

International Federation of Clinical Chemistry and Laboratory Medicine

Advancing excellence in
laboratory medicine for
better healthcare worldwide

www.ifcc.org

Annual Report 2019



IFCC
International Federation
of Clinical Chemistry
and Laboratory Medicine

Highlights of the Year



- **EuroMedLab Congress, Barcelona, ES** – May 2019 (<http://euromedlab.org/>)
- **24th Congreso Latinoamericano de Bioquímica Clínica – COLABIOCLI Congress**, Panamá – September 2019
- **15th Asia-Pacific Federation of Clinical Biochemistry and Laboratory Medicine (APFCB) Congress**, Jaipur (India), November 2019
- **6th African Federation of Clinical Chemistry (AFCC) Congress**, Marrakech (Morocco), September 2019
- New **Task Force Corporate Members (TF-CM)** formed
- **IFCC VLP programme** supported by Abbott (<http://www.ifcc.org/ifcc-education-division/emd-special-projects/>)
- **IFCC Speakers' Bureau** (<https://www.ifcc.org/media/478033/ifcc-speakers-bureau-rev-12-may-2019.pdf>)
- **Roche/IFCC Travel Scholarships**
- **IFCC Professional Scientific Programmes (PSEP/PMEP)**
- **IFCC FEN** - Foundation for Emerging Nations (<http://www.ifccfoundation.org/>)
- **Webinars and Distance Learning Modules** (<http://www.ifcc.org/ifcc-education-division/webinars/ifcc-webinars/>)
- **Task Force Young Scientists (TF-YS) webinars** (<http://www.ifcc.org/task-force-young-scientists-web-pages/tf-ys-webinars/>)
- **IFCC Expert Database** (<http://www.ifcc.org/ifcc-education-division/experts/>)
- The **IFCC Curriculum, Phase 1** released in Vietnamese (<http://www.ifcc.org/media/477266/ejifcc2018vol29no1pp055-093.pdf>)
- **e-Academy**, open educational resources (<http://eacademy.ifcc.org/>)
- **eJIFCC** available in Google Scholar
- **eJIFCC** available in Scopus
- **CPD C-IeL and EMD C-DL** re-established again from former C-IDL
- **IFCC Flow cytometry courses** (http://www.ifcc.org/ifcc-education-division/working-groups-special-projects/httpifccorghostinginsoftdkmedia46789217_phd_course_program_bpdf/)
- **DQCML Projects in Kazakhstan** (<http://www.ifcc.org/ifcc-education-division/working-groups-special-projects/developing-quality-competence-in-medical-laboratories-dqcml/>)
- Implement cooperation and agreements with **IFCC Regional Federations**

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Message from the President of IFCC



The IFCC mission 'Advancing excellence in laboratory medicine for better healthcare worldwide' has been the guiding principle for our work in 2019.

The 2019 was a very sad year for IFCC community with the sudden death of the President Prof. Howard Morris. As a result, I was very honored to be asked to serve again in the role of President. It is a great pleasure to thank the Executive Board for the support during this challenging time. All members contributed their valuable knowledge, experience, and insight from around the world.

In 2019 we followed the 2018-2020 Strategic Plan developed under the guidance of Prof. Morris.

The 2018-2020 strategic plan supports the principle of maintaining the IFCC as the most respected international resource of expertise for the improvement of patient care through laboratory medicine.

There were a number of significant achievements in 2019, as a result of the efforts of the Divisions, Committees, Working Groups and Task Forces made up of volunteers from our member organizations. These achievements are summarized in the various reports from the functional groups below. My thanks to all of these groups and their volunteers for the excellent work they have done.

Some highlights of our strategic plan and achievements are summarized below.

We established the EMD Committee for the Value Proposition in Laboratory Medicine (C-VPLM) to advocate the adoption of the value proposition in laboratory medicine, and develop tools that can be used to establish the value of medical tests within the healthcare system in terms of financial impact and patient outcomes.

The CPD eAcademy continues its efforts to provide a quality, comprehensive curriculum in laboratory medicine via 20 to 40 minute webinars, with learning points and a certifiable assessment. Currently these are largely available in English although collaborations are underway to increase the Spanish language presentations. Perhaps more important is utilization of the eAcademy by national societies or perhaps local area branches of national societies. These webinars are an excellent tool to bring together younger or trainee clinical laboratory specialists with one or two more experienced practitioners to listen to the presentation, discuss the learning points and then individually undertake the assessment. Learning together is always a more enjoyable experience.

The excellent work of the Scientific Division in collaboration with the Joint Committee for Traceability in Laboratory Medicine (JCTLM) and the International Consortium for Harmonization of Clinical Laboratory Results (ICHCLR) and other metrology and reference material manufacturers continues to expand the standardization and harmonization of clinical laboratory assays. This is a key strategy to ensure accuracy or at least harmonization of results of medical tests for optimal medical practice. During the next period the IFCC will be working with metrology institutes, both regional and national, to enhance collaboration and avoid duplication of the preparation of certified reference materials. This has been identified as the current requirement



for the profession in order to take the next steps in our long-term strategy.

A significant accomplishment in 2019 was the EuroMedLab, held in Barcelona, Spain, May 19th – May 23rd. The Congress was extremely successful with more than 6,300 participants coming from 117 different countries.

I thank all IFCC officers for their invaluable service throughout 2019 as described in their specific reports below. My sincere thanks also to the member organizations: full, associate and corporate members, for their continued support of the IFCC and for the individuals that they nominate to the IFCC functional groups. A special thanks to Professor Dave Kinniburgh for his invaluable work throughout 2019. I wish to thank the IFCC Office Staff, Paola Bramati, Silvia Cardinale and Silvia Colli-Lanzi for their dedicated efforts in managing the day-to-day business of the IFCC, and for their personal assistance to me as President.

Prof. Maurizio Ferrari

EXECUTIVE BOARD (EB)

The IFCC Executive Board held three meetings during 2019. The first meeting was held in Hammamet, Tunisia on February 2-4, in conjunction with the STBC meeting; the second EB meeting was held in Barcelona, Spain on May 19, 24-25, in conjunction with EuroMedLab; and the third EB meeting was held in Jaipur, India on November 20-22 in conjunction with the APFCB Congress.

A few of the highlights of 2019 are summarized below. In order to strengthen the collaboration between IFCC and its Corporate Members and to better address their specific needs and challenges, the EB created a new IFCC Task Force - Corporate Members (TF-CM) that will report directly to the IFCC Executive Board. The IFCC was invited to attend a WHO meeting and established a line of communication with the WHO that will facilitate input to the WHO in the future. In an order to address inequities in member dues, the EB received approval from Council to set the dues for Affiliate members. The IFCC EuroMedLab was held in Barcelona on May 19-23, 2019 and was a very successful congress, providing an excellent educational and professional networking experience for all delegates. Recognizing the importance of Young Scientists to the future of IFCC and the practice of Laboratory Medicine, the EB established a policy requiring all Committees to have at least one Young Scientist. Mathias Müller and Bernard Gouget are reviewing the archived IFCC documents to prepare an updated History of the IFCC. The newly established Emerging Technologies Division was active in establishing the Committee for Emerging Technologies in Pediatric Laboratory Medicine (C-ETPLM), the Committee on Mobile Health and Bioengineering in Laboratory Medicine (C-MHBLM), the Committee for Omics Translations (C-OT), and the Volatolomics WG (WG-Vol) and the Custom-Made Genomic Panels WG (WG-CGP).

A letter was sent to National Societies Full and Affiliate members, and to the Divisions requesting their annual reports. All reports will be included in the IFCC Annual report for 2019 which will be available on the IFCC Website (www.ifcc.org).

The IFCC membership, as of December 31, 2019, included 92 Full Members, 16 Affiliate Members and 47 Corporate Members. During 2019, one Full Member Society joined, *Laboratory Medicine Association of Georgia*, and six new Corporate Members: *Immunodiagnostic Systems – IDS*; *Nittobo Medical Co. Ltd.*; *SCL Healthcare*; *Agilent Technologies Inc.*; *Zhejiang Quark Biotechnology Co., Ltd.* and *Labtronic*.

While the IFCC had many noteworthy accomplishments in 2019, it was marked by the tragic death of our President, Prof. Howard Morris. The IFCC lost a visionary leader, and the global community of laboratory medicine lost a gifted clinical chemist, a champion for the value of laboratory medicine, and a friend.

Finally, 2019 was the second year of my term as Secretary of the IFCC and I would like to thank all the IFCC officers, members and colleagues who I have worked with for their cooperation and assistance. I have met or exchanged emails with many of the IFCC members these past two years and I look forward meeting more of you in 2020. Special thanks to Maurizio Ferrari, who stepped back into the demanding role of President, and to the other EB members for their extra efforts during this difficult year. Thanks also to the IFCC Office staff in Milan (Paola Bramati, Silvia Cardinale and Silvia Colli Lanzi) for their diligent work on behalf of IFCC.

David Kinniburgh, Executive Board Secretary

TREASURER REPORT

During the second year of my second term as the IFCC treasurer, with the valuable help and assistance of the IFCC Office, the annual dues of Full, Affiliate and Corporate Members were received, the adherence of IFCC operating units to their allocated budgets were monitored, detailed records of all transactions were kept, and reimbursements were processed immediately after the receipt of the claims from the IFCC office. Close collaboration was achieved with the IFCC investment bank (Credit Suisse) to optimise the financial return on IFCC investments. The annual accounts and financial actions were reviewed by an external independent auditor in order to finalize the actual income and expenses at 31st December 2019.

1. COMPARISON OF 2019 PROPOSED BUDGET WITH ACTUALS AT 31st DECEMBER 2019

The 2019 budget was expected to be closed with a deficit of CHF -207 548. Instead, it was closed with a surplus of CHF 1 740 501 (Fig. 1). The main reasons for this difference were the high amount of income from EuroMedLab Barcelona, new sponsorship funds and less expenditure.

Summary	Expected Budget 2019	Actual Budget 2019
	CHF	CHF
Total Operational revenues & financial income	1.709.600	3.341.898
Total Operational costs & financial charges	1.917.148	1.601.397
Profit (-loss) for the year	-207.548	1.740.501

Figure 1. 2019 proposed budget versus to actual at 31st December 2019

2. TOTAL OPERATIONAL REVENUES AND FINANCIAL INCOME

The actual total operational revenues and financial income were CHF 3.341.898 (Fig. 2).

REVENUES & INCOME	Expected Budget 2019 CHF	Actual Budget 2019 CHF
Full members (National Societies)	175.000	186.192
Corporate members	250.000	299.023
Affiliate members	4.500	5.923
Income from CLSI royalties	2.000	3.740
Revenue for ICHCLR secretarial support	9.000	8.817
Revenue for ICHCLR sub-account	40.000	54.296
EuroMedLab Congress Barcelona 2019	1.000.000	2.262.278
WorldLab Congress Seoul 2020	0	0
EMD Symposium - WorldLab Seoul 2020 - Abbot	0	0
Income for Scientific Division (SD) JRC IRMM	40.000	76.907
Roche support to WG-APO activities	0	7.693
Abbot VLP sponsorship	55.000	49.021
Income for C-CB support	0	18.567
Income for C-CB support - scorecard	80.000	49.512
Elsevier Support - AACC stand & royalties	3.000	3.269
Income from Com. Publ. div. (CPD) Elsevier endorsement	30.000	31.596
Yashraj Dist Clinical Chemist Award	0	0
Siemes - Henry Wishinsky Award dist Intl services	0	0
Abbot Award for dist. contribution in education	0	0
Abbot Award for significant contribution to molecular diagnostic	0	0
Sekisui Award for Lab Med and Patient care	0	0
NIST/CLSI Robert Schaffer Award	0	0
Young Investigator Award - IFCC	0	0
Hyttest Award for contr to cardio vascular diagnostic	0	0
Gerard Siest - Biologie prospective Award	0	0
Abbot Univants Project	0	0
Income for Roche travel scholarship	21.000	21.790
Elsevier support TF-YS	0	980
FEN espenses re-imbursed	100	0
Abbot Univalent Project / HM		3.060
Overhead on sponsorship project	0	3.445
Realized profits on investments	0	52.272
Unrealized profits on investments	0	193.443
Profits on exchange	0	10.075
TOTAL REVENUES & INCOME	1.709.600	3.341.898

Figure 2. INCOME at 31st December 2019: CHF 3.341.898-.



3. IFCC MEMBERSHIP DUES

Below is a diagram showing the percentage of the major income of IFCC from the annual dues of Full, Affiliate and Corporate Members collected during 2019 (Fig. 3). Thanks to all the member Societies and Corporate members that supported IFCC throughout the years. Their continuous contribution has made possible the accomplishment of numerous IFCC tasks and projects. IFCC is grateful to the IVD industry for their support and active participation in the IFCC scientific events. We also thank the members for their loyalty and attention in paying dues at the start of the year, which helps the cash flow.

Dues	CHF
Full members	186.192
Corporate members	299.023
Affiliate members	5.923
Total	491.138

Figure 3. IFCC membership dues collected in 2019.

4. IFCC MEETINGS INCOME PARTITION

IFCC meetings' revenues are not a regular yearly income. The average yearly income of IFCC arising from the meetings can be calculated by dividing the total revenue by the frequency of the event. The yearly income of IFCC from the recent meetings (EuroMedLab 2019 Barcelona, EuroMedLab2017 Athens and WorldLab 2017 Durban and shares from the regional federations' meetings) subdivided per year is indicated below (Fig. 4).

INCOME	PARTITION	YEAR AVAILABILITY
WordLab 2017(Durban): CHF 189.429	3 years	CHF 63.143
EuroMedLab2017 (Athens): CHF 774.318 – 155.737 (EFLM share) = CHF 618.581	2 years	CHF 309.290
APFCB share: CHF 25.664	2 years	CHF 12.832
COLABIOCLI Congress Punta del Este – 2017 CHF 2.624	2 years	CHF 1.312
EuroMedLab (Barcelona) 2019: CHF 2.262.278 – 564.494 (EFLM)=CHF 1.697.784	2 years	CHF 848.892

Figure 4. IFCC meetings income.

The income of IFCC from the membership dues and annual meetings income (excluding sponsorships and other revenues) in 2019: **CHF 491.138 (dues) + CHF 848.892 (annual meeting income) = CHF 1.340.030**

5. SPONSORSHIP

Divisions and some Functional Units raise some sponsorships funds which give them a certain flexibility in conducting projects. These sponsorships are used for the specific projects in due time. The unspent sponsorship funds are carried over to the next years. The total amount of sponsorships available for specific projects at 31 December 2019 to be carried to 2020 is **CHF 732.727**.

6. TOTAL OPERATIONAL COSTS AND FINANCIAL CHARGES

The actual total operational costs and financial charges in 2019 were CHF 1 601 397- (Fig.5).

IFCC GENERAL EXPENES - 2019 Budget to 31st December 2019 Actual

	Including sponsorship expenses
5. Organisations Affiliated w/ IFCC	632.461
6. IFCC Int/Reg Organisations	91.102
7. IFCC Congresses and Conferences Committee (C-CC)	28.474
8. IFCC Scientific Division (SD)	84.092
9. IFCC Education and Management Division (EMD)	185.741
10. IFCC Communication Publication Division (CPD)	90.433
11. IFCC Emerging Technologies Division (ETD)	31.230
13. IFCC Special Projects	60.999
14. IFCC Statutes & Rules	19.373
15. IFCC Financial Report	29.896
16. IFCC Organisational Matters	261.412
19. IFCC Executive Board (EB)	86.184
GENERAL TOTAL	1.601.397

Figure 5. IFCC GENERAL EXPENSES-2019



7. IFCC INVESTMENT AT CREDIT SUISSE IN 2019

The important issues of the agreement with Credit Suisse are outlined as below:

Investment strategy: Income oriented

Risk Profile: Moderate

Risk Budget: Moderate

Reporting currency: CHF (with investments in three currencies: CHF, EUR, USD)

Ticket fee model: 0.20% for the safekeeping fee (no investment fee).

Return of the IFCC investments at CS between 31.12.2018 to 31.12.2019 is shown in **Figure 6**.



Figure 6. Credit Suisse Investments between December 31th, 2018 and December 31th 2019.

Tomris Ozben, Treasurer

CORPORATE MEMBERS' REPORT 2019

Rolf Hinzmann, MD, PhD, Clinical Pathologist (Roche)

Corporate Representative at IFCC Executive Board (2nd term 2018-2020)

In 2019 IFCC was pleased to welcome *Nittobo Medical (Japan)*, *SCL Healthcare (South Korea)*, *Immunodiagnostic Systems (UK)*, *Agilent Technologies (USA)*, *Zhejiang Kuake Biotechnology (China)* and *Labtronic (Kazakhstan)* as new Corporate Members. Only one company, *Analisis (Belgium)*, cancelled their membership. By the end of 2019, the total number of IFCC's Corporate Members was 47, contributing with annual fees to approximately 60% of IFCC's total direct annual income from its members (which comprise National Societies and Affiliate Member Societies as well). On top of this, IFCC received sponsorship for scientific or educational projects, awards, travel of students and lecturers, and congresses.

Over the past years, IFCC had seen an erosion in corporate membership and the necessity to make IFCC more attractive for corporate members became evident. As one action, a **New Task Force Corporate Members** was established in 2019 and kicked off at EuroMedLab in Barcelona with the goal to facilitate discussions among Corporate Members, identify common topics, and directly interact with / report to the Executive Board. The Task Force is chaired by Joseph Passarelli from Roche. It consists of 7 members and 3 corresponding members and defines its own scope and goals. The following major objectives have been identified:

- Better representation of Corporate Members within IFCC and better understanding of their needs
- Direct dialogue with the IFCC Executive Board
- Receiving advice from Corporate Members to improve the practice of laboratory medicine
- Facilitate discussion among Corporate Members and identification of common topics
- Improving engagement of Corporate Members
- Frequency and locations of IFCC conferences
- Alternative funding structure for IFCC by Corporate Members
- Collaboration of IFCC with Clinical Societies and Regulators on guidelines
- Promote the value of laboratory testing

The recently established **Emerging Technologies Division** provides multiple opportunities for Corporate Members. It has been agreed that each working group or committee will accept at least one full member from a Corporate Member company.

The Corporate Members make several important contributions to IFCC activities: Numerous delegates from Corporate Members are actively engaged in most of the working groups and committees in all IFCC divisions and in their Executive Committees, either as full members or as corresponding members, as well as in the Congresses & Conferences Committee.

Here is the contact information for Corporate Representatives who were / are members of the Executive Committees of IFCC's 4 divisions and the Congresses & Conferences Committee. Please feel free to reach out to them in case you have questions:

- **Scientific Division:** James Pierson-Perry (*Siemens*) (2nd term 2018-2019)
- **Emerging Technologies Division:** This newly established division has two Corporate Representatives: Peng Yin (*Abbott*) (1st term 2018-2020) and Markus Roessler (*Roche*) (1st term 2018-2020)
- **Education & Management Division:** André Ziegler (*Roche*) (1st term 2018-2020)
- **Communications & Publications Division:** Patricia Ravalico (*Abbott*) (1st term 2018-2020)



- **Congresses & Conferences Committee:** Cheryl Jackson (*Beckman Coulter*) (1st term 2018-2020).

The following persons are Corporate Members of the respective Congress Organizing Committees (COCs):

IFCC / WorldLab 2020, Seoul, South Korea: Douglas Chung (*Abbott*)

IFCC / EuroMedLab 2011, Munich, Germany: Katja Schwarzer / Lieselotte Lennartz (*Abbott*)

Since January 1, 2018 the transition period of certain MedTech Europe Code regulations has expired, and new rules have become effective:

- For third-party organised conferences (main programme): Companies may not directly support a healthcare professional, neither as a delegate, nor as a speaker.
- For company-organised events in the framework of third-party organised conferences (e.g. satellite symposia): Companies may directly support speakers (i.e. their consultants) but not delegates.
- Educational grants are still possible. They can only be provided to legal entities but never to individuals.
- Companies will be able to define the type of recipients who should be eligible for the grant but will not be able to identify individual recipients.
- Companies must have an internal and independent process based on objective criteria to assess grant requests.

For more information please check out the MedTech Europe website. Similar codes are expected to come into place in various other regions of the world.

EuroMedLab in Barcelona was the first major event for IFCC that fell under the new rules. In spite of these strict regulations, 15% more delegates attended the scientific sessions in Barcelona compared to Athens two years earlier. This is good news since there were strong concerns about a decline of industry sponsorship under the new rules which fortunately did not happen. Many corporate members had provided travel grants to healthcare organizations (not individuals!) to be compliant with the MedTech Europe Code.

The next Corporate Members Meetings will be held during AACC in Chicago in July. I would like to encourage all members to take part in the meeting. The respective meeting details will be communicated soon.

Rolf Hinzmann, Corporate Members Representative



COMMITTEE ON CONGRESSES AND CONFERENCES (C-CC)

The thirty-sixth (36th) meeting of the IFCC Executive Board Committee on Congresses and Conferences (C-CC) was held on May 19, 2009 in Barcelona, Spain.

The only membership change to the C-CC during 2019 was the resignation of Corresponding Member Prof. Rajiv Erasmus.

International Congresses of Clinical Chemistry & Laboratory Medicine (WorldLab)

IFCC ICCCLM (WorldLab) Seoul, Korea 2020 (May 24-28)

Congress President: Prof. Won-Ki Min; Congress Chair Prof. Junghan Song

Prof. Won-Ki Min and others from the Congress Organizing Committee (COC) presented a detailed progress report on the planning and promotion of this Congress. All aspects of the congress are well in hand.

IFCC ICCCLM (WorldLab) Rome, Italy 2023 (May 21-25)

Congress Chair: Prof. Sergio Bernardini

Prof. Bernardini presented the report that included a detailed outline of the infrastructure, location and access to the Congress facility. Composition of the COC is awaiting representatives to be decided upon by the IFCC and the EFLM. JW will serve as the C-CC representative on the COC. A promotion booth will be present in Seoul. The congress logo and the First Announcement will be released in Seoul. A video about 2023 Congress will be shown during the Closing Ceremony in Seoul followed by an Italian Farewell Cocktail.

Regional Congresses of Clinical Chemistry & Laboratory Medicine

APFCB, Jaipur, India, 2019 (November 17-20)

Congress Chair: Prof. Praveen Sharma

Prof. Sharma presented a progress report that highlighted the readiness for this Congress.

EuroMedLab, Barcelona, Spain, 2019 (May 18 - 23)

Dra. Imma Caballé

JW, the C-CC representative to the COC, presented the report. Preliminary data shows strong registration. This Congress will be the first to be assessed with the implementation of the newly developed and approved Delegate Survey.

EuroMedLab, Munich, Germany, 2021 (May 16 – 20)

Congress Chair: Dr. Karl Lackner

TZ presented the report. TZ will serve as an EFLM representative and MBG will serve as the C-CC representative on the COC. The International Congress Centre Munich has been booked. The Congress was promoted at EuroMedLab Barcelona. Dr. Lackner gave a short presentation and invited everyone to EuroMedLab 2021 at the Closing Ceremony in Barcelona. The first informal meeting of the Scientific Programme Committee (SPC) was to happen during EuroMedLab Barcelona. The first meeting of the COC was to take place on July 9, 2019 in Munich.

COLABIOCLI, Panama City, Panama, (September 17 – 20) 2019

Congress Chair: Lcda. Jovanna Borace

Lcda. Borace presented the progress report for this fast approaching Congress. All appeared to be on target.

AFCB, Beirut, Lebanon, 2021 (Date yet to be determined)

Congress Chair: Dr. Christian Haddad

No report received.

AFCC, Marrakech, Morocco, 2019 (September 26 – 28)

Congress Chair: Dr. Layachi Chabraoui

JW presented the report for this Congress. All appeared to be in order.

IFCC Specialised Conferences

IFCC - Roche Diagnostics Bergmeyer Conference

This conference has not been held since 2016. The cause for the postponement of this conference is related to concerns with respect to the various Codes of Ethical Business Practice. There are ongoing discussions within Roche regarding the future of this event.

IFCC – Abbott “Turning Science into Caring” Symposium

This program was last held in China and India in 2018. However plans for future events is again under discussion within Abbott Diagnostics. Issues at least in part due to concerns with respect to the various Codes of Ethical Business Practice.

Congress Guidelines and Other Documents

Auspices Guidelines and Application Forms

ICCCLM Congress Guidelines and Application Form

In the Guidelines document: replace “EuroMedLab” with “WorldLab” on page 10/10 – Form A – 1.2.

EuroMedLab Congress Guidelines and Application Form

Guidance for National and International Congresses

Scientific Program Guidelines for ICCCLM (WorldLab)

Satellite Meeting Guidelines for an IFCC-sponsored Congress / Conference

IFCC Guidelines for Compliance with Applicable Codes of Ethical Business Practice

All of the C-CC documents listed above were reviewed in advance of the C-CC meeting and it was concluded during the meeting that other than the correction noted above that no other revisions were required. Therefore the effective date of these documents has been updated to May 2019.

Scientific Program Guidelines for EuroMedLab

Review required but postponed until next year in order to identify any deficiencies or potential improvements based on the application of the guidelines to EuroMedLab 2019 Barcelona. The SPC Chair for EuroMedLab 2019 Barcelona will be asked for feedback (positive and negative) on the utility of these guidelines. Review of this document with revisions as required is expected to occur in 2020.

Congresses/ Conferences with IFCC Auspices

- 2014 – 40 events
- 2015 – 45 events
- 2016 – 70 events
- 2017 – 55 events
- 2018 – 76 events
- 2019 – 82 events

Other Business

Survey for Participants to IFCC Congresses and Conferences

This survey was approved by the IFCC and the EFLM EB’s in early 2019. JW worked with MZ Congressi who prepared the document for electronic distribution, completion and submission. The survey was sent to all delegates of EuroMedLab 2019 Barcelona immediately following the Congress. The names of three delegates that submitted a completed survey within the allowed timeframe (2 weeks) were drawn at random by MZ Congressi and these individuals will receive complimentary registration to EuroMedLab 2021 Munich. The delegate response of 36% was considered excellent and the results of the survey will be available to future WorldLab and EuroMedLab COC’s and SPC’s.



CONAQUIC

Alejandra A. Cano Huizar, CONAQUIC President, gave a presentation on the organization of CONAQUIC and reported on the XXII National Congress for the Analysis of Quality Assurance that was held in San Juan del Rio, Queretaro, Mexico from March 15 – 17, 2019.

This interaction was considered important on account of the rather persistent difficulties that the IFCC has had in regards to unauthorized use of the IFCC logo on congress/conference related documents by various CONAQUIC member organizations without even submitting applications for IFCC auspices. IFCC auspices application submissions appears to have improved somewhat through 2019.

Thirty-seventh (37th) Meeting of the C-CC

The proposal to hold the 37th meeting of the C-CC in association with WorldLab 2020 Seoul was accepted.

James Wesenberg, C-CC Chair

SCIENTIFIC DIVISION (SD)

During 2019, the following members served on the SD Executive Committee: Philippe Gillery (FR) (Chair), Christa Cobbaert (NL) (Vice-Chair), Joseph Passarelli (US) (Secretary), Barnali Das (IN), Konstantinos Makris (GR), Mario Plebani (IT) (members) and James Pierson-Perry (US) (corporate representative). Five representatives of International Organizations were invited to attend the SD meetings as consultants or observers: Ian Young (JCTLM), Heinz Schimmel (JRC), Karen Phinney (NIST), Chris Burns (NIBSC) and Youchun Wang (NIFDC). Two meetings were held during 2019: May 18 - 19 (Barcelona, Spain in conjunction with EuroMedLab) and October 11 - 12 (Milano, Italy at the IFCC offices).

Relationship with International Organizations

The SD continues to pursue the expansion of its activities to collaborate with international organizations to promote the implementation of the concept of traceability in laboratory medicine and the implementation of reference measurement systems.

• Joint Committee on Traceability in Laboratory Medicine (JCTLM)

The JCTLM continues its work, which is available for review on its database at www.bipm.org/jctlm. The following annual report summarizes 2019 activities of the JCTLM.

Governance:

Dr. Ian Young was nominated by IFCC and approved by the Executive Committee to serve a 2-year (2019-2020) as the new Chair of the JCTLM Executive Committee. Dr. Myers was appointed by IFCC to replace Dr. Graham Beastall as a representative from IFCC to the JCTLM Executive Committee. Dr. Myers joins Dr. Anja Kessler (Referenzinstitut für Bioanalytik) as the two appointed representatives from the IFCC to the JCTLM Executive Committee.

JCTLM Membership:

The JCTLM Executive Committee continued its efforts to engage the International Council for Standardization in Hematology (ICSH) in collaborative programming activities in traceability. Having met all the requirements for membership, ICSH was approved as the newest organizational member of the JCTLM Executive Committee.

JCTLM Database:

Database Content: • 308 available certified reference materials; • 201 reference measurement methods or procedures; • 187 reference measurement services delivered by 19 reference laboratories.

The JCTLM 2019 nomination cycle for certified reference materials, reference measurement

procedures and calibration laboratories that provide reference measurement services for laboratory medicine and clinical chemistry closed May 30, 2019. The various Review Teams completed their respective reviews of the nominations in their areas of responsibility and the results were reviewed for approval at a meeting of the JCTLM Database WG on 4 December 2019 at BIPM.

JCTLM WG on Traceability Education and Promotion:

JCTLM Newsletter: can be downloaded from the following link: <https://www.bipm.org/utills/common/pdf/JCTLM/JCTLM-Newsletter-2019.pdf>

JCTLM Meetings

- 2-3 December 2019: JCTLM Members and Stakeholders Meeting, BIPM, Sévres.
- 4 December, 2019: JCTLM Database WG Meeting and JCTLM WG TEP, BIPM, Sévres
- 5-6 December 2019 JCTLM Executive Committee Meeting, BIPM, Sévres.

Working Group 1 (GUM): The title “Guide to the expression of uncertainty in measurement” for the whole suite has been confirmed. Various practical aspects, such as rebranding and renumbering the existing documents, are under discussion. This document was originally planned as supplement 3 to the GUM, under the heading “Evaluation of measurement data”. In the spirit of the new perspective on the GUM, its title was changed to: “Guide to the expression of uncertainty in measurement – Developing and using measurement models”. The new title reflects the evolution of the document since its earlier stages, when the traditional structure of the GUM and GUM-related documents was still in place, and its current status. The scope has been broadened well beyond that strictly relevant to JCGM 100:2008, and now includes statistical models and modelling of dynamic measurements. This document represents a bridge between the traditional structure of the GUM and the new perspective and is to be considered as the first document in the new structure. Having a broader scope would also allow the “new” GUM to be better harmonized with existing ISO standards.

Working Group 2 (VIM): WG2 decided to proceed along two parallel paths:

Path 1 was to develop a new draft ‘minimum change’ document that starts from the VIM3 Chapters 1-5 and simplifies the language, incorporates the VIM3 Annotations and includes some agreed-upon content-related changes. In parallel, further entries on nominal properties were developed and put in a separate new chapter. The new ‘minimum change’ draft and the new chapter on nominal properties are now essentially ready for consultation. WG2 has focused on developing the draft ‘minimum change’ document ready for the current JCGM meeting, according to the mandate from the JCGM.

Path 2 was to create a new ‘evolutionary’ document, which possibly incorporates the expanded definition of ‘measurement’, and includes several other significant changes. WG2 has started down this second path as well, but it will take more time to complete a draft ready for circulation. A copy of the minimum change “Committee Draft” document was circulated, which incorporated changes that were made at the WG2 meeting held on 26-30 November 2018. Dr Ehrlich commented that the feedback received from the circulation had indicated that the VIM4 is more “readable”.

A complete draft of the “VIM4” (including the minimally revised versions of chapters 1-5 and the new chapter 6) will be circulated as a committee draft (CD) to the JCGM member organizations for their comments after the June 2019 WG2 meeting.

Joint Research Center (JRC – formerly the Institute for Reference Materials and Measurements (IRMM))

Close collaboration with JRC continues through a number of joint ventures involving SD Committees and Working Groups. Reference materials are still a key area of focus of the JRC. The status of specific JRC reference materials activity is mostly covered under the respective





Cs and WGs. Most notable are Certified Reference Materials (CRMs) for enzymes, autoimmune disorders, proteins, Thalassaemia, and apolipoproteins.

- **Clinical and Laboratory Standards Institute (CLSI) (formerly NCCLS)**

An updated list of joint CLSI/IFCC documents is available on the IFCC web site at: [http://www.ifcc.org/index.asp?cat=Publications&scat=CLSI_\(Clin_Lab_Stand_Inst\)_-_IFCC_Joint_Projects&rif=6&dove=1](http://www.ifcc.org/index.asp?cat=Publications&scat=CLSI_(Clin_Lab_Stand_Inst)_-_IFCC_Joint_Projects&rif=6&dove=1).

A project proposal is under consideration by the CLSI Consensus Council for the update to EP28 (guidance document on Reference Ranges). This has direct implications to the Committee on Reference Intervals and Decision Limits (C-RIDL). As such, it is highly likely that Prof. Yeşim Özarda (chair of C-RIDL) will co-chair the CLSI Document Development Committee (DDC) for the revision to EP28.

- **National Institute of Standards and Technology (NIST)**

NIST continues to undertake a large number of projects, many of which are of considerable interest to IFCC. The NIST website (www.nist.gov) can provide information on materials and services available today.

The most relevant projects to the IFCC and SD are: - pre-natal serum; - TNI; - -urine albumin; - materials for bone metabolism

- **National Institute of Biological Standards and Controls (NIBSC)**

Close collaboration with NIBSC continues through a number of joint ventures involving SD Committees and Working Groups. NIBSC successfully established 11 new WHO International Standards potentially of interest to the SD. In addition, proposed 13 new standards projects to be endorsed by WHO. The status of specific NIBSC reference materials activity is mostly covered under the respective Cs and WGs.

- **European Federation of Clinical Chemistry and Laboratory Medicine (EFLM)**

The EFLM Science Committee and SD leadership once again agreed there should be close liaison and communication between the two groups. Professor Eric Kilpatrick is the EFLM SC chair. The Science Committee is responsible for scientific matters within EFLM and projects that further the scientific development of EFLM. Activities of the Committee particularly focus on promotion of research that translates the scientific results of clinical chemistry and laboratory medicine to clinical applications and improves patient outcomes through the appropriate use and interpretation of laboratory data in clinical practice. Within the EFLM SC there are working groups on cardiac biomarkers, biological variation, test evaluation, personalized laboratory medicine and a number of others but the general consensus of the SD is that these activities do not overlap with the IFCC SD. Professor Philippe Gillery (SD chair) has been in contact with the chair of the EFLM SC. Approaches to avoid overlap and work collaboratively continue to be discussed and explored.

- **World Health Organization (WHO)**

The WHO meeting occurs each autumn. Professor Philippe Gillery attends and participates as the liaison from the SD. Dr. Chris Burns is also a full member of the WHO Expert Committee on Biological Standardization (ECBS) and attended the 2019 meeting. The focus is primarily on public health and emerging pathogens. Much of the activities of ECBS are not relevant to the IFCC. There was a call for public comment with respect to the WHO Model List of In Vitro Diagnostics - https://www.who.int/medical_devices/diagnostics/selection_in-vitro/selection_in-vitro-meetings/sage-ivd-2nd-meeting/en/. Comments were requested concerning the following document:

“WHO list of priority medical devices for management of cardiac diseases, stroke, and diabetes”. Prof. Sverre Sandberg has been selected to represent the IFCC to the WHO on this document. The WHO will issue recommendations coming from all comments from all parties after review by the advisory panel and a 3rd version will be prepared.

Congresses (WorldLab, Regional and other congresses):

The SD made the following presentations:

XXIII EuroMedLab 2019, 23rd IFCC-EFLM European Congress of Clinical Chemistry and Laboratory Medicine – Barcelona, Spain, May 19-23, 2019

Title: Dyslipidemia guidelines in Europe and need for Standardization of traditional and new cardiovascular disease biomarkers – addressing cholesterol and beyond

Chair: Philippe Gillery - Standardization of tests in the ISO 15189:2012 era; Speaker 1: Michel Langlois - Update on Dyslipidemia Guidelines and the rationale of Cardiovascular Disease Biomarker Standardization Programs; Speaker 2: Vincent Delatour - Standardization of advanced lipoprotein testing: the BioSITrace project; Speaker 3: Christa Cobbaert -Mass spectrometry-based approach for apolipoprotein quantification and profiling

Latin American Confederation of Clinical Biochemistry - COLABIOCLI Congress, Panama City – Panama, 10th–13th September 2019

Title: Quality Considerations for Molecular Diagnostics

1. What is going on in Molecular Diagnostics in Central and South America? What do we need to do to improve it? Dr. Graciela Russomando (Paraguay) C-MD Full Member 2019; 2. An Update of Molecular Analytes: Current and Future Directions. Dr. Parvis Ahmed-Nejad from Germany (C-MD Chair appointed for 2019); 3. Pre and Post Examination Factors for Molecular Diagnostics. Dr. Debs Payne (USA); 4. EQA and Alternate Assessment Strategies in Molecular diagnostics. Dr. Patricia Esperon (Uruguay)

African Federation of Clinical Chemistry - AFCC Congress, Marrakech, September 26–28, 2019

Title: Standardization in Laboratory Medicine: impacts on patient outcome

1. Successes and challenges in standardization of laboratory tests Philippe Gillery (FR); 2. HbA2 standardization and thalassemia screening Andrea Mosca (IT); 3. Standardization of PTH assays: methodological and clinical challenges Etienne Cavalier (BE); 4. Quality improvement in molecular diagnostics addressing different needs worldwide Parviz Ahmad-Nejad (DE)

Activities of Committees and Working Groups

The Committees (Cs), which are theme-oriented, carry out much of the scientific and professional activities of the SD. Their work is often in close collaboration with other international organizations. For more specific tasks, the activities are usually accomplished through Working Groups (WGs).

Committees

- **Nomenclature, Properties and Units (C-NPU); Chair: Karin Toska (NO)**

During 2019 ongoing progress towards C-NPU terms of reference included:

Term of Reference 1. *To continuously provide advice for the management, updating and publishing of the NPU terminology.* **Accomplishments include:** An online NPU or international laboratory terminology manual is being established via an IUPAC project. Access will be provided by a link from the main governance site (<http://www.npu-terminology.org>). The NPU Steering Committee website continues to act as the main governance site (<http://www.npu-terminology.org>), while the NPU terminology itself can be searched from (<http://www.ifcc.org/ifcc-scientific-division/sd-committees/c-npu/npusearch/>). The NPU also holds a Wikipedia page at https://en.wikipedia.org/wiki/NPU_terminology. Via an IUPAC project, a promotion video and a leaflet has been produced, presented at conferences and put on the internet (YouTube). **List planned activities in 2020 for this Term of Reference:** Continue teleconference and face-to-face meetings of both the C-NPU and NPU SC. Finish the terminology manual and promote its use.



Establishing definitions for non-referenced terms in the NPU terminology.

Term of Reference 2. *To make recommendations on NPU for reporting clinical laboratory data that conform to or adapt current standards of authoritative organizations and that will improve their utilization for health care.*

Accomplishments include: Project on online “dynamic” manual for the NPU terminology continues, chaired by Young Bae Lee Hansen. A new website has been established and is under construction. <https://dynamicnpumanual.atlassian.net/wiki/spaces/DNM/pages/89522221/NPU+Concept+Model>. This is expected to act as both a user manual and reference, but also as repository for NPU decisions made during NPU scientific meetings. NPU Steering Committee continues to administer and update its strategic plan and work on the international release centres. **List planned activities in 2020 for this Term of Reference:** C-NPU will continue to work in order to broaden the international use of NPU terminology and to demonstrate how NPU terminology may be used with other terminologies and open standards, for example SNOMED CT and FHIR messaging. C-NPU will work on an international standard for a laboratory information model, and establish NPU terminology as an integral component of laboratory messaging. The project of the online “dynamic” manual for the NPU terminology is continuing and scheduled to be completed in 2020. C-NPU continues to review technical issues around use of the NPU terminology from users and national release centres.

Term of Reference 3. *To provide a connection with other organizations concerned with NPU such as the Bureau International des Poids et Mesures (BIPM), the European Committee for Standardization (CEN) and the International Organization for Standardization (ISO), and, by extension, clinical laboratory science societies such as the International Union of Pure and Applied Chemistry (IUPAC), and the in vitro diagnostics industry, to ensure that problems encountered by health care professionals in the area of NPU are considered by those organizations.* **Accomplishments include:** C-NPU remains a joint committee with both IFCC and IUPAC representation. Helle Johannessen is President of Division VII (IUPAC). Colin Humphries from IUPAC Exec has continued to attend the majority of Steering Committee meetings and teleconferences. Titular member Koh Furuta (KF, JPN) participate in the revision of ISO 15189. Gunnar Nordin participate in BIPM WG2 meetings and provide input into the upcoming VIM4 (International Vocabulary of Metrology).

Daniel Karlsson reports to the NPU on IHTSDO/SNOMED-CT related matters. The National Release Centres of Denmark, Norway and Sweden provide national NPU support for those countries, and are represented both on the SC NPU and C-NPU. **List planned activities in 2020 for this Term of Reference:** Continue to work with the NPU National Release Centres to ensure utility of the NPU terminology and review and respond to questions or concerns. Continue the work with IUPAC on projects. Continue communications with external metrology groups (e.g. BIPM WG2), ISO groups and IHTSDO representatives,

Term of Reference 4. *To act as a consultant group on NPU in clinical chemistry and, by extension, in the rest of clinical laboratory sciences to international scientific panels, regional and national clinical laboratory sciences organizations, editors of scientific journals, manufacturers of clinical laboratory instrumentation and products, and to individual clinical laboratory professionals and other health care professionals.*

Accomplishments include: Chair and individual NPU members continue to be active with their societies, particularly in the informatics and terminology arenas; NPU connected members are active as members of their respective national NPU release centres (NRCs); Robert Flatman actively involved in Australia harmonization initiatives and now Vice President “Scientific and Regulatory Affairs” for the Australian Society; Gunnar Nordin continues to be active within the Joint Committee for Guides in Metrology Working Group 2 (JCGM WG2). **List planned activities in 2020 for this Term of Reference:** Continuation of activities described above.

- **Molecular Diagnostics (C-MD); Chair: Parviz Ahmad-Nejad (DE)**

During 2019 ongoing progress towards C-MD’s terms of reference included:



Term of Reference 1. *To produce guidelines on clinical validation of tests, conduct and reporting of molecular diagnostic tests.* **Accomplishments Include:** After publishing “Toward Harmonization of Clinical Molecular Diagnostic Reports: Findings of an International Survey” in 2018 in CCA the C set out to update information collected at the C-MD web space (see Regional and National Guidelines and Reports and External Quality Assessment (EQA) or Proficiency Testing in Molecular Diagnostics). The lists of EQA in Molecular diagnostics was completely updated and several new EQA providers were added. Additionally, a C-MD *Resource for Nomenclature* was added to support a uniform nomenclature as a prerequisite for standardization in molecular diagnostics. **List planned activities in 2020 for this Term of Reference:** Plan is to update the Regional and National Regulatory and Policy Documents. Finally, a first checklist for the verification of molecular genetic test procedures will be completed and the document will be available on the C-MD homepage in Q1 2020.

Term of Reference 2. *To foster dynamic exchanges between IFCC and molecular diagnostic laboratories and industry.* **Accomplishments Include:** Dr. Jim Huggett from LGC Genomics was added to the C-MD.

List of EQA providers updated. **List planned activities in 2020 for this Term of Reference:** Continue to add collaborators.

Term of Reference 3. *To create a network of locus-specific IFCC Molecular Diagnostics Centres (MDC).*

Accomplishments Include: A new call for MDC application (Network lab or Expert lab) was initiated via the IFCC channels at the end of 2019. Additionally the concept of the IFCC MDC was explained with lectures during the Colabiocli 2019 and the Africamedlab 2019 in Marrakech to foster applications in the upcoming new call for MDCs. **List planned activities in 2020 for this Term of Reference:** Regional societies in clinical chemistry/laboratory medicine will also be addressed directly in January 2020.

Term of Reference 4. *Provide data on the current state of molecular diagnostics, with a particular focus on low-income countries, and provide information to promote quality improvement.*

Accomplishments Include:

The Committee conducted a survey of international molecular laboratories that covered specific topics of molecular diagnostic services as well as methods for EQA and AAPs. The survey addressed the following aspects: 1) usage of lab developed test, 2) participation in EQA schemes and 3) performance of alternative assessment procedures (AAPs). A total of 93 responses was received from laboratories located in Asia, Europe, the Middle East, North America and South America. For the first time a web-based international survey was conducted about SurveyMonkey in two languages. A subsequent manuscript summarizing the results of the survey has already been approved by the SD and is now to be submitted. **List planned activities in 2020 for this Term of Reference:** A new survey is prepared for 2020.

- **Traceability in Laboratory Medicine (C-TLM); Chair: Anja Kessler (DE)**

During 2019 ongoing progress towards C-TLM terms of reference included:

Term of Reference 1. *To support activities regarding Traceability in Laboratory Medicine, permitting IFCC to continue its international role in this area and providing an operating link between the SD and the WGs of the Joint Committee on Traceability in Laboratory Medicine (JCTLM), concerning identification of reference measurement procedures, reference materials and reference laboratories.*

Accomplishments include: Following the discussions in recent years, members of the committee and the participants of the annual meeting discussed their active contribution to the work of JCTLM (e.g. as review team members, author of web presentations) to establish and promote the concept of traceability.

At the JCTLM members’ and stakeholders’ meeting in December 2019 the results of RELA and the work of C-TLM as advisory board were presented by the chair (“IFCC RELA EQA scheme – Report”, a link to the presentations will appear in the next update of JCTLM website). As



representative of IFCC SD, the chair of C-TLM wanted to participate at the annual meeting of the JCTLM Working Group “Database” and the JCTLM Executive Board. However, due to the general strike in France, this could not be realized.

List planned activities in 2020 for this Term of Reference: C-TLM will contribute to the next JCTLM symposium “Traceability in laboratory medicine - vital for clinical value” at WorldLab2020 in Seoul. The title of the lecture will be “Traceability for Laboratory Medicine – the role of the national measurement institute” and highlight the qualification of calibration laboratories and their impact on implementation of metrological traceability.

Term of Reference 2. *RELA - External Quality Assessment Scheme for Reference Laboratories.* The C-TLM supports reference laboratories in the context of complete reference systems (accepted reference measurement procedures of higher order, reference materials, and reference laboratories) by establishing an External Quality Assessment Scheme (EQAS) for reference laboratories in order to monitor their competence.

Accomplishments include: The results of RELA2018 have been evaluated and published (<http://www.dgkl-rfb.de:81>). The number of published results is constantly increasing up to approximately 500 results of 50 laboratories. Especially laboratories from Europe and China are active in the project.

Total hemoglobin is part of RELA measurands for the first time. Four laboratories submitted and published their results. In general, the results are fit for the purposes: calibration laboratories can demonstrate their competence, results of candidate reference measurement procedures can be compared to established RMP, and the EQA scheme can visualize the link between calibration/reference laboratories in laboratory medicine and national metrology institutes. Since listing in the JCTLM-DB is a quality characteristic, the quality assurance criteria of the calibration laboratory should be appropriate. The regular participation at RELA is one criterion laboratories have to fulfill to obtain (and keep) listing in the JCTLM-DB. With regard to the request of the SD chair, the committee discussed its contribution to a special issue of CCA. One proposal is to evaluate the data of RELA of more than 10 years with regard to the differences between calibration laboratories, JCTLM listed laboratories and candidate laboratories and their performance (e.g. the reported measurement uncertainty). As the discussion at the last meeting has shown, the issue of measurement uncertainty is very topical and important. Both, the industrial partners and the calibration laboratories are interested in using uniform standards when introducing traceability. The committee should therefore include this issue as an important aspect in future discussions of traceability. The chair of C-TLM has presented the work of the committee at the annual meeting of WG-ID. It has been proposed to include newly developed methods to the RELA scheme as soon as available. The next RELA survey has been announced in September. Participants reported that there was an increasing need for clarification regarding the naming of the survey. Therefore, it was decided to equate the name of the execution with the year of the certificate issuance. Thus, RELA 2020 is hereby announced; a survey called “RELA2019” will not take place. The samples were shipped in November 2019 and the survey period will end in April 2020. The measurands remain the same as for RELA 2018.

Planned activities in 2020 for this Term of Reference: The results of RELA2020 will be published in mid of 2020. The activities of RELA will be continued. It is planned to conduct RELA surveys in parallel with CCQM comparison studies of NMIs for HbA1c and enzymes, respectively. The coordinators of NMIs contacted the chair of C-TLM to discuss the design and organization of both projects. It would be an important step to demonstrate the implementation of metrological traceability.

Term of Reference 3. *To promote establishment and maintenance of IFCC reference laboratory networks for clinically relevant measurands.* **Accomplishments include: HbA1c Network:** It is standard for the IFCC Network to organize two intercomparison studies a year. In 2019 there were no candidate reference laboratories. One of the reference laboratories lost its approval status because no results were submitted. The Master Equations between the IFCC Reference Measurement Procedure and the designated comparison methods were confirmed again. The



2019 intercomparison studies are in process. The network met in Barcelona (EuroMedLab May 2019) and the next meeting is planned to be held in Seoul (WorldLab May 2020). The laboratories had to decide about the forthcoming criterion for approval of the network laboratories. The majority was in favor of tightening to 1.5 mmol/mol and that was the criterion starting from 2019. For educational activities, the network is part of the IFCC C-EUBD. EurA1c, the multinational project in which national EQA organizers share two samples, was first organized in 2016. The study was repeated in 2017 and 2018. The number of participating laboratories increased from 2000 in 2016 to 4000 in 2018. In 2018 countries outside Europe also participated (Korea, Thailand and Mexico). In October 2019 the next trial EurAAA1c was started.

Planned activities in 2020 for this Term of Reference: The HbA1c network will continue its activities in 2020.

Additional Information: Prof. Gerhard Schumann has informed committee that he will end his activities as C-TLM consultant. Publication proposal (working title “The metrological concept of traceability and its application in laboratory medicine”) was discussed with the chair of WG-ID. In this contribution it should be shown, that the current practice of the concept, including its realization in the IVD regulations has moved a quite a bit away from the theoretical concept. This serves as basis of understanding for the problems encountered with the concept of material commutability and the need to go for harmonization activities.

The kick-off meeting of the European Metrology Network “TraceLabMed” has taken place at PTB, Braunschweig in June 2019. The presentations and discussions have shown that common interests must be promoted through regular correspondence and information between the metrologists and scientists of laboratory medicine. The SD allowed C-TLM to establish the position of a Consultant of EMN on the committee. The goal is to provide information about the activities and, where possible, set up joint projects. The chair of C-TLM contacted Dr. Rainer Stosch, coordinator of EMN TraceLabMed and asked for the nomination of a representative. The coordinator of EMN TraceLabMed and the chair of C-TLM submitted a proposal for a session at the EuroMedLab meeting 2021 to the scientific organizing committee. The title of the proposed session is “Global Networks to Support Metrological Traceability Requirements of the EU IVDR”. This initiative should stressed the cooperation between the various networks within the framework of the IVDR implementation.

- **Reference Intervals and Decision Limits (C-RIDL); Chair: Yesim Özarda (TR)**

During 2019 ongoing progress towards C-RIDL terms of reference included:

Term of Reference 1. *Review current concepts of establishing reference intervals (RIs) and decision limits and to prepare state-of-the-art position statements regarding new avenues.*

Accomplishments include: The study to compare alternative approaches (conventional-direct and big data-indirect) for the determination of reference intervals has been finished. The published direct data from 7 geographical regions of Turkey were included to compare with the indirect reference intervals. Indirect reference intervals were calculated with the most used and popular methods (i.e. Bhattacharya, Hoffman, Arzideh methods) in the literature that were originated from the same laboratory in Turkey.

The attempts for updating the CLSI document of EP28-28A3 guideline have been initiated as a CLSI-IFCC joint project to reflect the recently published works of C-RIDL. The main topics were indirect reference intervals, multicenter studies and clinical decision limits for the revision. The proposal for the revision has been approved and submitted for consideration by the Consensus Council at their June 2019 meeting. According to the Consensus Council’s voting, the proposal has been found too long and it should be revised and divided into two parts: 1) multicenter studies 2) verification of reference intervals. The Committee worked on this task accordingly and submitted the part of multicenter reference intervals to CLSI in December 2019.

List planned activities in 2020 for this Term of Reference: The paper on the comparison of the indirect and direct reference intervals will be published in 2020. This publication will be very important for the revision of the CLSI guideline. The C-RIDL will firstly focus on the revision of



the multicenter reference intervals for the CLSI EP28A guideline. During the C-RIDL meeting in Seoul (WorldLab 2020), the group will discuss and work on the revision of the guideline for the submitted document on the multicenter reference intervals and the verification of reference intervals using indirect reference intervals based on the comparison of different calculation methods (direct vs indirect).

Term of Reference 2. *To make available reference intervals and decision limits that respects the requirements of international directives such as the European IVD Directive 98/79, and relevant ISO standards.*

Accomplishments include: The results of the Global Reference Intervals Study performed by C-RIDL have been previously downloaded on the IFCC, C-RIDL web-page. The country-specific reference intervals were derived for China, Japan, Turkey, Russia, UK, USA, Saudi Arabia, Argentina, India, Philippines, South Africa, and Pakistan and related analyses on reference values were carried out and the comparison of the reference values across 12 countries after alignment based on the panel test results were fully described in these papers. In 2019, the indirect reference interval study of the same biochemical parameters with the Global study were initiated for the comparison and to make available reference intervals that respect the requirements of international directives such as the European IVD Directive 98/79.

List planned activities in 2020 for this Term of Reference: The publication regarding the findings of the indirect reference interval study of biochemical parameters will be compared with the results of the Global Reference Interval Study and the comparative data will also be given on the web-page.

Term of Reference 3. *To determine priority list of measurands (analytes) for which reference intervals and/or decision limits have to be developed, considering various factors, such as age, gender, ethnicity, and for which the greatest improvements in medical decision making are anticipated.*

Accomplishments include: In the indirect reference intervals study to compare with the direct data obtained conducted in Turkey, the gender-related changes in the reference values were evaluated that will be included in the comparison paper (direct vs indirect method comparison).

List planned activities in 2020 for this Term of Reference: In the indirect reference intervals study to compare with the direct data obtained conducted in Turkey, the age-related changes in the reference values will be evaluated.

Term of Reference 4. *To monitor and evaluate currently proposed reference intervals for selected measurands (analytes) in the light of the concept of traceability and of the identification of the uncertainty.*

Accomplishments include: No action was taken on this Term of Reference. **List planned activities in 2020 for this Term of Reference:** Not planned.

Term of Reference 5. *Establish transferability protocols of reference intervals and decision limits, which take into consideration inter-routine laboratory method variations and achieve better applicability in clinical practice.*

Accomplishments include: No action was taken on this Term of Reference.

List planned activities in 2020 for this Term of Reference: Not planned.

Term of Reference 6. *To collaborate with other organizations and/or to undertake establishment of reference intervals or decision limits for measurands (analytes) identified as a priority.*

Accomplishments include:

The indirect reference intervals data obtained by C-RIDL has also been evaluated by the method introduced by the German Association of Clinical Chemistry and Laboratory Medicine (DGKL) known as the 'Reference Limit Estimator'. In this way, the indirect reference intervals methods (Bhattacharya, Hoffman, Reference Limit Estimator, etc.) can be compared. **List planned activities in 2020 for this Term of Reference:** Literature or systematic review of data on reference interval studies will be written and submitted to the special issue of CCA in 2020 with the collaboration of the indirect reference intervals study group named 'Number group' in the Netherlands.

Term of Reference 7. *Work in close collaboration with other Cs and WGs of SD and other IFCC Divisions for the development and appropriate clinical utilization of reference intervals and decision limits.*

Accomplishments include: No action was taken on this Term of Reference. **List planned activities in 2020 for this Term of Reference:** An attempt will be made to collaborate with the Task Force for Paediatric Laboratory Medicine for the comparison of direct and indirect reference intervals between adult and pediatric populations.

Additional Information

Chair of C-RIDL, Prof. Yesim Ozarda gave a presentation on Current concepts AND Future Plans of Committee on Reference Intervals and Decision Limits at XXVII. Balkan Clinical Laboratory Federation Meeting (BCLF) 2019 Joint XXX. National Congress of the Turkish Biochemical Society (TBS) 2019, 27-31 October 2019, Antalya, Turkey.

- **Standardization of Thyroid Function Tests (C-STFT); Chair: Hubert Vesper (US)**

During 2019 ongoing progress towards C-STFT terms of reference included:

Term of Reference 1. *Establish a system to maintain traceability of free thyroid hormone and TSH measurements.* **Accomplishments include:** 1: In an effort to establish a network of reference laboratories for FT4, an initial interlaboratory comparison study was completed and building on the findings of the initial study, a second study was initiated and is ongoing. Currently four network members are identified: Ref4U (Belgium), CDC Clinical Reference Laboratories (USA), Radboud University Medical Center of Nijmegen (The Netherlands), and Reference Material Institute for Clinical Chemistry Standards (Japan). All network laboratories perform IFCC International conventional reference measurement procedure (RMP) that is traceable to SI in accordance with ISO 17511. The second study will be used to establish the network. As the second study is ongoing, operational rules for the network are being established; 2: The harmonization protocol is being used to harmonize TSH in Japan and to develop reference intervals for TSH based on harmonized assays. Initial findings suggest that the harmonization protocol first used 3 years ago can be reproduced. This opens up opportunities for using the protocol in other countries; 3: The committee is working on preparing a new harmonization panel for TSH to ensure continuity of harmonization. It is anticipated that this effort will take 12-18 months and will require funds created for this purpose; 4: The inventory for the harmonization panels was consolidated to be located only at NIBSC. This will increase efficiency of distribution of harmonization panels. **List planned activities in 2020 for this Term of Reference:** 1: Finalize interlaboratory study for FT4 and establish formal network of reference laboratories.

This includes network protocols and ISO compliant SOPs; 2: Finalize collection protocol for TSH follow-up panel and start collection of TSH specimens; 3: Revise harmonization protocol, if needed, based on findings for the harmonization efforts performed in Japan; 4: Publish findings from the interlaboratory studies, and if agreeable with colleagues from Japan, on the TSH harmonization.

Term of Reference 2. *Coordinate programs to evaluate free thyroid and TSH assays with regards to their analytical performance.* **Accomplishments include:** 1: The committee successfully started a collaboration with the U.S. NIST to assess suitability of potential reference materials for FT4; 2: CDC Clinical Standardization Programs will launch a standardization program for FT4 in spring 2020, which is aligned to the IFCC reference system. **List planned activities in 2020 for this Term of Reference:** 1: Coordinate standardization and harmonization efforts performed nationally, such as the CDC Standardization Programs; 2: Reach out to EQA providers to ensure accuracy-based surveys are aligned to the IFCC reference system; 3: Complete evaluation of NIST materials and publish findings.

Term of Reference 3. *Develop reference intervals for free thyroid hormones and TSH.* **Accomplishments include:** 1: The committee successfully established contact with the Nepalese Society of Clinical Chemistry and will work with the C-RIDL to help with establishing reference intervals with Nepal; 2: The committee provided technical assistance to colleagues in





Japan to help establish harmonized reference intervals for TSH. These intervals will be recognized by regulatory bodies and clinical stakeholders; 3: The committee successfully established contact with PIs of the EUThyroid project to help with harmonizing/standardizing FT4 and TSH tests used in the study; 4: The committee successfully reached out to PIs in Croatia to help with harmonizing reference intervals for TSH; 5: The committee identified a large epidemiological study in Finland and is reaching out to ensure TSH and FT4 measurements are aligned with the IFCC reference system; 6: The American College of Pathologists is using an accuracy-based survey for thyroid function with reference values for FT4 aligned to the IFCC reference system.

List planned activities in 2020 for this Term of Reference: 1: Develop approaches/protocols to align ongoing reference interval activities to the IFCC reference system as interim until assays are standardized/harmonized; 2: Provide technical assistance to national efforts developing reference intervals or conducting studies that may be used for developing reference intervals.

Term of Reference 4. Liaise with key stakeholders to promote the use of the standardized assays in routine clinical practice and public health, to ensure analytical performance requirements meet clinical needs, and to help with developing and establishing reference intervals.

Accomplishments include: 1: A committee member provided presentations as educational activities about the importance of thyroid function test standardization at the annual meeting of the AACC.

List planned activities in 2020 for this Term of Reference: 1: Conduct meetings or workshops at national meetings such as the annual AACC meeting to promote standardization of FT4 and harmonization of TSH; 2: Conduct one meeting at the Worldlab conference in Seoul and invite stakeholders from that geographical region to inform them about the work being performed by the IFCC and to obtain information about ongoing national efforts in the region; 3: Conduct one in-person committee meeting outside major meetings similar to the November meeting. Thus, focus meetings at conference such as Worldlab on outreach and education; 4: Summarize and publish survey data conducted by Prof. Thienpont. Also, publish manuscript on stakeholder engagement for special CCA issue. **Additional Information:** A concept will be developed for sustaining the reference system beyond the term of the committee.

- **Harmonization of Autoantibody Test (C-HAT); Chair Joanna Sheldon (UK)**

During 2019 ongoing progress towards C-HAT terms of reference included:

Term of Reference 1. *To evaluate what are the main causes of variability for a number of diagnostically critical autoantibodies.* **Accomplishments include:** No further progress since the last update.

Term of Reference 2. *To identify autoantibodies where a common calibrator could reduce the inter-assay variability.* **Accomplishments include:** The first commutability study for IgG anti glomerular basement membrane has been completed and a candidate material identified. Prof Pusey from the Imperial School of Medicine will hopefully provide the material. Dr Evi Monogioudi at the JRC is currently sourcing the ELISA kits for further studies on the collected patients' samples. Developing reference materials for IgG and IgA anti TTG antibodies is progressing. Data from the 1st commutability study for IgG anti TTG is being analysed and the IgA anti TTG will progress further when additional reagents have been received.

Term of Reference 3. *To identify or produce commutable materials that could be used as interim calibration material for autoantibody assays.* **Accomplishments include:** The difficulties in assigning a value in mass units to the B2GP1 prepared reference material has made it impossible for this material to progress under the JRC. Nevertheless, the material is commutable and is likely to improve the standardization of B2GP1. The WG explored the possibility of the alternative approach of assigning value in arbitrary units and therefore approached NIBSC.

Dr. Evi Monogioudi and Dr. Jo Sheldon met with NIBSC in July 2019 and they were supportive of the initiative. Dr. Monogioudi sent all the materials and relevant data to NIBSC which will proceed to make an application for this material to become a WHO reference material with values in arbitrary units. The formal application is likely to be submitted to the WHO in December 2020. **List planned activities in 2020 for this Term of Reference: FDA and CE:** A

very disappointing meeting with corporate colleagues within the Autoimmunity area took place in Dresden on 9th September 2019. Approximately 40 company representative attended and the discussions were lively and at times aggressive. The companies were asked what were the major barriers to adopting the new reference preparations for IgG anti proteinase 3 and IgG anti myeloperoxidase. Their short answers were that the cost would be too high (over \$1million was suggested), the effort too large (particularly with FDA applications) and the benefit was negligible. The companies agreed that they participated fully in the evaluation process, donating reagents and analysing samples because they did not want to miss out but overall they would not adopt the materials unless legally required to do so.

The WG may need to find alternative ways to encourage companies to adopt these materials and currently the chair is exploring with a small number of companies whether it is possible to have the conversion factors (or even the standards) available in values w.r.t the CRMs to start collecting data, particularly via EQA, on the impact of the reference materials. **Education:** Continuing; **EQA:** No further progress; **Communication:** The interaction with the FDA is central to being able to promote the use of the new CRMs and this must be the focus of the C's activities. Until the use of ERM-DA476/IFCC and ERM DA 483/IFCC is embedded into kit documentation, further communication with other bodies will be difficult.

Time scale: No further progress; **Further projects:** Anti GBM antibodies and Anti TTG antibodies are both in progress.

Term of Reference 4. *To produce well-characterized pure antibody preparations with known concentration and identity and use these to transfer values to a matrix preparation.*

Accomplishments include: The preparation of pure antibody preparations with known concentration is embedded in the value assignment process.

Term of Reference 5. *To evaluate the impact of new reference material on the variability of autoantibody tests and identify areas where further harmonization would improve diagnostic accuracy.*

Accomplishments include: The WG is in discussion with UKNEQAS and the Royal College of Pathologists of Australasia Quality Assurance Programs but the progress depends on some cooperation from companies to enable to use values based on ERM DA 476/IFCC and ERM DA 483/IFCC..

Additional Information: The WG specifically encouraged all companies not currently members of the IFCC to become corporate members both in letter and in presentations.

- **Bone Metabolism (C-BM); Chair: Etienne Cavalier (BE)**

During 2019 ongoing progress towards IFCC-IOF Joint Committee for Bone Metabolism (C-BM) terms of reference included:

Term of Reference 1. PTH standardization. Accomplishments include: - Commutability study: Goal is to prove that the WHO IS 95/646 is commutable. A plan has been developed. Dilutions of the IS (internal standard) will be prepared. Patient samples will be collected that will bracket the dilutions. Each sample+dilution will be run in triplicate with different PTH assays to check commutability. In January 2020, UK-NEQAS controls will be prepared by enriching plasma pools with the IS and will be run together with patients' samples as a preliminary study; - **RMP for PTH:** Dr. Candice Ulmer presented the first results of the RMP LCMS/MS method currently in development at the CDC facilities, both at the C meeting in Barcelona at EuroMedLab and at the AACC meeting in August. CDC is working on improving the LOQ of the method and expanding the number of fragments recognized by the method. CDC also plans to work on real patients' samples; - **Liaison with other societies:** the C-BM is already endorsed by the IFCC. The chair (Prof. Etienne Cavalier – EC) has contacted K-DIGO representatives, but K-DIGO does not endorse any other initiative. EC is in contact with the ERA-EDTA to try to set up a joint ERA-EDTA-IOF-IFCC Committee. The Council of ERA-EDTA (European Renal Association-European Dialysis and Transplantation Association) has accepted to endorse the Committee and Standardization project. **List planned activities in 2020 for this Term of**



Reference: Achieve and finalize the commutability study. Transition to focus on the PTH RMP.

Term of Reference 2. Standardize or harmonize bone markers assays; Accomplishments

include: - PINP: * A manuscript on the results of the multicentre study has been accepted by CCLM; * During the IOF-IFCC held in Paris on April 3rd 2019, EC has proposed an equation to “recalibrate” the kits against each other based on 10% of the results of the multicentre study. This equation has been “validated” on another set of independent samples. This shows that harmonization of PINOP is possible. Essentially, Roche and IDS are in close agreement whereas Orion presents lower results. Since there is no reference method nor reference standard, it is impossible to determine which method is “wrong” or “right”. Orion IRMA is the predicate in the US and does not want to change its standardization. Roche is the marker leader (at least in Europe) and does want to change either. IDS sells Orion kits in the US and iSYS kits in Europe and would accept a change. With the help of Dr. Vincent Delatour (VD), a preliminary commutability study will be organized in Liege; * The EFLM group on biological variation has kindly provided the remaining samples from the EuBIVAS study (90 patients, 10 times, in duplicate) so that they can be run for PINP (and other bone markers) in Liege on the iSYS. Results have been obtained and sent to be analyzed by EFLM experts.

- EC has written a paper on BV of bone markers. The paper has been accepted by IFCC, IOF and EFLM boards. The paper has been submitted to Osteoporosis International and has been reviewed.

EC is working on the responses to the Reviewers. An Editorial on PINP has also been written.

- EC and VD are working to find a commutable standard for PINP. One matrix has been found to be commutable with the 3 methods when enriched with the IDS top dose. EC has requested Roche and Orion’s to check commutability with this matrix. - **CTX:** * A paper on the multicenter study has been written, but it has been put on hold because of the poor quality of the results;

* Samples have been exchanged between Greece and Belgium and run in the 2 labs: results confirm that the problem of the Cobas in GR were incidental and good agreement has now been achieved between centers; * A study on biological variation of CTX on remaining samples from EuBIVAS has been performed. Decision will need to be taken on the results from the multicentre study. - **Other bone biomarkers:** Other biomarkers have been measured in Liege to evaluate their biological variation: osteocalcin and FGF-23. The manuscript will also present these results.

List planned activities in 2020 for this Term of Reference: PINP: Finalize the commutability study. Evaluate the opportunity to develop a RMP for PINP. Prepare commutable standard to calibrate the assays (with the help of the LNE). Submit additional manuscripts. **CTX:** Manufacturers will hopefully work to improve the issues observed on the multicentre study. This is mandatory for the future of the marker. Write the paper on biological variation of CTX (and other bone markers).

Term of Reference 3. Vitamin D metabolites assay standardization. Accomplishments include:

* In collaboration with the NIST, a study has been organized to evaluate the performance of different assays on a single donor panel. The LCMS reference method at NIST has been used to assign the value of the samples and they have all been measured in Liege with most of the different immunoassays available on the market according to the VDSP protocol. A paper is currently under redaction; Contacts have been made with Professor Callum Fraser to see if uncertainty could replace bias and CV in VDSP targets. EC is measuring 25OHD and 24,25(OH)₂D in samples from EuBIVAS.- Analysis of the EuBIVAS samples is still ongoing; - A study on 25OHD in pregnant women has been planned. Samples will be collected from 1st and 3rd trimester pregnant women. Samples will be sent to be measured with most of the immunoassays (2 labs by immunoassays), two LCMS/MS and CDC and/or NIST reference methods. NIST has also prepared new standards for pregnant women and these will be measured in this study.

List planned activities in 2020 for this Term of Reference: Write and submit the paper on the study: - Propose an “external” validation of IVD certified assays for VDSP; - Work on current VDSP performance guidelines for 25(OH)D (measurement uncertainty?); Finalize the study on biological variation and write a paper; Update the Stockl paper with the new results from EuBIVAS (with Callum Fraser); Complete the study on VTD in pregnant women.

- **Standardization of Hemoglobin A₂ (WG-SHbA₂); Chair: Andrea Mosca (IT)**

During 2019 ongoing progress towards WG-HbA₂ terms of reference included:

Term of Reference 1. *Definition of a reference measurement procedure for haemoglobin A₂.*

Accomplishments include: No significant advances on this matter due to the lack of calibration materials. New lots of calibration materials were delivered at the end of September 2019. The characterization of their impurities and specific protein content is under way. **List planned activities in 2020 for this Term of Reference:** Delivery of the characterized calibration materials to at least three independent reference laboratories. The laboratory of Dr. Quinde Liu has been replaced by that of Prof. Tianjiao Zhang (NCCL, China). A final validation will be performed in order to publish the RMP as an official IFCC reference method, after approval by the Scientific Division and further ballot among the Corporate National Societies.

Term of Reference 2. *Development of a secondary certified reference material (CRM) for hemoglobin A₂ (in cooperation with the JRC).*

Accomplishments include: In the first week of April 2019, two members of the IFCC WG went to the JRC site in Geel to transfer the knowledge of the procedure for the preparation of the CRMs for HbA₂. **List planned activities in 2020 for this Term of Reference:** Production of two large batches of CRMs at normal and pathological HbA₂ concentration, to be used by the manufacturers to align their routine methods to the IFCC traceability chain. The procedures to collect the starting material (fresh blood from healthy blood donors, non-carriers and carriers of beta-thalassemia) are being officialized in collaboration with the Milan's major Hospital (IRCCS Ca' Granda, Ospedale Maggiore Policlinico).

- **Standardization of Carbohydrate-Deficient Transferrin (WG-CDT); Chair Jean Deenmamode (UK)**

During 2019 ongoing progress towards WG-CDT terms of reference included:

Term of Reference 1. *Promoting the use of the HPLC reference measurement procedure (RMP) as the accuracy base for CDT test standardization.*

Accomplishments include: Some members of the WG have been in contact with new diagnostic centres, with a focus on CDT, in Slovenia, Lithuania and Italy to participate as network laboratories by using the HPLC RMP. The chair has been in contact with the head of Colabiocli who expressed interest in (previously unaware) CDT and possibilities to have a candidate network lab to cover the South Americas, following email communications. No further update since then. **List planned activities in 2020 for this Term of Reference:** Further participants will be sought globally. Maintenance of further progress in the setup of the RMP at interested sites to cover the Indian Ocean and African continent, as well as exploring opportunities in Australasia. Raising further awareness in using the RMP to other groups involved with CDT. Maintaining momentum and encouraging participation of new potential candidate network labs in Slovenia, Lithuania and a further Italian laboratory, in the IFCC CDT 2020 blind study.

Term of Reference 2. *Maintaining sustainability of an international network of laboratories*

Accomplishments include: Sustainability and performance of network laboratories and participating commercial manufacturers are assessed by the yearly distribution of IFCC calibrators, controls and blind samples from Dr Weycamp's laboratory. Laboratory performance is assessed on a pass/fail criterion and HPLC RMP performance is assessed in further detail by Dr Schellenberg. The 2019 Cycle took place during the first quarter of the year with participants' results submitted by end March. Performance and participation were presented and discussed during the meeting on 19 May in Barcelona. The chromatographic patterns submitted were reviewed. There were five successful IFCC networked laboratories in 2019, with two candidate labs yet to improve in performance and one manufacturer who has yet to pass the blind study. Manufacturers' contribution towards this study do not form part of the CDT WG's funds. **List planned activities in 2020 for this Term of Reference:** Cycle of blind IFCC samples will take place during the summer 2020; following prior requests that will be sent to all prospective





participants (network labs and manufacturers). Results will be presented and discussed during the WG CDT meeting in Sept. 2020.

Term of Reference 3. *Supporting the worldwide standardization of commercial methods against the RMP*

Accomplishments include: Most participating commercial CDT manufacturers have achieved positive results towards CDTIFCC and have launched respective assays. One manufacturer no longer produces CDT kits following closure of one of its plants in Germany. Another commercial CDT manufacturer has requested participation in standardization of its CDT assays. A Dutch network laboratory is providing advisory assistance and guidance for a manufacturer to further improve its CDT assay. **List planned activities in 2020 for this Term of Reference:** Continue to assist the remaining commercial participants in successfully achieving the CDTIFCC goal. The WG will endeavor to support the transition from classical CDT to CDTIFCC.

Term of Reference 4. *Offering consultation concerning use of biomarkers of alcoholism towards national and international agencies.* **Accomplishments include:** Generally, a local or extended activity initiated primarily by a member of the WG. The process has been in place with better success in Sweden and the Netherlands. Similar efforts are progress in the UK with certain agencies, aviation Medicine and government advisors abroad. Another WG member is working with a CDT manufacturer to approach an industry where CDT testing is a much-needed test. **List planned activities in 2020 for this Term of Reference:** To maintain the above activities ongoing in other countries.

Additional Information: Two further terms: - Providing scientific support for the production and delivery of authorized CRM: Actively supporting other sites interested towards introducing the RMP as part of the network laboratories; - Supporting the development of guidelines for clinical use of CDT assays: Work in progress; Current Projects: Promoting the use of the HPLC reference measurement procedure (RMP) as the accuracy base for CDT test standardization; Maintaining an international network of reference laboratories; Supporting the worldwide standardization of commercial methods against the RMP; JCTLM nomination in progress with decision expected end 2019.

- **Standardization of Albumin Assay in Urine (WG-SAU) (a joint committee with the Laboratory Working Group (LWG) of the National Kidney Disease Education Program (NKDEP), USA); Chair: Lorin Bachmann (US)**

During 2019 ongoing progress towards WG-SAU terms of reference included:

Terms of Reference 1. *Status of harmonization among commercial immunoassays for UA (funded by NKDEP).* **Accomplishments include:** The objectives of this project are to: 1.) Assess current status of harmonization of routine measurement procedures versus ID-LCMS candidate reference measurement procedure using native patient samples; 2.) Evaluate analytical performance characteristics of urine albumin measurement procedures; 3.) Evaluate commutability characteristics of the Japan Society for Clinical Chemistry (JSCC) and diluted IRMM ERM-DA470k/IFCC reference materials; and 4.) Assess utility of candidate reference materials for use in standardization of routine measurement procedures. Findings were published in Bachmann LM, Nilsson G, Bruns DE, McQueen MJ, Lieske JC, Zakowski JJ, Miller WG. State of the Art for Measurement of Urine Albumin: Comparison of Routine Measurement Procedures to Isotope Dilution Tandem Mass Spectrometry. Clin Chem 2014; 60:471-480.

A freeze-thaw study was performed using 66 pairs of unfrozen and frozen freshly collected, native urine samples to determine the effects of a single freeze-thaw cycle urine albumin results. Samples spanning the concentration range of 15 – 1,000 mg/L were included in the study. Samples were centrifuged and one aliquot was stored at 2-8C and the other was frozen at -70C for a minimum of 66hrs. The non-frozen and frozen aliquots were shipped to 10 manufacturers for albumin measurement. Median bias for frozen vs. non-frozen samples was < 1.2% for all methods tested suggesting that frozen samples may be used for the commutability studies. However, outlier samples were observed with biases that exceeded 10%. Formal statistical

analysis is in process. **List planned activities in 2020 for this Term of Reference:** A manuscript for the UA freeze/thaw study is under preparation that will be submitted to CCLM or JALM.

Terms of Reference 2. *Reference measurement procedure for UA (funded by NKDEP and NIST)*

Accomplishments include: Candidate isotope dilution liquid chromatography tandem mass spectrometry (ID-LC-MS/MS) reference measurement procedures for UA are under development by the Mayo Clinic Renal Testing Laboratory (John Lieske), University of Minnesota Advanced Research Diagnostic Laboratory (Jesse Seegmiller) and NIST (Ashley Beasley Green). NIST and Mayo continued to perform development of their candidate reference measurement procedures and conducted planning sessions for validation and JCTLM submission. Monthly conference calls were conducted beginning on Sept. 2018 between NIST, Mayo, Univ of Minnesota and LWG and WG-SAU chairs. The funding contract for development of the reference measurement procedure at Univ of Minnesota in the Advanced Research and Diagnostic Laboratory was finalized in the beginning of March 2019. After funding was secured, laboratory supplies were ordered March 6th. Additional laboratory staff have been hired to assist. Initial studies and measurement procedure development are currently underway. In previous discussions with the NKDEP-LWG, it was agreed upon between Mayo Clinic and the University of Minnesota, that a synthetic urine matrix would be utilized for calibrator preparation to ensure lot-to-lot calibrator consistency and long-term availability. The matrix would not consist of a proprietary commercial synthetic matrix; rather it will be a matrix that can be prepared in the laboratory from commercially available chemicals. The synthetic matrix recipe was circulated and will be used by both the University of Minnesota and Mayo Clinic to increase the probability of assay agreement. The calibrators have been prepared on the basis of extinction coefficient analysis and value assignment was conducted using this approach. NIST is using SRM 2925 for calibration of their candidate reference measurement procedure, and has provided some guidance on linking the concentrations of calibrators at Mayo Clinic and the University of Minnesota to SRM 2925. The SRM does not provide sufficient concentration/volume for the University of Minnesota and Mayo Clinic to prepare the desired quantities of calibrators. NIST will be providing a reference material (possibly SRM 2925a) with a higher concentration of albumin) in the future. Mayo has modified their procedure to use TCEP as a reducing agent, replacing DTT. This change will simplify transfer of the process to a robotic liquid handling system and provide for a potentially more precise and less toxic alternative to DTT. Studies to evaluate this new process are ongoing. From mid-March 2019 to July 2019 validation studies were performed. The % coefficient of variation (%CV) was determined over 21 days in calibration matrix and in human urine controls. These values derived from the UMN laboratory were shared with the laboratory working group members in hopes to come to a consensus on the reference measurement procedure protocol. Next steps involve consensus on alignment of calibration between laboratories with the use of the NIST reference material, performing sample comparison studies and proceeding with the validation of the reference measurement procedure. The group has reviewed the JCTLM submission requirements and is designing validation and round robin sample exchanges to fulfil the submission requirements. The uncertainty requirement for the RMP results is being determined based on the propagation of error in the calibration hierarchy and the allowable total error for the end-user laboratory patient result published in: Miller WG, Seegmiller JC, Lieske JC, Narva AS, Bachmann LM. Standardization of Urine Albumin Measurements: Status and Performance Goals. *J Applied Lab Med* 2017;2:423-9. **List planned activities in 2020 for this Term of Reference:** NIST, Mayo and Univ of Minnesota will continue to develop and validate their reference measurement procedures and pursue validation of the candidate reference measurement procedures in accordance with ISO 15193 and other relevant standards for the purpose of JCTLM listing.

Comparison studies for candidate reference measurement procedures will be performed among NIST, Univ of Minnesota and Mayo and any additional discrepancies will be investigated.

Term of Reference 3. *Reference materials for UA and urine creatinine.* **Accomplishments**





include: SRM 2925 Human Serum Albumin from NIST is a primary certified reference material for use with higher order reference measurement procedures for albumin. It is a solution of recombinant human serum albumin (~1 g/L). Value assignment is by amino acid analysis using ID-LC-MS/MS. Documentation is currently in review in the NIST Office of Reference Materials, and official release is anticipated in early 2020. In the meantime, NIST is providing SRM 2925 for use in the development of the reference measurement procedures. To facilitate standardization of routine methods, NIST SRM 3666 is currently being developed based on the specifications recommended by the WG-SAU and the LWG of the NKDEP. The NIST SRM 3666 Albumin and Creatinine in Human Frozen Urine certified reference material will be pooled urine collected from human subjects with four urine albumin levels: 5-10 mg/L, 20-50 mg/L, 60-180 mg/L, 275-375 mg/L. All four levels of pooled urine will be available frozen, in 1 mL aliquot volumes. The four pools have been prepared and vialled by Solomon Park, and all candidate materials have been received by NIST. Preliminary analysis of the four pools indicates that the target albumin concentrations were achieved for each pool. **List planned activities in 2020 for this Term of Reference**

NIST will value-assign SRM 3666 once the NIST candidate reference measurement procedure is finalized. A commutability study of the SRM 3666 materials will also be conducted.

Additional Information: Dr. Jesse Seegmiller will become the Chair in 2020

- **Standardization of Pregnancy-associated Plasma Protein A (WG-PAPP A); Chair Saara Wittfooth (FI)**

During 2019 ongoing progress towards WG-PAPPA terms of reference included:

Term of Reference 1: *To develop a reference system for standardization of PAPP-A measurement employed as marker for prenatal screening.* **Accomplishments include:** A pregnancy-serum based material to be made available as the certified reference material for PAPP-A was identified (NIST SRM 1949). There is preliminary agreement with NIST to co-operate with WG-PAPP-A to add PAPP-A reference values to the SRM certificate. The plans for working towards the PAPP-A value assignment of the NIST SRM 1949 have been drafted within the WG. **List planned activities in 2020 for this Term of Reference:** Finalization of the protocol and testing of NIST SRM 1949 with manufacturers' assays and assignment of PAPP-A value for this material. Scientific article of the accomplishments of this WG. Possibly also a study of the performance of the commercial PAPP-A assays "in the field" in respect of the detection of different PAPP-A forms in collaboration with UK NEQAS.

- **Growth Hormone (WG-GH); Chair: Eef Lentjes (NL)**

During 2019 ongoing progress towards WG-HbA₂ terms of reference included:

Term of Reference 1. *To achieve standardization of growth hormone through secondary reference materials and a reference measurement procedure.* **Accomplishments include:** - Approval from the Medical Ethical Committee for blood withdrawal from healthy persons which will undergo an exercise test in order to obtain blood with high growth hormone concentrations; - Agreement with the in-house sports-medicine department to do the exercise tests. The cyclists will be monitored constantly during the exercise by a physician and after the test a phlebotomist will collect 500 ml of blood. This study will be activated when there is enough funding; - Dr Christian Arsene (Physikalisch-Technische Bundesanstalt, Braunschweig, Germany) and Dr Milena Quaglia (LGC, Teddington, London, UK) will work on the reference method for 22 KDa growth hormone. **List planned activities in 2020 for this Term of Reference:** - recruit 15 healthy persons for donation of 500 ml of blood after strenuous exercise; - constructing 5 pools from the serum of the cyclists and from serum of healthy donors (blood bank) with concentrations of growth hormone ranging from low to high ; - aliquoting the pools (1 ml) and storage at -70-80°C; - testing for equality of the pools; performing a test for commutability of the pool samples.

- **Standardization of Insulin Assays (WG-SIA); Chair: Michael Steffes (US)**

During 2019 ongoing progress towards WG-SIA terms of reference included:

Term of Reference 1. *To improve the standardization of assays for insulin by the development of a candidate reference method and materials.* **Accomplishments include:** 1. Ongoing development and validation of MS/MS method for intact insulin at University of Minnesota. The next step subsumes measurement of insulin concentration in 2000-3000 samples. Significant progress has been made following prioritization and financial support for development of the LC-MS/MS insulin assay at the University of Minnesota; 2. Continued collaboration with other laboratories (Quest Diagnostics, Mayo Clinic) developing insulin methods by mass spectrometry and sustain efforts to evolve reference method procedures with these laboratories; 3. In collaboration with the College of American Pathologists (CAP), established criteria for ongoing accuracy based evaluation of serum pools for testing of insulin, C-peptide, and glucose. This accuracy based survey can be sent globally and utilized to demonstrate ongoing state of harmonization and standardization of insulin assays (as well as C-peptide assays); 4. Continued collaboration with NIBSC to evaluate insulin candidate reference material which will ultimately be utilized to calibrate the mass spec methods and thus establish it as a higher order reference method. This area is actively overseen by Dr. Gwen Wark, University of Surrey, Guildford (UK), Dr. Christopher Burns, and colleagues at NIBSC. Dr. Wark is an active member of the IFCC WG-SIA; 5. Implemented accuracy based proficiency testing survey using serum pools for insulin (and c-peptide) via the College of American Pathologists; results will allow for assessment of comparability of results across assays, using a commutable matrix, as we move towards standardization or harmonization. **List planned activities in 2020 for this Term of Reference:** Continued validation of an intact insulin assay via LC-MS/MS that meets all analytical and clinical specifications for insulin testing.

Term of Reference 2. *Establish availability of pure recombinant human insulin as a Reference Material (RM) for insulin assays and have the RM listed by JCTLM.* **Accomplishments include:** No update.

List planned activities in 2020 for this Term of Reference: Not planned.

Term of Reference 3. *Continue a program to collect serum samples (and serum pools) as needed for assignment of IDMS values and a biobank which could be utilized collaboratively by the WG-SIA and C-peptide Standardization Group. These materials will sustain the program to harmonize results from manufacturers of insulin assays.* **Accomplishments include:** No update.

List planned activities in 2020 for this Term of Reference: Not planned.

- **Standardization of Troponin I (WG-TNI); Chair Rob Christenson (US)**

During 2019 ongoing progress towards WG-TNI terms of reference included:

Term of Reference 1 and 2 (similar and therefore covered together): *Design, & Development of a candidate secondary reference measurement procedure for cardiac troponin I.*

Accomplishments include:

- The commutable Reference Materials (RM) for cardiac troponin I (cTnI) has been coined RM 8121 by National Institute of Standards and Technology (NIST). RM 8121 will actually be a set of four (4) samples having successively increasing concentrations, levels A-D. RM 8121 will be housed and distributed at the NIST in Gaithersburg, Maryland, USA. At this stage of technology development, the material will be an RM rather than a Standard RM (SRM) because neither mass spectrometry methodology nor other technology are appropriately sensitive for direct assignment of values to RM 8121 and can not yet have the characteristics required for metrological value assignment; About 1 year ago the WG-TNI finalized the protocol for collection the ‘raw materials’ for developing RM 8121 samples from patients with myocardial infarction (MI) having appropriate TnI concentrations. To date 57 MI patients were recruited and underwent informed consent in accordance with all rules and regulations. Blood collection to produce serum, in accordance with an Institutional Review Board approved (IRB) processes for the activity was conducted. This collection is complete





and the raw materials will be provided to produce RM 8121. Additional MI subjects will be recruited and samples collected as a contingency for unforeseen complications.

- The WG-TNI had a casual meeting at the 2019 AACC Annual Meeting. This meeting was attended by Drs. Lowenthal and Phinney from NIST, Dr. Robert Payne from Siemens and Jim Pierson- Perry, Christa Cobbaert and Ian Young of the IFCC SD, among others. Based on the open discussion at this meeting it was decided that the matrix for the RM 8121 would be lithium heparin plasma because this is predominant matrix used clinically for cTnI measurements worldwide. NIST has previous experience in collaborating on production and distribution of RMs in a lithium heparin matrix. The NIST members identified no issues with providing RM 8121 in the lithium heparin matrix preferred by intended users.
- In addition, it was discussed at this meeting that RM 8121 will consist of a set of four (4) samples, labelled levels A-D that will have increasing concentrations of cTnI. The samples collected from MI subjects will be pooled and used to develop the vials at the 4 concentrations. Initially, the data will be expressed in cTnI values from the Atellica TnIH assay (Siemens Healthineers), The cTnI concentrations will be as follows: 1. Level A ~>LOQ but < female 99% upper reference limit (URL), target concentration 20 ng/L (range 10 ng/L – 30 ng/L); 2. Level B ~99% male URL + 20%, target concentration 65 ng/L (range 50 ng/L – 80 ng/L); 3. Level C ~ 5-fold higher than 99% URL of males, target concentration 265 ng/L (range 220 ng/L – 310 ng/L); and 4. Level D, which will challenge the assay range, i.e. ~20-fold higher than Level C, target concentration, ~6500 ng/L (range 6000 ng/L – 7000 ng/L).
- A separate IRB submission for collection of low cTnI concentrations samples in a lithium heparin ‘diluent’ matrix for producing RM 8121 is in the final development phases. Briefly, an equal number of male and female volunteers will be recruited for producing the lithium heparin matrix for RM 8121. This lithium heparin diluent that will be collected from normal healthy individuals below the age of 40 years. Collection from this younger population will be used because their samples are better suited for use in diluent production according to literature showing lower cardiac troponin concentrations in younger individuals compared to older individuals. Each recruited individual will undergo an initial screening visit at which they will complete a standard health assessment form. Potential volunteers will also have 3 mLs of blood collected for infectious disease testing (Hep A, B, C and HIV). Once the volunteers have successfully passed the screening examination, they will undergo phlebotomy in the University of Maryland School of Medicine General Clinical Research Center (GCRC). This facility routinely collects units of blood (i.e. 500 mLs) for research projects from normal healthy individuals. Each volunteer for producing RB 8121 will donate 1 unit, i.e. 500 mL of blood, collected by a standard technique at GCRC. The blood will be collected into a standard donor bag containing an appropriate amount of lithium heparin to produce plasma in the same final concentration as standard lithium heparin phlebotomy tubes. The collection from each normal healthy subject will be processed within 3 hours of collection by standard technique to separate the lithium heparin plasma from cellular components and then the donated plasma from each individual will be individually frozen in bulk and maintained at -700C until the blending process for producing RM 8121. Plasma donations from the 50 volunteers will produce ~12.5 L of lithium heparin plasma that will be used as the diluent for RM 8121. ~12.5 L will be sufficient to produce the 4 sets, Levels A-D, comprising RM 8121 in 2500-4000 vials for each level (total 10,000 to 16,000 vials) in a volume of 0.70 mL per vial.
- The remaining processes for producing sets of RM 8181 vials are articulated in NIST’s Scope of Work (SOW). A nearly final draft has been prepared.

List planned activities in 2020 for this Term of Reference (1 & 2 combined):

- Continue to work closely with Drs. Lowenthal, Phinney, Robert Payne and knowledgeable members of the laboratory community to produce RM 8121. The WG will work to the endpoint of making this resource generally available to all in the laboratory medicine field, worldwide.
- The WG has initiated and will complete IRB submission for ethical recruitment of normal healthy men and women for the purpose of collecting a unit of blood (~500 mL) from each

volunteer for use in producing the lithium heparin matrix diluent for RM 8181.

- In collaboration with NIST, the WG will use the collected MI samples and properly produce the lithium heparinized plasma matrix for RM 8121
- Assist NIST in completing the Statement of Work (SOW) for blending the lithium heparin diluent and producing the four cTnI concentrations, A-D, that will comprise RM 8121. A total of about 10,000 to 16,000 vials with 0.70 mL each.
- Collaborate with NIST in selecting an appropriate vendor that can meet all specifications of NIST's final SOW.
- Collaborate with NIST to oversee blending and production of 2500 to 4000 vials of 0.7 mLs each at the four, A-D cTnI levels.
- Design and (if timing allows) conduct a Round Robin with RM 8121 with all commercial entities having a cTnI method that meets high-sensitivity cTnI specifications
- Write methods paper for publication on "Production of a Commutable Reference Material for Cardiac Troponin I".
- Write a paper describing the Round Robin for RM 8121 and promulgating the results.

Term of Reference 3: *Conduct a pilot round robin study to assess cTnI standardization and initiate validation and characterization among commercial cTnI assays. **Accomplishments include:***

- On behalf of the WG-TNI, Dr. Christenson (chair) collaborated with Dr. Lowenthal at NIST and Dr. Robert Payne at Siemens to conduct a Pilot Round Robin study. The purpose of this study, in part, was to validate the strategy for developing materials intended for RM 8121. This study was designed and conducted to produce five (5) samples with sequential TnI levels. The pooled samples comprising these pools targeted various increasing concentrations of cTnI, similar to what is planned for RM 8121.
- The raw materials to produce the pooled samples for the pilot round robin were from de-identified residual human samples in Dr. Christenson's laboratory; the raw materials were retrieved under an IRB approved protocol. The residual de-identified samples were sent to Dr. Payne with instructions for blending with a low-cTnI lithium heparin matrix diluent in amounts sufficient to produce the designed cTnI levels. The 5-member set of blended samples that Dr. Payne oversaw demonstrated nearly 100% recovery compared to the calculated values in the design. The sets of vials were then shipped back to Dr. Christenson's laboratory for distribution/measurement.
- The WG recruited several manufacturers of high-sensitivity cTnI assays that are US FDA cleared or in the last phases of development to collaborate.
- Sets of the 5 levels comprising the pilot were run on platforms of 5 high-sensitivity cTnI methods by individuals who were blinded to the concentrations in any vials. Roche (5th GEN TnT) also participated.
- A primary objective was to characterize the relationships between the hsTnI methods.
- The data in preliminary form were presented to the group in attendance at the casual meeting of the WG-TNI at the 2019 AACC Annual Meeting.

List planned activities in 2020 for this Term of Reference: Invite other high-sensitivity cTnI manufacturers to participate; Submit abstract to 2020 AACC Annual Meeting on this pilot work; Present data at other scientific venues; Prepare a manuscript to promulgate the pilot round robin results.

Additional Information: There are several activities that are being planned by the workgroup as follows.

- Progress on developing a commutable reference material will be presented at scientific meetings.
- The production of an app will be explored. This app would make available evidence of the relationship and perhaps a strategy for normalizing values of the various hsTnI assays from the round robin activity.
- Explore the contact made with the Maastricht cardiac biomarker group that has experience





investigating cTnI subforms that are released early after cardiac ischemia. This contact was kindly provided by Prof. Cobbeart. Examining characteristics of the various hsTnI subforms associated with acute injury versus chronic forms of heart disease could be interesting.

- Currently the technology does not exist for developing and properly defining a TnI SRM. The workgroup will continue to discuss what should be focused on for use in developing this RM into an SRM in the future.
- Continue to reach to Dr. Claudia Swart (Germany) who is working in this same general area at the Physikalisch-Technische Bundesanstalt in Braunschweig, National Metrology Institute. The WG sees the collaboration with this group would likely be synergistic.

From a public health perspective, the path to true standardization of cTnI assays is well worth the effort of going to the US FDA and discussing how this could be done by transference of values. Others in IFCC have done similar projects and the WG looks forward to discussions that could lead to better healthcare for cardiac patients.

- **CSF Proteins (WG-CSF); Chair; Johan Gobom (SE)**

During 2019 ongoing progress towards WG-CSF terms of reference included:

Term of Reference 1. - Collaborative effort to develop RMPs and CRMs of CSF biomarkers to enable harmonization across analytical platforms; - Development of new CSF biomarkers.

Accomplishments include: Initiated Round Robin study of candidate RMPs for CSF amyloid beta 1-40; -Round Robin study of candidate RMPs for CSF tau under way; - Planning of blood Nfl Round Robin and commutability study. **List planned activities in 2020 for this Term of Reference:** - Concluding Round Robin study of candidate RMPs for CSF amyloid beta 1-40; Concluding Round Robin study of candidate RMPs for CSF tau; Completing Nfl Commutability/Round Robin study

Term of Reference 2: CSF NFL Method/RMP collaborative project. **Accomplishments include:** Still to be done.

- **Commutability (WG-C); Chair: Greg Miller (US)**

During 2019 ongoing progress towards WG-C terms of reference included:

Term of Reference 1: Establish operating procedures for the formal assessment of the commutability of a reference material intended for use as a calibrator, trueness control or EQA sample, taking into account different measurement procedure properties and categories of traceability described in ISO 17511. **Accomplishments include:** Prepare IFCC recommendations for assessing commutability part 4: correction of bias caused by non-commutability of a certified reference material used in the calibration hierarchy of an end-user measurement procedure. This manuscript is submitted and under review for publication. **List planned activities in 2020 for this Term of Reference:** WG-C will be discontinued at the end of 2019. Activities for further implementation, education to continue under a new WG.

Term of Reference 2: Establish procedures to correct for bias in a metrological traceability hierarchy caused by non-commutability, or by bias that meets a commutability criterion, of a reference material. **Accomplishments include:** Described in term of reference #1 and will be addresses in publication #4.

Prepare IFCC recommendations for validating commutability for a replacement batch of a reference material. Not started. **List planned activities in 2020 for this Term of Reference:** WG-C will be discontinued at the end of 2019. Activities for further implementation, education to continue under a new WG.

Term of Reference 3: Establish how to define the criterion for acceptable commutability that is required for a given reference material, taking into account its intended use and the intended use of the measurand.

Accomplishments include: Prepare IFCC recommendations for defining the criterion for acceptable commutability that is required for a given reference material, taking into account its intended use and the intended use of the measurand. Not started. **List planned activities in**

2020 for this Term of Reference

WG-C will be discontinued at the end of 2019. Activities for further implementation, education to continue under a new WG.

Term of Reference 4: Advise IFCC Committees and Working Groups on how to assess the commutability of materials on which they are working. **Accomplishments include:** No requests for advice were received in 2019. **List planned activities in 2020 for this Term of Reference:** WG-C will be discontinued at the end of 2019. Activities for further implementation, education to continue under a new WG.

- **Immunosuppressive Drugs (WG-ID); Chair: Christoph Seger (CH)**

During 2019 ongoing progress towards WG-FIT terms of reference included:

Term of Reference 1. Regulatory framework for submission of methods and materials to JCTLM.

Term of Reference 3. Production of reference materials

Term of Reference 4. Establishment of reference methods

Term of Reference 5. Establishment of reference procedures

Accomplishments include: The WG discussed these issues and agreed that the ultimate goal would be the establishment of a definitive (absolute) reference method. Agreement was also achieved that both JCTLM listing and reference material availability is necessary for traceability establishment. As of now two reference method candidates are published. The approach by Grote-Koska et al. focuses on Cyclosporin A, whereas Taibon et al. published on all four drugs measured from whole blood. **List planned activities in 2020 for this Term of Reference:** A critical evaluation of both methods will be undertaken to evaluate which method is suited for establishing a reference measurement service and ultimately a reference measurement service network. It is likely that the one method will be the prototype for the definitive method and the other one for the broader application.

Term of Reference 2. Measurement comparison initiative. **Accomplishments include:** The WG discussed this issue and decided to concentrate on establishing a reference method and an access to reference material. Hence no activities will be set in 2020. **List planned activities in 2020 for this Term of Reference:** To be defined.

- **Apolipoproteins by Mass Spectrometry (WG-APO MS); Chair: Christa Cobbaert (NL)**

During 2019 ongoing progress towards WG-APO MS terms of reference included:

Term of Reference 1: To achieve standardization of a panel of clinically relevant serum apolipoproteins (apo) A-I, B, C-I, C-II, C-III, E and apo (a) (including qualitative phenotyping where needed). Standardization is done in such a way that measurement results are traceable to SI as outlined in ISO 17511. Other traceability chains will be used in cases where traceability to SI cannot be achieved. **Accomplishments include:** **Reference measurement procedure:** In 2019, the digestion conditions have been optimized to obtain stable digestion for apolipoproteins CI and CIII. Using a stepwise digestion protocol in which proteins are first cleaved roughly into larger peptides, followed by a more precise digestion using trypsin to achieve the final tryptic peptides. This strategy was initially developed at the LUMC site, and is now successfully transferred to the calibration laboratories of the CDC and UKL. A common draft SOP has been developed for the MS-based cRMP by the three laboratories, based on the optimized digestion conditions, as well as the parameters previously harmonized amongst the three laboratories. This also includes the data evaluation using the open source software tool skyline. The laboratories are currently evaluating whether the same results are obtained using their individual vendor software tools as compared to the open access software tool skyline. An experimental plan has been designed to assess the current state of harmonization amongst the three calibration laboratories using the harmonized draft SOP. Because the final calibration strategy with SI-traceability is not in place yet, the native serum based external calibration strategy used at the LUMC will be used for calibration. Samples for the inter-lab



comparison have been shared, and results were collected and analysed. The initial data are promising and indicate harmonization amongst the three laboratories is feasible, but further method optimization is still required and planned for 2020. **Reference materials:** A three-step approach has been agreed upon, in which the WG will first work on materials for apo(a), then apoA-I and B, followed by materials for apoC1, CII, CIII and E. For the first apo(a) RM in 2019, test batches of synthetic peptides have been ordered from two suppliers, and were received. The synthetic peptides have been dissolved and aliquoted in 5 nmol aliquots at a concentration of 50 $\mu\text{mol/L}$. It has been established that there are no interferences in the signals of the MRM transitions. Samples have been distributed to JRC and LNE and preliminary amino acid analysis as well as purity assessment will be performed before the end of 2019. Sourcing of the peptides for apoA1 as well as apoB has been initiated, and will be finalized by Q1 2020. Potential secondary reference materials have been identified for apo(a). Pig plasma containing defined apo(a) with a single number of kringle IV type 2 was procured and an experimental plan was developed for the purification of apo(a) from this material. Purification at an initial batch level is expected to be finalized by the end of 2019. An alternative source of apo(a) reference material could be recombinant apo(a) expressed in human HEK cells. **List planned activities in 2020 for this Term of Reference:** **Reference measurement procedure:** Peptide-based calibration with SI-traceability can only be achieved if equimolar digestion of apolipoproteins can be proven. A draft experimental plan has been developed to assess whether the current digestion protocol (from the draft common SOP) results in complete, equimolar digestion. To perform the experiments, well-characterized materials both at the intact protein level as well as at the peptide level are required. The WG aims to have the materials in place and the experiments performed by Q2 2020.

A first ring trial with a harmonized cRMP SOP was performed among three candidate reference laboratories using native serum based calibrators. The results were good, but better agreement would be required. Three experiments have been planned for further evaluation and possible improvement in 2020:

- The concentrations of the SIL peptides should theoretically be similar to the endogenous concentrations of the protein of interest. An alternative SIL mixture will be developed for use in further experiments.
- The currently optimized digestion approach was evaluated in three laboratories for reaching stable digestion in time course experiments, but the repeatability of the digestion was not fully assessed yet. The repeatability of the digestion will be re-evaluated with an improved SIL peptide mixture.
- A second ring trial using native human serum samples as well as synthetic peptide mixtures and prepared digests will be conducted in the first half of 2020.

Reference materials: - Both purity assessment as well as quantitation using amino acid analysis is foreseen for apo(a) peptide calibrators that have already been procured. Initial stability experiments will be performed. Peptide calibrators will be procured for apoA1 and B in Q1 2020, and for apoC1, CII, CIII and E before the end of 2020; - An initial commutability study to evaluate the potential of currently obtained secondary reference materials will be conducted by Q2 2020.

Term of Reference 2: *To evaluate clinical performance and clinical utility of serum apolipoprotein panel(s) for CVD risk stratification and treatment, in comparison to or together with contemporary blood lipids.*

Accomplishments include: The chair is preparing study protocols for both clinical and epidemiological studies to evaluate the added value of the apo panel for clarifying residual CVD risk, on top of the regular lipid tests for CVD assessment. **List planned activities in 2020 for this Term of Reference:** The WG plans to write a fundable study protocol in order to be able to investigate the added value of multiplexed serum apolipoprotein quantitation on top of traditional serum lipids in multiple studies. In addition, a study has to be set up to determine reference values in healthy Caucasians.



Additional Information: Exposure to the work of this WG was given at EuroMedLab 2019 (Barcelona, Spain, Christa Cobbaert) and EAS 2019 (Maastricht, The Netherlands, Renee Ruhaak), as well as at AACC 2019 (Christa Cobbaert), MSACL EU 2019 (Christa Cobbaert and Renee Ruhaak) and at the Leiden symposium on November 15th 2019. There is now substantial interest for the WG's standardization effort, particularly apo(a), and a workshop was organized at the NHLBI in November 2019. Christa Cobbaert was invited and explained the mission/vision and activities of the WG. Point of attention: Prof S. Marcovina also develops a cRMP for Lp(a) standardization, beyond the current reference based ELISA with WHO-IFCC traceability of apo(a) results. Funding for the development of secondary RM for apolipoproteins is ensured through JRC/EC, whereas funding for the purchase and evaluation of primary RMs is covered through the CardioMET consortium.

- **Pancreatic Enzymes (WG-PE); Chair Denis Grote-Koska (DE)**

During 2019 ongoing progress towards WG-PE terms of reference included:

Term of Reference 1: *To develop a primary reference method for pancreatic Amylase in Serum.*

Accomplishments include: In the calibration laboratory in Hannover, different experiments had been performed giving a proof of principle of the desired measurement procedure. As the last step, reproduction experiments at two further reference laboratories have been performed successfully. Experimentally determined results were in good accordance with the calculated values. Namely, the determination of inhibition coefficients for used antibodies, the comparison of aqueous enzyme samples and the comparison of matrix materials was investigated. Test material was individual for each site. As a theoretical exercise, the magnitude of achievable measurement uncertainty was estimated and considered to be sufficient for the reference system by the WG. **List planned activities in 2020 for this Term of Reference:** An inter-laboratory comparison is planned. Approximately 5 different reference laboratories agreed to perform measurements using the same material. An SOP still needs to be generated. Human serum pools in different concentration levels will be collected and circulated together with commercial control materials and special reagents. The measurements will be performed in the beginning of 2020 and evaluated in summer 2020.

Term of Reference 2: *To develop a primary reference method for pancreatic Lipase in Serum.*

Accomplishments include: Further investigation and development had been performed by Shigeru Ueda (Japan). **List planned activities in 2020 for this Term of Reference:** No activities are planned by the WG before finishing of term of reference 1.

Term of Reference 3: *To support EC-JRC (Joint Research Centre, Directorate F – Health, Consumers and Reference Materials, formerly IRMM) in case of studies and certification of reference materials for enzymes*

Accomplishments include: Characterisation studies of the new ERM reference material ERM AD456/IFCC of pancreatic amylase were performed by various sites of WG-PE members and others. Stability studies were performed in the calibration laboratory in Hannover for EC-JRC. The material is now released and available.

List planned activities in 2020 for this Term of Reference: Depending on inquiries by JRC.

- **Fecal Immunochemical Testing (WG-FIT); Chair: Sally Benton (UK)**

During 2019 ongoing progress towards WG-FIT terms of reference included:

Term of Reference 1. *To harmonize and/or standardize analysis of haemoglobin in faecal samples by immunochemistry (FIT).* **Accomplishments include:** A study has been completed where reference materials were analysed on 4 different FIT analysers. The results were reported back to the IFCC FIT-WG. A decision has been reached by the group that standardization is probably not possible because of the nature of the matrix (faeces). The plan is to see if methods can be harmonised to a single reference material. **List planned activities in 2020 for this Term of Reference:** Agree on the next stages for the harmonization project. Develop a protocol for the next stage of the project and carry out the analytical work.



Term of Reference 2. *To standardize the pre-analytical phase.* **Accomplishments include:** This was not something the group worked on in 2019. **List planned activities in 2020 for this Term of Reference:** There are no plans for this work to start in 2020 due to other priorities of the FIT-WG.

Term of Reference 3. *To establish EQA and 3rd party IQC programmes.* **Accomplishments include:** EQA: a study has been carried out by the South of England bowel cancer screening Hub research team in Guildford to assess 9 different EQA schemes. This work was presented at the IFCC FIT-WG meeting in October where a discussion on how to proceed occurred. IQC: 4 manufacturers who sit on the IFCC FIT-WG agreed to have their IQC material tested on the other 3 manufacturer analysers. This work was presented at the IFCC FIT-WG meeting in October and will be written up for publication. It should enable accessibility to 3rd party IQC material. **List planned activities in 2020 for this Term of Reference:** EQA: based on the study above the group will consider whether to provide guidance to EQA schemes and on what sort of EQA should be offered for FIT tests. The FIT-WG will aim to engage with EQA companies to obtain guidance on requirements in terms of EQA to help inform the recommendations from the group.

Term of Reference 4. *To determine impact of assay interference of Hb variants and other factors.* **Accomplishments include:** Nothing to update from 2019 for this TOR. **List planned activities in 2020 for this Term of Reference:** There are no plans to focus on this in 2020 due to other priorities of the group, predominantly harmonization.

- **Cell free DNA and related circulating biomarkers (WG-cfDNA); Chair Ron van Schaik (NL)**

During 2019 ongoing progress towards WG-cfDNA terms of reference included:

Term of Reference 1. *To identify and provide guidance on pre-analytical and analytical aspects for obtaining good and reproducible results for cfDNA and related circulating biomarkers for clinical use, and to guide the correct clinical implementation of these biomarkers.*

Accomplishments include: Draft manuscript is complete. **List planned activities in 2020 for this Term of Reference:** Defining pre-analytical aspects / drafting guideline. Defining minimal analytical performance.

Term of Reference 2. *Setting up proficiency testing for cfDNA.* **Accomplishments include:** Contacts with EQMN and participation in their proficiency testing programs to learn their experiences. **List planned activities in 2020 for this Term of Reference:** Discussing possibilities to join those proficiency testing programs.

Term of Reference 3. *Organizing international workshops.* **Accomplishments include:** Oct 5, 2019: cfDNA session (Klaus Pantel, Marzia del Re, Romano Danesi, Michael Oellerich, Evi Lianidou) at the 5th European Society for Pharmacogenomics and Personalized Therapy Congress (ESPT) in Seville.

List planned activities in 2020 for this Term of Reference: cfDNA session at IFCC World lab Seoul (arranged)

Term of Reference 4. *Defining grant proposals to address unmet needs.* **Accomplishments include:** Not started yet

List planned activities in 2019 for this Term of Reference: To be determined.

- **Standardization of Procalcitonin assays (WG-PCT); Chair: Vincent Delatour (FR)**

During 2019 ongoing progress towards WG-PCT terms of reference included:

Term of Reference 1. *Develop and validate a reference measurement procedure for PCT absolute quantification by Stable Isotope Dilution Mass Spectrometry.* **Accomplishments include:**

- Good progress was made on the development of a candidate reference measurement procedure for PCT absolute quantification by Stable Isotope Dilution Mass Spectrometry; - Different primary calibrators (peptides and recombinant protein) were produced. Their purity was characterized by High-Resolution Mass Spectrometry and PCT concentration in calibration solutions was determined by Amino Acid Analysis (AAA). Additional experiments are still needed

to confirm the identity of low abundant impurities and correct raw amino-acid analysis results;

- In parallel to calibrators' characterization, sample preparation was thoroughly optimized through development of different separation methods to extract PCT from the other proteins;
- Validation of a candidate reference measurement procedure for absolute quantification of PCT by IDMS is almost achieved with peptide-based calibration. Still, further developments are needed to improve the limit of quantification of the method because in the current situation, samples with PCT concentration below 2 ng/mL cannot be measured with sufficiently small uncertainty. In addition, results obtained so far suggest that protein-based calibrators are preferred to peptide-based calibrators. Development of a quantification method with protein-based calibrators was initiated.

List planned activities in 2020 for this Term of Reference:

- Finalize purity assessment and value assignments of primary calibrators.
- Improve sample preparation to improve the limit of detection;
- Conduct full method validation.

Term of Reference 2. *Document and understand the variability of results provided by the different commercially available PCT assays.* **Accomplishments include:**

- Agreement and correlation between the different PCT assays will be evaluated through an interlaboratory comparison involving the most popular PCT assays and relying on samples of proven commutability.
- Discussions on the study design have started and the following prerequisites were identified: Investigation of the freeze thaw effect to confirm that frozen samples can be used instead of fresh clinical specimens; Establish a list of known interfering substances with the objective to exclude clinical specimens with abnormal / elevated concentration of these compounds; Determination of the volume needed by each routine assay to conduct measurements; Determination of assays precision to determine the number of replicates needed to minimize uncertainties and the rate of inconclusive results
- Assay manufacturers agreed to conduct measurements in their facilities or in an expert lab.
- Leftovers from patients with different PCT concentrations (frozen serum) are being collected with the objective to prepare candidate EQA materials consisting in pools of human frozen serum. Sample collection is conducted in the lab of Prof. Tsatsanis (Crete) and Dr Dupuy (France). The lab from Prof. Hausfater (France) will join the effort later in 2020.

List planned activities in 2020 for this Term of Reference: - Finalize preparation of study materials; - Arrange logistics and planning; - Conduct the study; - Perform statistical analysis according to latest recommendations established by IFCC WG-C; - In cooperation with IVD manufacturers, investigate what are the causes for the variability of results provided by the different commercially available PCT assays

Term of Reference 3. *Evaluate the need for standardization of PCT assays.* **Accomplishments include:** - The ICHCLR identified PCT standardization as high priority with high clinical impact; - Consultation of IVD manufacturers was initiated and reveals that the need and demand for standardization of PCT assays differs in the two following situations: - BRAHMS licensed assays are all calibrated with the Kryptor method. Assay manufacturers feel that recalibration of BRAHMS PCT assays is not a priority and possibly appears undesirable because introducing a new reference system based on IDMS could potentially result in the need to revise clinical decision limits, which could create confusion in the clinical community. However, using an IDMS RMP as a stable anchor reference method would be helpful and would be beneficial to monitor the stability of the Kryptor method; - For PCT assays other than BRAHMS PCT assays, there is currently no internationally agreed reference system and there is a need for assay standardization.

All WG members agree that commutable EQA materials are needed to accurately estimate between-method agreement. **List planned activities in 2020 for this Term of Reference:** - Pursue stakeholder consultation; - Maintain and extend manufacturers' involvement

Term of Reference 4. *Evaluate the feasibility for standardization of PCT assays.* **Accomplishments include:** - Feasibility for standardization of PCT assays will be evaluated after activities planned within ToR 1 and 2 have been completed. **List planned activities in 2020 for this Term of**





Reference: Finalize validation of the candidate reference method by mass spectrometry; Evaluate if the candidate reference method by mass spectrometry is sufficiently robust at PCT concentration of interest and enables to properly establish results traceability to the SI Units with sufficiently low measurements uncertainty; Establish correlation between the different commercially available PCT assays and the candidate reference method by mass spectrometry; Seek manufacturers' involvement and willingness to implement a new traceability chain

Term of Reference 5: *Perform standardization of PCT assays, if needed and feasible.*

Accomplishments include: The need and feasibility for standardization of PCT assays first needs to be evaluated.

List planned activities in 2020 for this Term of Reference: PCT assays will be standardized:
- if the IDMS method meets the necessary performance specifications; - if the variability of results provided by the different commercially available PCT assays is considered unacceptable and can be improved through common calibration with commutable secondary calibrators;
- if correlation between the IDMS method and routine assays is sufficient; - if most assay manufacturers agree recalibrating their assays

- **Continuous Glucose Monitoring (WG-CGM); Chair Guido Freckmann (DE)**

During 2019 ongoing progress towards WG-CDT terms of reference included:

Term of Reference 1. Work package 1 (WP 1): Establish a Traceability Chain. Accomplishments include: Goal: Establish traceability of glucose values obtained by continuous glucose monitoring (CGM) to materials and methods of higher metrological order. Problem: There is no reference method to measure the measurand glucose in "interstitial fluid" (ISF) (There is no reference method at all available for glucose in ISF). Therefore, capillary or venous blood is used for comparative measurements. Because calibration also cannot be performed with ISF glucose values, capillary or venous blood is also used for calibration. Although it is therefore likely that CGM devices predict capillary or venous glucose, some algorithms seem to provide advanced features, e.g., partial compensation of time lag. However, because algorithms are proprietary information, definitive statements about what is displayed by CGM systems is impossible. Solution: currently, solutions are under discussion. Further goals: Establish traceability chains to the defined compartments (e. g. capillary or venous). Discussions about background information and the methods, performance of two conference calls and one on-going e-mail conversation. **List planned activities in 2020 for this Term of Reference:** Further discussions and input to this work package via conference calls and via e-mail.

Term of Reference 2. Work package 2 (WP 2): Establish procedures & metrics suitable for the assessment of the analytical performance. WP 2.2: Metrics for the evaluation of the analytical performance of CGM; WP 2.3: Procedures for the evaluation for the analytical performance of CGM. Accomplishments include: Discussions about procedures and metrics, performance of two conference calls and one e-mail on-going conversation. **List planned activities in 2020 for this Term of Reference:** Further discussions and input to this work package via conference calls and via e-mail.

Term of Reference 3. Work package 3 (WP 3): Work with ISO on a new CGM guideline. Goal: To establish standardized procedures and acceptance criteria for CGM systems, covering mechanical and electromagnetic safety, analytical performance, and ease of use (analogous to ISO 15197). Cooperation with ISO should be aimed for, if ISO is interested. Accomplishments include: Internal discussions via a conference call and via e-mail conversation which is on-going. **List planned activities in 2020 for this Term of Reference:** Further internal discussions and input to this work package via conference calls and via e-mail. Planned contact and cooperation with the International Organization for Standardization (ISO). **Additional Information:** First publication planned for 2020. Draft title: "Traceability of glucose values achieved by continuous glucose monitoring systems"

Publications by Committees and Working Groups:

C-NPU: Young Bae Lee Hansen: Recommendations on measurement units – why and how: **eJIFCC Volume 30 n° 3 – 2019**

C-MD: External Quality Assessment (EQA) and Alternative Assessment Procedures (AAP) in Molecular Diagnostics: Findings of an International Survey. Deborah A. Payne¹, Graciela Russomando², Mark W. Linder³, Katarina Baluchova⁴, Tester Ashavaid⁵, Werner Steimer⁶, Parviz Ahmad-Nejad⁷ and the IFCC Committee for Molecular Diagnostics (C-MD)

Approved by the SD. Now in submission process; probably CCA

C-TLM: The results of RELA2018 have been evaluated and published (<http://www.dgkl-rfb.de:81>).

C-BM: - “A multicenter assay to evaluate the harmonization of PINP assays: a report of the IOF-IFCC Committee on Bone metabolism” accepted for publication in CCLM; - Abstract on “PINP harmonization: a report of the IOF-IFCC Committee for Bone metabolism” presented during IOF meeting in Paris on April 5th

WG-SAU: Miller WG, Bachmann LM, Fleming JK, Delanghe JR, Parsa A, Narva AS. Recommendations for reporting low and high values for urinary albumin and total protein [Letter to the Editor]. Clin Chem 2019; 65(2):349-350.

WG-APO MS: The group aims for submission of the following manuscripts in 2020:

A first manuscript will be a conceptual paper on standardization of multiple apolipoproteins with a common LC-MS approach, and will cover the clinical rationale and the unmet clinical needs for personalized and stratified cardiovascular risk assessment and treatment as well as the metrological striving for establishing SI-traceable multiplex apo test.

By invitation: a special paper on apo(a) standardization will be written for the special issue of CCA.

A third manuscript will be a technical note or letter on the improved digestion of apolipoproteins using a combination of lysC and trypsin. This manuscript will summarize the findings and evidence gathered by the three reference labs (LUMC, CDC and UKL).

A fourth manuscript that will be in the preparation phase by the end of 2020 is the development of a harmonized LC-MS based reference method, including results from the planned ring trials. Members of the group have participated in several related publications:

- Orsi FA, Lijfering WM, Van der Laarse A, Ruhaak LR, Rosendaal FR, Cannegieter SC, Cobbaert C. Association of apolipoproteins C-I, C-II, C-III and E with coagulation markers and venous thromboembolism risk. Clin Epidemiol. 2019 [https://doi.org/ 10.2147/CLEP.S196266](https://doi.org/10.2147/CLEP.S196266).
- Ruhaak LR, Van der Laarse A, Cobbaert CM. Apolipoprotein profiling as a personalized approach to the diagnosis and treatment of dyslipidaemia. Annals of Clinical Biochemistry. 2019 <https://doi.org/10.1177/0004563219827620>
- Dittrich J, Beutner F, Teren A, Thiery J, Burkhardt R, Scholz M, Ceglarek U. Plasma levels of apolipoproteins C-III, A-IV, and E are independently associated with stable atherosclerotic cardiovascular disease. Atherosclerosis. 2019 Feb;281:17-24. <https://doi.org/10.1016/j.atherosclerosis.2018.11.006>

WG-cfDNA: What do we need to obtain high quality circulating tumor DNA (ctDNA) for routine diagnostic test in oncology? - Practical recommendations on pre-analytical issues by the IFCC workgroup cfDNA R. Danesi¹, Y. M. D. Lo², M. Oellerich³, J. Beck⁴, S. Galbiati⁵, M. del Re¹, E. Lianidou⁶, M. Neumaier⁷, R.H.N. van Schaik⁸ – *On behalf of the IFCC Working Group cfDNA* (to be submitted to CCA)

Philippe Gillery, SD Chair and Joseph Passarelli, SD Secretary





EDUCATION AND MANAGEMENT DIVISION (EMD)

The EMD EC met on 18th and 19th May 2019 in Barcelona during the 2019 EuroMedLab where a face to face meeting was also held with Chairs of EMD Committees, Working Groups and Special Projects; The EMD EC met again on 18th and 19th October 2019 in Milan to have a mid-term review of the EMD strategic plan and perform an annual review of each EMD functional unit. The finalised annual review for each functional unit was agreed by each respective Chair and the EMD EC.

Committees

- **Clinical Molecular Biology Curriculum (C-CMBC); Chair: Evi Lianidou (GR)**

1. The 2019 C-CMBC Course that was to have been held in La Paz, Bolivia in December 2019 has been postponed to 1st till 7th March 2020 due to the unstable political situation in Bolivia, The training of the Trainee from the Bolivian Society, Dr Aldo Vacaflores, took place in Mannheim in November 2019

2. Numerous requests have been received from the member societies that have already had the basic C-CMBC course to provide a novel advanced molecular biology course. The first Advanced Course will be conducted in Kuala Lumpur Malaysia from 29th till 31st Jan 2020 following the invitation of Dr Raja Elina, President of the MACB.

- **Analytical Quality (C-AQ); Chair: Annette Thomas (UK)**

1. Three e-learning presentations were completed for the eAcademy. A fourth presentation has been completed but is being modified into three separate presentations.

2. A workshop was held in Kazakhstan on 19th and 20th April 2019 in collaboration with DQCML. A Haliassos, L Khorovskaya and A Thomas gave various presentations on aspects of Quality.

3. Three chapters have been completed in draft form for the Quality Ladder. These will be discussed at the IFCC WorldLab Congress in Seoul in May 2020.

4. Patient-Based Real Time Quality Control (PBRTQC) project – Two publications have been produced to date by this very active subgroup:

a) Patient-Based Real-Time Quality Control: Review and Recommendations. Tony Badrick, Andreas Bietenbeck, Mark A. Cervinski, Alex Katayev, Huub H. van Rossum, Tze Ping Loh. DOI: 10.1373/clinchem.2019.305482. Published in July 2019.

b) Recommendations for laboratory informatics specifications needed for the application of patient-based real time quality control. Tze Ping Loh, Andreas Bietenbeck, Mark A Cervinski, Alex Katayev, Huub H van Rossum, Tony Badrick. Clin Chim Acta 2019; 495: 625-629.

- **Evidence-Based Laboratory Medicine (C-EBLM); Chair: Annalise Zemlin (ZA)**

1. All members are busy preparing eAcademy presentations. Topics being prepared include: Guidelines and systematic vs. narrative reviews – A Don-Wauchope (ADW); Sources of bias and STARD – A Zemlin (AZ); Diagnostic tests – K Rodriguez-Capote (KRC); Basics of EBLM – KRC or C Florkowski (CF); Meta-analysis – N Gimenez (NG)

2. The findings of the EBLM Questionnaire / Survey were presented as a poster (all members were co-authors) at EuroMedLab Barcelona and AACC in 2019. A new survey was presented by the Spanish Society with NG as co-author in EuroMedLab Barcelona. Committee members are preparing the manuscript, based on the original survey, for publication. The new survey has been translated into English and sent to IFCC members for completion.

3. Presentations at other congresses: AFCC Congress, Morocco 2019 – AZ and KRC part of a joint IFCC/AACC EBLM symposium on Personalised Medicine Symposium; APFCB Congress, Jaipur – IFCC Joint EBLM – Public Relations symposium – AZ and SB presented; AZ presented on behalf of C-EBLM in Egypt, Zambia, Kenya and India. Also presented for Argentinian Virtual Lab; NG published and presented with Spanish Society.

• **Clinical Laboratory Management (C-CLM); Chair: Sedef Yenice (TR)**

1. A monograph entitled “Basic Problem Solving Tools for Quality Improvement - A Pocket Guide for Laboratory Professionals” is in its second draft. Publication is planned for Q2 in 2020.
2. The monograph entitled “Practical Approaches to Quality Systems Set-up for Compliance with Internationally – Acceptable Requirements” is being finalised and will be published in the first quarter of 2020.

3. The following four educational workshops and one symposium were held in Q3 and Q4 of 2019.

Workshops: a) AACC University- 6 hours (full day) on Clinical Laboratory Leadership Essentials for the 21st Century. 71st AACC Annual Scientific Meeting & Clinical Lab Expo, Anaheim, USA, 4th August 2019; b) Workshop on “Leadership Development for Laboratory Professionals”. 6th Congress of the African Federation of Clinical Chemistry and Laboratory Medicine and 19th Moroccan Congress of Clinical Biology, Marrakech, Morocco. 28th September 2019; c) Joint Workshop with TF-YS on “Building Tomorrow’s Leaders by the Young Generation. 15th APFCB Regional Congress 2019, Jaipur, India, 17th November 2019.; d) Workshop on “Verification of Laboratory Test Results in the Core Lab: Exploring effectiveness from the ground up”. 6th Congress of the African Federation of Clinical Chemistry and Laboratory Medicine and 19th Moroccan Congress of Clinical Biology, Marrakech, Morocco, 27th September 2019.

Symposium: “Leading the Appropriate Utilisation of Medical Laboratory Services” held at the 15th APFCB Regional Congress 2019, Jaipur, India, 17th November 2019.

4. Earlier in 2019, Aye Aye Khine Wamono provided two presentations to the eAcademy. S Yenice and E Randell are in the process of preparing their IFCC-Abbott VLP presentations and slide scripts for the eAcademy.

5. Laboratory Leadership Training Certificate Programme. The programme will consist of 3 six-hour workshop sessions that comprise a mixture of didactic instruction and activity-based learning. All sessions will be supported by textual learning materials that address all key learning objectives that will be provided as handouts. Documented attendance and successful fulfillment of the evaluation question quiz will be required for the successful completion of each part of the programme. Certificates will be awarded to all participants who successfully complete all sections by Canadian Academy of Clinical Biochemistry. Three educational workshops were conducted in 2019 as part of this Laboratory Leadership Training Programme. A survey was conducted to examine medical laboratory test utilisation management and relevant practices that are country-specific from a laboratory staff perspective. The survey was designed to be completed by the leadership of medical or clinical laboratory professionals who have direct contact or interaction with physicians and facility administration and whose primary professional work directly affects patient care. The survey findings were presented by S Yenice at the session on “Leading the Appropriate Utilisation of Medical Laboratory Services” at the 15th APFCB Congress, Jaipur, India. The relevant presentation is going to be available through eAcademy. A publication is being prepared.

6. C-CLM submitted a revised format of case scenarios suitable for management to Janine A. Grant. However, the response of the App developer has been awaited since 25th March 2019.

7. Upon the invitation of EFLM WG-Distance Education and E-learning, S Yenice delivered one webinar on the topic of “Essential Leadership Management for Laboratory Professionals” on 17th December 2019 and acted as a moderator for a webinar on “How should a medical laboratory specialist prepare for accreditation according to the ISO 15189” on 18th October 2019.

8. A symposium proposal of C-CLM on “Essential leadership skills: shaping future leaders for success in laboratory management” has been accepted by the IFCC WorldLab Seoul Congress Organising Committee for 27th May 2020.

9 Other Congress Participation: S Yenice delivered a talk at the 27th Balkan Clinical Laboratory Federation Meeting, Papillon Zeugma Convention Centre, Belek Antalya, Turkey on “Developing a roadmap for laboratory test utilisation management programme” on 30th October 2019.





Publications:

- Yenice S. Why Leadership Skills are Essential for the Future of Laboratory Medicine? Indian J Clin Biochem. DOI: 10.1007/s12291-019-00856-7.
- Yenice S. Motivating Laboratory Staff. Clinical Lab Manager. Issue September 2019, Volume 4, p.10-13.
- Randell EW, Yenice S, Wamono AAK, Matthias O. Autoverification of Test Results in the Core Clinical Laboratory. Clin Biochem 2019 Aug 3. pii: S0009-9120(19)30663-0. doi: 10.1016/j.clinbiochem.2019.08.002. [Epub ahead of print].
- The EFLM Newsletter n. 2/2019. p. 11. Abastract on “Leadership basics for clinical laboratory professionals. C-CLM brings in a new manual to prepare laboratory leaders” (with link to the Manual) <https://www.eflm.eu/upload/newsletters/2019-Mar-Apr-EuroLabNews.pdf#page=11>
- Yenice S. Leadership basics for clinical laboratory professionals. C-CLM brings in a new manual to prepare laboratory leaders. IFCC eNews, March 2019, pp.8-9. <http://www.ifcc.org/media/477804/ifccenewsmarch2019.pdf>
- Randell EW and Yenice S. Delta Checks in the clinical laboratory. Critical Reviews in Clinical Laboratory Sciences 2019; Jan 11:1-23. DOI: 10.1080/10408363.2018.1540536 [Epub ahead of print] PMID:30632840. [PubMed - indexed for MEDLINE]
- IFCC Manual on Leadership Basics for Clinical Laboratory Professionals, ed. Sedef Yenice and Edward Randell. 2018. ISBN: 978-88-87772-10-4. Available from: <http://www.ifcc.org/ifcc-education-division/emd-committees/c-clm/7-c-clm-publications-and-survey-reports/>

- **Distance Learning (C-DL); Chair: Loralie Langman (US)**

The eAcademy is a Learning Management System (specifically coded and developed by IFCC) using a curriculum based approach to catalogue and access educational material and contains linked presentations, webinars and other educational material managed through the Umbraco content management system. The Committee on Internet and e-Learning (C-IeL) was established to develop the platform and produce modules and the Committee on Distance Learning (C-DL) is responsible for content selection in order to populate the IFCC eAcademy based on the IFCC curriculum and controlled by a peer revision process. There are 3 phases in eAcademy development, the first was launched in Paris in 2015. The second one is now under deployment and will introduce login features like self-assessment quizzes, progress tracking and certificates issuing. The third phase is under development with the aim to introduce social features like forum discussions and users interactions.

A number of new educational webinars have recently been developed or are in progress for the eAcademy. The C-IeL in collaboration with IFCC office recently developed a strategy to record materials from a variety of sources including lectures from speakers at EuroMedLab 2017 other IFCC sponsored events. Currently, 18 talks recorded during Durban’s WorldLab are under revision to be published as complete modules. The C-DL has also identified other key conferences and scientific activities during 2017 till 2019 that will be recorded. To date, 117 modules have been incorporated into the eAcademy and 6 more will be finalised and uploaded soon.

Intense effort is underway to close the current gaps in the curriculum for the eAcademy. To accelerate the rate of programme development for the eAcademy, new programme coordinators/consultants are being created. This will assist in identifying appropriate topics and speakers for webinar development, assist authors and C-IeL in preparing webinars.

In liaison with the Ibero-American Nomenclature and Translations WG, 10 talks are now subtitled in Spanish. This project will continue to cover all the modules and could be expanded to other languages. A joint project with the AACC and Nader Rifai where a number of the AACC Pearls will be translated into Spanish for publication in the eAcademy is also being undertaken.

Lastly, the participants in the Visiting Lecturer Programme (VLP) are expected to provide content to the eAcademy when asked by the C-DL. The Committee may not always ask the VLP speakers since one of the primary tasks of the committee is to populate the gaps in the

curriculum. Therefore, speakers will be asked based on whether their lectures: 1) fit within the IFCC curriculum structure; 2) are of otherwise educational/training value to the IFCC membership

- **Education in the Use of Biomarkers in Diabetes (C-EUBD); Chair: Garry John (UK)**

1. Work with WHO to finalise the Diabetes Laboratory Handbook.

Hopefully this will be finalised in 2020; internal delays at WHO has held up this project. Committee members (E English and G John) have been working closely with WHO as experts, not representing IFCC but promoting IFCC.

2. HbA1c European EQA study

The 2019 survey has been reported. There are now 7 countries outside Europe participating; improvement is being monitored by the EUBD committee. This project will continue and expand. It is planned to present the data at the IFCC WorldLab, Seoul 2020

3. Continuing education activities in Africa. Develop a workshop on point of care (POC) with a focus on Diabetes and Metabolic Complications.

4. Continue working with colleagues from the IDF on a project looking at the diagnostic cut points for diabetes mellitus type 2.

5. Educational activities on Diabetes given by members: Peru and Chile – Cas Weykamp; Vietnam – Andrea Mosca; Dubai and China – Emma English; Hong Kong and India – Garry John; China and ADA – David Sacks; Indonesia, China, Iran – Erna Lenters; Tunisia – Okesina.

5. The committee has been asked to help unify reporting of HbA1c values within Germany.

Publications:

- Asako Sato, Sayo Yada, Emiko Hosoba, Hiroko Kanno and Hitomi Miura Establishment of glycated albumin unit conversion equation from the standardized value (mmol/mol) to the routinely used value (%) *Annals of Clinical Biochemistry* 2019, Vol. 56(2) 204–209.
- Erna Lenters-Westra, Emma English. Investigating the Quality of POCT Devices for HbA1c: What Are Our Next Steps? *Journal of Diabetes Science and Technology* 2019, 1–4.
- Erna Lenters-Westra, Gijs den Besten, Robbert J. Slingerland. An Unexpected Low HbA1c: Measurement Error or Interpretation Problem? *Clinical Chemistry* 2019. 65:8 1062–1065.
- Emma English & Erna Lenters-Westra (2018) HbA1c method performance: The great success story of global standardization, *Critical Reviews in Clinical Laboratory Sciences*, 55:6, 408-419, DOI: 10.1080/10408363.2018.1480591.
- Bachmann MO, Lewis G, John WG, Turner J, Dhatariya K, Clark A, Pascale M, Sampson M; Norfolk Diabetes Prevention Study. Determinants of diagnostic discordance for non-diabetic hyperglycaemia and Type 2 diabetes using paired glycated haemoglobin measurements in a large English primary care population: cross-sectional study. *Diabet Med.* 2019 Nov; 36(11):1478-1486. doi: 10.1111/dme.14111. Epub 2019 Sep 3. PubMed PMID: 31420897.
- Klonoff DC, Aron D, Cohen RM, Home P, John WG, Little RR, Nathan DM, Sacks DB. The Need for Accuracy in Hemoglobin A1c Proficiency Testing: Why the Proposed CLIA Rule of 2019 Is a Step Backward. *J Diabetes Sci Technol.* 2019 May;13(3):424-427. doi: 10.1177/1932296819841699. Epub 2019 Mar 22. PubMed PMID: 30897963; PubMed Central PMCID: PMC6501538.

- **Cardiac Biomarkers (C-CB); Chair: Fred Apple (US)**

1. The committee has developed educational materials for a) high-sensitivity, contemporary and point of care cardiac troponin assays and b) natriuretic peptide assays used in clinical practice.

2. The committee has developed publishable laboratory medicine, interdisciplinary, expert opinion materials and presented at global workshops in collaboration with industry, clinical societies and other IFCC committees.

a) Natriuretic Peptides Educational document – Final draft was submitted to all committee members and consultants for review with a goal of submission to *Clin Chem* by 1st May 2020.

b) Social Media: a. R Body developed a twitter handle that went live at the meeting (@Ccbifcc); b. Developing a code of conduct for the C-CB to tweet statements on behalf of the





committee allowing open access to post comments/tweets; c. Other mechanisms for social media postings being discussed such as: Facebook, LinkedIn, AACC Artery (once per month, Saenger volunteered to lead), using CHARIOT paper as the first example; d. Video, individual KOL productions will be discussed and could potentially be initiated at the Barcelona meeting. c) IFCC Workshops at 2019 Meetings with C-CB participation: a. Cardiac Dialogue Meeting; Alan Reid UK, April 5, 2019; Apple, Jaffe, Collinson, Body all presented; b. AACC Anaheim August 2019 – there was a Sunday AACC University session discussing the IFCC C-CB recommendations; c. There was a 2nd multi-industry sponsored Wednesday morning workshop with panel by the same group of industry sponsors at AACC 2019 as in 2018.; d. EUSEM Prague October 2019, symposium (non-industry sponsored); 90 min presentation; e. EuroMedLab 2019, Barcelona, Spain – individual companies had their own hs-cTn workshops

3. Yearly update IFCC website of cardiac troponin assay and natriuretic peptide assay tables by both manufacturer' claims and from peer-reviewed literature. Additional interference tables for biotin and haemoglobin have been uploaded.

4. Continuation of distribution of educational posters and mouse-pads, as well as pocket-cards, addressing high sensitivity cardiac troponin and natriuretic peptide assays at IFCC (laboratory medicine) and clinical society meetings. R Body will lead production of educational material pocket cards with link to website and Saenger will lead USB drive production with logo which will contain links and PDFs of IFCC derived educational materials, to be distributed initially along with mouse pads at AACC meeting.

5. Planned development of a searchable 'App' that will be the educational tool for cardiac biomarker assays used in clinical practice by clinicians and laboratorians.

6. Development of a study model to define a 'clinical scorecard' for high sensitivity cardiac troponin assays.

a) Contracts are all in place except for one company which is in the final stages

b) All instruments ready to go, pending reagents from a couple of companies

c) QC: a. 2 levels of BioRad QC (one low/one mid-range); b. 2 serum pools, one near or around 99th percentile and one low value near LoD; c. manufacturers' QC material for their own assay, if provided

d) Go live for testing: deadline 1st May 2020

e) Specimens have been sourced from 3 different studies (UTROPIA, High STEACS, MAYO) instead of just single site as initially requested industry.

7. Industry Multi-Sponsored Workshops (Tricia Ravalico, Abbott, lead)

a) Industry reps met 6th April, 2019 at 730-830h to discuss the possibility of conducting workshops over the next year at a Lab, Cardiology and Emergency Medicine meeting.

b) Decision was to focus on ESC for 2020 and submit as a scientific session. Jaffe and Omland will work on organising a submission for a session for ESC 2020.

8. Regulatory/CLIA issues (Saenger): there is a recommendation from US CMS regarding updates to CLIA which affect regulation of laboratory proficiency testing criteria for grading. Currently, troponin is not a regulated analyte; current College of American Pathologists (CAP) grading criteria for laboratories for troponin proficiency testing is +/- 3SD of the peer group mean or +/- 30%, whichever is greater. The proposed criteria are +/- 30% or +/- 0.2 ng/mL for cTnI, +/- 0.9 ng/mL for cTnT. Several issues were discussed, including appropriateness of these criteria when translated to hs-cTn assays, particularly when criteria could be +/- 900 ng/L for hs-cTnI and +/- 200 ng/L for hs-cTnT, which are too wide limits for assay performance. Feedback from the diagnostic companies was requested; Saenger will send a generic letter of request to C-CB industry members who can then route it to the appropriate quality/regulatory groups within their companies.

Publications

Saenger AK, Jaffe AS, Body R, Collinson PO, Kavsak PA, Lam CSP, Lefevre G, Omland T, Ordonez-Llanos J, Pulkki K, Apple FS. Cardiac troponin and natriuretic peptide analytical interferences from hemolysis and biotin: educational aids from the IFCC Committee in Cardiac

Biomarkers (IFCC C-CB). Clin Chem Lab Med 2019; 57: 633-640. doi.org/10.155/cclm-2018-0905.

Collinson PO, Saenger AK, Apple FS, on behalf of the IFCC C-CB. High sensitivity, contemporary, and point-of-care cardiac troponin assays: educational aids from the IFCC Committee in Cardiac Biomarkers (IFCC C-CB). Clin Chem Lab Med 2019; 57: 623-632. doi.org/10.155/cclm-2018-1211

- **Kidney Disease (C-KD); Chair: Flavio Alcantara (BR)**

1. Creation of a standard Questionnaire for use in surveys of CKD situation in countries. Publication in Biochemia Medica Journal 2019:

<https://doi.org/10.11613/BM.2019.030301>.

2. Recommendation for creation of a Central Lab in each region for measuring GFR.

Some issues are still pending and will be defined during Amsterdam meeting 2020. The creation of a Central Laboratory for direct GFR measurement was proposed to the Central Laboratory Division of the Clinical Hospital University of Sao Paulo Medical School, the largest university and largest hospital in Latin America and has been accepted. The project is underway.

3. A position paper on controversies in creatinine assays is being prepared.

4. The C-KD Committee meeting in Barcelona had a good attendance with 18 members from more than 10 countries (including both delegates and corresponding members). This was a very productive meeting, especially to clarify practices on direct GFR measurement both in USA and Europe, and to define common goals.

5. The C-CKD was renamed Committee for Kidney Diseases (C-KD) in December 2018. Its scope has been broadened to include acute kidney injury (AKI) in addition to chronic kidney disease (CKD).

6. The collaboration with Dr E Cavalier and Dr Pierre Delanay (nephrologist) who have significant experience in direct GFR measurement using iohexol is critical. They joined the Barcelona 2019 C-KD meeting. Their participation has been fundamental to uniting both the laboratory and clinicians.

- **Point of Care Testing (C-POCT); Chair: Adil Khan (US)**

1. The first draft of the Position Statement on Point-of-Care Testing is being revised.

2. The first draft of an online lecture on Point-of-Care Testing for the eAcademy is being revised after receiving feedback.

3. A mini-symposium/workshop on Point-of-Care Testing at XXIV IFCC WORLDLAB SEOUL 2020 has been organised and will be held on 24th May 2020. The title of the mini-symposium is "Current Prospects and Future Roles of Point-of-Care Testing". The companies that are sponsoring this session are Radiometer, Abbott, Nova Biomedical, Siemens and Roche.

4. C-POCT is collaborating with Committee on Clinical Applications of Cardiac Bio-Markers (C-CB) on an educational guideline on POC Troponin Assays.

5. POCT Sharing of Information with other National Member countries: The C-POCT submitted a survey to IFCC Member Societies to understand their utilisation of POC testing. The results will be submitted to the eIJFCC for publication in 2020. The committee also had a teleconference with other countries that are not represented in the C-POCT to discuss areas that need addressing. Three areas were identified that would be among the objectives of 2020. These are: (a) Develop a guideline that would help limit the number of POC tests that physicians can ask for; (b) Help standardise POC testing in Egypt; (c) Develop a guideline to help management of POC testing for General Practitioners (GPs).

6. The IFCC Working Group on How should Glucose Meters be Evaluated in Critical Care (WG-GMECC) has finished its term and completed its objectives. The members of the working group are finalising their document for submission to IFCC EMD.





- **Proficiency Testing (C-PT); Chair: Alexander Haliassos (GR)**

1. The main project of the committee is the creation of an online database - web application (PTDB) accessible via web browsers and also via specific applications, for the major mobile platforms, offering much more functionalities and ease of use. The roots of this database are the analytes (tests, measurands) that have to be filed with all possible synonyms, and the methods (assays, instruments, reagents, etc.) also with all possible synonyms. Another part of the database, maintained with the cooperation of the IFCC EMD C-AQ and of EQALM, is the PT providers section containing all their contact information, their programmes with the analytes, frequencies, type of statistics, commutability of control materials, their accreditation or certification status, etc. The roll out of the Providers part of the database was achieved in the middle of February 2017 and the PTDB now includes 68 providers from all around the world, the latest additions are from Mexico, Russian Federation, Iran and India. The PTDB can be consulted directly at <http://ptdb.ifcc.org/providers>

2. In order to develop and implement the Analytes section of PTDB we produced a document describing all the fields required for the creation of an Analyte record and documenting this procedure. We started with the biomarkers of neurodegenerative diseases as they are quite complicated but well documented and we have committee members with expertise on these markers. The document on neopterin was finalised during the IFCC General Conference (Budapest, November 2018).

3. Development of e-documents on the use of the database is in progress - web applications (user manuals). A member of the committee has started the compilation of a “help” file for the PTDB project. These files will be sent to InSoft in order to be incorporated in the PTDB (B Aslan).

4. The online database (PTDB) was revised in 2019 by checking all the records of the registered EQA-PT providers (A Carobene).

5. A Corporate Representative of our committee (J Dai) made suggestions about the introduction of features in our project that can help IVD manufacturers during the implementation and the pre-launch testing and validation of new assays. We revised these requests, merged them in our features requests, and we sent them to InSoft for development and implementation (A Haliassos). InSoft requested and received clarification and precise instructions on this subject.

6. We have been aware of the lack of EQA-PT schemes for neopterin in CSF, and this fact prevents the standardisation of the assays measuring this analyte. Two members of our committee (A Perret-Liaudet and C Weykamp) started the design and production of suitable control materials that can be used for the development of EQA-PT schemes for neopterin in CSF. In March 2019, the first lot of these materials were produced by C Weykamp and sent to A Perret-Liaudet for measurement, pilot distribution, and evaluation. Stability studies conducted over August to September 2019 proved the feasibility of the project.

7. A pilot PT scheme for neurodegenerative disease biomarkers was implemented in co-operation with a non-for-profit ISO 17043 accredited EQA-PT organiser (A Haliassos and C Weykamp). The first lot of these materials has been distributed to the laboratories selected by (A Perret-Liaudet and C Weykamp) in order to start their statistical analysis and evaluation of the used measurement methods. This activity was implemented in early October 2019, when A Haliassos participated in the EQALM EB meeting (Ljubljana, Slovenia, 16th – 18th October 2019), where the next steps of the participation and the contribution of the EQALM members for the further development, updating and maintenance of the C-PT database were discussed, as well as the planning of a co-organised roundtable session during the EQALM meeting in Athens (October 2020).

8. Letters to the EQA-PT providers and the National Representatives were sent by e-mail via the IFCC office (Silvia Cardinale) in February 2019 to remind them to review and update their records for the PTDB and to attract new PT schemes to register and participate in the PTDB project (AH).

9. Responding to a request of the Chair of the EMD Developing Quality Competence in Medical Laboratories (DQCML) special project, the Chair of C-PT (A Haliassos) gave three presentations

related to the work and projects of the committee during the DQCML workshop and lectures in Almaty (Kazakhstan) on 19th and 20th April 2019. The presentations were:

a) The IFCC PTDB project or how to select your EQA-PT provider; b) The EQA-PT programmes for the new companion tests in oncology; c) Digital Tools for researchers in Laboratory Medicine 10. The Chair of C-PT participated and made presentations at the: a) 6th Congress of the African Federation of Clinical Chemistry and Laboratory Medicine “AFRICAMEDLAB 2019” along with the 19th Moroccan Congress of Clinical Biology at Marrakech, Morocco, 25th – 27th September 2019, presenting: The role of EQA/PT in the process of Personnel Competencies Evaluation, Control and Maintenance in Medical Laboratories; b) 1st International KBUD Congress and Lab Expo at Sapanca Sakarya, Turkey, 2nd – 5th October 2019, presenting: Proficiency Testing (PT) schemes - External Quality Assurance (EQA) programs in Molecular Tests; c) 27th Balkan Clinical Laboratory Federation meeting along with the 30th National Congress of the Turkish Biochemical Society in Antalya, Turkey, 27th -31st October 2019, presenting: The IFCC committee on EQA and Proficiency Testing (IFCC C-PT): Major Objectives and New Projects; d) 15th Asia-Pacific Federation for Clinical Biochemistry (APFCB) Congress in Jaipur, India, 17th – 20th November 2019: Digital Tools for Researchers in Laboratory Medicine; e) 3rd Conference on Medical Laboratory Accreditation and Quality Systems (CLAQ). “Lab medicine in the transformative decade: digital technologies, artificial intelligence and quality management” at Belgrade, Serbia, 9th – 10th December 2019: Artificial intelligence in EQA - PT schemes in Laboratory Medicine.

- **Value Proposition for Laboratory Medicine (C-VPLM); Chair: Andrew St. John (AU)**

1. A workshop on Maximising Value from New Diagnostic Tests was held on 16th May 2019 at Jesus College in Oxford, UK. Sponsors were the National Institute for Health Research, Nuffield Department of Primary Health Sciences and IFCC. Outcomes from 3 group discussions on implementation of: high-sensitivity troponin, STD testing by POCT and home testing for neutropaenia will be published in 3 separate papers.

2. Symposia: a) AACC, Anaheim – Title: The Value Proposition: Actionable Strategies for Enhancing the Value of Laboratory Medicine. The speakers were Rob Christensen, Michael Oellerich and Michael Kanter. The symposium was well attended by more than 200 delegates; b) WASPaLM Congress, Xi’an, China, IFCC-WASPaLM Symposium – Title: “Demonstrating the Value of Laboratory Medicine. The speakers were Michael Oellerich and Andrew St John.

3. 2019 David Curnow Plenary Lecture at AACB Annual Scientific Meeting, Adelaide Title: “The pursuit of value in laboratory medicine – progress and challenges” presented by Andrew St John. This lecture will be published in The Clinical Biochemist Reviews.

Publications:

a) Price CP, St John A. The value of proposition for point-of-care testing in healthcare: HbA1c for monitoring in diabetes management as an exemplar. Scand J Clin Lab Invest. 2019, May 13, p.1-7.

b) O’Kane M., Porter D, McCann M, Juelicher P, Christenson R, Oellerich M, Price CP, St John A. A value proposition for natriuretic peptide measurement in the assessment of patients with suspected acute heart failure. Clin Chim Acta 2019, Oct 23.

c) Oellerich M, Christenson RH, Beck J, Walson PD. Plasma EGFR mutation testing in non-small cell lung cancer. A value proposition. Clin Chim Acta 2019; 495: 481-6.

Working Groups

- **Laboratory Errors and Patient Safety (WG-LEPS); Chair: Laura Sciacovelli (IT)**

1. The new data entering procedure for Quality Indicators (QIs) is being used continuously by laboratories in the dedicated website (www.ifcc-mqi.com). the collected data will be evaluated to update the ‘State-of-the-Art’ pertaining to Quality Indicators.

2. The Performance Specifications for each Quality Indicator is updated on a regular basis.



3. The web application (www.ifcc-mqi.com) for data collection that allows the autonomous management of Quality Indicator data belonging to a group of laboratories (for example, laboratories of the same country) by a “National Leader” is updated on a regular basis. Each National Leader is now able to collect and process data of his/her laboratories and release to them the report. He/She can visualise, in an anonymous form, the data collected from laboratories all over the world. This stimulates the discussion and improvements within the scientific community and the harmonisation of the use of quality indicators in laboratory medicine (same indicators, same criteria for data collection and processing, same criteria for definition of the quality specifications). Moreover, it allows achieving a suitable State-of-the-Art regarding errors in the total testing process and a consensus on appropriate performance specifications

4. The publication of a document that includes each quality indicator proposed in the Model with the description of all its characteristics in order to allow a clear understanding and their accurate and harmonised management in the laboratories all over the world is in progress.

Publications

Sciacovelli L, Lippi G, Sumarac Z, Del Pino Castro IG, Ivanov A, De Guire V, Coskun C, Aita A, Padoan A, Plebani M; Working Group on Laboratory Errors and Patient Safety of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC). Pre-analytical quality indicators in laboratory medicine: Performance of laboratories participating in the IFCC working group “Laboratory Errors and Patient Safety” project. *Clin Chim Act.* 2019;497:35-4.

- **Personal Support (WG-PS); Chair: Graham Beastall (UK)**

1. Promotion of WG-PS via IFCC e-News and TF-YS social network.
2. An audit of the Mentoring Programme is ready for distribution.
3. Case studies have been prepared and are awaiting publication.

Special Projects

- **Visiting Lecturer Programme (IFCC-VLP); Chair: Nader Rifai (US)**

In 2019 16 VLPs and 39 Visiting Lecturers were approved.

- **Working Group on Flow Cytometry (WG-FC); Chair: Claude Lambert (FR)**

1. A winter school was held in St-Etienne/France from 4th – 9th February 2019. Organisers were Claude Lambert and Ulrich Sack. Financial support: Saint Etienne Cytometry unit; French Embassy, IFCC and registration fees.
2. A workshop was held in Munich entitled “What you never wanted to know about flow cytometry” from 13th – 15th May 2019. The organiser was Matthias Schiemann. Financial support: Munich Cytometry unit, Beckman-Coulter Germany.
3. Tel-Aviv workshop Sheba Medical Center held from 2nd – 4th June 2019. The organiser was Matthias Schiemann. Financial support: Munich Cytometry unit, Beckman-Coulter Russia.
4. Flow cytometry workshop “Cell Processing and Purification” held from 23rd – 27th September 2019 at Technische Universität München. The organiser was Matthias Schiemann. Financial support: Munich Cytometry unit, Beckman-Coulter Germany.
5. Moscow “L&L course” held from 25th – 27th September 2019. The organiser was Matthias Schiemann. Financial support: Beckman-Coulter Russia.
6. Basic cytometry course, Haematology Department, Al-Zahraa University Hospital, Cairo, Egypt from 27th – 28th September 2019. The organisers were Claude Lambert and Reham Hamad. Financial support: IFCC, registration fees.

- **Developing Quality Competence in Medical Laboratories (DQCML); Chair: Egon Amann (DE)**

1. A workshop was held from 19th – 20th April 2019 in Almaty, Kazakhstan. Lecturers were Egon

Amann (DQCML), Annette Thomas (C-AQ), Alexander Haliassos (C-PT), and Lina Khorovskaya (C-AQ). The goals and objectives of the workshop were “Establish professional relationships and improve their knowledge in the field of quality control of laboratory service specialists in Kazakhstan”.

2. Pakistan. A DQCML workshop will be held in Lahore, Pakistan from 10th – 11th January 2020. Lecturers will be Annette Thomas (C-AQ) and Egon Amann (DQCML).

Publications: IFCC eNEWS N0 7/8 – July 2019: “Visit to Kazakhstan: April 19 - 20, 2019”.

Leslie Lai, EMD Chair

COMMUNICATIONS AND PUBLICATIONS DIVISION (CPD)

In 2019 the IFCC was struck by the untimely death of Prof. Howard Morris, IFCC president who suddenly passed away on 28 April 2019, whilst travelling to represent IFCC. The CPD remembers him for his friendship, vision, leadership and human qualities. On this sad occasion the CPD helped the IFCC family to express a tribute to Prof Morris and to collect the great number of messages received.

The following members served on the CPD Executive Committee: Tahir Pillay (ZA, Chair), Rajiv Erasmus (ZA, Public Relations Coordinator), Eduardo Freggiaro (AR, Publications/Distance Learning Coordinator), Katherina Psarra (GR, News Editor), J. Kappelmayer (HU, Vice Chair, Editor eJIFCC), and Tricia Ravalico (US, Corporate Representative). Janine Grant (AU, Website Editor), Maria del Carmen Pasquel (EC, WG- IANT Chair), Anthony Newman (NL, Publications consultant) were invited to attend the CPD meeting in Barcelona, on occasion of the IFCC EuroMedLab Congress 2019.

The following is a summary list of the key CPD activities in 2019:

- Two face-to-face executive committee meetings were held in 2019: Barcelona (ES) in May, on occasion of the IFCC EuroMedLab Congress 2019, Jaipur (IN) in November, on occasion of the APFCB Congress.
- CPD Chair, Prof. Tahir Pillay (ZA), began his first term.
- CPD Secretary, Dr Eduardo Freggiaro, ended his first term and will begin his second term in 2020.
- C-PR Chair, Prof Rajiv Erasmus (CA) began his first term.
- eNews Editor, Dr Katherina Psarra (GR,) began her first term.
- WG eJIFCC Chair, and eJIFCC editor, Prof János Kappelmayer (HU), was appointed CPD Vice Chair.
- IFCC Website Editor, Dr Janine Grant, completed her second term.
- Renewed agreement with Elsevier
- Explored the possibility of using a manuscript submission system such as Scholar one, Editorial Manager or any other open source platform to be adopted as soon as the eJIFCC increases the number of issues/year.
- Organized an Editors and Publishers meeting in Barcelona.
- A new agreement was signed with Insoft, the IFCC web-related services provider in July 2019. The company will provide technical support to the eAcademy and IFCC website. It is a 3 year contract for support services ending on 30 June 2022. A video in memory of Prof. Morris was prepared for Barcelona meeting
- A special eNews issue was published in memory of Prof. Morris
- News items on the website: more than 60 news items were published on the website.
- Press releases: 4 press releases were drafted and distributed via the AACC press room, with nearly 1500 accesses in total.



CPD Symposia at 2019 Meetings:

- EuroMedLab Barcelona 2019: “A New Era in Communicating Diagnostics Data to Patients” Chairs: K. Adeli (Ca), M. Calvo (ES). “Classification and benchmarking apps for patients and professionals” Snezana Jovicic (SRB); “Personalised communication of results to patients” Ian Watson (UK); “Electronic apps and medical diagnostics data management” Khosrow Adeli (CA); “Online resources for patients and healthcare professionals” Tahir Pillay (ZA)
- XXIV Congreso Latinoamericano De Bioquimica Clinica, Panama 2019. “Blended communication in delivering data and education in laboratory medicine”. “Era of P4 medicine and the 4th Industrial Revolution: blended communication resources for patients and laboratory professionals” Tahir Pillay (ZA); “Educational resources for the clinical laboratory in the IFCC Latin American corner” Maria Del Carmen Pasquel Carrera (EC); “Education and distance learning strategies in the IFCC” Eduardo Freggiaro (AR)
- APFCB Jaipur November 2019: “New Era of Communication in P4 Medical Diagnostics Data Management” Chair: Khosrow Adeli (CA). “Electronic Apps and Medical Diagnostics Data Management” Khosrow Adeli (CA); “Communication Strategies in Education and Distance Learning” Eduardo Luis Freggiaro (AR); “Online Resources for Patients and Healthcare Professionals” Tahir Pillay (ZA)

Committees

Committee on Public Relations (C-PR); Chair: Prof. Rajiv Erasmus (ZA)

A Committee Meeting was held in Barcelona which most members attended. The annual 2019 CPD survey was sent and the results were analysed. The Committee emphasizes the importance of continuous education and proposes to translate the eAcademy webinars into several languages. There was a suggestion to set up a WeChat IFCC Account.

A new set of Posters was displayed during the EuroMedLab congress. They have received excellent feedback and will be updated for future events. The C-PR is developing new **BROCHURES**, to reflect the new IFCC pay-off and a new, shortened IFCC slide deck that could be useful for IFCC speakers to introduce the IFCC during their presentations.

A call for nominations has been issued to complete membership. The appointment will be done in early 2020.

Committee on Internet and e-Learning (C-IeL); Chair: Eduardo Freggiaro (AR)

A Committee Meeting was held in Barcelona. It was decided to split again the merged C-IDL committee into CPD C-IeL and EMD C-DL with Eduardo Freggiaro being the chair of the CPD Committee on Internet and eLearning.

Two calls for nominations were issued to complete membership. Dr Michele Brennan Bourdon (MX full) was appointed in 2019. Three further members will be appointed early 2020. One of the positions will be the IFCC website editor.

These are the main activities carried out during the last 10 months:

IFCC Curriculum: thanks to Ronda Greaves (ETD Secretary), and the support of the Vietnamese Roche team, its translation into Vietnamese was published in the eAcademy. The project was started in 2018, with the support of Prof. Morris, the IFCC President, who gave his approval for the curriculum to be translated into Vietnamese. An independent check from an IFCC Officer was provided by Dr Chi Mai.

IFCC website: it was migrated from the Umbraco v4 platform to v7. Future updates will occur automatically as part of the support and service agreement with Insoft, during the monthly service window.

Additional updates include: - The addition of a new IFCC Division required an update to Blue link banner and slight widening of pages and an update to the Website Policy and Procedures; - The

ongoing updates to various media files, links and pages are carried out as required; - Updates relating to GDPR compliance: addition of cookies notification for first visit and homepage link to privacy and policies page; - Addition of reCAPTCHA spam blocker to IFCC website contact form. A large amount of dynamic metric information is available via Google Analytics. For consistency the same metrics are reported here as in previous reports. Specific information is available on request. In 2019 more than 60 News items were published on the website.

eAcademy website:

The design was updated as part of the phase 2 implementation. There is ongoing publication of content.

The next steps will include moving the eAcademy website under the same Umbraco installation – (to be reviewed going forward); bringing RIA and DIV pages further into the overall IFCC website design (e.g. font and background colour) with media and file management made easier in Umbraco. The current design is stylistically out of date and not totally compatible with the responsive element introduced for display on phones and tablets. The structure needs to be reviewed, layers and flow of information as well: currently we have hundreds of pages and many of them are well hidden.

IFCC e-Academy

Number of new items published: In 2019 the eAcademy reached the number of 117 resources published, 67 webinars and 51 external links; 24 webinars are completed with LO and MCQs ready to be uploaded and comply with eAcademy phase 2 features. Several webinars derived from conferences have been created and are progressing in Knovio to be uploaded to the eAcademy website. Platform update: the plan is to move the eAcademy website under the same installation as IFCC website. Phase 2 deployment: at the moment, all the features are ready to be deployed (user's profile, quizzes and certificates). The new features will be launched soon.

Social Media

IFCC Social Media are taken care of by Dr Rojeet Shrestha (NP), C-IeL member.

Facebook IFCC official page is the leading social site with more than 25,000 followers (Nov 2019). Total engagement from Nov 2018 to Oct 2019 in the Facebook page is 34,222 that includes any click, like, comments and sharing of our post. This indicates that all news and events that we share in Facebook can reach a huge number of users. In term of number of followers, IFCC Facebook page is at second position with similar pages (1st is Clinical Chemistry). Among professional society of clinical chemistry, IFCC Facebook page can be considered as number 1. Most of our fans are youngers. About 47% of our Facebook fans are between 18-24 years old and 37% of them are between 25-34 years.

IFCC Facebook Group: it has 9108 group members with 2673 being active in various conversations and discussion. The number of group member is steadily increasing

Twitter: IFCC has more than 1,800 followers and more than 700 tweets with a rate of around 50 new followers/month.

LinkedIn IFCC official LinkedIn page was recently created. Currently we have 777 followers. All post that in Facebook and Twitter are also posted in LinkedIn page.

Basic demographics of our followers in terms of location and job function is demonstrated in the figure 24. Approx. 25% of followers mentioned in their page as research as primary job, 15% are related to education, and 13% in health service. Despite of the fact that our page is relatively new and has comparatively low number of followers, the number of post and engagement rate is much higher in our posts compared with similar pages including that of AACC, ASCP, EFLM and CLSI.

LinkedIn group: it has 3651 members and being used to discuss various issues.

Instagram: starting from Feb 2018, we have extended our social media presence to Instagram (figure 28). Currently, it has 362 followers and 247 posts, and we hope our followers to Instagram will rise in near future.





As the number of followers is directly associated with the number of posts, it is very important to increase the number of posts. Target is having 1 post / day.

Even though our page is relatively new and have comparatively a low number of followers, the number of post and engagement rate is much higher in our post compared with similar pages including that of AACCC, ASCP, EFLM and CLSI.

YouTube: IFCC channel currently has only 3 videos, including promotional material for EuroMedLab 2019. Currently we are working on 12 video featuring interviews to Chairs of various IFCC Functional Units.

Databases

The NPU, Register of Experts, and Publications databases are the only active databases currently on the website. An eAcademy database will be developed with the eAcademy phase 2 implementation.

Working Groups

Working Group on Electronic Journal of the IFCC (WG ej-IFCC); Chair: János Kappelmeyer (HU)

Major accomplishments:

The eJIFCC collection is available at: <http://www.ifcc.org/ifcc-communications-publications-division-cpd/ifcc-publications/ejifcc-journal/e-journal-volumes/>

A meeting of journal editors was organized in Barcelona, with the participation of more than 20 editors and publishers.

eJIFCC: Statistics of Free Communications

Dues	2018	2019 (OCTOBER)
<i>Submitted</i>	20	49
<i>Rejected</i>	7	20
<i>No answer post major revision</i>	3	8
<i>Accepted post minor revision</i>	9	5
<i>Accepted post major revision</i>	0	16
<i>Accepted as Letter to Editor</i>	0	4
<i>Accepted as submitted</i>	1	1

By countries of corresponding author

- Free communications: Austria, Australia, Ethiopia, Ireland, Italy, Nepal, Spain, United Kingdom,
- Invited papers: Belgium, Hungary, Italy, France, Greece, Nigeria, Palestine, Serbia, Slovenia, Spain, Syria, Turkey, United Kingdom

eJIFCC visibility: PubMed: Available; Google Scholar: Available; Scopus: Available: 14 Jan 2019; Web of Science: Applied: 05 Mar 2019



2019 projects

The possibility to have videos published in the eJIFCC, an automatic slideshow downloadable from the eJIFCC papers with logo and correct citation already included has been considered. Further discussions at CPD EC level will be needed before submitting the final proposal to the IFCC EB.

A comparison of international manuscript management systems was also been performed: the adoption of a manuscript manager is postponed until all indexing in above portals is completed/accepted and the number of issues grows from current 4/year to 6/year, with further options of open source software submissions.

eJIFCC 2019 issues. For thematic issues the eJIFCC is seeking Guest Editors.

- **eJIFCC Volume 30 n°1 - 2019**

1. **Call for manuscript submissions for a thematic eJIFCC issue on “Flow cytometry”**
Katherina Psarra
2. **Call for manuscript submissions for a thematic eJIFCC issue on “Improving the preanalytical phase in laboratory medicine”**
Gabriel Lima-Oliveira
3. **The irreplaceable value of laboratory diagnostics: four recent tests that have revolutionized clinical practice**
Giuseppe Lippi
4. **Factors affecting turnaround time in the clinical laboratory of the Kathmandu University Hospital, Nepal**
Rajendra Dev Bhatt, Chandani Shrestha, Prabodh Risal
5. **Hemolysis interference studies: the particular case of sodium ion**
José Antonio Delgado, Daniel Morell-Garcia, Josep Miquel Bauça
6. **Prevalence of anemia and associated factors among hospitalized children attending the University of Gondar Hospital, Northwest Ethiopia**
Bamlaku Enawgaw, Yaregal Workineh, Sisay Tadesse, Eyuel Mekuria, Ayenew Addisu, Meaza Genetu
7. **Waist circumference cutoff point determination for defining metabolic syndrome in type 2 diabetes mellitus in Ethiopia**
Shewit Hailemariam, Tadele Melak, Molla Abebe
8. **Critical issues and new trends on stat tests in clinical laboratory**
Ariadna Arbiol-Roca, Dolors Dot-Bach
9. **Diamond Blackfan Anemia: genetics, pathogenesis, diagnosis and treatment**
Getabalew Engidaye, Mulugeta Melku, Bamlaku Enawgaw
10. **Gaucher disease: an underdiagnosed pathology in the Eastern Moroccan population**
Ouardia Bouayadi, Amina Lyagoubi, Adnane Aarab, Somiya Lamrabat, Abdelilah Berhili, Mohammed Bensalah, Rachid Seddik
11. **A rare case of non-secretory multiple myeloma: a case report and literature review**
Mohammed Bensalah, Somiya Lamrabat, Amina Lyagoubi, Adnane Aarab, Ouardia Bouayadi, Rachid Seddik
12. **Increased bleeding risk in a patient with oral anticoagulant therapy and concomitant herbal intake – a case report**
Paul Gressenberger, Peter Rief, Philipp Jud, Katharina Gütl, Viktoria Muster, Leyla Ghanim, Marianne Brodmann, Thomas Gary
13. **Unusually low serum alkaline phosphatase activity in a patient with acute on chronic liver failure and hemolysis**
Parul Arora, Shekhar Singh Jadaun, Prasenjit Das, Shalimar, Sudip K. Datta

- **eJIFCC Volume 30 n° 2 – 2019 - Non-coding RNAs as potential laboratory biomarkers Themed Issue**

1. **Foreword: non-coding RNAs as potential laboratory biomarkers**
Guest editor: Béla Nagy Jr.
2. **How close are miRNAs from clinical practice? A perspective on the diagnostic and therapeutic market**
Bonneau E., Neveu B., Kostantin E., Tsongalis G.J., De Guire V.
3. **Role of sepsis modulated circulating microRNAs**
Bernadett Szilágyi, Zsolt Fejes, Marianna Pócsi, János Kappelmayer, Béla Nagy Jr.



4. **MicroRNAs in endocrine tumors** *Henriett Butz, Attila Patócs*
5. **The role of microRNAs in congenital heart disease** *Orsolya Nagy, Sándor Baráth, Anikó Ujfalusi*
6. **Circulating microRNAs as possible biomarkers for coronary artery disease: a narrative review** *Tadele Melak, Habtamu Wondifraw Baynes*
7. **MicroRNA profiles in B-cell non-Hodgkin lymphoma** *Zegeye Getaneh, Fikir Asrie, Mulugeta Melku*
8. **Cell-free nucleic acids in prenatal diagnosis and pregnancy-associated diseases** *Bálint Nagy*
9. **Exosomal long non-coding RNAs as biomarkers in human diseases** *Evelyn Kelemen, Judit Danis, Anikó Göblös, Zsuzsanna Bata-Csörgő, Márta Széll*
10. **Dysregulated expression profile of myomiRs in the skeletal muscle of patients with polymyositis** *Erika Zilahi, Zsuzsanna Adamecz, Levente Bodoki, Zoltán Griger, Szilárd Póliska, Melinda Nagy-Vincze, Katalin Dankó*

- **eJIFCC Volume 30 no 3 - 2019**

1. **Recommendations on measurement units – why and how** *Young Bae Lee Hansen*
2. **Evaluation of visual serum indices measurements and potential false result risks in routine clinical chemistry tests in Addis Ababa, Ethiopia** *Tigist Getahun, Anberber Alemu, Firehiwot Mulugeta, Merone Sileshi, Abenezer Ayalkebet, Wosene Habtu, Zeleke Geto, Fitsum Girma, Feyissa Challa, Mistire Wolde*
3. **Best practices in the implementation of a point of care testing program: experience from a tertiary care hospital in a developing country** *Aysha Habib Khan, Shahid Shakeel, Khairunnissa Hooda, Kashif Siddiqui, Lena Jafri*
4. **Prevalence of liver function test abnormality and associated factors in type 2 diabetes mellitus: a comparative cross-sectional study** *Getnet Teshome, Sintayehu Ambachew, Alebachew Fasil, Molla Abebe*
5. **Correlation of body mass index and waist/hip ratio with glycated hemoglobin in prediabetes** *Manju Bala, Meenakshi, Sameer Aggarwal*
6. **Hyperuricemia and its association with cardiovascular disease risk factors in type two diabetes mellitus patients at the University of Gondar Hospital, Northwest Ethiopia** *Birhanu Woldeamlak, Ketsela Yirdaw, Belete Biadgo*
7. **Atypical hemolytic uremic syndrome: genetic landscape challenge** *Laura Valiña, Bernardo López Andrade, Josep Miquel Bauça*
8. **Letter: Manchineel apple of death** *Michelle Muscat*

- **eJIFCC Volume 30 no 4 – 2019 Clinical flow cytometry in 2019 Themed Issue Guest editor: Katherina Psarra**

1. **Clinical flow cytometry in 2019** *Katherina Psarra*
2. **Flow cytometric diagnosis of paroxysmal nocturnal hemoglobinuria: pearls and pitfalls – a critical review article** *Bruno Brando, Arianna Gatti, Frank Preijers*
3. **Flow cytometric analysis of monocytes polarization and reprogramming from inflammatory to immunosuppressive phase during sepsis** *Marilena Greco, Aurora Mazzei, Claudio Palumbo, Tiziano Verri, Giambattista Lobreglio*
4. **Evaluation of sample quality as preanalytical error in flow cytometry analysis in childhood acute lymphoblastic leukemia** *Eszter Szánthó, Bettina Kárai, Gergely Ivády, Sándor Baráth, Marianna Száraz-Széles, János Kappelmayer, Zsuzsanna Hevessy*
5. **Immune cellular evaluation following newborn screening for severe T and B cell lymphopenia** *Johannes Wolf, Karolin Dahlenburg, Stephan Borte*
6. **Flow cytometry in the diagnosis and follow up of human primary immunodeficiencies** *Ulrich Salzer, Ulrich Sack, Ilka Fuchs*
7. **Past, present and future of flow cytometry in breast cancer – a systematic review**

Maria Andreou, Evrysthenis Vartholomatos, Haralampos Harissis, Georgios S. Markopoulos, George A. Alexiou

8. Summer school in flow cytometry for immunology: report from a successful ESCCA experience *Katherina Psarra, Genny del Zotto, Alexandra Fleva, Areti Strati, Marianna Tzanoudaki, Silvia Della Bella*

In 2019 the eJIFCC volumes were distributed: February, May, August and November.

Working Group on IFCC NEWS (WG-ENEWS); Chair: Katherina Psarra (GR)



The working group has 25 representatives with 9 national society liaisons. The current members of the eNewsletter working group are also involved into other IFCC activities. A request to confirm the interest to stay in the WG has been sent to all members. In 2019 the rate of publication continued with monthly frequency with the sad exception of an issue fully dedicated to Prof. Morris, IFCC president who suddenly passed away in April 2019. The IFCC board has requested a shorter and more frequent newsletter. The eNews has now following section: Editorial; The Voice of IFCC; IFCC, the People; IFCC, the Young Scientists; Contribute to IFCC eNews; News from Regional Federations and Member Societies; IFCC Calendar; News from the Web.

The eNewsflash was revamped in August and 3 editions highlighting important IFCC news items especially time-sensitive and urgent items were published.

Requests for articles are sent to all eNewsletter WG members, National Societies liaisons and National Representatives (through the IFCC Office) with a reminder of the deadlines. The reports of the IFCC Young Scientists task force and the PSEP reports from awardees tend to feature prominently. This helps to highlight the contribution of the IFCC to international clinical chemistry across the world and also ensures that contributions from members continue to come to the newsletter. The eNews continue to coordinate with Social Media editor to post most popular articles on IFCC Social accounts.

The **eNews collection** is available at: <http://www.ifcc.org/ifcc-communications-publications-division-cpd/ifcc-publications/enewsletter/enews-volumes/>

The **eNews Flash collection** is available at: <http://www.ifcc.org/ifcc-communications-publications-division-cpd/ifcc-publications/enewsletter/enews-flash-archive/>.

The collaboration with EFLM news and LMI has continued as before.

Relationship with LabMedica International

LMI prints a selection of the articles. The eNews editor is on the editorial board of LabMedica.

Working Group -Spanish (Ibero-American) Nomenclature and Translations; Chair: Maria del Carmel Pasquel (EC)

The update of RIA and DIV web pages continues with the cooperation of the office and of the web editor

Membership: new members are participating in the WG activities representing all Ibero-American IFCC countries. The RIA section of IFCC website is continuously updated. Social networks are working very well and allowed a significant increase visits to IFCC / RIA / DIV. The WG continued its collaboration with the AMARA translation project. The AMARA platform was updated, translations were distributed to the countries and some are already complete.

In 2019 two group meetings were organized: EUROMEDLAB 2019, Barcelona, Spain, and

COLABIOCLI CONGRESS 2019, Panama City, Panama. The WG IANT offered support to scientific Societies. Other events where WG members were speakers were: the International Conference on Clinical Biochemistry and Hematology - Machala Ecuador; COLABIOCLI CONGRESS in Panamá 2019.

DiV, Diagnóstico in Vitro, continues to be a major product of the WG-IANT activity. The DiV collection is available at: <http://www.ifcc.org/div/>



We would like to particularly thank Dra Maria del Carmen Pasquel Carrera for her work on issues of Diagnóstico In Vitro (Div). 3 DIV issues were published in February, June and October 2019, both in PDF version and flip version,

DiV sections are the following:

- Editorial, based on the content of the journal, or on a specific event.
- News and Updates, on the scientific or professional activities of the scientific societies of the region.
- Scientific Articles and News Research articles,
- Letters to the Editor,
- Young Scientists corner,
- Radio Interview “*El Microscopio*”.

The access to DiV is direct from IFCC and DIV website (<https://www.ifcc.org/div/>)

The WG-IANT is constantly inviting readers to visit the magazine through emails and social networks.

El Microscopio



In 2019 The Iberomeric web Radio El MICROSCOPIO (<https://www.infobioquimica.com/new/>) continued to support the dissemination of IFCC journals and broadcast interviews for the magazine DIV, some translated from English to Spanish. New programs and initiatives are planned, mainly focused on updating the RIA section of the website.

Programmes are regularly broadcast and some of them are in English, for a broader circulation. This successful initiative is in search of additional funding and tools for promotional purposes.

Corporate Member activities; Tricia Ravalico (US)

Tricia Ravalico (Abbott) has provided great support for IFCC public relations. Her 2019 activities included supporting the C-PR for the IFCC brochures revision, supporting the IFCC, along with other partners, for the launch of the UNIVANTS of HCE (Healthcare Excellence Programme). For this latter programme the activities were many and were facilitated through the different IFCC communications channels.

Tahir Pillay, CPD Chair



EMERGING TECHNOLOGIES DIVISION (ETD)

The ETD is an IFCC functional unit responsible for identifying and assessing emerging technologies and for translating the emerging and disruptive diagnostic and data analysis procedures from academic laboratories to clinical laboratories and from clinical laboratories to market.

The ETD Responsibilities are: defining for each ET the clinical needs and criteria of education of specialists in Laboratory Medicine and caregivers; defining for ET the appropriate infrastructure and laboratory organization; defining for each ET pre-analytical, analytical and post-analytical processes necessary for clinical laboratory applications; defining for each ET quality programs and certifications required to meet criteria for accreditation up to ISO151811 standard; assess the clinical value of each test with regard to addressing unmet clinical need.

During 2019 the following members served on the ETD Executive Committee: Sergio Bernardini (Chair), Paolo Fortina (US) (Vice-Chair), Ronda Graves (AU) (Secretary), Damien Gruson (BE), (member), Markus Roessler (DE) and Peng Yin (CN) (corporate members). Four consultants: Maurizio Ferrari (IT), Larry Kricka (US), Jason Park (US) and Helen Martin (AU). Two meetings were held during 2019: May 21-22 Barcelona (EuroMedLab), November 17 Jaipur (APFCB Congress).

Membership: During 2019, the EC welcomed 22 new Corresponding members. To date ETD in total is composed by 72 members from 27 Countries.

Relationship with other IFCC Divisions: The ETD share project proposals and information with the Scientific Division (Chair: Philippe Gillery). The purpose is to share information on activities and look for areas of mutual interest, avoiding overlaps and working in synergy. The Division leadership meet at least once per year, preferably at a major conference. The ETD collaborates with the Communication and Publication Division (Chair: Tahir Pillay) to organise surveys, to promote its activities and to deliver webinars.

Relationship with International Organizations:

- *European Federation of Clinical Chemistry and Laboratory Medicine:* The EFLM Science Committee and SD leadership agreed there should be close liaison and communication between the two groups. The purpose is to share information on activities and look for areas of mutual interest. It was agreed the leadership of the SD and the EFLM Science Committee should meet once per year, preferably at a major conference. Professor Eric Kilpatrick is the EFLM SC chair.

- *Healthcare Information and Management Systems Society (HIMSS):* is a global advisor and thought leader supporting the transformation of the health ecosystem through information and technology. As a mission-driven non-profit, HIMSS offers a unique depth and breadth of expertise in health innovation, public policy, workforce development, research and analytics to advise global leaders, stakeholders and influencers on best practices in health information and technology.

Damien Gruson is the liaison with HIMSS. The target is to organise a Joint Conference during 2020.

- *European Society for Pediatric Endocrinology (ESPE):* This collaboration is concerning activities related to laboratory diagnosis and monitoring for disorders of sex development. This is a joint project with clinical and translational research experts. ETD liaison is Ronda Graves.

Congresses and Conferences 2019

1. Malaysian Association of Clinical Biochemists (MACB) National Congress, Kuala Lumpur, July 15th, 2019. "The Impact of New Technologies on the Current and Future Practice of Clinical Laboratory Medicine" - Sergio Bernardini
2. APFCB Congress, Jaipur, 18th November 2019. "E-Health and Digital tools" - Bernard Gouget; "Digital Tools for researchers in Laboratory Medicine" - Alexander Haliassos; "Machine Learning in Laboratory Medicine" - Sergio Bernardini
3. Beograd (Serbia) Dec 9 – 10, 2019: Co-organization of the 3rd conference on Med



- laboratory accreditation and quality systems (CLAQ 2019): Lab-medicine in the transformative decade: Digital technologies, AI and quality management - Chairs of sessions: B Gouget, Sergio Bernardini; C MHBLM speakers: James Nichols, CMHBLM member; 1- Opportunities for POCT in modern healthcare and dangers of D to C; 2- Risk management in POCT: understanding human factors and processes to minimize errors. Bernard Gouget, AI in education as a lifelong learning companion; Hugo Ribeiro (CM Abbott) Lab procurement models that incentivize innovation and cost savings; Sergio Bernardini, ETD Chair: AI application in Lab Medicine
4. Rome (Italy), 20 December 2019: 3rd National conference GDS SIBIOC Young Scientists: Novel targets and technologies: From Bench to bedside - Bernard Gouget, speaker: «Artificial Intelligence contribution to m/eHealth»
 5. Paris (France) November 21-22, 2019; 62nd JIB: Days of innovation in Biology - B Gouget, Chair: The future of lab medicine; G Beastall speaker; D. Gruson/ B Gouget, Chairs: “La biologie 2.0 et les applications numériques au service du diagnostic biologique”
 6. Jaipur (India) November 17-20, 2019: 15th- Asia Pacific Federation for clinical biochemistry and Laboratory Medicine Congress - Lab Medicine: Innovation and integration; B. Gouget and S. Bernardini recipients of the APFCB Awards: “IFCC visiting lecturer to APFCB 2017-2019”; IFCC-ETD session: eHealth and digital tools: B. Gouget: “eHealth tools for the medical lab for better outcomes”; S. Bernardini: “Machine learning in lab medicine”
 7. Paris, France; October 1st: 41st LABAC Conference - B. Gouget, chair: Communication of scientific and educational information in Lab Medicine: Innovative approaches and tools. Guest of honor Pr N.Rifai.
 8. Prague, Czech Republic; October 3-4 2019: 3rd symposium Cutting Edge laboratory management in Europe: Emerging Challenges in Lab Medicine (CELME 2019). B Gouget, Chair session: Lab medicine Big Data and Biobanking

Congresses and Conferences organised during 2019 and expected in 2020

1. WorldLab, Seoul May 25-28, 2020, scientific session “Emerging Technologies: new trends and Clinical applications”
2. 2020 XV International Congress of Pediatric Laboratory Medicine, Seoul May 22-23.
3. ETD Workshop under the IFCC Auspices LabMedNext, Rome April 27th, 2020
4. AACC Conference, Chicago July 26-30, Scientific session “Tumor Mutation Burden (TMB): A Potential Novel Biomarker for Therapeutic Selection”
5. AACC Conference, Chicago July 26-30, Scientific session “Successful Strategies for the Clinical Implementation of Next Generation Sequencing in Oncology in a Hospital Setting.”

Committees

Mobile Health and Bioengineering in Laboratory Medicine (C-MHBLM); Chair B. Gouget (FR)

IFCC Survey on “Mobile Health and Digital Diagnostics” completed; publication expected in the first quarter of 2020. Activation of the “IFCC-ETD Forum” in collaboration with CPD ongoing, expected second quarter 2020. Review paper about “Regulatory aspects a Mobile and E-Lab Medicine” ongoing; publication expected for the second quarter 2020.

Publications:

eNews March 2019 issue: “AI, Open digital resources and Open science” by B. Gouget

eNews April 2019 issue: “The IFCC-CMHBLM On-the-Go” by B. Gouget

eNews September 2019 issue: “How AI will change work and careers in lab medicine?” by B.

Gouget

Omics Translation (C-OT); Chair Gregory .J. Tsongalis (US)

Review paper ongoing: “Tumor Mutational Burden Biomarker application” by G. Tsongalis et al. on Critical Review in Clinical Laboratory Sciences is ongoing, expected in the first quarter 2020.

Emerging Technologies in Pediatric Laboratory Medicine (C-ETPLM), Chair: T. Lang (UK)

The scientific program of ICPLM in Seoul, May 22-23 has been finalized and the organization is in an advanced state. Ronda Greaves attended the European Society for Pediatric Endocrinology (ESPE) 2019 congress in Vienna from 19th – 21st September. This is concerning activities related to laboratory diagnosis and monitoring for disorders of sex development project that is underway.

Members of committee have contributed to AACC PMF curriculum guidelines and shared the database of worldwide curricula with this team. Dr Tiffany Payne from Agilent attended the C-ETPLM meeting as an invited observer. Thanks to this contact, the company has recently become a corporate member of IFCC.

Working Groups

Volatolomics (WG-Vol); Chair L. Kricka (US)

In 2019 has been published the first version of the volatolomics (breath analysis) survey (pdf format) on the ETD page on the IFCC web site. The survey covers: (i) News items and opinion pieces from key researchers/opinion leaders about recent developments in the clinical diagnostic applications of volatolomics; (ii) A directory of companies active in the clinical diagnostic applications of volatolomics; (iii) Links to clinical trials involving volatolomics testing; (iv) a listing of analyzers and regulatory approvals of clinical diagnostic products based on volatolomics testing; and (v) a literature survey (subdivided into categories reflecting the different aspects of volatolomics testing technology and clinical studies). The volatolomics survey will be updated regularly as the scope and extent of volatolomics testing increases.

Publications:

eNews July-August 2019 issue: “Introducing the IFCC Working Group on Volatolomics (WG-Vol)”, by L. Kricka

Guidance for the Implementation of Custom-made Genomic Panels (WG-GCP); Chair : J. Morrissette (US)

The WG genomics webpage has been created with material being identified and the upload is ongoing. Content is being curated through a shared Google document, that includes genomic technologies as well as bioinformatics information with Github links for informatics applications. Industry partners in the genomics space have been contacted for permissions to link to currently available genomics resources and for development of new content specifically for the international community for display on the IFCC webpage. A goal of the WG has been to create a manuscript delineating the prerequisites required for the implementation of custom genomic panels in community hospitals and emerging nations. The WG has devised a survey to understand the genomic testing needs in oncology in different settings. This was reviewed by clinicians from community hospitals in Africa to ensure the content was relevant and would generate the necessary data for our manuscript. The survey is in a Google docs format found at the following address: <https://forms.gle/E6rocHtwcnW965rQ6>. The results will be evaluated by statistical measures where possible. The survey has been distributed to the IFCC members and affiliated groups through correspondence by Silvia Colli Lanzi. The results will be coalesced into a manuscript reviewing what is currently in the literature with our findings from the IFCC community members.

The WG has been partnering with colleagues in Botswana and Nigeria to determine the potential clinical utility and application of genomics. It has become apparent that the greatest need





currently is in the diagnostic realm, where the clinical teams (pathologists and oncologists) are struggling with the turnaround time (TAT) for diagnostic testing. This has led to the exploration of the Cepheid STRAT4 testing for genomic abnormalities in breast cancer. STRAT4 can use FFPE tissue to detect ER, PR, ERBB2, Ki67 gains in breast tumours. We met in January 2020 with Cepheid leadership to determine whether we can pilot STRAT4 detection of ER, PR, ERBB2, Ki67 from fresh breast FNA specimens. Discussions are ongoing.

Publications:

eNews September 2019 issue: “Introducing the IFCC Working Group on Guidance for the Implementation of Custom-made Genomic Panels (WG-CGP)” by J. Morrissette

Editorial: Zakaria R, Graves R. The re-emergence of dried blood spot sampling-are we ready? Clin Chem Lab Med 2019; aop.

Ronda F. Greaves, Sergio Bernardini, Maurizio Ferrari, Paolo Fortina, Bernard Gouget, Damien Gruson, Tim Lang, Tze Ping Loh, Howard A. Morris, Jason Y. Park, Markus Roessler, Peng Yin, Larry J. Kricka. “Key questions about the future of laboratory medicine in the next decade of the 21st century: A report from the IFCC-Emerging Technologies Division” CCA 2019; Aug;495:570-589

Sergio Bernardini, ETD Chair

TASK FORCES

Task Force on Ethics (TF-E)

Achievements during 2019:

- Ethics Toolkit for Member Societies was completed and uploaded at TF-E website .
- Registration of current ethics documents and future needs regarding ethics documents on COI, code of ethics & relationship with industry (partially done).
- Comparison of Code of ethics documents creating a document that outlines similar sections to be included as part of Toolkit.
- Updated TF-Ethics website and include a section on “Highlights of recent events in Bioethics”
- E-learning course on professional ethics for IFCC e- Academy resources and volunteers
- TF-Ethics held a committee meeting in Barcelona during EFML congress 2019.

Plans for 2020:

- Annually update the Ethics “toolkit” for Member Societies.
- To update TF-Ethics website and section on “Highlights of recent events in Bioethics”
- To complete a table of documents collected so far stratified by organization. Committee members will approach organizations in their region to solicit more documents.
- To prepare and edit a 2020 e-IFCC journal number entirely dedicated to Ethics in Laboratory Medicine

Nilda Fink, TF-E Chair

Task Force for Young Scientists (TF-YS)

Educational sessions, workshop, functional meeting conducted:

- **Functional Meeting, Symposium & Workshop:** “Building Tomorrow’s leaders by the young generation (IFCC-CCLM / IFCC-TFYS)” & TF-YS symposium “Clinical Chemistry to Clinical Laboratory Science - Future Challenges” at APFCB, 17-20 Nov 2019.
- **Symposium:** “Laboratory Medicine training in Europe - In partnership with the IFCC TF-YS symposium” & “Young Scientist session” at EuroMedLab 2019, 19-23 May 2019.
- **Symposium:** Young Scientists Session: “IFCC TF YS: A short presentation”, “New technology in pre-analytical phase”, “Advances in analytical phase” & “Advances in post analytical-phase” at 33th National Congress of the Tunisian Society of Clinical Biology (STBC) on 25-27 April 2019.
- **Symposium:** Egypt, Annual International Conference of The Chemical Pathology Department, Medical Research Institute - Alexandria University, in collaboration with The African Federation of Clinical Chemistry (AFCC), 22nd-23rd of Feb 2019.
- **Symposium:** 3rd Annual Conference of the Italian YS, on December 20th, 2019 in Rome-supported by SiBioC, with auspices of European and International Federation of Clin Chem (EFLM and IFCC). IFCC TF-YS Joint session “Scientists of 2929s”.
- **Symposium:** at Annual Conference Ambicon 2019, Dec 13-15, Ludhiana, India.

Webinar Series & Mentorship Programme Interviews:

Webinar Series:

TFYS Conducted 4 webinars during 2019:

- Biochemical Genetics in Functional Diagnosis and Monitoring of Inborn Errors of Metabolism. Speaker: Prof. Khosrow Adeli
- Circulating Tumor DNA: A Promising Biomarker in the Liquid Biopsy of Cancer. Speaker: Prof. Maurizio Ferrari and Dr. Guiliane Boursier
- Essential Skills to Structure a Paper. Speaker: Dr. Anthony Newman
- Role of Artificial Intelligence in Laboratory Medicine. Speaker- Prof. Damien Gruson

IFCC Young Scientists’ Mentorship Program:

Phase I: Mentoring Minutes



This mentoring minutes program is intended to educate IFCC Young Scientist members on any current mentorship program in the laboratory research area. The program focuses on “how, when, what and why” about the existing mentor and mentee relationship and tips on how others can learn from their relationship.

Lab-Surfing

Lab-Surfing is a Laboratory professional social media designed and created in order to fulfill the objectives of IFCC-TFYS and unmet needs of Young Scientists (YS) globally. In a continuing evolving Laboratory Medicine profession with new technologies and methods every year, YS find exchange programmes and communication essential to widen their horizons and sharpen their laboratory skills. Lab-Surfing.com has grown in number of members with participation reaching 701 members. Our next plan is to update Lab-Surfing.com with new content/sections (hospital directory, mentors directory), include LinkedIn link in the user profile, send automatic e-mails to users every time that a new discussion forum is started.

New Members IFCC-TFYS for 2020 new terms

Two members completing terms are Pradeep K Dabla (Chair till 2019) and Guilaine Boursier (Core member till 2020). Thus, 2 new core members will be joining the 2 vacant positions. New Chairs appointed are as- Santiago Fares Taie (Chair 2020-21); Sancesario Giulia (Co-Chair 2020-21). Details at: [https://www.ifcc.org/task-force-young-scientists-web-pages/Plan of Actions for 2020](https://www.ifcc.org/task-force-young-scientists-web-pages/Plan%20of%20Actions%20for%202020)

I. TF-YS educational sessions & networking 2020:

«**YOUNG SCIENTISTS FORUM**» at **IFCC WORLDLAB CONGRESS SEOUL, 24-28 May, 2020**- Pre Congress Forum & networking of 50-80 young scientists for 1.5 day with deliberation of talks and topics close to the need of young scientists. Though not limited but planned to include workshop, scientific oral & presentations. Further, they will continue joining main congress. Selection criteria and budget estimation is determined and proposed to IFCC-EB, corporate members for support with help of Liaison officer IFCC TFYS, Prof Tomris Ozben. The event will be fully supported by IFCC & Organising Committee Worldlab Seoul 2020 as per objectives and desired outcomes.

TF-YS Functional meeting at IFCC WorldLab Seoul 2020, May 24-28.

TFYS Symposium & YS Awards at ACBICON-2020, Calcutta, India

Waiting confirmation for Young Scientist Session at CALILAB 2020, 23-26 Sep 2020, Argentina.

Waiting confirmation for Young Scientist Session at Congresso Nazionale SIBioC YOUNG SCIENTISTS, Dec 2020, Italy.

II. Webinar Series & Mentorship programme Interviews

Suggested Webinar Topics: “analysis of extravascular body fluids”, “CRISPER – Sherlock”, “Mobile health and chronic diseases”, “Biomarkers for neuro degenerative diseases”, “Auto-verification in LIS”, “Latest innovations in Laboratory Medicine” and as per need and suggestion of young colleagues. New core members will be included for continuation of programme. Joe El Khoury (core member) will get involved in the Mentorship Programme after Danni Li finishes her term.

III. Lab-Surfing

With the Lab-Surfing upgrade approved in the 2019 budget we will be able to meet more YS needs.

Improve participation in the discussion forums: Update profile with more information; New section with Hospital / Laboratory information; New section with Mentor information; Newsletters In the last report we noticed that the Lab-Surfing community was aging, so we need to reach out to new young members to encourage more participation and newsletters.

The maintenance requested include fee for Google Maps & site registration. It is an initiative of Santiago Fares Taie.

IV. Social Media & Online Meetings via Zoom

We are continuing meeting needs and networking YS through all media Facebook, Google

group, Linked In, Twitter, Online meetings of members. For 2020 we plan to include Instagram communications to address young colleagues. Ashlin Rampul will be collaborating in the management of social media accounts and Initiating Online Meetings Core & Corresponding members via ZOOM through meeting room subscription.

V. TF-YS Survey

Now approximately 2000 new members have been added globally to all social media channels. Josep Miquel Bau a with TFYS is coordinating a global survey on Residency Training to understand the differences in Laboratory Medicine training around the world. The goal of this survey is to publish the results. Need to use Survey Monkey to complete the global survey.

VI. Capillary programme

This programme intends to increase the participation of TF-YS corresponding members during national meetings. It is an initiative of Dr Giulia Sancesario in her plan for the TF-YS.

What is the CP: The CP is the formation of a network of thousands of YSs all around the world.

How are we going to develop it: -stimulating the formation of YS-WGs within the National Societies which belong to IFCC; connecting the already existing WGs under the umbrella of the IFCC.

VII. Clinical Case Study

We plan to develop a clinical case study with Q&A for the YS to increase participation and opinion exchange. Expert participation will be required for the clinical case interpretation and explanation.

VIII. EI Microscopio

Active participation in the selection of interviews and creation of questions for the different topics. +50 online radio programmes in 2019.

IX. DIV

Every DIV publication has one section for Young Scientists with a note of relevant information. Participation of Maria Eugenia Shroeder, Alvaro Justiniano Cortez and Santiago Fares Taie.

Young Scientists Positions in IFCC task forces and sub-committees

Progressively young scientist started to be included in IFCC committees with great success.

Member YS Support

Great success of the Young Scientists volunteer programme, travel grants by IFCC-TFYS to join APFCB 2019 and EuromedLab2019. Continue with same plans for Seoul World Lab 2020 and regional conferences.

Pradeep Kumar Dabla, TF-YS Chair

Task Force Corporate Members (TF-CM)

Background:

In order to strengthen the collaboration between IFCC and its Corporate Members and to better address their specific needs and challenges, the IFCC Executive Board approved the establishment of the **IFCC Task Force Corporate Members (TF-CM)** reporting directly to the IFCC Executive Board. The intention behind this is:

- Better representation of Corporate Members within IFCC and better understanding of their needs
- Receiving advice from Corporate Members to improve the practice of laboratory medicine
- Facilitate discussion among Corporate Members and identification of common topics
- Improving engagement of Corporate Members
- Direct dialogue with the IFCC Executive Board

Meetings held:

- Kick-off was held at EuroMedLab in Barcelona in May (4 hours)
- Follow-up two hour web conference took place July 30
- Full one day f-2-f meeting took place on September 24 at the IFCC office in Milan:

- Major objective for the meeting was to identify and agree on topics / issues to address and pursue.
- Decide on realistic actions and paths forward, including responsibilities and timelines.

Goals to be achieved:

1. Develop a structure for better communication among Corporate Members.
2. Make real progress to promote the value provided by lab testing.
3. Create formal collaboration channels between IFCC, regulators and clinical societies
 - to reduce / harmonize regulatory requirements
 - to harmonize clinical and clinical chemical guidelines
 - to achieve more favourable reimbursement.
4. Initiate activities to support and educate its professional membership on what will be required with respect to the In-vitro Diagnostica Regulation (IVDR).
5. Ensure MedTech Europe Code compliance rules are completely adhered to.
6. Improve communication to enhance visibility of Corporate Member contributions to the outside world (e.g., social media).
7. Provide suggestions on frequency, venues, and locations of IFCC conferences to enhance value to its corporate members.
8. Guaranteed full membership of at least one Corporate Representative in all Committees, Working Groups and Task Forces (not only corresponding membership).

First report / update of the TF-CM to the EB was given as a presentation during the meeting of the EB in November in Jaipur.

Topics for Future Meetings:

1. Develop a strategic IFCC corporate roadmap
2. Develop a process to assess costs versus value for any corporate sponsorship or funding request
3. Provide direct input on efficacy of Committees and Working groups to the EB, if appropriate
4. Engage other professions and different stakeholders beyond traditional laboratory medicine
5. Develop processes that could support the IFCC to influence future regulations and guidelines
6. Pursue the opportunities of data analytics in laboratory diagnostics
7. Develop training and learning programs – benchmark EFLM

Future Meetings:

- March 17, 2020: 12:00 – 14:00 CET via WebEx
- f-2-f meeting in Seoul, South Korea during WorldLab 2020:
- Proposal to also meet f-2-f during the 2020 AACC (separate from Rolf Hinzmann's customary EB Corporate Member's meeting) if enough TF-CM members can attend
- f-2-f meeting sometime in the late Fall at the IFCC offices in Milano, Italy
- one or two additional WebEx meetings in 2020

Joseph Passarelli, TF-CM Chair

Task Force History (TF-H)

The IFCC TF was established last May during EuroMedLab Barcelona 2019. Mathias M Mueller and Bernard Gouget were asked to write a new history book for the 70th IFCC anniversary. The previous edition coordinated by John Line was celebrating the 50th anniversary (2002).

The first TF-H meeting was held at the IFCC office last July 9–12, 2019. It was dedicated to check the archives, to inventory some archives boxes and to list the relevant documents. It was also an opportunity to sort the pertinent IFCC documents to be saved or destroyed.

It became quickly apparent that the useful resources for the history publications can be found in: archives, annual reports, EB and working parties minutes, IFCC newsletters, Handbooks,





previous IFCC milestones, IFCC website. The close collaboration with the IFCC secretary team is allowing for the exhaustive search for accurate information. The first action was to send immediately an invitation e-letter to the IFCC officers to ask their contribution to underscore the values and focal points accomplished during their chairmanship or term of appointment. Among the people who did received it are: Past Presidents, Chairs of Divisions, Regional Representatives within the EB, Regional Representatives within Divisions, Corporate Representatives seated at the executive board or at the Divisions executive committees

During the second meeting on November 26 - 27 2019, it was decided, due to the close date of the next IFCC WorldLab congress, first to publish a new edition of the “IFCC milestones Golden achievements 2002-2020” available next May during “WorldLab Seoul 2020”. It will be written in the same spirit of the former editions published for Kobe 2002 and Barcelona 2003 by the same authors. Furthermore, the 70th anniversary (2002-2022) will be ready end of 2022 to be distributed in Roma 2023.

The “IFCC Milestones Golden achievements 2020” are organized in different sections reflecting the evolution of the IFCC strategy, the evolution of its structure as the integration at the EB level of the regional representatives, the activities of the four divisions, committees, working groups and task forces. Special focus is made on the growing participation of the young scientists, and on the development of the e-academy and open science.

The “IFCC milestones” is the right platform to get a clear vision of how IFCC was reshaped during the past 20 years to foster agility and innovation. It also important to understand how the potential of the new and disruptive technologies, the progress and the impact of the digitalization and Artificial Intelligence adoption pushed the boundaries of the federation; fantastic also to see the wealth of talents involved in.

2020 TF-H timetable

The future joint actions to be implemented are:

IFCC Milestones 2020

- **TF-H meeting on January 23 - 24 2020** at the IFCC office to finalize the content.
- **End of February 2020:** Milestones project completion (layout and graphic design)
- **Deadline for final draft with file ready for printing:** April 3rd

70th IFCC anniversary book

Accordingly, the TF H endorsed an approach whereby the IFCC secretariat would invite IFCC officers of working parties to seek written contributions.

Mathias M. Müller and Bernard Gouget, TF-H Chairs



FOUNDATION FOR EMERGING NATIONS – FEN



Introduction:

The FEN is established under Swiss law as a non-profit making charitable trust, which is devoted to fund raising and to supporting programmes that help to improve the quality and delivery of laboratory medicine services, particularly in emerging nations.

Board of Directors:

There are five members of the FEN Board of Directors

- Dr Graham H Beastall (UK) Chair
- Dr Michelle Rossier (CH)
- Prof Thomas Brinkmann (DE)
- Dr Lucia Monaco (IT)
- Prof Tomris Ozben (TR)

Biographies of the Board of Directors are available from www.ifccfoundation.org

Board Meetings:

During 2019 the Board met (by Skype) on one occasion. Confirmed and signed Minutes of those meetings are available on request.

Achievements:

During 2019 the FEN achieved the following:

Compliance with the Handelsregister des Kantons Schwyz and the Swiss Foundation Supervisory Authority

Publication of the annual report for 2018

Approval of audited accounts for 2018

Operation of the FEN website www.ifccfoundation.org

Publication of a newsletter

Promotion of the FEN through various IFCC media outlets

Fundraising initiatives

Support for and monitoring of two funded projects

Completed Projects:

Proficiency of malaria microscopists in Ethiopia:

The Ethiopian Public Health Institute has an ambitious programme to eliminate malaria from areas of the country. The proficiency of the microscopists who make the diagnosis requires improvement if this is to be achieved. The FEN provided an award for partnership working with EPHI to develop training support for microscopists. A survey of the competence, training status and further requirements of microscopists has been completed and published.

A report of the project is available from www.ifccfoundation.org

'Support a Professional' programme

In collaboration with the Pakistan Society of Chemical Pathologists the first FEN SNIBE scholarship was awarded to Dr Sibtain Ahmed from Pakistan. Dr Ahmed spent ten weeks training in the University of Antalya in Turkey where he developed his skills and experience. A report of the visit is available from www.ifccfoundation.org

Ongoing Projects: 'Support a Professional' programme

Funding for a second FEN SNIBE scholarship has been secured to enable a senior trainee

from Indonesia to undertake a training visit to an advanced laboratory. In collaboration with the Indonesian Association for Clinical Chemistry the scholarship opportunity has been advertised. The scholarship will be awarded, and the visit arranged during 2020.

Fundraising and Finances:

During the year the FEN secured two educational grants to enable the further implementation of the 'Support a Professional' programme:

- SNIBE Diagnostics to support a scholarship in Indonesia
- Abbott Diagnostics to support four scholarships

Audited accounts for the year to 31st December 2019 are in preparation and will be available on request. In summary:

Income:

Starting balance at 1 January 2018	11 835 CHF
Funds added during year	43 778 CHF
Total	55 613 CHF

Expenditure:

Operating costs	3 362 CHF
Bank charges	216 CHF
Project support	6 734 CHF
Total	10 312 CHF

Closing balance at 31 December 2019	45 301 CHF
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Acknowledgement:

The FEN acknowledges expert administrative support from Ms Paola Bramati of IFCC.

Graham Beastall, FEN Chair

ORGANIZATIONS (REGIONAL) AFFILIATED WITH IFCC

There are six main Regional Professional Laboratory Medicine organizations which can be considered IFCC regional partners:

- AFCB - Arab Federation of Clinical Biochemistry
- AFCC - African Federation of Clinical Chemistry
- APFCB - Asia-Pacific federation of Clinical Biochemistry
- COLABIOCLI - Latin-American Confederation of Clinical Biochemistry
- EFLM - European Federation Clinical Chemistry and Laboratory Medicine
- NAFCC – North American Federation of Clinical Chemistry and Laboratory Medicine

More information about these affiliate organizations and their activities can be found on our website (<https://www.ifcc.org/executive-board-and-council/regional-federations/>) and are included in the IFCC Annual report 2019, web edition (<https://www.ifcc.org/executive-board-and-council/annual-reports/>).

FEDERATIONS



AFCB **Arab Federation of Clinical Biology**



The Arab Federation of Clinical Biology is a Regional Federation of Associations, Societies and Syndicates of Laboratory Medicine specialists in Arab Countries. AFCB represents Laboratory Medicine professionals practicing in scientific, educational, research institutes and in the private sector as well.

During 2019, the main activities of the Arab Societies were the following:

1) Algeria

Algeria is represented by two associations ALAM and SABC

ALAM (AFCB Member):

- National Congress - ALAM Has organized the 3rd Congress of Practical Biology and 4th Congress of FIFBCM Alger october11-12, 2019
- **Continuing Medical Education (5 workshops)**
 - Spermiology, exploration of male infertility 11 and 12/11/2019
 - Molecular biology and cancer 21/09/2019
 - Optimizing the means of a laboratory of medical biology 07/11/2019
 - Antibigram and interpretation 04 and 05/11/2019
 - advices in bacteriology 25 and 26/11/2019

SABC (IFCC Member)

- **Continuing Medical Education Formations (2 workshops):**
 - Practical Biology November -28 2019
 - Immunology December 2019

2) Saudi Arabia (SSCLS)

Saudi Society has organized 20 meetings:

- **4 national Congress**
 - The 5th annual conference Saudi society for clinical chemistry December 2-5, 2019
 - The 2nd Saudi international Medlab Expo 2019 December 10-12, 2019
 - AACC Middle East Dubai November 1,2, 2019
- **Continuing Medical Education**

SSCLS has organized 16 workshops:

- The main topics (workshops) were about the immunological tests, Health & Hospital Administration Laboratory and diagnostic, newborn screening awareness campaign, Breast Cancer, Highlights on clinical chemistry pediatric, CAP Educational, Protein Electrophoresis, Health & Hospital Administration

3) Lebanon (SNBL)

The activities of SNBL were characterized by the organisation of:

- **National Congress:** VIII Congress of Lebanon Biologist and IV Congress of the International Francophone Federation under the IFCC and AFCB auspices - Beyrouth, Lebanon 14 au 16 mars 2019
- Continuing Education (2 workshops)
 - Microbiology, Quality control, Quality control
 - Summer School in Medical Mycology

4) Marocco (SMCC)

- The Moroccan Society of Clinical Chemistry and Medical Biology (SMCC-BM) organized, under the patronage of His Majesty King Mohammed VI, the 6th Congress of the African Federation of Clinical Chemistry and Laboratory Medicine “AFRICAMEDLAB 2019 “Coupled with the 19th Moroccan Congress of Clinical Biology from 25 to 28 September 2019, in Marrakech,
 - 999 participants including
 - 121 exhibitors.
 - 127 speakers 13 symposia, 11 workshops sponsored by the laboratories, 7 workshops organized by the Federations (AACC, AFCB, IFCC, FIFBCML), 5 plenary conferences, 1 session of 13 oral communications and 341 posters.
- **Continuing Medical Education Formations**
 - Training on Accreditation 5 days 25/2 / 2019-1 / 3/2019 Faculty of Pharmacy and Medicine Oujda Prof.

5) Palestine (PMTA)

- **National Congress**
PTMA has organized The National Week of the Medical Laboratory
 - The National Week of the Medical Laboratory is an annual activity of the Palestinian Medical Laboratory Syndicate, in accordance with the International Medical Laboratory Week, in all the governorates of the country between 25-30 April each year under the slogan “Working Together for Your Health”.
The main objective of the National Week of the Medical Laboratory is to make the citizens aware of the role of the medical laboratories in the diagnosis and prevention of various diseases and the effectiveness of treatment. **78 activities were held in the governorates of the Palestine**
 - **8th Scientific Day of the Palestinian Medical Technology Association (PMTA)-Nablus Branch**, which took place at Hayat Nablus Hall on August, 23, 2019, under the slogan “Laboratory Professionals Get Results”, and with a distinguished attendance of PMTA members from Nablus and all Palestinian governorates
- **Continuing education program:**
 - 25 events covering different fields of biology were organized: Chemical Analysis of food, water and drugs, Microbiological Analysis of food, Development & Quality for clinical medical laboratories, Diagnostic mycology laboratory, Molecular Diagnosis of Cancer, Mycology, Biochemistry, Virology, haematology ...

6) Syria (SCLA)

The difficult situation in Syria did not limit the activities of our Syrian friends who were able to organize their annual congress and continuing education formations

- **National congress:** 10th National congress 24-26 October, 2019
- **Continuing education program:**
 - **7-12 June SCLA/AFCB Young Scientist Continuous education program: Cytogenetics and FISH**
This course includes hand-on training in different cytogenetics techniques such as karyotyping Normal and pathological
 - FISH probes and multicolour FISH techniques.
 - Bone marrow culturing, met phasing and doing the FISH, result interpretation and reporting using different types of microscopes (fluorescence and bright field microscopes).
 - Neonatal Metabolic screening / Junior Chamber international / Faculty of medicine



7) Tunisia (STBC)

The STBC has organized many manifestations

- **National Congress:**
- XXXIIIth National Days of Clinical Biology 25, 26 and 27 April 2019 Yasmine Hammamet, Tunisia
- 11th Molecular Biology Course: Research of genetic markers: PCR - RFLP and study of microsatellites April 18 and 19, 2019
- IFCC/STBC Scientific Meeting February -1, 2020 Hammamet
- IFCC EB Meeting February 2-4, 2020
- **Continuing education program:** 10 manifestations covering the majority of the biology areas Haematology, Biochemistry, Parasitology, immunology, Microbiology and Toxicology (TDM)

AFCB Activities (2019)

- Meeting of The AFCB EB March 15, 2019 Lebanon
- Recommendations:
 - Obligation of the AFCB and the all Arab societies to submit their annual Scientific activity reports to the IFCC EB
 - All the Arab societies must pay their annual IFCC fees
 - Support by the IFCC EB the candidate of One Arab Society to the organization of the next general conference and The 2nd IFCC, EFLM, AFCB Conference on “Laboratory Medicine: Meeting the needs of Mediterranean Nations”
 - Unaffordable high cost of Congress (registration fees, travel and hotel accommodation): Reduction of registration fees for Developing countries,
 - The AFCB hopes the support of the candidate of the Arab biologists to the IFCC committees
- AFCB funded 5 workshops for young scientists from Lebanon, Morocco, Palestine, Syria and Tunisia
- **EFLM/AFCB Collaboration**
EFLM-AFCB Joint Taskforce for Laboratory Medicine in Mobile Societies (JTF -LM4MS) has organized two meeting: the 1st Steering Committee during EuroMedLab Barcelona May 20th 2019, and the 2nd Steering Committee during AFCC/ SMCC Congress, September-26 , 2019 Marrakech, Morocco
- **Mission Statement of the EFLM/AFCB collaboration**
“The European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) and the Arab Federation of Clinical Biology (AFCB) recognize the importance of working together in order to collaborate on specific issues that have been identified as being mutually important in the Federations’ realm of expertise and professional activities. Especially they recognize that today’s societies are characterized by an increasing mobility of their citizens both within the Federations’ borders, but also across the Mediterranean region defining the geographical interface between the Federations. Increasingly, migration and getaway movements are the consequence of unrest, war and socio-political instability often leaving the victims in desperate need for health care not only upon entering EFLM and AFCB member countries, but also beyond their point of entry during their continued migration through the Federations’ territories. In consequence EFLM and AFCB recognize the importance of jointly supporting the evolution of comprehensive laboratory strategies in the context of mobile societies and people migration by networking health care Professionals in the Mediterranean region.”
- **Future Activities of AFCB**
 - 3rd Meeting of the FLM/AFCB Joint Taskforce for Laboratory Medicine in mobile Societies (JTF-LM4MS) January 25 , 2020 Hammamet Tunisia
 - EFLM/AFCB Meeting October-7-10 ,2020 Hammamet Tunisia

- AFCB EB Meeting October 2020 Hammamet Tunisia
- 16th AFCB Congress Lebanon 2021
- 2nd EFLM/AFCB Meeting 2022
- 17th AFCB congress Morocco 2024

Abderrazek Hedhili, AFCB Representative



AFCC **African Federation of Clinical Chemistry**

Summary Report of AFCC Activities

The federation was very active throughout 2019. Notable good progress was made. Highlights include the following:

1.0 Interact with major societies of Lab Medicine to encourage co-operation and collaboration as well strengthen communication between laboratories

- (a) Meeting held with CDC Africa, Addis Ababa, July, 2019.
- (b) Meeting held with Egyptian Society of Laboratory Medicine (ESLM) in Cairo, Egypt.
- (c) Meeting with Egyptian Society for Quality Improvement
- (d) Meeting with Kenyan Association of Clinical Pathology for co-operation in organizing workshops and conferences.

2.0 Raise Funds for AFCC to promote scientific activity in Africa

- In 2019 we developed partnerships with Radiometer who promised to support 4 workshops on Blood Gases in Egypt, Kenya, South Africa and Nigeria.
- We continued with our partnership with BD who supported the conference in Livingstone, Zambia.
- We have either trained or supported training of more than 500 laboratory professionals in 2019 through various educational activities.

3.0 Support from SAACB and Stellenbosch University

Stellenbosch University supported our workshops in Egypt and meeting with CDC, Africa by paying the air tickets for Prof Zemlin and Prof Erasmus, Prof Whitelaw, Prof Kotze and Prof Preiser. SAACB supported tickets for 3 speakers to BSZ meeting in Zambia.

4.0 Radio Africa

Support for this program was discontinued.

5.0 Joint Scientific Meetings with Member Societies

We organized international congresses and or workshops with Egyptian Society of Quality Improvement, Biotechnological Society of Zambia (BSZ), Kenya Association of Clinical Pathology (KACP, AACC, South African Association of Clinical Biochemistry (SAACB), Association of Clinical Chemists of Nigeria (ACCN) and APFCB in 2019.

6.0 Improve governance structures in AFCC

Policy has been developed for the award of travel grants to young scientists. Form for travel grant was redesigned and made simpler after complaints were received from some members that the forms were too complex.



7.0 Young Scientists Travel Grant

- 5 were advertised in 2019. Only 2 applicants were received and both were awarded (approx. US\$ 950).
- Registration fees for 5 IFCC Young Scientists Travel Grant Awardees was paid by AFCC (approx. US\$ 1200)

8.0 Finances

Our finances are in good standing and Dr Onakoya, the AFCC Treasurer has kept a good record and she always present report to the Board meetings. Our last first face to face board meeting was held in Marrakech, Morocco. We plan that in 2020 we hold 2 face to face board meetings.

9.0 Developing Skills for young scientists (Activities in 2019)

- a. Support for Egyptian Society for Quality Improvement, Alexandria, Feb, 2019.
- b. Support for Biomedical Society of Zambia Annual Conference, 25-28th April, 2019.
- c. Blood Gas Symposium, Aga Khan Hospital, 22nd June, 2019.
- d. Blood Gas Symposium, College of Medicine of S Africa, Johannesburg, 18th September, 2019.
- e. AFCC Regional Meeting in Morocco, 25-28 September, 2019.
- f. Blood Gas Symposium, Lagos, Nigeria, 26th October, 2019.
- g. AFCC Symposium of NCDs, Jaipur, India, 17-20th November, 2019.

10.0 Improve Public Relations and Communication: Website Improvement

- (a) Revamp Website and Newsletter.

11.0 Membership of AFCC

AFCC Secretary has been in touch with colleagues from Namibia, Uganda and Malawi while Prof Okesina is talking to countries in West Africa sub region.

12.0 AFCC/Moroccan Association Regional Conference

- 6th regional conference AFCC was organized by Moroccan Association of Clinical Chemistry. The conference received considerable support from IFCC.
- We contacted IFCC Lab Management Committee and AACC, both of whom participated actively
- Prof Layachi's immense contribution is acknowledged
- IFCC also supported 5 symposia for which AFCC is very grateful.

13.0 Next Regional AFCC Regional Conference

The next regional AFCC conference will be hosted in Zambia as per calendar drawn at Durban 2017 meeting and reemphasized in Morocco.

Acknowledgements

- Thanks also to Prof Layachi for organizing the 6th Regional conference in Marrakech.
- Special thanks to ACCC who supported and participated in our meetings for the first time. We hope this will become a regular event.
- IFCC for educational donations and supporting several symposia at 6th AFCC Regional Meeting, Marrakech.
- Thanks to Dr Rania El Sharkawy for organizing Egyptian meeting
- Thanks to Mr Victor Daka for organizing BSZ Conference
- Thanks to Dr Omuse (KACP) AND Prof Pillay (SAACB) for organizing Blood Gas Symposia
- Thanks to ACCN for organizing Blood Gas symposium in Lagos, Nigeria

Our Plans for 2020

1. Increase current activities by 30 %
2. Request industry for travelling scholarships for young scientists
3. Interact and collaborate more with Industry according to IFCC guidelines
4. Support other regional societies with educational activities
5. Increase current funds by 30 %
6. Motivate for 2 face to face board meetings in 2020
7. Request for more collaboration with AACC, EFLM and ASLM including CDC Africa
8. Widen scope of training workshops
9. Website and Newsletter to receive greater attention

*Rajiv Erasmus, President
Hilary Lumano, Secretary*

*Adekunle Bashiru Okesina, Representative at Executive Board
Aramide Onakoya, Treasurer*



APFCB **Asia-Pacific Federation for Clinical Biochemistry** **and Laboratory Medicine**

15th Asia-Pacific Federation of Clinical Biochemistry and Laboratory Medicine (APFCB) Congress, Jaipur, India, November 2019

The 15th Asia-Pacific Federation of Clinical Biochemistry and Laboratory Medicine (APFCB) Congress was held at Jaipur Exhibition and Convention Centre (JECC), Jaipur, Rajasthan, India from 17th to 20th of November 2019. It was organised by Association of Clinical Biochemists of India (ACBI) along with the support of Association of Medical Biochemist of India (AMBI). The theme of the congress was —Laboratory Medicine – Innovation & Integration.

The Scientific Program was a comprehensive mix of Pre-Congress Workshops, Plenary Sessions, Symposia and Industrial Symposia. The scientific program of the Congress had 40 symposia containing 134 lectures presented on emerging topics of clinical biochemistry and laboratory medicine by various member societies of APFCB, IFCC, AACC, COLABIOCLI, WasPalm etc. A total number of 662 participants and 308 exhibitors from all over the world participated in this Congress. A total of 28 companies exhibited their products in the Congress.

In addition, there were a host of administrative meetings during the Congress. APFCB had its council meeting on November 17, 2019. The IFCC ETD and CPD also had their meeting on the same day. IFCC TFYS meeting was on November 19 and the IFCC Executive Board meeting was conducted on November 20-22, 2019.

Education and Laboratory Management Committee Report

The Education and Laboratory Management Committee (C-ELM) consists of the following: Environmental – Lia Gardenia Partakusuma (Indonesia); Website development/Interpretative Comments – Tze Ping Loh (Singapore); Vietnam Course – Ronda Greaves (Australia); MACB Course – Elina Raja (Malaysia); Needs Survey of members – July Kumalawati (Indonesia); Phlebotomy audit – Endang Hoyaranda (Indonesia); Lean Vietnam – Jozi Habijanac (Roche Corporate); Quality Control/Sigma training - Amit Manjure (Siemens Corporate).

A brief summary of the major outcomes of the C-ELM follows:

APFCB Travelling Lecturer



The APFCB Visiting Lecturer for 2018/19 is Dr. Raja Elina Raja Aziddin, President MACB
Nepalese Association for Clinical Chemistry (NACC) - March 2019
Singapore Association of Clinical Biochemistry (SACB) – March 2019

APFCB - Roche – 11th Chemical Pathology Course, Vietnam

This annual event took place on the 4th and 6th July 2109 in Hanoi and Ho Chi Minh City. This was the 11th consecutive year since 2009 that the program is conducted and involved the participation of more than 500 healthcare professionals. The popularity of the program continues to grow.

APFCB VACB Lean Project

The Lean project continues with the support of Roche in Vietnam. The project will continue with support for the trainers being provided by Roche. The emphasis of the training has been standardisation of techniques and a just-in-time approach to using a suite of Lean tools. Small laboratory improvement projects are favoured so that trainees learn from the application of the tools.

MACB Chemical Pathology Course

The three-year cycle Chemical Pathology course completed. The 2019 program involved two external speakers with 70% of the material delivered by local speakers. The plan is for the MACB to be completely independent of the APFCB and conduct future programs which will be supported by Malaysian government certification. APFCB is keen to work with another member society for a similar Chemical Pathology programme, in view of the success of this model.

APFCB Jaipur Meeting Scholarships

APFCB sponsored 10 scholarships for young scientists to attend and present at the APFCB Congress.

C-ELM Supported Symposia

CCLTA Meeting in China July 2019

APFCB Snibe International Conference on Immunoassay in Shenzhen, August 2019

WASPALM in Xi'an, China, September 2019

Cutting Edge Laboratory Management (CELME) – EFLM in Prague, October 2019

Scientific Committee Report

Chair: Samuel Vasikaran; Secretary: Richard Kam; Members: Ronda Greaves, Chair of Mass Spectrometry Harmonisation WG; Graham Jones, Chair of APFCB / WASPaLM Task Force on CKD; Leslie Lai, Vice Chair and WASPaLM Rep-APFCB / WASPaLM TF CKD; Tester Ashavaid (TD) Chair of Pharmacogenetics WG

Mass Spectrometry Harmonisation WG

- A multicentre study of the influence of internal standard on the analysis of 17-hydroxyprogesterone by LCMSMS is currently under way, in association with RCPAQAP – AACB and IFCC ETD Pediatric Hormonics Working Group.
- The Chair of the WG, Ronda Greaves, is involved with the organisation of the Workshop on chromatography-mass spectrometry by AACB at the APFCB Congress in Jaipur, India.
- Future conferences:
- 10th Anniversary meeting of the Asian Pacific Conference of Chromatography & Mass Spectrometry: Bringing clinical mass spectrometry into routine practice in the Asian Pacific region, Guangzhou, China. 27 – 29 March 2020
- Publication:
Greaves RF, Ho CS, Loh TP, et al. Current state and recommendations for harmonization of serum/plasma 17-hydroxyprogesterone mass spectrometry methods.; Working Group 3 “Harmonisation of Laboratory Assessment” European Cooperation in Science and Technology (COST) Action BM1303 “DSDnet”. *Clin Chem Lab Med* 2018;56(10):1685-97.

APFCB-WASPALM TF-CKD

Graham Jones, Chair of APFCB-WASPALM TF-CKD visited Sri Lanka and gave lectures to the

ACB-SL and held discussions with Chemical Pathologists and Nephrologists in 2018. ACB-SL is currently examining the feasibility of standardising creatinine assays and reporting practices throughout the country. APFCB-WASPaLM TF-CKD will assist as and when required.

Project on Laboratory Practices for Diabetes Mellitus in the APFCB region

A survey of current status of laboratory testing practises for diabetes was performed in the Philippines with a view to assessing the potential role of APFCB in improving the quality of laboratory practice in the diagnosis and monitoring of diabetes mellitus. Results of the survey, analysis and recommendations for harmonising laboratory practices were presented by Sam Vasikaran at the Philippine Association of Medical Technologists, Inc. (PAMET) 54th Annual Convention in Manila in December, 2018.

A similar survey has been conducted for India by Dr Col Mithu Banerjee, and the results have been analysed, and will be presented together with recommendations arising from the survey, by Mithu Banerjee and Sam Vasikaran at the APFCB Congress in Jaipur.

The next survey is being planned for Sri Lanka in collaboration with ACB-SL.

Reference Interval WG

Global multi-centre study on reference values coordinated by the C-RIDL/IFCC for serum analytes to explore biological sources of variation of reference values among 12 countries around the world including participating countries in the APFCB region (China, India, Japan, Pakistan and Philippines) has been published.

Publication:

- Ichihara K, et al; Committee on Reference Intervals and Decision Limits, International Federation of Clinical Chemistry and Laboratory Medicine and Science Committee, Asia-Pacific Federation for Clinical Biochemistry. A global multicenter study on reference values: 2. Exploration of sources of variation across the countries. Clin Chim Acta 2017;467:83-97.

Sunil Sethi, President



COLABIOCLI

COLABIOCLI

Latin-American Confederation of Clinical Biochemistry

1) Affiliated National Societies from the following countries

1.1-ARGENTINA

Unified Biochemical Confederation of the Argentine Republic (CUBRA)

1.2-BOLIVIA

Bolivian Society for Clinical Biochemistry (SOBOBIOCLI)

1.3-BRAZIL

Brazilian Society of Clinical Analysis (SBAC)

1.4-CHILE

Chilean Society of Clinical Chemistry. (SCHQCI)

1.5-COLOMBIA

National College of Bacteriology of Colombia (CNBC)

1.6-DOMINICAN REPUBLIC

Dominican College of Bioanalysis (CODOBIO)

1.7-ECUADOR Ecuadorian Society for Clinical Biochemistry (SEBIOCLI)

1.8-GUATEMALA Association

of Chemical Chemists of Guatemala (AQBG)

1.9-HONDURAS College of Microbiologists and Clinical Chemists of Honduras (CMQCH)

1.10-MEXICO

Mexican College of Clinical Laboratory Sciences (CMCLABC)

1.11-PANAMÁ National College of Clinical Laboratory Workers of Panama (CONALAC)

1.12-PARAGUAY Association of Biochemists of Paraguay (ABP)

1.13-SPAIN Spanish Association for Clinical Laboratory (AEFA)

1.14- URUGUAY Uruguayan Biochemical Association (ABU)



Collaborating partners:

SPAIN – SEQC Spanish Society for Clinical Chemistry

ITALY - SIBioC Italian Society of Clinical Chemistry and Clinical Molecular Biology

2) Integration of the Executive Committee of COLABIOCLI 2018-2019

President: Prof. Dra. QF BC Stella Raymondo (Uruguay)

Vice President: Prof. Dr. Álvaro Justiniano (Bolivia)

Secretary: Prof. Dra. QF BC Ana María Lena (Uruguay)

Treasurer: BC. Natalia Amor (Uruguay)

1st Member: Mag. Lizbeth Campillo (Panama)

2nd Member: Prof. Dra. Juana Ortellado de Canesse (Paraguay)

3rd Member: Lic. Lourdes Cruz / 2nd part Lic. Antonia Suriel (Dominican Republic)

Past- President: Prof. Dra. QF BC Graciela Queiruga (Uruguay)

COLABIOCLI representative at IFCC. Dra. Rosa Isabel Sierra-Amor (Mexico)

Accounts Review Commission

Dra. Alejandra Arias (Argentina)

Dr. Thamara Andrade (Ecuador)

Dra. Jezabel Vite (México)

The Executive Committee meetings were established to be held with a 1/month periodicity and by Skype, without prejudice of having closer meetings in case of emergency. COLABIOCLI hosted 21 meetings and 2 Assembles. In addition, correspondence was by email and a WhatsApp.

3) Legal Status

3.1- The Legal Status (LS) was obtained in Uruguay on August 2019

3.2- From the date of obtaining LS, it was possible for PAHO to extend the collaboration with COLABIOCLI for three more years

3.3- Currently, based on obtaining the LS, a bank account was opened in the name of COLABIOCLI in Uruguay, which made it possible to transform COLABIOCLI into a recognized and legalized Institution.

4) Courses

4.1 Courses under the PAHO-COLABIOCLI Agreement.

4.1.1 Course on Quality Management and Good Laboratory Practices.

(Free registration for university professors from the clinical laboratory area of the region).

(Finished) Dictated by Dr. Juan Pablo Grammatico (Argentina) in 2019.

4.2 - Courses in the framework of the COLABIOCLI platform with other Institutions and countries

4.2.1 Course on “Advances in Diabetes. Clinical, genetic and biochemical aspects”

(Proposed in 2018 and carried out in 2019). Sponsored by the Uruguayan Biochemical Association and coordinated by the Committee for Standardization and Quality Control (CECC). It had 50 enrolled and up to 2 scholarships were awarded per country. Satisfaction survey with excellent return was made

4.2.2 “Bioethics Course”.

Course coordinated by Dr. Nilda Fink (Argentina), with expert teachers on the subject from countries in the region. Start date: September 30, 2019, being free for countries affiliated to COLABIOCLI is already being disseminated to countries and is on the website.

5) Activities and Projects with PAHO

5.1 Laboratory Census.

Activity led by: Dr. Álvaro Justiniano Grosz and Dra. Stella Raymondo.

It is planned to know the reality of laboratories in Latin America. Carried out between the years

2018 - 2019 by COLABIOCLI through surveys of the subsidiaries of the countries that make it up, requesting information on: 1) Population of the country, 2) Number of Clinical Analysis laboratories registered / authorized with the respective health entities. 3) Number of private laboratories. 4) Number of public laboratories. 5) Number of hospital laboratories. 6) Existence of Accreditation standards. 7) Number of accredited Clinical Analysis laboratories. 78.5% of the countries called responded. Indicators that link the population and the number and type of laboratories were managed. Accreditation rates were also established in the countries, linking the number of accredited laboratories with the total number of laboratories, among others. Survey completed at this stage (New items can be incorporated for 2020). Difficult access to information has been detected in most countries.

5.2 Update on the External Quality Assessment 2018 to 2019.

Activity supported by agreement signed between OWA and COLABIOCLI Executive Committee. A proposal was received from OWA to carry out this activity with full financial support, making all the information obtained available to COLABIOCLI and PAHO. Entity responsible for the activity: COLABIOCLI. Member countries were invited to participate, expressing interest: Ecuador, Honduras, Guatemala, Costa Rica, Bolivia, Paraguay, Panama, El Salvador and the Dominican Republic.

These surveys were scheduled to be carried out one in October 2019 and the other in March 2020, the latter being subject to acceptance by the new COLABIOCLI authorities. These surveys will constitute an initial, descriptive pilot study that will allow obtaining a discreet knowledge of the technological level, reagents used and needs that arise in the different countries participating.

6) Dissemination of the Latin American Training Program.

Creation of a database of experts in different areas from all affiliated countries with their corresponding abbreviated CVs.

7) Pre-Project of Relationship with the Pan American Society for Clinical Virology (PASCV)

On 9/11/2019 Dr. Randall T. Hayden, president of the PASCV, was invited to meet with COLABIOCLI showing interesting projects during COLABIOCLI Congress introduced by CONALAC.

8) Survey on the Diagnosis of Von Willebrand Disease.

This project was coordinated by Dr. Ana Lena (Secretary of COLABIOCLI). 16 countries were contacted and 9 responded to a survey that asked about the different techniques used in each country for the diagnosis and typification of the disease, prevalence data by country and whether they had a registry of this pathology.

	Argentina	Bolivia	Chile	Colombia	Honduras	Mexico	Panamá	Paraguay	Uruguay
Ristocetin Cofactor	x	x	x	x		x	x	x	x
Colagen Binding	x		x	x		x		x	x
Register	x			x	x				x
Ivy	x	x		x		x			x
Adhesiveness	x			x		x	x		x
Aggregation	x	x	x	x		x	x		x
FVIII	x	x	x	x	x	x	x	x	x
FVW	x	x	x	x	x	x	x	x	x
FVIII Binding	x		x	x		x			x
Molecular	x			x					
Propéptide	x								



Chromogenic Factor VIII				x			x		
Prevalence				3%					

Among the specific techniques, the most expanded were those that could be carried out on automated analyzers (FVIII, VWF, and Ristocetin Cofactor). At the COLABIOCLI Panama Congress, the Registry developed in Uruguay was presented, which allowed the registration of data on patients with the disease, not only from Uruguay but from other Latin American countries.

9) COLABIOCLI Working Groups and Commissions

9.1 Pre-Analytical Working Group, created in 2016.

- Chair: PhD Gabriel Oliveira Lima (Brazil)
- Beatriz Varela (Uruguay) Secretary.
- Eduardo Aranda (Chile) Member.
- Patricia Ochoa (Argentina) Member
- Ma. Elena Arredondo (Chile) Member
- Michelle Brennam (México) Member
- Patricia Ochoa (Ecuador) Member
- Silvia Flores (Perú) Member

They presented abstracts at AACC Chicago in July 2018 and published in CCLM in June 2018, the work done in Chile.

9.2 Commission of Academic Union and Management Affairs. Created in 2018

- Chair: Dr. Carlos Navarro – (Argentina)

Full members:

- Iratxe López Pelayo.- (Spain)
- Magaly Magariños Egüez- (Bolivia)
- Manuel Arcas.- (Argentina)
- Graciela Borthagaray.- (Uruguay)
- Alba Marina Valdés de García- (Guatemala)
- Daniel Razo Morales- (Mexico)
- Eduardo Antonio Rodríguez Vega- (Panama)
- Rosanna Clotilde Elías Peña-(Dominican Republic)

9.3 Accreditation Management working group. Created in 2019.

- Chair: Dra. Rosa Sierra-Amor. (Mexico)

Full Members

- Carlos Peruzzetto (Argentina)
- Leonardo Aguirre (Chile)
- Edgard Espinoza (Ecuador)
- Lisa Ma. Madrid (Honduras)
- Hasmi Cristaldo (Paraguay)
- Beatriz Varela (Uruguay)
- Sandra Quintana (Mexico)
- Thamara Andrade (Ecuador)

Corresponding Members:

- Magaly Magariños (Bolivia)
- Daniela Carrasco (Chile)
- Gina Laitano (Honduras)
- Rodrigo Ayala (Paraguay)

- Ana Ma. Piana (Uruguay)

Consultants:

- Milena Monari (Chile)
- Roberto Carboni (Chile)

Observer:

- Victor Baltazar (Mexico)

10) Scholarships

2019 - Applications were received from 4 applicants in total:

Paraguay, Colombia, Bolivia and Uruguay, all were granted

10.1 - Claudia Lucía Villegas Gómez (Colombia)

- Project from the ZOOLAVET Veterinary Laboratory, to gain experience at the IBS CONICET-UNAM Institute for Subtropical Biology. Probable date between September 14 and October 13 (Lasting 3 months)

10.2 - Álvaro Justiniano-Jr (Bolivia)

- Internship in Molecular Biology in Argentina, from July to October, 2019

10.3 - Candy Giannina Santacruz Ayala (Paraguay)

- Supervised professional internship at the Nuclear Medicine Service of the Austral University Hospital, to deepen knowledge and expand experience in Internal Dosimetry in the Treatment of Differentiated Thyroid Cancer (CaDiT), with I-131. From August 10 to 24, 2019.

10.4 - Micaela Cipriani (Uruguay)

- Internship at the Department of Clinical Biochemistry of the Research Institute in Health Sciences of the National University of Asunción, in the area of morphological analysis of urinary stones.

From August 5 to 16 August, 2019

11) XXIV Latin American Congress of Clinical Biochemistry. Panamá 2019 and XIV National Congress of Clinical Laboratorians of Panamá.

11.1- This Congress was held in the Megapolis Center of Panamá City and a lot of activities: 10 workshops, 13 symposiums, 62 scientific conferences, 5 industry conferences, 3 round tables and 3 plenary conferences were held. 716 participants

11.2- Three working meetings were held:

- 1) W-IANT of the IFCC (11/10/2019),
- 2) Session of the COLABIOCLI Executive Committee of COLABIOCLI (11/9/2019).
- 3) COLABIOCLI Ordinary General Assembly (12/9/2019).

11.3- WIENER AWARD: Six research papers were received for the Wiener Lab-COLABIOCLI 2019 "Best Research Paper in Clinical Biochemistry", the work identified with the pseudonym ROMARI was selected as the winner. The main author of the award was Dr. Isabel Rodríguez Martín, from the Virgen de Macarena University Hospital (Spain) with the collaboration of Dr. Catalina Sánchez Mora and Prof. Victor Sanches Margalet, with the TITLE: "Results in Health After the Implementation of Rotational Thromboelastometry (ROTEM®) in Subjected Patients A Cardiovascular Surgery ". The symbolic delivery of the award was made by Lic. Gabriel Sivina, representative of Area Manager Wiener of the area.

11.4- Poster competition: 39 abstracts were received for its evaluation. The awarded posters





were the following:

First Place	Hepcidin as a new differential diagnostic marker of anemias associated with iron metabolism.	Brito Perea MC, Medina Camacho JA, Moreno Lozano P, Landeros Sánchez B, Hurtado Ayala LA,	México
Second Place	Community-acquired methicillin-resistant Staphylococcus aureus viruloma causing invasive infections in Paraguayan children.	Rodríguez, Fátima; Salinas, Claudia; Mendoza, Alejandro; Díaz, Ana; Lorenzo, José; Rafaela, González; Flores, Carlos; Guillén, Rosa.	Paraguay
Third Place	Factors associated with not being a voluntary donor in extramural collections from the Blood Bank of the Santo Tomás Hospital, 2018.	Aris Córdoba	Panamá

11.5- On November 10th, 2019: The Pan-American Society for Clinical Virology (PASCV), in conjunction with the Latin American Confederation of Clinical Biochemistry (COLABIOCLI), the National Association of Clinical Laboratory Technologists of Panama (CONALAC), organized a scientific activity prior to the XXIV Latin American Congress of Clinical Biochemistry (September 10-11, 2019), with the goal of reinforcing the technical and practical aspects of the diagnostic virology laboratory. This event was aimed for directors of clinical laboratories, laboratory technologists, physician trainees, and specialists in infectious diseases.

12) COLABIOCLI National Society Congresses

12.1 - May 12-15, 2019- XI Congress of the Latin American Society of Inborn Errors of Metabolism and Neonatal Research (SLEIMPN) that was held in Buenos Aires, Argentina.

12.2 - May 15-17, 2019-Mayan International Conference in Sucre, Bolivia. Invitation to Dr. Juana Ortellado to teach a Microbiology course.

12.3 - June 16-19, 2019.- SBAC Congress. Expominas, Belo Horizonte, Brazil Invitation to Dr. S. Raymondo, participated at the Opening ceremony and in a Workshop on POCT, with the topic: "POCT in Latin America".

12.4 - June 26 to 29, 2019 - I Congress of the Mexican College of Clinical Laboratory Sciences. Merida, Yucatan, Mexico. Dr. Graciela Queiruga was invited to present her National Research in Neonatology and Inborn Errors of Metabolism, she gave a course and the closing plenary. Dr. Queiruga was an IFCC VLP Abbott awardee. As well, Magister Roberto Carboni from Chile was an IFCC VLP Abbott awardee, he gave a course and a symposium on Audits and ISO 15189.

12.5 - September 25-27, 2019.- "National Biochemical Congress CUBRA XV 2019" Gala Hotel and Resistance Convention Center, Chaco, Argentina.

12.6 - October 3-5, 2019: XII Uruguayan Congress of Clinical Biochemistry 2019 took place at the Radisson Victoria Plaza Hotel with the slogan "New challenges in the era of 4.0 laboratories". Congress had three speakers with the support of the IFCC- Abbott VLP which gave relevance to the event: a) Dr. Khosrow Adeli (Canada), b) Carlos Von Mühlhen (Brazil-USA) and c) Gabriel Lima Oliveira (Brazil) and regional and national guests. The event was successful, with 26 posters presented, 17 commercial stands, 2 pre-congress courses, 6 keynote lectures, 15 round tables, 2 symposia on Commercial Companies, with a total of 350 registered. During the event, the Extraordinary General Assembly of ABU was held, in which the purchase motion for the new headquarters of the Uruguayan Biochemical Association in Montevideo was approved.

12.7 - October 23-25, Seville, Spain, 2019. XIII National Congress of Clinical Laboratory. 12 symposium, 2 conferences, 2 discussion pannels and 681 participants

12.8 - November 28 - 30, 2019 - XIX National Congress of Clinical Laboratory professionals from ADOPLAC, an event that took place in the Dominican Republic.

13) IFCC

13.1 - Barcelona- Euromedlab 2019., Spain.

13.1.1 - Working in the IFCC / COLABIOCLI Agreement.

Activity carried out through the Regional Representative to IFCC, Dr. Rosa Sierra-Amor, the President of IFCC (Dr. Maurizio Ferrari), IFCC Secretary (Dr. Dave Kinniburgh), and the President of COLABIOCLI (Prof. Stella Raymondo)

13.1.2 - Petition of support for the operation of “Radio El Microscopio” was proposed.

13.1.3 -The meeting of the Renal Diseases Committee at the IFCC (C-KD) took place at this Barcelona Congress, with a broad agenda. We worked on a worldwide survey on creatinine methods and other relevant kidney measurands. The purpose was to distribute it to all IFCC member countries, and it was translated into several languages, with the Spanish translation delegated to Drs. Sierra-Amor and Raymondo, for the Spanish speakers.

13.2- XXIV Latin American Congress of Clinical Biochemistry COLABIOCLI-PANAMÁ 2019.

13.2.1- New IFCC- COLABIOCLI Agreement was signed during this Congress by Dr. Maurizio Ferrari (President of IFCC) and Dra. Stella Raymondo (President of COLABIOCLI).

13.3- IFCC- VLP: All member countries of COLABIOCLI have seen the level of their professionals raised by having the support of the IFCC Abbott Visiting Lecturer Program, for all their academic and continuing education projects. As a result of these activities, research and training networks of excellent human resources have been established, with excellent results in the region.

13.4 COLABIOCLI Symposium at the APFCB Congress in Jaipur India by an invitation of the APFCB 2019 Organizing Committee was held on November 19th. 2019. The COLABIOCLI Symposium was chaired by Dr Rosa Sierra-Amor from Mexico, who presented a talk on the Regional experiences in the implementation of laboratory accreditation, followed by Dr Hernan Fares-Taie from Argentina who spoke on the Knowledge of management in clinical biochemistry, and finally Dr. Juana Ortellado de Canese from Paraguay who lectured on Automated Microbiology analysis.

14) Regulation in which we have worked

14.1- Modifications to the COLABIOCLI Scholarship Regulations. (2018-2019)

14.2- Latin American Training Program, 2018-2019

14.3- Suggested modification of the current COLABIOCLI-IFCC Agreement

14.4- Regulations for the Awards of Excellence.

*Stella Raymondo, Outgoing President
Álvaro Justiniano, Incoming President*



GENERAL MEETING

General issues

The EFLM President, Michael Neumaier (MN), greeted the audience and welcomed the delegates to the General Meeting (GM) in Barcelona. Overall, 33 national representatives were present at the GM. MN said that Georgian national representatives (NRs) would like to participate to the GM and asked if someone had any objection. No objections raised and participation of Georgian NRs was otherwise approved.

No matters raised from the minutes of the last GM in Athens, June 2017. Minutes were hence otherwise approved. The EFLM Secretary, Giuseppe Lippi (GL), presented the nomination of the Faculty of Pathology at the Royal College of Physicians of Ireland as EFLM Affiliate Member. Nobody had anything against, so that the Faculty of Pathology at the Royal College of Physicians of Ireland has been officially accepted as EFLM Affiliate Member. MN provided an overview of the Federation and recent EFLM activities since the last GM in Athens.

The EFLM Treasurer, Huib Storm (HS), gave a report on the following: (a) Audit; (b) Balance sheet 2018; (c) Internal budget 2019. Audit of the EFLM financial matters for 2018 had been done in accordance with GAAP (Belgian Generally Accepted Accountant principles) by the certified auditor. The members present at the GM unanimously (with 33/33 votes in favor) certified the EFLM account and balance sheet, which will now be published through the accountant. Approval of the accounts by General Meeting also constitutes the discharge for EB members. HS has also presented the Internal Budget 2019 and MN asked for its formal approval. EFLM GM approved the Internal budget with 33/33 votes in favor. The full presentations are available in the EFLM website.

Election Executive Board 2020-2021

Sverre Sandberg (SS), EFLM Past President (MP), briefly explained the procedure of elections for EB members. SS informed the NRs present at the GM that Prof. Ana-Maria Simundic will be the next President and Prof. Michael Neumaier will be the next Past President, as for EFLM regulation. The majority of the GM or the following election has been fixed at 17 (during the voting procedure 33 NRs were present; majority hence represents 17 votes).

- **EFLM President Elect**

Candidates for EFLM President Elect were (in alphabetical order):

- (a) Prof. Damien GRUSON (Belgium)
- (b) Prof. Tomris OZBEN (Turkey)
- (c) Prof. Ian YOUNG (Ireland)

As Tomris OZBEN received the majority of votes (17/33), she was elected as EFLM President Elect.

- **EFLM Secretary**

The only candidates for EFLM Secretary was Giuseppe LIPPI (Italy). Decision was hence made by simple voting and Giuseppe Lippi was elected by acclamation as EFLM Secretary for a second 2-year term.

- **EFLM Treasurer**

Candidates for EFLM Treasurer were (in alphabetical order):

- (a) Snežana JOVIČIĆ (Serbia)
- (b) Klaus KOHSE (Germany)

For EFLM Treasurer there were hence 2 candidates, with the candidate with the majority of votes being elected. SS invited GM members to express their vote for this position. As Klaus KOHSE received the majority of votes (19/33), he was elected as EFLM Treasurer.

- **EFLM Member-at-large (2 positions)**

Candidates for the 2 positions of EFLM Member-at-large were (in alphabetical order):

- (a) Pilar FERNANDEZ-CALLE (Spain)
- (b) János KAPPELMAYER (Hungary)
- (c) Ralf LICHTINGHAGEN (Germany)
- (d) Dalius VITKUS (Lithuania)

For Member-at-large there were hence 4 candidates (Prof. Tiago GUIMARAES from Portugal has pulled out with an official note), and a candidate needs more than 50% of votes to be elected. If nobody has the majority, the candidate who has the lowest number of votes is left out and another round of voting will be scheduled, until one candidate gets a majority of votes. SS invited GM members to vote for a first position. According to the procedure, as no candidate received the majority of votes, the last candidate must be eliminated. This was János KAPPELMAYER. According to the procedure, as Pilar FERNANDEZ-CALLE received the majority of votes (17/33), she was hence elected as first EFLM Member-at-large. SS then invited GM members to vote for the 2nd member at large. According to the procedure, no candidate received a majority of votes, the last candidate must be eliminated. This was János KAPPELMAYER. According to the procedure, Dalius VITKUS received the majority of votes (23/33) and he was hence elected as 2nd EFLM Member-at-large. SS finally presented the final composition of the next EFLM EB.

Reports from Committee Chairs

Reports about the past and ongoing activities within the EFLM functional units were given by the Science Committee (E. Kilpatrick, C-S Chair), Profession Committee (G. Wieringa, C-P Chair), Quality & Regulations Committee (F. Vanstapel, C-QR Chair), Education & Training Committee (D. Pasalic, C-ET Chair) and Communication Committee (D. Rajdl, C-C Chair). Power point presentations with reports can be viewed and downloaded from EFLM's website.

Report from IFCC (M. Ferrari, IFCC Past President)

Maurizio Ferrari (MF) has given a report about the past and ongoing activities within the IFCC. Power point presentation with this report can be viewed and downloaded from EFLM's website. No questions were raised.

At the end of the meeting the EFLM President warmly thanked the audience.

EXECUTIVE BOARD

Some of the leading activities planned and developed during 2019 are listed below:

- Definitive establishment of the EFLM Academy
- Re-negotiation of the contract with CCLM
- Initiative "EFLM Postgraduate Courses on scientific writing and biostatistics"
- Involvement of EFLM in EC Medical Device Coordination Group (MDCG)
- Approval of the new release of the EFLM Procedure Manual (PM)
- Collaboration with European Radiology Association, and organization of joint sessions at ECR 2020 (Vienna/AT, March 11-15 - Postponed), ECR 2021 (Vienna/AT, March 3-7) and EuroMedLab 2021 (Munich/Germany, May 16-20)
- Membership in European Institute for Biomedical Imaging Research (EIBIR)
- Creation of the TF on Disruptive Technologies
- Establishment of joint EFLM-AFCB TF on mobile societies and congress guidelines

COMMITTEES

Committee – Communication (C-C)

The C-C activity in 2019 focused mainly in three objectives:

- improvement of the EFLM functional units and National Societies communication with CC;

- consolidation of EFLM communication channels and building a central strategy to effectively use these channels;
- improvement of EFLM Newsletter creation management.

These advances created a synergic effect on more interesting content of the Federation Newsletter, which achieved more visibility and popularity. Furthermore, we have greatly improved our visibility in social media by regular production of our original posts and thus quickly increasing number of our followers. The most progressive growth of followers was observed on EFLM Facebook page. By strategic planning of propagation campaigns, we were able to effectively support spread of information about important EFLM activities and congresses. EFLM webpage continued to attract more and more visitors; pages with EFLM publications remained the most visited section of our web; biological variation database the most visited EFLM project.

CC was involved in planning and realisation of organizational and technical implementation of EFLM Academy.

Committee – Education and Training (C-ET)

- **The Working Group on Congresses and Postgraduate Education (WG-CPE)** maintained the EFLMLabX (the EFLM laboratory exchange programme) platform establishing new agreements with hosting institutions in Europe. To promote this initiative, a series of activities were organized by the Working Group such as the publication of a paper in CCLM and the presentation of the platform on occasion of conferences. Thanks to this activities, 227 users were registered in 2019 and 5 practices were organised. The WG-CPE also published a manuscript with the results of a survey addressed to EFLM National Societies to investigate the previous and current practice in terms of cooperation between professionals or professional societies and the IVD industry, as well as plans under the incorporation of the MedTech Europe Code. In addition, the Working Group prepared and implemented the EFLM guidelines to grant EFLM auspices. In 2019, the WG-CPE granted EFLM auspices to 28 different educational events. Another important achievement of the WG-CPE in 2019 is the launch of the EFLM Postgraduate Courses to be proposed to EFLM National Societies on specific topics as a “turnkey courses”, i.e. with a defined structured programme and designated speakers’ teams ready to travel to EFLM countries to deliver the course. Currently, the available courses are on “Biostatistics in Laboratory Medicine” and on “How to write a good scientific and professional article”. Courses on Biostatistics were held in Finland, Russia, Ireland while in Turkey it was held a course on how to write a good scientific paper.
- In 2019, the **Working Group on Distance Education and E-learning** realized 8 webinars and made available in the e-learning platform the recording of the plenary presentations at the EuroMedLab Congress in Barcelona and the full EFLM CELME Symposium in Prague.
- In the second half of 2019, the **Working Group on Laboratory Medicine Credit Points** was re-established due to some structural changes. This group is responsible to establish and run the EFLM system to allocate credit points for educational events.

Committee – Profession (C-P)

2019 saw the launch of the EFLM Academy offering anyone with an interest in Laboratory Medicine free subscription to Clinical Chemistry Laboratory Medicine, reduced fees to participate in EFLM organised conferences, events and webinars, opportunities to join EFLMLabX (the EFLM laboratory exchange programme) and eligibility to apply for EFLM travel grants. By the end of 2019, Memorandums of Understanding for block enrolment were in progress or agreed with national societies in Austria, Belgium, Bosnia Herzegovina, Croatia, Hungary, Ireland, Israel, Lithuania, Netherlands, North Macedonia, Portugal, Serbia, Slovenia, Turkey, and UK.

A ‘status quo’ survey of EFLM’s 40 societies ability to meet Equivalence of Standards in education and training at Specialist in Laboratory Medicine level indicated that 19 EU Member States could





meet the standards. From the interest generated through the survey Equivalence was subsequently recognized for medical practitioners in Turkey, for scientists in Serbia, Lithuania, Romania and Israel, and for both medical practitioners and scientists in Bosnia Herzegovina and North Macedonia. The survey also identified that 15 of the 19 EU Member States able to meet Equivalence could also meet the more stringent requirements of EFLM's proposed Common Training Framework under EU Directive 2013/55/EC (The Recognition of Professional Qualifications), 6 more than the EU Commission requires for the framework to be representative of all 27 EU Member States. The framework is due for publication and submission to the EU Commission during 2020.

Committee – Quality and Regulations (C-QR)

The Working Group Accreditation and ISO/CEN standards published articles on validation and verification of methods and traceability requirements according to ISO15189 and is working on different papers concerning retention time of documents, repetition of measurements, and the relation between risk management and process care. All members of the different countries contribute actively to make these widely acceptable. The Committee Chair is active in ISO-TC212 WG1, especially in relation with the new edition of ISO15189, as we did with the former editions. This is pivotal standard for quality management in medical laboratories. The paper by Thelen and Huisman on Harmonization of accreditation to ISO15189 can be considered as a specific view on this process. The Committee Chair is active in the EA Health Care Working Group to contribute to harmonization of accreditation according to ISO15189 in the European countries. The WG is focused on influencing the development and interpretation of ISO and CEN standards and in particular the implementation of the new EU IVD Regulation. The EFLM Executive Board is directly following up on the latter, and started a task force with active involvement of the Science Committee / WG Test Evaluation and the Quality and Regulations Committee / WG Accreditation and ISO/CEN standards.

Committee – Science (C-S)

The seven Working Groups (WGs) under this Committee (Biological Variation, Guidelines, Harmonisation, Patient Focused Laboratory Medicine, Postanalytical Phase, Preanalytical Phase and Test Evaluation), three Task Groups (TGs) (Biological Variation Database, Performance Specifications Based on Outcome Studies and Cardiac Markers) and two Task and Finish Groups (TFGs) (Urinalysis and Autoimmunity Testing) have in the last year been joined by the introduction of three TFGs, namely the TFG Practical Approach to Measurement Uncertainty, TFG Laboratory Diagnostics of Chronic Kidney Disease and TFG Hemolysis, Icterus and Lipemia (HIL) Interference. All groups remain highly active in focusing on topics which are of direct relevance in improving the effectiveness of laboratory medicine to patients. Particular highlights from 2019 include the launching of the EFLM Biological Variation Database (<https://biologicalvariation.eu>), continued publication of robust biological variation data on different analytes, a tool for preventing preanalytical diagnostic errors in clinical trials, a joint EFLM & EAS consensus guideline for dyslipidaemia testing, the 5th EFLM Preanalytical Phase Conference in Zagreb, the translation of EFLM-COLABIOCLI recommendations on venous blood sampling into 8 additional languages and a course on unmet clinical needs.

Special note should be made of the contributions members of the Science Committee WGs have made to meeting activities, not least their contributions to the 23rd IFCC-EFLM EuroMedLab meeting in Barcelona.

The Science Committee cannot function in isolation, and depends on the continued support of the constituent National Societies as well as the collaboration with companion organisations such as the IFCC Scientific and Emerging Technologies Divisions.

MEETINGS

EFLM has organized seven meetings during 2019:

1. 5th EFLM Conference on Preanalytical Phase: “Preanalytical challenges - time for solutions”.

- Zagreb (HR), 22-23 March 2019.
2. EuroMedLab 2019 - 23rd IFCC-EFLM European Congress of Clinical Chemistry and Laboratory Medicine. Barcelona (SP), 19-23 May 2019
 3. EFLM Postgraduate Course on Biostatistics in Laboratory Medicine in collaboration with the Association of Laboratory Specialists and Organizations «Federation of Laboratory Medicine. Moscow (RU), 14 September 2019
 4. EFLM Postgraduate Course on Biostatistics in Laboratory Medicine in collaboration with the Finnish Society of Clinical Chemistry. Helsinki (FI), 18-19 September 2019
 5. CELME 2019: Emerging Challenges in Laboratory Medicine (in collaboration with the Czech Society of Clinical Biochemistry). Prague (CZ), 3-4 October 2019
 6. EFLM Postgraduate Course on “How to write a good scientific and professional article” in collaboration with the Turkish Biochemical Society. Antalya (TR), 26-27 October 2019
 7. EFLM Postgraduate Course on Biostatistics in Laboratory Medicine in collaboration with the Association of Association of Clinical Biochemists in Ireland. Athlone (IR), 7 November 2019



WEBINARS

EFLM has organized seven Webinars during 2019:

- Sepsis Biomarkers - Speaker: Giuseppe Lippi (IT) - held on 22 January 2019
- New parameters of hematology analyzers and their clinical significance - Speaker: Johannes (Hans) Hoffmann (DE) - held on 12 February 2019
- Unmet clinical needs - Speaker: Phillip Monaghan (UK) - held on 23 April 2019
- Monitoring of Internal Quality Control System Using Patients’ Data - Speaker: Abdurrahman Coskun (TR) - held on 18 June 2019
- Harmonization of Autoimmune tests - Speaker: Joanna Sheldon (UK) - held on 24 September 2019
- How should a medical laboratory specialist prepare for accreditation according to the ISO 15189 - Speaker: Diler Aslan (TR) - held on 8 October 2019
- Essential Leadership Management for Laboratory Professionals - Speaker: Sedef Yenice (TR) - held on 17 December 2019

PUBLICATIONS

1. Preanalytical challenges – time for solutions. *Lippi G, Betsou F, Cadamuro J, Cornes M, Fleischhacker M, Fruekilde P, Neumaier M, Nybo M, Padoan A, Plebani M, Sciacovelli L, Vermeersch P, von Meyer A, Simunic AM, on behalf of the Working Group for Preanalytical Phase (WG-PRE), European Federation of Clinical Chemistry and Laboratory Medicine (EFLM)*. Clin Chem Lab Med 2019 doi.10.1515/cclm-2018-1334
2. The end of Laboratory Medicine as we know it? Michael Neumaier and Ian D. Watson. Clin Chem Lab Med 2019;57:305-7
EFLM project “Exchange of practical knowledge and skills in Laboratory Medicine”. *Homsak E*. eJIFCC 2018;29:191-5
European Biological Variation Study (EuBIVAS): Within- and Between-Subject Biological Variation Data for 15 Frequently Measured Proteins. *Carobene A, Aarsand AK, Guerra E, Bartlett WA, Coskun A, Díaz-Garzón J, Fernandez-Calle P, Jonker N, Locatelli M, Sandberg S, Ceriotti F; European Federation of Clinical Chemistry and Laboratory Medicine Working Group on Biological Variation*. Clin Chem 2019 <https://doi.org/10.1373/clinchem.2019.304618>
3. European survey on preanalytical sample handling – Part 1: How do European laboratories monitor the preanalytical phase? On behalf of the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) Working Group for the Preanalytical Phase. *Cadamuro J, Lippi G, von Meyer A, Ibarz M, van Dongen Lases E, Cornes M, Nybo M,*



- Vermeersch P, Grankvist K, Guimaraes JT, Kristensen GBB, de la Salle B, Simundic AM. Biochem Med (Zagreb) 2019 <https://doi.org/10.11613/BM.2019.020704>*
4. European survey on preanalytical sample handling – Part 2: Practices of European laboratories on monitoring and processing haemolytic, icteric and lipemic samples. On behalf of the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM). *Cadamuro J, Lippi G, von Meyer A, Ibarz M, van Dongen Lases E, Cornes M, Nybo M, Vermeersch P, Grankvist K, Guimaraes JT, Kristensen GBB, de la Salle B, Simundic AM. Biochem Med (Zagreb) 2019 <https://doi.org/10.11613/BM.2019.020705>*
 5. Biological variation data for lipid cardiovascular risk assessment biomarkers. A systematic review applying the biological variation data critical appraisal checklist (BIVAC). *Díaz-Garzón J, Fernández-Calle P, Minchinela J, Aarsand AK, Bartlett WA, Aslan B, Boneda B, Braga F, Carobene A, Coskun A, Gonzalez-Lao E, Jonker N, Marques-Garcia F, Perich C, Ricos C, Simón M, Sandberg S. Clin Chim Acta 2019 <https://doi.org/10.1016/j.cca.2019.05.013>*
 6. PREDICT: a checklist for preventing preanalytical diagnostic errors in clinical trials. *Lippi G, von Meyer A, Cadamuro J, Simundic AM, for the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) Working Group for Preanalytical Phase (WG-PRE). Clin Chem Lab Med 2019 doi.org/10.1515/cclm-2019-1089*
 7. Investigations on the clinical utility of apolipoprotein B measurement: a research priority. *Langlois M. Eur J Prev Cardiol. 2019 [doi: 10.1177/2047487319869578](https://doi.org/10.1177/2047487319869578)*
 8. Practice in financial support of third party organised conferences and courses at a national level for health care professionals in Europe. *Pašalić D, Homšak E, Buño A, Bergmann K and Carru C on behalf of the EFLM Committee on Education and Training (C-ET), Working Group for Congresses and Postgraduate Education (WG-CPE). Clin Chem Lab Med 2019;57:1319-28*
 9. Systematic review and meta-analysis of within-subject and between-subject biological variation estimates of 20 haematological parameters. *Coskun A, Braga F, Carobene A, Ganduxe AT, Aarsand AK, Fernandez-Calle P, Diaz-Garzon Marco J, Bartlett J, Jonker N, Aslan B, Minchinela J, Boned B, Gonzalez-Lao E, Marques-Garcia F, Perich C, Ricos C, Simon M, Sandberg S, on behalf of the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) Working Group on Biological Variation and Task Group for the Biological Variation Database. Clin Chem Lab Med 2019 <https://doi.org/10.1515/cclm-2019-0658>*
 10. Setting clinical performance specifications to develop and evaluate biomarkers for clinical use. *Lord SJ, St John A, Bossuyt PM, Sandberg S, Monaghan PJ, O’Kane M, Cobbaert CM, Röddiger R, Lennartz L, Gelfi C, Horvath AR; Test Evaluation Working Group of the European Federation of Clinical Chemistry and Laboratory Medicine. Ann Clin Biochem. 2019;56:527-35*
 11. Validation and verification of examination procedures in medical laboratories: opinion of the EFLM Working Group Accreditation and ISO/CEN standards (WG-A/ISO) on dealing with ISO 15189:2012 demands for method verification and validation. *Roelofsen-de Beer R, Wielders J, Boursier G, Vodnik T, Vanstapel F, Huisman W, Vukasović I, Vaubourdolle M, Sönmez Ç, Linko S, Brugnoli D, Kroupis C, Lohmander M, Šprongl L, Bernabeu-Andreu F, Meško Brguljan P, Thelen M. Clin Chem Lab Med 2019 <https://doi.org/10.1515/cclm-2019-1053>*
 12. Quantifying atherogenic lipoproteins for lipid-lowering strategies: consensus-based recommendations from EAS and EFLM. *Langlois MR, Nordestgaard BG, Langsted A, Chapman AJ, Aakre KM, Baum H, Borén J, Bruckert E, Catapano A, Cobbaert C, Collinson P, Descamps OS, Duff CJ, von Eckardstein A, Hammerer-Lercher A, Kamstrup PR, Kolovou G, Kronenberg F, Mora S, Pulkki K, Remaley AT, Rifai N, Ros E, Stankovic S, Stavljenic-Rukavina A, Sypniewska G, Watts GF, Wiklund O, Laitinen P, for the European Atherosclerosis Society (EAS) and the European Federation of Clinical Chemistry and*

Michael Neumaier, EFLM President 2018-2019
Ana-Maria Simundic, EFLM President 2020-2021
Giuseppe Lippi, EFLM Executive Board Secretary



NAFCC
North American Federation of Clinical Chemistry
and Laboratory Medicine

The NAFCC was formed by CSCC and AACC in 2014.

In 2019 a joint AACC/CSCC educational conference was not held.

NAFCC members (AACC and CSCC executive) met at the annual AACC meeting in Anaheim California, August 5, 2019. They discussed the need to select a new NAFCC representative in 2020, to begin their term in 2021. Per the NAFCC MOU, that person will be selected from the CSCC membership.

NAFCC members (AACC and CSCC executive) plan to meet in Chicago at the Annual AACC meeting which has been changed from July to December 13-17, 2020.

Ann M Gronowski, NAFCC Representative

Full Member Societies



ARGENTINA

CONFEDERACIÓN UNIFICADA BIOQUÍMICA DE LA REPÚBLICA ARGENTINA (CUBRA)

NATIONAL MEETINGS

- **Assemblies of the Confederal Council of C.U.B.R.A.** 10th May; 23th August; 13th December, 2019 in Buenos Aires – Argentina.
- **Government Board CGP** 31th July; 06th November; 12th December; 2019 in Buenos Aires – Argentina.
- Meetings of the **Permanent Technical Commission of the Unique Biochemical Nomenclator of C.U.B.R.A.** (CTP-NBU -CUBRA) 04th - 05th. April; 11th. July; 22th August; 10th - 11th October 2019 in Buenos Aires – Argentina.
- Meetings of the **Executive Committee of the Commission of National Biochemical Certification (COCERBIN)**; 09th May; 31th August, 11th December 2019 in Buenos Aires – Argentina.
- Meeting of the **Quality Commission of C.U.B.R.A.** (C3-CUBRA) 05th April, 2019 in Buenos Aires – Argentina.
- Meetings of the **Commission of Academic Affairs**, 22th August, 2019 in Buenos Aires – Argentina.
- **Authorities Meeting CUBRA – COFA** 26th September, 2019 in Buenos Aires – Argentina.
- **“3º Congreso Virtual de Bioquímica Clínica VIRTUALAB 2019”** 11th - 23th November, 2019 in Buenos Aires – Argentina.
- **Biochemical Centenary Celebration** on the COFyBCF Colegio Oficial de Farmacia y Bioquímica de Capital Federal 29th June, 2019 in Buenos Aires – Argentina.

EDUCATION

- Member of the Executive Committee of the Commission of National Biochemical Certification (COCERBIN).
- Member of the “Advisory Commission for the Evaluation and Updating of the Unique Biochemical Nomenclature”, within the Superintendence of Health Services.

REGIONAL MEETINGS

- **III Jornadas Patagónicas de Bioquímica**, 14th - 16th March, 2019 in Neuquén – Argentina.
- **Congress, “II Congreso Científico Profesional de Bioquímica”** 05th - 07th Jun, 2019 in Córdoba – Argentina.
- **Congress, “V Congreso Bioquímico del Litoral”** 12th - 14th Jun, 2019 in Santa Fe – Argentina.
- **Congress, “Congreso Nacional Bioquímico CUBRA XV”** 25th - 27th September, 2019 in Resistencia – El Chaco – Argentina.
- Meeting of the **Coordinating Entity of Academic Units of Pharmacy and Biochemistry (ECUAFyB)**, 31th October, 2019 in Comodoro Rivadavia – Chubut - Argentina.
- **“Jornada Bioquímica, 100 años de historia de una profesión que despierta pasión”** 22th November, 2019 in San Luis – Argentina.

REGIONAL RELATIONS

Colegio Bioquímico de Catamarca
Colegio Bioquímico del Chaco
Colegio Bioquímico de La Pampa
Colegio Bioquímico de La Rioja
Colegio Bioquímico de San Juan
Colegio Bioquímico de Santiago del Estero
Colegio Bioquímico de Tucumán
Colegio de Bioquímicos de la Provincia de Río Negro
Colegio de Bioquímicos de Corrientes
Colegio de Bioquímicos de Neuquén
Colegio de Bioquímicos de Entre Ríos
Colegio de Bioquímicos de Formosa
Colegio de Bioquímicos de Jujuy
Sección 1ª de Bioquímica del Colegio Oficial de Farm. y Bioq. de Capital Federal
Colegio de Farm. y Bioquímicos de la Provincia de Santa Cruz
Bioquímicos del Interior A.C. Salta
Círculo Bioquímico de la Provincia de Misiones
Asociación Bioquímica de Salta
Asociación Bioquímica de Mendoza
Asociación Bioquímica del Este
Asociación Bioquímica de San Luis
Asociación Bioquímica de Villa Mercedes
Asociación Bioquímica de San Rafael
Federación de Bioquímicos de la Provincia de Córdoba
Federación Bioquímica de la Provincia de Buenos Aires
Federación Bioquímica de la Provincia de Chubut
Federación Bioquímica de la Provincia de Santa Fe

ABA - Asociación Bioquímica Argentina

FBA - Fundación Bioquímica Argentina

COORDINADORA de Colegios de Bioquímicos de Ley de la República Argentina

CGP - Confederación General de Profesionales

IRAM - Instituto Argentino de Normalización y Certificación

ECUAFyB - Ente Coordinador de Unidades Académicas de Farmacia y Bioquímica

UCOPS - Unión de Confederaciones de Profesionales de la Salud

Agrupación Bioquímica de Cuyo

FEBIPA - Federación Bioquímica Patagónica.

FOBINEA - Foro de Bioquímicos del Noreste Argentino.

FEBINOA - Federación Bioquímica del Noroeste Argentino

Ministerio de Salud de la Nación

Ministerio de Educación de la Nación

Superintendencia de Servicios de Salud de la Nación

INTERNATIONAL RELATIONS

IFCC International Federation of Clinical Chemistry and Laboratory Medicine.

COLABIOCLI Confederación Latinoamericana de Bioquímica Clínica.

CLAPU Confederación Latinoamericana y del Caribe de Asociaciones de Profesionales Universitarios.



ADDITIONAL INFORMATION

COLABIOCLI Congress, "XXIV Congreso Latinoamericano de Bioquímica Clínica" 10th - 13th September, 2019 in Panamá.



AUSTRALASIA AUSTRALASIAN ASSOCIATION FOR CLINICAL BIOCHEMISTS (AACB)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
Harmonisation Workshop	1-2 May 2019	Various Harmonisation topics including Review of Best Practice Harmonisation Guidelines, Dynamic Endocrine Testing, Blood Gases and Hormone Immunoassays.
Point of Care Testing	14 October 2019	Various PoCT topics including CRP, Antibiotic Stewardship, Netherlands Model of PoCT, Flu Testing.
AACB 57 th Annual Scientific Meeting	15-17 October 2019	Theme: Clinical Biochemistry - Optimising Value in Healthcare
Quality Control Workshop	18 October 2019	This is the sixth of a series of workshops designed to develop consensus statements on quality control procedures.

EDUCATION

RCPA AACB Chemical Pathology Course – Gold Coast 4-8 February 2019 – covered exam curriculum topics for both the AACB and RCPA.

40 State Branch based monthly scientific meetings

Roman Lectures – Professor Leslie Burnett: Genomics: Hype, Reality and Potential

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
APFCB Congress -Jaipur India	17-20 November 2019	Workshop- Mass Spectrometry in the clinical laboratory Symposium- Biochemical Assessment of Key Nutrients

REGIONAL RELATIONS

Asia Pacific Federation of Clinical Biochemistry and Laboratory Medicine
Executive Board Secretary Dr Helen Martin

AACB members on a number of APFCB committees both in chair and member roles:

Education and Laboratory Management Committee Tony Badrick – Chair

Scientific Committee Dr Samuel Vasikaran-Chair, Ronda Greaves – Member Graham Jones – Member

Communication Committee Dr Mohamed Saleem- General and Case Study Editor

Congress and Conferences Committee Peter Graham – Secretary

AACB will host the 2022 APFCB congress in Sydney. Preparations are well underway with a PCO, and Local Organising Committee appointed.

AACB offers a discounted membership for members of APFCB affiliate societies, including on-line subscription to Clinical Biochemist Reviews and access to all member only educational material.

INTERNATIONAL RELATIONS

AACB members contributing to IFCC in 2019:

Executive Board 2019-2020:

Prof Howard Morris – Past President †

Committees and Working groups

Executive:

C-CC, Helen Martin- Corresponding member

TF- Ethics, Richard Davey - Member

Scientific division:

C-MD, Daniel Burke – Corresponding member

C-TLM, Tony Badrick - Member

C-RIDL, Ken Sikaris – Member, Graham Jones – Corresponding member

C-STFT, Paul Williams – Corresponding member

C-HAT, Louise Wienholt – Member

C-BM, Sam Vasikaran - Member

WG-CDT, Dorothy Kouzious- Corresponding member

WG-SAU, Graham Jones

WG-PAPP A, Greg Ward – Corresponding member

WG-GH, Lyn Boscato – Corresponding member

WG-SIA, Paul Glendenning – Corresponding member

WG-FIT, E Symonds

Education and management division:

C-CMBC, D Kunde – Corresponding member

C-AQ, Tony Badrick – Corresponding member

C-EBLM, Chris Florkowski – Consultant

C-IDL, Ronda Greaves – Consultant, Janine Grant – Web editor

C-POCT, Rosy Tirimacco – Consultant, Samarina Mussad – Corresponding member

C-VPLM, Andrew St John – Chair, Tony Badrick – Corresponding member

WG-FC, E Spittler - Member

WG-ICQA, Tony Badrick, Ken Sikaris - Members

DQCML, Ronda Greaves – Corresponding member

Communications and Publications division:

C-PR, Peter Vervaart - Member

C-IDL, Ronda Greaves – Consultant, Janine Grant – Web editor

WG-eJIFCC, Ronda Greaves, Rita Horvath, Peter Vervaart

ADDITIONAL INFORMATION

The AACB membership adopted a revised Constitution in November 2019. This included changing the name of the association to: Australasian Association for Clinical Biochemistry and Laboratory Medicine.

It reflects a recognition that traditional boundaries of pathology disciplines are becoming increasingly blurred and over the next couple of years we will seek to extend our education and professional development opportunities to all clinical laboratory staff.

We have also introduced an executive position of President Elect or Past President. The change



gives newly elected President a one year apprenticeship shadowing the incumbent before taking on the role themselves. It also extends their ability to be mentored by the immediate Past President for the first year of their term and to offer similar assistance to their successor.



BELGIUM
ROYAL BELGIAN SOCIETY OF LABORATORY MEDICINE
(RBSLM)

NATIONAL MEETINGS

Annual meeting (together with Belgian pediatric Society)	November 15, 2019	Pediatric laboratory medicine
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BOLIVIA
SOCIEDAD BOLIVIANA DE BIOQUÍMICA CLÍNICA

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
IV NATIONAL EXTRAORDINARY BOLIVIAN SOCIETY OF CLINICAL BIOCHEMISTRY	LA PAZ, DECEMBER 12 -15	REPORT OF THE NATIONAL EXECUTIVE COUNCIL OF THE BOLIVIAN SOCIETY OF BIOCHEMISTRY. PRESENTATION PLAN OF ACTIVITIES BY SUBSIDIARY MANAGEMENT 2019 PROBOECO REPORT 2018 ELABORATION OF THE PROBOECO ACTIVITY SCHEDULE 2019 APPROVAL OF REGULATIONS: <ul style="list-style-type: none"> • SCHOLARSHIP REGULATIONS • CONGRESS REGULATIONS • REGULATIONS OF ACKNOWLEDGMENTS

EDUCATION

AGREEMENT WITH THE ARGENTINE BIOCHEMICAL FOUNDATION TO DEVELOP TRAINING AND TRAINING ACTIVITIES OF BIOCHEMICAL PROFESSIONALS IN COMMON INTERS AREAS THROUGH THE BOLIVIAN CONTINUOUS TRAINING PROGRAM (PROBOECO). THIS COURSE NOW HAS THE SPANISH ALSO OF IFCC AND COLABIOCLI.

AGREEMENT WITH THE ARGENTINE BIOCHEMICAL FOUNDATION 2019 - 2020 TO DEVELOP THE LABORATORY ACCREDITATION PROGRAM IN BOLIVIA. THROUGH THE LABORATORY ACCREDITATION PROGRAM OF THE ARGENTINE BIOCHEMICAL FOUNDATION (PAL) AND BOLIVIAN LABORATORY ACCREDITATION PROGRAM (PROBOACRELAB). ELABORATION AND APPROVAL OF THE LABORATORY ACCREDITATION MANUAL IN BOLIVIA.

COURSE "XXXIV LATIN AMERICAN UPDATE COURSE IN ANTIMICROBIALS" - "DR. CARLOS MALBRAN" 2019

COURSES AWAY FROM PROECO OF THE ARGENTINE BIOCHEMICAL FOUNDATION - PROBOECO OF THE BOLIVIAN SOCIETY OF CLINICAL BIOCHEMISTRY

ACTIVIDADES DE EDUCACION CONTINUA DEL PROGRAMA BOLIVIANO DE EDUCACION CONTINUA (PROBOECO)



<i>Name of the meeting</i>		<i>Date</i>	<i>Topics</i>
SANTA CRUZ - TARIJA	QUALITY CONTROL IN QUANTITATIVE ANALYTICAL PROCEDURES BASIC AND ADVANCED COURSE -	13 – 16 March	DR.GIRARDI RAÚL
COCHABAMBA - BENI	HEMATOLOGY. UPDATES IN THE STUDY OF ERYTHROCYTES AND PLATELETS.	10 - 13 April	DRA.FINK NILDA ESTER
TARIJA – GRAN CHACO	PARASITOLOGY- COPROPARASITOLOGICAL ANALYSIS- ENTEROPARASITOSIS DIAGNOSIS	8 – 11 May	DRA. RADMAN NILDA ESTER
LA PAZ - SUCRE	CLINICAL ENZYMOLOGY	12 – 15 June	DRA. YAPUR VIVIANA MÓNICA
SANTA CRUZ COCHABAMBA	QUALITY MANAGEMENT IN CLINICAL LABORATORY HEALTH SERVICES -	10 – 13 July	DR. GRAMMATICO JUAN PABLO
SUCRE - POTOSI	NEW TRENDS IN ANTIBIOTICS RESISTANCE AND NEW METHODS TO DETECT THEM.	4 -6 September	DRA. VIGLIAROLO LAURA
COCHABAMBA - TARIJA	BIOSECURITY WORKSHOP: MANAGEMENT OF PATHOLOGICAL WASTE - TRANSPORTATION OF BIOLOGICAL MATERIAL	9 – 12 October	DR. MICUCCI HORACIO ALEJANDRO
SANTA CRUZ - BENI	QUALITY CONTROL IN QUALITATIVE TESTS AND QUICK TESTS	9 – 12 October	DRA. ABERER JORGELINA

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
ORDINARY ASSEMBLY OF THE LATIN AMERICAN CONFEDERATION OF CLINICAL BIOCHEMISTRY (COLABIOCLI)	PANAMA - REPUBLIC OF PANAMA 13 TO SEPTEMBER 15, 2019.	ELECTION NEW EXECUTIVE COMMITTEE COLABIOCLI LEGAL PERSONERIA COLABIOCLI PLANS AND PROGRAMS
CORRESPONSALIA "RADIO EL MICROSCOPIO"	ACCORDING TO PROGRAMMING	SUPPORT FOR DEVELOPMENT IN THE MANAGEMENT ACTIVITIES PLAN 2019

REGIONAL RELATIONS

PERMANENT REALIZATION WITH THE LATIN AMERICAN CONFEDERATION OF CLINICAL BIOCHEMISTRY (COLABIOCLI) AND THE NATIONAL REPRESENTATIONS OF LATIN AMERICA-BOLIVIA WILL OCCUPY THE PRESIDENCY. DR. ALVARO JUSTINIANO GROSZ

BRAZIL SOCIETY OF CLINICAL ANALYSIS (SBAC) AND NATIONAL QUALITY CONTROL PROGRAM (PNCQ)

PARTICIPATION 47th BRAZILIAN CLINICAL ANALYSIS CONGRESS - BRAZILIAN SOCIEDAD DE CLINICOS ANALYSIS (SBAC)

INTERNATIONAL RELATIONS

ORDINARY ASSEMBLY OF THE LATIN AMERICAN CONFEDERATION OF CLINICAL BIOCHEMISTRY (COLABIOCLI)
PANAMA REPUBLIC OF PANAMA SEPTEMBER 15-15, 2019

PERMANENT REALIZATION WITH THE INTERNATIONAL FEDERATION OF CLINICAL CHEMISTRY (IFCC), SPANISH SOCIETY OF CLINICAL CHEMISTRY (SEQC-ML)



BOSNIA-HERZEGOVINA ASSOCIATION OF MEDICAL BIOCHEMISTS IN BOSNIA HERZEGOVINA

NATIONAL MEETINGS

3 rd Congress of Medical biochemists in Bosnia and Herzegovina	November, 2020	Quality Control, Harmonisation, Referent Values for children, Metabolic disorders
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BULGARIA BULGARIAN SOCIETY OF CLINICAL LABORATORY

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
XII National Conference of BSCL	02-04/10/2019	Accreditation and lab management External Quality Assurance Molecular diagnosis of genetic diseases Cardiac markers Laboratory endocrinology Tumor and bone markers Immunology TDM Point of care testing
BSCL-Varna branch professional meeting	March 2019	Issues in feces analysis
BSCL-Sofia branch professional meeting	March 2019	New analytical characteristics of modern hematology analyzers - erythropoiesis. Hematological indicators for sepsis Clinical Significant of the New Automatic Hematological Parameters for Assessment of Leukocyte Functionality
BSCL-Sofia branch professional meeting	December 2019	Markers of hepatocellular carcinoma (PIVKA II, AFP) and neurodegenerative markers Non-alcoholic steatosis

EDUCATION

Basic postgraduate course for physicians, specialising clinical laboratory- part I-March 2019
Basic postgraduate course for physicians, specialising clinical laboratory- part II-July 2019
Basic postgraduate course for physicians, specialising clinical laboratory- part III-October 2019

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
XXVII BCLF Meeting	27-31/10/2019	Turkish Biochemical Society (TBS)

REGIONAL RELATIONS

BCLF

INTERNATIONAL RELATIONS

IFCC

EFLM

BCLF



CANADA

CANADIAN SOCIETY OF CLINICAL CHEMISTS (CSCC)
SOCIÉTÉ CANADIENNE DE CLINICO-CHIMISTES

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
Upcoming meeting in 2019: CSCC Annual Conference	June 2-5 2019	CSCC Annual Meeting Saint John, New Brunswick
Upcoming meeting in 2020: CSCC Annual Conference <i>Cancelled due to COVID-19</i>	June 18-20 2020	CSCC Annual Meeting Winnipeg, Manitoba

EDUCATION

2019 Travelling Lectureship Series

Speaker: Andrew Hoofnagle, MD PhD, Professor of Laboratory Medicine, Head of the Division of Clinical Chemistry, and Deputy Director of the Northwest Lipid Metabolism and Diabetes Research Laboratory, University of Washington, Seattle

Topic: Clinical Proteomics: What Every Sample Wants

Dr. Hoofnagle gave presentations in Edmonton AB, Vancouver BC, Saskatoon SK, Halifax NS, St. John's NL, Montreal QC, and Toronto ON in the period September 5 – December 5, 2019

The lectureship is sponsored by Bio-Rad Laboratories

CSCC Webinar Lectureship on Cardiovascular Disease

Speaker: Dr. Joseph Alpert, MD, Professor of Medicine, University of Arizona College of Medicine, Tucson, Arizona; Editor in Chief, The American Journal of Medicine

Topic: The Fourth Edition of the Universal Definition of MI: Consensus and Controversy

February 7, 2019

Lectureship sponsored by Abbott

CSCC Webinar Lectureship on Critical Care Medicine

Speaker: Dr. Stephanie Booth, Zoonotic Diseases & Special Pathogens, National Microbiology Laboratory, Public Health Agency of Canada, Canadian Science Centre for Human and Animal Health, Winnipeg, Canada

Topic: Creutzfeldt Jakob Disease: Prions, Detection and Surveillance

March 7, 2019

Lectureship sponsored by Roche



2018-19 Webinar Series

17 CSCC “Education Roundtable” in webinar format were held twice a month from September 2018 to June 2019. In addition to single participants, many members formed groups at their institution to attend the webinars. Sessions averaged about 50 phone lines and 200-250 participants.

Special Interest / Working Groups

CSCC has 8 special interest / working groups which are communities with an interest in advancing a specific area of knowledge, learning or technology where members cooperate to affect or to produce solutions within their particular field. The activities usually consist of communication between conferences and informal sessions within the CSCC conference. These groups also develop position statements and guidelines.

Leadership In Quality Management Certificate Program

The purpose of this Program is to bring Clinical Biochemists, as laboratory leaders, to a level required to provide competent leadership and oversight to the quality management systems (QMS) in their laboratory. The certificate Program is presented as an on-line course in quality management. CSCC trainee members are offered the option to register in the program at no charge. This event is an accredited group learning activity as defined by the CACB/CSCC Professional Development Program.

Participants have two years to complete the program.

CACB Professional Development Program

The Maintenance of Competence Committee oversees the continuing professional development (PD) program designed by the Canadian Academy of Clinical Biochemistry to encourage and support the lifelong learning needs of its Fellows and other healthcare professionals who are in the practice of clinical chemistry. The program uses accreditation of continuing professional development events, establishes an ongoing PD program for continuing education credits, and conducts audits of PD credit submissions as a means of achieving this goal.

REGIONAL RELATIONS

CSCC has 7 Provincial Sections – British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, New Brunswick, and Nova Scotia. Each Section holds its own meetings and small conferences. The Sections report annually to the Society Council. A Provincial Grant is available for each section to help fund their activities.

INTERNATIONAL RELATIONS

CSCC paid the IFCC membership dues of the Cuban Society.

CSCC, with AACC, is a member of the North American Federation of Clinical Chemistry and Laboratory Medicine (NAFCC) of IFCC. The NAFCC was represented at the IFCC Executive Board meetings in 2018.

Dr. David Kinniburgh, Past-President of CSCC, is the current Secretary of IFCC.

Dr. Khosrow Adeli, Past-Chair of the Canadian Academy of Clinical Biochemistry, is the President-Elect of IFCC.

There are several Canadian members on IFCC committees and each of these members is asked to provide a report to each CSCC Council meeting.

ADDITIONAL INFORMATION

CSCC had a number of interactions with other Canadian pathology and lab medicine groups including:





Canadian Leadership Council on Laboratory Medicine & Laboratory Utilization Sub-Committee
 Participation in 'Choosing Wisely Canada' <http://www.choosingwiselycanada.org/>
 Participation in 'Lab Tests Online' with AACC <https://labtestsonline.org/>

CSCC supports LabCanDx (formerly MEDEC), the national association for the Canadian medical technology industry, in their efforts to promote the value of laboratory medicine.

CSCC supports participation in ToxLRN which is an initiative by Health Canada to create a network of toxicology laboratories in Canada.

CSCC provides support and professional encouragement for Trainees and Young Scientists, such as a special reception at the annual conference.

CSCC holds an annual charity run at its annual conference and proceeds are donated to a local charity.

CSCC publishes a bi-monthly newsletter and periodic electronic newsletters..



CHILE SOCIEDAD CHILENA DE QUÍMICA CLÍNICA (SCHQC)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
Symposium on Auto-Immunity	1 st October 2019	"Advances in laboratory and clinical practice, in the adoption of ICAP in Chile" DR. Carlos von Müllen, VLP IFCC-Abbott

EDUCATION

Member of the experts committee in clinical laboratory in lobby with National Health Fund (FONASA): Maria Elena ARREDONDO

REGIONAL MEETINGS

XXIV Congress COLABIOCLI, Panamá	10-13 September 2019	Active participation in the Assamby of COLABIOCLI and active participation meeting WG-IANT IFCC : member Leverton ORTIZ
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REGIONAL RELATIONS

- SChQC has collaboration with several regional associations of medical laboratory.
- COLABIOCLI (Confederacion Latinoamericana de Bioquimica Clinica) as a full member.
 - IAAC (Inter American Accreditation Cooperation) as a stakeholder member.
 - APTM (Asociacion Panamericana de Tecnologos Medicos)

INTERNATIONAL RELATIONS

Participation in the International Scientific Advisory of World Lab Seoul 2020

- SChQC is a Liaison member to the IFCC eNewsletter
- IFCC CDP WG. Ibero-American Nomenclature and Translations (WG-IANT) Member Leverton ORTIZ
- 2° Vocal EB COLABIOCLI: Maria Elena ARREDONDO
- National representative IFCC: Eduardo ARANDA
- National representative IAAC: Milena MONARI

ADDITIONAL INFORMATION

The SCHQC has been active in organizing the 20th National Conference will be held 6-8 May 2020, Santiago, Chile



CHINA (CN) PEOPLE'S REPUBLIC OF CHINA (PRC) - BEIJING CHINESE SOCIETY OF LABORATORY MEDICINE (CSLM)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
The 15th National Conference of Laboratory Medicine	August 29-31, 2019	The role of laboratory medicine in the future medicine

EDUCATION

Society kept the training of young and middle-aged talents as the most crucial thing in the development of laboratory medicine. The conference held the speech contests for young experts, and set up a graduate student academic competition to call for more “new blood” to stand out.

Adhering to the traditions of the society, the conference committed consideration fully for the actual situation of grass-roots technicians from the Midwest. It sponsored 31 western-area conference participants to promote the connection between the grass-roots technicians and the latest trends in laboratory medicine, to balance the development of laboratory medicine in both the urban and rural areas, and to empower the laboratory medicine to benefit all residents truly.

REGIONAL MEETINGS

The 15 th APFCB Congress	November 17 to 20, 2019	On November 19 afternoon, the CSLM held a symposium about Frontier in Laboratory Medicine. Professor Chengbin Wang and Professor Bharti Uppal cochaired the symposium. The three Chinese representatives made special presentation and had heated discussion with the audience. Professor Chengbin Wang gave a report on “Development and Prospect of Mass Spectrometry in clinical Laboratory in China”. Dr. Zhuo Li introduced the “Application of exosomes in the diagnosis of prostate cancer”. Dr. Ruibing Li talked about “Noninvasive prenatal diagnosis for fetal RhD & Achondroplasia”.
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REGIONAL RELATIONS

The 15th National Conference of Laboratory Medicine was held by the Chinese Medical Association (CMA) and the Chinese Society of Clinical Medicine (CSLM), in association with Jiangsu Medical Association during August 29-31, 2019, in Suzhou, Jiangsu Province. The conference was a grand academic gala for both the Society and the clinical laboratory experts in China.

The Conference Opening Ceremony was chaired by the Vice-Chairman Shiyang Pan and Vice Chairwoman Wei Cui of CSLM. Chairman Chengbin Wang of CSLM, Vice President and Secretary-General Keqin Rao of CMA, Vice President Yin Hu of Jiangsu Medical Association, delivered the welcome speech. In this conference, Vice-president Sunil Sethi of APFCB and Former president Dennis Dietzen of American Association for Clinical Chemistry (AACC) also

offered their warm remarks.

Prof. Sunil Sethi of Asian and Pacific Federation of Clinical Biochemistry (APFCB) was invited to give a speech in the meeting. He introduced the impact and opportunity from the latest medical technologies such as 3D printing, artificial intelligence, biosensors, and virtual simulation.

INTERNATIONAL RELATIONS

The 30th World Association of Societies of Pathology and Laboratory Medicine was held in Xi'an, China

The 30th World Association of Societies of Pathology and Laboratory Medicine (WASPaLM2019), sponsored by the Chinese Medical Association and Chinese Society of Laboratory Medicine, was held in Xi'an, capital of northwest China's Shaanxi Province from September 19 to 21st, 2019.

As the world's most influential community for laboratory-based physicians and clinical pathologists, WASPaLM is dedicating to the standardization, normalization and globalization of pathology and laboratory test, development of pathology and laboratory medicine, and promotion of public health. It is the first time that the annual event is held in China, after Chinese Society of Laboratory Medicine joined the WASPaLM. Seventeen parallel sessions are scheduled and focused on issues of common interest in medical fields such as precision medicine, laboratory automation, POCT, smart medicine, bioinformatics analysis, new testing technology, and laboratory medicine education. The three-day conference has attracted about 500 experts from 12 international academic organization, including 212 experts from overseas. Fifty-six speakers from 34 countries and regions have presented wonderful reports, and 372 posters and 20 oral presentations were selected from 542 submitted abstracts for the conference. The WASPaLM Annual Conference provided a platform for exchanging and sharing intelligence on pathology and laboratory medicine, and for promoting communication, enhancing friendship and seeking common development.



COLOMBIA

COLEGIO NACIONAL DE BACTERIOLOGIA, CNB – COLOMBIA

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
XX Congreso Internacional del CNB-Colombia	October 30- November 2, 2020	General topics of the Clinical Laboratory

EDUCATION

A series of Webinars on different topics (Research, quality control, molecular biology)

REGIONAL RELATIONS

Member of Colabiocli

INTERNATIONAL RELATIONS

Member of IFCC





CROATIA

CROATIAN SOCIETY OF MEDICAL BIOCHEMISTRY AND LABORATORY MEDICINE

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
30th CSMBLM Symposium; Zagreb, Croatia	21.9.2019.	Vitamin D in Health and Diseases

EDUCATION

In the 2019, **Committee for the scientific and professional development** performed their activities through several working groups for the specific areas in the laboratory medicine. New working group for endocrinology was formed.

Two new guidelines were published and distributed to all members of the CSMBLM.

Working group for coagulation has published a document: Bronić A, Coen Herak D, Margetić S, Milić M. Croatian Society of Medical Biochemistry and Laboratory Medicine: National recommendations for blood collection, processing, performance and reporting of results for coagulation screening assays prothrombin time, activated partial thromboplastin time, thrombin time, fibrinogen and D-dimer. *Biochem Med (Zagreb)* 2019;29(2):020503.

Working group for postanalytical phase has published a document: Lenicek Krleza J, Honovic L, Vlasic Tanaskovic J, Podolar S, Rimac V, Jokic A. Post-analytical laboratory work: national recommendations from the Working Group for Post-analytics on behalf of the Croatian Society of Medical Biochemistry and Laboratory Medicine. *Biochem Med (Zagreb)* 2019;29(2):020502.

Working group for preanalytical phase has published Croatian translation of the Joint EFLM-COLABIOCLI Recommendation for venous blood sampling.

“**Elizabeta Topic**” grant for the scientific research in amount of 20.000 HRK was awarded for the second time.

Education Committee

Webinars of CSMBLM in 2019:

1. January 2019: Laboratory diagnostics in veterinary medicine - is there a veterinary clinical chemistry?
2. March 2019: Laboratory diagnostics of autoimmune polyneuropathies
3. April 2019: Clinic and Laboratory: Idylls or Necessary Coexistence?
4. May 2019: Biological variability-theoretical basis
5. June 2019: Comparison of qualitative methods
6. July 2019: Comparison of quantitative methods
7. December 2019. Analytical Characteristics of Methods for Determining hs Troponin - Are We Ready for the 0/1 h Algorithm?

Grants in 2019:

5 grants for 23. IFCC-EFLM Congress, 19.-23.05.2019. Barcelona, Spain.

8 grants for 5. EFLM Conference of preanalytical phase 22.-23.03.2019., Zagreb, Croatia

ADDITIONAL INFORMATION

Croatian Centre for Quality Assessment in Laboratory Medicine (CROQALM), member of EQALM (CSMBLM representative in EQALM: Jasna Lenicek Krleza, PhD, Specialist in Laboratory Medicine). In 2019. CROQALM performed three rounds of external quality control (March, June, September). In December 2019, annual report for each participant was sent to Croatian Chamber of Medical Biochemists and applications for EQA in 2020 was opened.

Active participation at the EQALM Symposium in Slovenia.

Biochemia Medica

CSMBLM continues with supporting of the journal. Journal BIOCHEMIA MEDICA continues with activities for improving the quality and position of the journal among international scientific publications. Due to strategy of independent editing, the journal replace the online submission system Editorial Manager provided by Sciendo-de Gruyter with Manuscript Manager, provided by Akron.

In 2019, the journal published 3 issues with 56 articles in total.

In 2019 **Committee for information and public relations** has regularly informed the membership about IFCC and EFLM activities by preparing newsletters and notifications in Croatian and English language. They forwarded all the calls for nominations in EFLM and IFCC working groups and committees.

LabDay, organized by the IPRC as a part of the Croatian society of medical biochemistry and laboratory medicine (CSMBLM), was held for the second time on November 5th 2019, with the help of the CSMBLM members from all over Croatia with numerous activities (lectures, workshops, Open Doors Day, kindergarten children, elementary and high school students paying visits to laboratories) in more than 20 cities around Croatia.

Croatian media showed interest in the International Laboratory Medicine Day, and has reported about the event in newspapers and web portals. This event was also radio and television broadcasted.

Also, a roundtable “The Status, Perspectives and Challenges of Laboratory Medicine” was held, in which CCMB President, FFMB Representative, CSMBLM President and EFLM President had participated.

An article about LabDay was published in EFLM News.

Committee for organizational and legal issues of the Croatian society of medical biochemistry and laboratory medicine (CSMBLM)

In 2019 the Committee for organizational and legal issues of the Croatian society of medical biochemistry and laboratory medicine (CSMBLM) worked on amending all documents relevant for the competences of various bodies of CSMBLM, with the purpose of harmonization with the Statute of CSMBLM in force. The respective documents were adopted at the e-session of CSMBLM on 19 November 2019.



CZECH REPUBLIC CZECH SOCIETY OF CLINICAL BIOCHEMISTRY (CSKB)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
INCD 2019	15.-18.OCT 2019	Nutrition and Diagnostics
CELME 2019	3-4 OCT 2019	Laboratory management
X. Biochemics Meeting	31 OCT -1 NOV 2019	Preanalytical and postanalytical phase, toxicology, case studies
XIV.National Congress	22-24 SEP 2019	General clinical biochemistry
Atherosclerosis 2019	11-12 SEP 2019	Lipids diagnostics, prevention, treatment
VITATOX	20-22 May 2019	Vitamins, antioxidants, drug monitoring, toxicology

Immunoanalytical Days	17-19 MAR 2019	Immuno assays, biobanking, endocrinology, downsyndrom, tumour markers
RANK 2019	6-7 FEB 2019	Routine nucleic acid analysis

EDUCATION

Pre-graduate education: 5-6 years, Medicine: M.D. (medical doctors), Ing. (engineer in chemical sciences) or RNDr. (doctor in natural sciences) or Mgr. (master in natural sciences), Pharm Dr. (pharmacy doctor)

Post-graduate education in Clinical biochemistry: 5 years, compliant with EFLM standards both M.D. and Ing, RNDr, Mgr., PharmDr. may obtain EuSpLM (European Specialist in Laboratory Medicine), additional post-graduate education is needed for Haematology, Microbiology, Immunology, Genetics and Pathology.

Continuous Professional Development: All categories may obtain certificates with CPD credits, registered by central authorities, at congresses and seminars.

Patients' education: Czech version of Lab Test online is available and being regularly updated under supervision of the Czech Society of Clinical Biochemistry (<https://www.labtestsonline.cz>)

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topics</i>
Regional Day in Hradec Kralove	17 DEC 2019	Clinical biochemistry varia
38th Regional Days in Karlova Studanka	4-6 DEC 2019	Biochemistry, hematology
Regional Days in Libice	28-29 NOV 2019	Biochemistry, hematology
Laboratory Technicians Working Day	9 OCT 2019	Breaking news in laboratories
Monoclonal Gammopathy Working Day	26 SEP 2019	Myeloma and MGUS diagnostics
4. CSF Diagnostic Day in Ostrava	6 SEP 2019	Multiple sclerosis, neurodegenerative diseases
Laboratory Days in Zemanice	10-11 JUN 2019	News in clinical biochemistry
Interlab 2019	5 JUN 2019	Clinical biochemistry technologies
37. Regional Days of Jihocesky, Kralovehradecky a Pardibucky Region	29-30 May 2019	Tumour markers, Urine analysis, myeloma and MGUS, vitamin D
XV.Regional Nejedly Day in Kladno	17 APR 2019	News in clinical laboratories
Laboratory Technicians Day -Cardiology	10 APR 2019	cardiomarkers
Biochemistry and Hematology Regional Day of Plzensky and Karlovarsky Region	28 MAR 2019	News in biochemistry and hematology
Uncommon biological materials	27 MAR 2019	Clinical biochemistry
Menhir of Professor Masopust	24 JAN 2019	Kidney function, lipids, Alzheimer disease

At all meetings the Czech Society of Clinical Biochemistry guarantees scientific programme (*Society's contribution*)

INTERNATIONAL RELATIONS

8 members in IFCC Committees and Working Groups
9 members in EFLM Committees and Working Groups

ADDITIONAL INFORMATION

Czech Society of Clinical Biochemistry (CSKB) supervises external quality control programme SEKK (www.sekk.cz)

Official CSKB society journal is “Klinicka biochemie a metabolismus”, reviewed since 1971, ISSN: 1210 – 7921, English article are acceptable. CSKB also co-edits FONS journal, ISSN 1211-7137.

National guidelines, opinions, instructions in 2019:

CSKB Guideline: Laboratory Diagnostics of Monoclonal Gamopathies

CSKB Guideline: External Quality Control System

CSKB Guideline: Rules for Sample Acceptance in Laboratory

CSKB Opinion to 2019 ESC-EAS Guidelines for Diagnostics and Treatment of Dyslipidaemias

CSKB Instruction: Urine Sampling for Toxicology Assessment



FINLAND

FINNISH SOCIETY OF CLINICAL CHEMISTRY (SKKY)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
Labquality Days	7.-8.2.2019	General clinical chemistry
Spring Meeting	16.5.2019	Process leading
Laboratory Medicine Days	10.-11.10.2019	AI and data mining

EDUCATION

Live streaming/Immunosuppressants 12.2.2019. A webinar available for all members.

The Finnish Society of Clinical Chemistry has a member in the educational work group in Labquality Days (7.-8.2.2019) with a purpose to enable collaboration with the society and the company.

The Society organized an educational company visit to PerkinElmer, Turku Finland on 22.3.2019

The topic of the spring meeting (16.5.2019) was process leading. The meeting was organized in collaboration with two national societies (medical specialists in laboratory medicine and clinical biochemists) and Labquality.

The Finnish Society of Clinical Chemistry organized an EFLM Postgraduate Course on Biostatistics in Laboratory Medicine in Helsinki, Finland on 18.-19.9.2019.

The content of Laboratory Medicine Days (10.-11.10.2019) was general clinical chemistry organized together with medical specialists, clinical biochemists and biomedical laboratory scientists. The Finnish Society of Clinical Chemistry organised a session of data mining in laboratory medicine and AI in data handling.

The Finnish Society of Clinical Chemistry has given several grants for the members of the society for both attending educational events (congresses, educational workshops etc.) and for enabling scientific work or academic studies.



REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
NFKK Board Meeting	10.4.2019	Anna Linko-Parvinen and Eeva-Riitta Savolainen attended
NFKK Board Meeting	13.9.2019	Eeva-Riitta Savolainen attended

REGIONAL RELATIONS

NFKK (Nordisk Forening for Klinisk Kemi, The Nordic Society of Clinical Chemistry) board meetings in April (Turku, Finland) and September (Västerås, Sweden). President Anna Linko-Parvinen and national representative Eeva-Riitta Savolainen attended the meeting in June and national representative Eeva-Riitta Savolainen the meeting in September. The meetings consisted of discussions of common practices in clinical chemistry in the Nordic countries as well as reference ranges and reference materials in the Nordic countries. Also educational aspects (e.g. scientific courses) were discussed.

Anna Linko-Parvinen attended, as the Finnish representative, the "NFKK Course in Practical Communication 2019" 29.8.-1.9.2019, Malmö, Sweden.

The society has been active with other societies in clinical chemistry, e.g. in organizing educational events in Finland.

INTERNATIONAL RELATIONS

The national representative Päivi Laitinen has been active in IFCC. Prof. Kari Pulkki has been the national representative in EFLM.

The following were previous members or selected in international scientific work groups (applications in 2019):

IFCC, WG-PAPPA, Saara Wittfooth, chair, Kim Pettersson, member

IFCC, WG-TNI, Aleksei Katrukha, member

IFCC, C-TLM, Saara Wittfooth, corresponding member

IFCC, C-VPLM, Päivi Laitinen, corresponding member

IFCC, TF-YS, Mikko Helenius, corresponding member

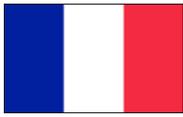
EFLM, WG-A-ISO, Solveig Linko, member

EFLM, WG-BV, Outi Itkonen, member

EFLM, WG-CM, Päivi Laitinen, chair, Kari Pulkki, member, Janne Suvisaari, corresponding member

EFLM, WG-PFLM, Mikko Anttonen, corresponding member

EFLM, EG-R, Eeva-Liisa Paattiniemi, corresponding member (new)



NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
National meetings with SFBC auspices		
- Journées “Numérique et Biologie Médicale”	Paris October 17 th , 2019	Digital Laboratory Medicine
- 3 rd Journées Francophones de Biologie Médicale	Monaco November 4 th – 6 th , 2019	Innovation / Oncology / Kidney Diseases
- 52 nd Journées de Biologie Praticienne	Paris December 4 th - 5 th , 2019	Hematology / Tumor markers / Liver Diseases / Allergy / Automation in Microbiology

EDUCATION

- Educational Committee chaired by Dr C. Augereau and Dr F. Guerber :
 - Continuous professional development (DPC) and continuous medical education (CME) through SFBC scientific meeting sessions
- Committee on Evaluation of Professional Practices (C-EPP): chaired by Dr I. Aimone-Gastin (Nancy)
 - National Agreement SFBC as Validating Society for “EPP”
 - Relations with the Federation of Medical Specialities (FSM)

REGIONAL MEETINGS

- Participation of SFBC members in International meetings
 - Serbis 5th Anniversary “Nutrition Biomarkers for Disease Prevention”, March 26-28 2019, Belgrade (Serbia)
 - 23rd IFCC-EFLM EuroMedLab Barcelona 2019, May 19-23 2019 Barcelona (Spain)
 - African MedLab 2019, September 25-28 2019, Marrakech (Marocco)

REGIONAL RELATIONS

EFLM : Participation of SFBC members

<i>Functional unit</i>	<i>Name</i>	<i>Surname</i>	<i>Position</i>
WG: Accreditation and ISO/CEN standards (WG-A/ISO)	Guilaine Michel	BOURSIER VAUBOURDOLLE	Chair Expert/Consultant
TG: European Laboratory Day (TG-ELD)	Bernard	GOUGET	Chair
TFG: Urinalysis (TFG-U)	Audry	MERENS	Member
C: Profession Committee (C-P)	Jean-Philippe Simone	BROCHET ZERAH	Expert/Consultant Expert/Consultant
WG: Register	Hugo	ROUX	Member - Young Scientist
WG: LM Credit Points (WG-LMCP)	Michel	PERES	Member - Young Scientist
WG: Biological Variation (WG-BV)	Nihad	MEKNACHE	Corresponding Member
WG: Preanalytical phase (WG-PRE)	Jean-Pierre	BOUILLOUX	Corresponding Member
WG: Guidelines (WG-G)	Bérénice	SHELL	Member - Young Scientist

INTERNATIONAL RELATIONS

- SFBC Committee on International Relations:
 - Prof.P. Gillery
 - Dr B. Gouget
- SFBC representatives :
 - IFCC : Prof. P. Gillery
 - EFLM : Dr M. Vaubourdolle
 - WASPaLM : Prof. P. Gillery, Dr G. Boursier
- Participation in the International Advisory Board of IFCC/EFLM meetings:
 - EFLM/IFCC EuroMedLab Barcelona 2019 (Dr M. Vaubourdolle, ISAB member)
 - IFCC WorldLab Seoul 2020 (Pr P. Gillery, ISC Member)
 - Workshop “Barriers to global standardization of clinical laboratory testing: reference materials and regulations” (Pr P. Gillery, Member Organizing Committee)
 - EFLM/IFCC EuroMedLab Munich 2021 (Pr P. Gillery, Chair of the Scientific Programme Committee), Michel Vaubourdolle (ISAB)
 - IFCC Council, and chair Arabic Federation /FIFBCML session (Dr B. Gouget)
- SFBC: founding member of the FIFBCML : Fédération Internationale Francophone de Biologie Clinique et de Médecine de Laboratoire. Participation in meetings in 2017: see “Regional Meetings”.
- Participation of SFBC members at National meetings of IFCC full member societies.

• Participation of SFBC members in IFCC Committees and Working Groups

✓ Scientific Division (SD)

Executive Committee

P. Gillery, Chair, 2017-2019

Committees

- | | |
|--|--------------------------------|
| - Nomenclature, Properties and Units (C-NPU) | F. Scherrer, Member, 2018-2020 |
| - Molecular Diagnostic (C-MD) | K. Peoc'h, corresp. Member |
| - Traceability in Laboratory Medicine (C-TLM) | A. Vassault, corresp. Member |
| - Standardization of Thyroid Function Tests (C-STFT) | V. Raverot, corresp. Member |
| - Bone markers (C-BM) | J.P. Cristol, corresp. Member |

Working groups

- | | |
|---|--|
| - Standardization of Procalcitonin assays (WG-PCT) | V. Delatour, Chair, 2018-2020
A. Boeuf, Member
H. Briand, Member
A.M. Dupuy, Member
P. Hausfater, Member |
| - Standardization of Carbohydrate-Deficient Transferrin (WG-CDT) | F. Schellenberg, Member |
| - CSF Proteins (WG-CSF) | S. Lehmann, Member
V. Delatour, Member |
| - Commutability (WG-C) | V. Delatour, Member
E. Romeu, Member |
| - Apolipoproteins by Mass Spectrometry (WG-Apo MS) | V. Delatour, Member |
| - Standardisation of Albumin Assay in Urine (WG-SAU) | E. Caussé, corresp. Member |
| - Standardisation of Pregnancy-Associated Plasma Protein (WG-PAPPA) | R. Garnotel, corresp. Member |
| - Standardization of Troponin I (WG-TNI) | G. Lefèvre, corresp. Member |
| - Standardisation of Hemoglobin A ₂ (WG-HbA ₂) | M. Arock, corresp. Mem-
ber |

✓ Education and Management Division (EMD)

Committees

- | | |
|---|--|
| - Committee on Point of Care Testing (C-POCT) | M. Vaubourdolle, Member, 2017-
2019 |
|---|--|



- Committee on Proficiency testing (C-PT) 2019 A. Perret-Liaudet, Member, 2017-
- Committee on Clinical Applications of Cardiac Biomarkers (C-CB) G. Lefèvre, Member, 2017-2019
- Committee on Analytical Quality (C-AQ) A. Vassault, corresp. Member
- Committee on Education in the Use of Biomarkers of Diabetes (C-EUDB) P. Gillery, corresp. Member
- Committee on Chronic Kidney Disease J.P. Cristol, corresp. Member

Working group

- Flow Cytometry (WG-FC) C. Lambert, Chair, 2019-2021

✓ **Emerging Technology Division (ETD)**

- Committee on Mobile Health and Bioengineering in Laboratory Medicine (C-MHBLM) B. Gouget, Chair, 2018-2020
- Committee on Omics Translation (C-OT) M. De Tayrac, Member, 2019-2021

✓ **Task Forces (TF)**

- Task Force on History –TF-H) B. Gouget, Co-Chair, 2019-2021
- Task Force for Young Scientists (TF-YS) G. Boursier, Member, 2017-2019

✓ **Nominations Committee**

B. Gouget, Past-Chair, 2018-2020

ADDITIONAL INFORMATION

SFBC Board 2019

Executive Board :

- President
- Vice-President
- Past-President
- General Secretary
- Assistant General Secretary
- Treasurer

Pr Vincent SAPIN
Pr Sylvain LEHMANN
Pr Marc DELPECH
Dr Véronique ANNAIX
Pr Bruno BAUDIN
Dr Philippe CHATRON
Dr Delphine COLLIN-CHAVAGNAC
Dr Katell PEOC'H

Scientific Committee :

Dr Laurence PIERONI
Dr Christine AUGEREAU-VACHER
Dr Fabrice GUERBER
Dr Isabelle AIMONE-GASTIN

Editors in Chief ABC:

Educational Committee :

Pr Philippe GILLERY
Dr Bernard GOUGET
Dr Michel VAUBOURDOLLE

International Relations :

National Relations :

Dr Marie-Françoise GAUDEAU-TOUSSAINT
Dr Carole POUPON

Young Scientist :

Dr Guilaine BOURSIER



GREECE

GREEK SOCIETY OF CLINICAL CHEMISTRY – CLINICAL
BIOCHEMISTRY (GSCC-CB)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
17th National Congress	21 to 23 November, 2019	

EDUCATION

Seminar Series in Athens targeting Young Scientists:

The seminars were dedicated on the work and contribution to clinical diagnosis, of the in vitro clinical labs of the Greek public hospital.

Referenced to the

- Biochemistry Department and included lectures on biochemical analysers, liver and renal function tests, enzyme tests diagnosis, disorders of carbohydrate and lipids metabolism, disorders of metal ions metabolism, abnormalities of thyroid function, steroid, hypothalamic and pituitary hormones, tumour markers in neoplastic diseases, therapeutic drug monitoring and pharmacogenomics.
- Histocompatibility complex, protein tests, autoimmune antibodies, flow cytometry in the Immunology Lab.
- The Blood-Bank department was presented with lectures on immunohematology, blood-born diseases and hematology analysers.
- Cytopathology Lab for the examination virtually of all body organs and tissues
- Pathology Lab
- Microbiology Lab topics and analytical tests

Post graduate educational seminars

INTERNATIONAL RELATIONS

IFCC- EFLM Membership

ADDITIONAL INFORMATION

Greek Lab Tests Online successfully uploaded 168 tests on its platform



NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
Enigma and surprises in clinical Microbiology Dr Yoram Kenes, Orna Schwartz.	29.01.19	This annual seminar is dedicated to presentations by microbiologists of interesting and puzzling cases including discussion of the different cases. This model is running already for eight years with significant success among our members
Implementation of biostatistics in clinical labs Dr Dganit Itzraki	6.03.19	<ul style="list-style-type: none"> • Biostatistics in daily routine in clinical labs • Biostatistics methods, analysis of results and selection of the relevant tools
The influence of pregnancy on laboratory tests results: Do we need specific reference ranges? Dr Klara Henig	25.03.19	<ul style="list-style-type: none"> • The biochemical changes associated with pregnancy • Influence of pregnancy on hematology and endocrinology lab testing • Monitoring of anti-epileptic drugs during pregnancy
Hematology is not just CBC Dr Ety Shaoul, Dr Tali Tohami	10.04.19	<ul style="list-style-type: none"> • From CBC to thalassemia and hemoglobinopathies diagnosis • Updates on hemophilia treatment • Flow cytometry: Small changes make the difference • NGS revolution and liquid biopsy: the new generation of monitoring cancer diagnosis & treatment
Annual Meeting of the Israel Society for Clinical Laboratory Sciences (ISCLS) Dr Maanit Shapira	14-15.05.19	<ul style="list-style-type: none"> • NGS the new era in Molecular Biology • Phage therapy: The solution for antibiotics resistance crisis • Evolution in a tube: Enzymes for all • Menopause and beyond it • What's new in Hepatitis • Intestinal Bowel Diseases • Personalized hematology • Dr, How is my immune system today? • Electrolytes imbalance
Diagnostic and epidemiologic aspects of helicobacter Pylori Dr Avi Peretz, Dr Tzahi Perez	12.06.19	Helicobacter pylori infection- current status: epidemiology, pathology, diagnosis and treatment <i>Participation of Prof Francis Megraud, Bordeaux, France</i>
Cardiac Biomarkers Symposium: High Sensitive Troponin Present and Future Dr Marielle Kaplan	24-26.09.19	<ul style="list-style-type: none"> • High sensitive Troponin in the real world using rule-out and rule-in algorithms • Reclassification of MI based on troponin • Use of Troponin in the Community for Risk Assessment of Cardiovascular Diseases • The use of natriuretic peptides for heart failure diagnosis • Advances in detection technologies to detect cardiac biomarkers. <p>Participation of Prof. Fred apple (University of Minnesota, USA); Prof. Alan Jaffe (Mayo Clinic, USA); Prof. Jack Ladenson (Washington University in St. Louis, USA); Prof Kristian Thygesen (Aarhus University Hospital, Denmark); Prof Johannes Mair (Innsbruck Medical University, Austria).</p>
ISCLS Session during the annual meeting on Research at the Meir Medical Center Dr Gloria Rashid	4.11.19	<p>Presntation of seven Research projects performed in Clinical Labs, among them:</p> <ul style="list-style-type: none"> • Specific circulating microRNAs are associated with type 2 diabetes progression • Evaluating the analytical performance of high throughput serum metabolomics for population cancer screening • Molecular identification of parasites in stool



PSA and prostate Cancer : what is new? Dr Tamar Stam	25.12.19	<ul style="list-style-type: none"> • Clinical aspects of prostate cancer • PSA tests in clinical labs • Circulating tumor cells and cell free DNA testing in prostate Cancer • 4K score tests • PHI-Prostate Health Index test
Corneal Surface Investigation Dr Avi Peretz	13.12.19	A collaboration with the Israeli group of corneal diseases

EDUCATION

Fellowship program for **Management training of successors**. 20 candidates (all PhDs) were selected from the group of young professionals in laboratory Medicine, all of them are on the track of serving as future Laboratory directors.

The program consisted of 12 meetings, each one 8 hours that included topics of management skills learning, national regulation as well as visits to main clinical laboratories in Israel.

A professional coach in management was an essential part of the program and escorted the participants throughout the program.



Dr Ram Dolman and Dr Avi Peretz (first row in this picture) organized this activity.

The enclosed picture is showing the candidates receiving their final Certificate at the end of the program.

As a follow up of this activity, the participants are meeting once every 2-3 months each time at one of the institutions they are part of. Their meetings includes lectures as well as panels of discussions on selected topics. The idea was to form a nucleus of young professionals in laboratory sciences at the national level that could interact together.

Moreover, one of the participants set up and is maintaining a Facebook page for the ISCLS. The Facebook page is very active and help us to connect with our members beyond using more traditional tools.

REGIONAL RELATIONS

Dr Kaplan as the ISCLS national representative was invited to participate to the **15th Belgrade Symposium for Balkan Region - Neighbouring Countries: The Same Professional Aim**. During the meeting she contributed a talk on "Laboratory Medicine in Israel: National Harmonization of Critical Values Communication"

INTERNATIONAL RELATIONS

Dr Itzraki is serving as full member of the WG-DE (EFLM).

Dr Kaplan is serving as corresponding member of C-CLM (IFCC) and has sent an application for a full member position.

Dr Stam is serving as corresponding member of the TP-FT (IFCC).

Israel through ISCLS has been granted recognition of equivalence by the EFLM and we are now working toward registration of relevant members as EuSpLM.

Israel through ISCLS is also taking care of registration of members to the EFLM Academy.

**ITALY****ITALIAN SOCIETY OF CLINICAL CHEMISTRY AND CLINICAL MOLECULAR BIOLOGY (SIBioC)****NATIONAL MEETINGS**

PADOVA 20-22 Novembre 2019	51° CONGRESSO NAZIONALE SIBioC	LA MEDICINA DI LABORATORIO NELLA FRAGILITÀ E LA FRAGILITÀ DELLA MEDICINA DI LABORATORIO LABORATORY MEDICINE IN FRAILTY AND FRAILTY OF LABORATORY MEDICINE
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**EDUCATION**

- Organization of, or Auspices for, over 40 National, Inter-regional and Regional meetings
- Permanent School of Education SIBIOC (1 course on Thrombosis and Hemostasis and 2 on Laboratory statistics);
- Technological Transfer in Laboratory Medicine (INNOVA SIBioC project)
- Distant education:
 - VARIABILI PREANALITICHE IN MEDICINA DI LABORATORIO (Coordinatori: Davide Giavarina, Graziella Bonetti)
 - CASI CLINICI IN MEDICINA DI LABORATORIO 1 (Coordinatore: Bruna Lo Sasso)
 - CASI CLINICI IN MEDICINA DI LABORATORIO 2 (Coordinatore: Bruna Lo Sasso)
 - QUALITÀ IN MEDICINA DI LABORATORIO: I PROGRAMMI DI VEQ (Coordinatore: Massimo Quercioli)
 - EMOSTASI E TROMBOSI: IL VALORE DEL LABORATORIO (Coordinatore: Sophie Testa)
 - BIOMARCATORI IN ONCOLOGIA (Coordinatori: Massimo Gion, Chiara Trevisiol)
 - APPROPRIATEZZA PRESCRITTIVA NELL'AMBULATORIO DEL MEDICO DI MEDICINA GENERALE (Coordinatori: Mariastella Graziani, Marcello Ciaccio, Bruna Lo Sasso)

Official documents:

- Recommendations for using of molecular assays on liquid biopsy: the first document provided by intersociety Group AIOM, SIF, SIAPEC-IAP, SIBioC. *Biochimica Clinica* 2019; 43(1) 106-114.
- Translation of Joint EFLM-COLABIOCLI Recommendation for venous blood sampling. *Biochimica Clinica* 2019; 43(2) 200-227.
- Protocol to verify the comparability of quantitative laboratory results obtained with different measurement procedures. *Biochimica Clinica* 2019; 43(2) 228-243.
- Pre-analytical issues in coagulation testing. *Biochimica Clinica* 2019; 43(3) 313-326.
- Biotin interference in immunoassays: recommendations of the SIBioC Working Group on Extra-Analytical Variability (WG-VEA). *Biochimica Clinica* 2019; 43(3) 327-331.
- Recommendations for the implementation of BRCA1/2 testing in ovarian cancer patients: from tumor to germline analysis. Joint document from SIBioC, AIOM, SIGU, SIAPEC-IAP. *Biochimica Clinica* 2019; 43(3) 332-338.
- Precision oncology: when the metrics does matter. *Biochimica Clinica* 2019; 43(3) 339-347.
- Laboratory Medicine: specialists of tomorrow. *Biochimica Clinica* 2019; 43(4) 424-434.
- Glossary of molecular biology and clinical molecular biology. Part II: laboratory methodologies. *Biochimica Clinica* 2019; 43(4) 435-448.
- Consensus document of the Study Group on Clinical Pharmacotoxicology and Doping of Italian Society of Clinical Biochemistry and Italian Forensic Toxicologists Group (GTFI) – for laboratories involved in the determination of substances of abuse. *Biochimica Clinica* 2019; 43(4) 449-452.

REGIONAL MEETINGS

- TORINO, 15 gennaio 2019 FARMACI BIOLOGICI E SMALL MOLECULES: Therapeutic Drug Monitoring e personalizzazione della terapia?
- SESTO FIORENTINO (FI) 28 Febbraio 2019 LE NUOVE FRONTIERE ORGANIZZATIVE IN MEDICINA DI LABORATORIO: DAL CONSOLIDAMENTO E L'INTEGRAZIONE AI "BIG DATA" CONGRESSO SIBIOC - SEZIONE TOSCANA
- TORINO, 23 marzo 2019 Corso di Aggiornamento CODICE DEGLI APPALTI E LABORATORIO ANALISI: COME SI FANNO LE SCELTE?
- NOVARA 27 Marzo 2019 LABORATORIO E CLINICA A CONFRONTO NELLA DIAGNOSTICA DELLE TALASSEMIE ED EMOGLOBINOPATIE
- MILANO 03 Aprile 2019 LA STATISTICA IN LABORATORIO (II LIVELLO)
- BARI, 5 aprile 2019 L'integrazione tra clinica e medicina di laboratorio nella diagnostica del danno renale: ricerca, innovazione ed EBM
- PERUGIA 05 Aprile 2019 APPROPRIATEZZA PRESCRITTIVA DELLA PROCALCITONINA
- FIRENZE 16 Aprile 2019 LA "BIOPSIA LIQUIDA" COME FONTE DI POTENZIALI BIOMARCATORI NELLA GESTIONE E MONITORAGGIO DEL PAZIENTE ONCOLOGICO
- MODENA 06 Maggio 2019 EXPECTATIONS OF LABMED FOR THE 2020S
- MODENA 07 Maggio 2019 TEST TRADIZIONALI E INNOVATIVI IN MEDICINA DI LABORATORIO APPROPRIATEZZA E EFFICACIA DIAGNOSTICA AGGIORNAMENTI IN IMMUNOMETRIA - 8° CONVEGNO
- ROMA, 9-10 maggio 2019 TERAPIA FARMACOLOGICA DI PRECISIONE: PERCORSI E STRATEGIE IN EVOLUZIONE
- PIEVESESTINA (FC) 10 Maggio 2019 FOCUS SULLE SOSTANZE STUPEFACENTI: DALLA CANNABIS TERAPEUTICA ALLE NPS IL LABORATORIO TRA CLINICA E GIURISPRUDENZA
- VICENZA 30 Maggio 2019 TRA IMMUNOMETRIA E SPETTROMETRIA DI MASSA: NECESSITÀ DIAGNOSTICHE, CLINICHE E TERAPEUTICHE- 34° CONVEGNO DI MEDICINA DI LABORATORIO
- GENOVA 03 Giugno 2019 APPLICAZIONI E INNOVAZIONI DIAGNOSTICHE NELL'AMBITO DELLA SPETTROMETRIA DI MASSA CLINICA
- PADOVA, 5-6 giugno 2019 URINOLOGY 2019
- ROMA, 11-12 giugno 2019 LA SPETTROMETRIA DI MASSA NELLA RICERCA E PRATICA CLINICA OSPEDALE PEDIATRICO BAMBINO GESU'
- CHIETI 14 Giugno 2019 I° CONGRESSO DI MEDICINA DI LABORATORIO SIBIOC ITALIA CENTRALE ABRUZZO, LAZIO, MARCHE, MOLISE, TOSCANA ED UMBRIA
- NAPOLI 04 Luglio 2019 4° MEETING DI TOSSICOLOGIA CLINICA E FORENSE - LA TOSSICOLOGIA INCONTRA LE ISTITUZIONI E LE FORZE DELL'ORDINE
- BOLOGNA, 18 settembre 2019 DALLA QUALITÀ DEL DATO ANALITICO ALLA QUALITÀ DEL PROCESSO: ESPERIENZE, SOLUZIONI ORGANIZZATIVE E INNOVAZIONI TECNOLOGICHE PER LA GOVERNANCE NEI CONTESTI DI "POINT OF NEED"
- ALESSANDRIA 19 Settembre 2019 LA DIAGNOSTICA EMATOLOGICA: STANDARD INTERNAZIONALI E CASE REPORT
- ROMA 19 Settembre 2019 ACCREDITAMENTO ISO 15189 DALLA TEORIA ALLA PRATICA
- MONZA 20 Settembre 2019 POINT OF CARE TESTING: GESTIONE, NORME E NORMATIVE. TRA REALTÀ ATTUALE E SCENARI FUTURI. CONGRESSO REGIONALE SIBIOC - MEDICINA DI LABORATORIO
- MILANO 25 Settembre 2019 CORSO TEORICO PRATICO DI EMATOLOGIA DI LABORATORIO PRIMO MODULO: "DIAGNOSI DIFFERENZIALE DELLE LINFOCITOSI
- ROMA, 18 ottobre 2019 Le Biobanche nell'era della Medicina di Precisione
- PADOVA, 23 ottobre 2019 INTERNATIONAL CONFERENCE ON LABORATORY MEDICINE. FROM BENCH TO DIAGNOSTIC-THERAPEUTIC PATHWAYS



- SAVONA, 24 ottobre 2019 IL DOSAGGIO DELL'EMOGLOBINA GLICATA NEL NUOVO CONTESTO SOCIALE
- ERICE, 7-9 novembre 2019 THE VALUE OF LABORATORY MEDICINE INTO CLINICAL MEDICINE
- ROMA 20 Dicembre 2019 3° CONVEGNO GDS SIBIOC YOUNG SCIENTISTS NOVEL TARGETS AND NEW TECHNOLOGIES: FROM BENCH TO BEDSIDE



REGIONAL RELATIONS

The current organization of the Society encompasses 2570 Members, distributed across the 21 National Regional Delegations. The Societies organizes many Regional and Inter-Regional scientific events, promotes additional scientific events in the area of Laboratory Medicine and organizes a 3-day annual National Meeting.

INTERNATIONAL RELATIONS

IFCC- EFLM Membership

- Complete list of IFCC Officers in the IFCC website



JAPAN
JAPAN SOCIETY OF CLINICAL CHEMISTRY (JSCC)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
The 59th Annual Meeting of Japan Society of Clinical Chemistry (JSCC)	2019/9/27-9/29	<p>2 Special Lectures:</p> <ol style="list-style-type: none"> 1) The way to go of clinical chemistry (Maekawa M) 2) New therapeutic concept brought by Muse cells (Dezawa M) <p>4 Educational Lectures:</p> <ol style="list-style-type: none"> 1) COI Tohoku Office: Data Integration for the Next Generation Health and Welfare Society 2) Physiological function of lysophospholipid mediator 3) Forefront of drug discovery proteomics research 4) Ensuring quality outside the laboratory – The power of POC informatics <p>14 Symposia:</p> <ol style="list-style-type: none"> 1) Pitfall in clinical laboratory: case presentation and discussion in 2019 2) Current status and issues of GLDH measurement in drug-induced liver injury 3) Selecting a routine laboratory test 4) Clinical chemistry for non-diseased (Mibyō) medicine 5) Mutual utilization of clinical chemistry and pharmaceutical research - microanalysis, genomic medicine and AMR - 6) Utilization of mass spectrometry technology in clinical chemistry - Current status and future potential - 7) Cell and regenerative medicine 8) Deployment of clinical chemistry in home medical care 9) Test data determines success or failure of project 10) Measures for antimicrobial resistance (AMR) in medical practice: Evidence-based implementation 11) Approach to organ lipid metabolism disorder 12) Early diagnosis and treatment of dementia 13) Big data and AI in medical practice 14) Latest technology approaching modern human illness

EDUCATION

In all annual meeting of JSCC and regional meetings in Japan, educational lectures on various clinical chemistry related subjects, such as standardization, analytical methods, and laboratory related trouble shootings were performed by the specialists of clinical chemistry. In addition, clinical chemistry related companies held various types of symposiums and educational meetings in all over Japan all the year round.

Clinical Chemistry Academy and Educational Lecture for Certified Clinical Chemistry and Immunochemistry Quality Assurance Medical Technologists and Professions were held in Sendai on Sep 29, 2019.

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
Hokkaido branch: The 29 th branch regular meeting	Oct 19, 2019	Each branch supervises the meeting of each region
Tohoku branch: The 30 th branch general meeting	Sep 29, 2019	Each branch supervises the meeting of each region
Kanto branch: The 36 th branch regular meeting	Dec 14, 2019	Each branch supervises the meeting of each region
Koushinetsu branch: The 37 th branch general meeting	Jul 6-7, 2019	Each branch supervises the meeting of each region
Tokai & Hokuriku branch: The 30 th branch general meeting	Jul 28, 2019	Each branch supervises the meeting of each region
Kinki branch: The 71 st branch regular meeting	Mar 9, 2019	Each branch supervises the meeting of each region
Chugoku & Shikoku branch: The 15 th joint regional meeting	Feb 16-17, 2019	Each branch supervises the meeting of each region
Kyushu branch: The 30 th branch general meeting	Mar 2, 2019	Each branch supervises the meeting of each region

INTERNATIONAL RELATIONS

SD Committees:

- Reference Intervals and Decision Limits (C-RIDL): Donchon. Kang, Member
- Reference Standardization of Thyroid Function Tests (C-STFT): Akira Hishinuma, Member

SD Working Groups:

- Standardization of Albumin Assay in Urine (WG-SAU): Yoshihisa Itoh, Member

Education Management Division (EMD) Committees:

- Internet and Distance Learning (C-IDL): Hideo Sakamoto, Member
- Chronic Kidney Disease (Integrated Project) - (C-CKD): Takashi Wada, Member

Communications and Publications Division (CPD) Committees:

- Internet and Distance Learning (C-IDL): Hideo Sakamoto, Member

Emerging Technologies Division (ETD) Committees:

- Committee on Mobile Health and Bioengineering in Laboratory Medicine (C-MHBLM): Kazuhiko Kotani, Member

International Journal Editor

- Editorial Board for Annals of Clinical Biochemistry: Kazuhiko Kotani

Editorial Board of Clini Chimica Acta:

Nobuo Okumura, Editorial Board
Masato Maekawa, Editorial Board

Takashi Miida, Editorial Board
 Minoru Tozuka, Editorial Board
 Katsuyuki Nakajima, Editorial Board
 Akihiro Inazu, Editorial Board

ADDITIONAL INFORMATION

About 1,700 members including MD and PhD belong to JSCC and 9 blocks were divided as the each centre of JSCC.

The annual meeting is held once a year and more than 300 papers are discussed in the meeting and the regional meetings were held once a year in each region and interesting symposiums and special lectures are planned by an annual president of the meeting.



LATVIA LATVIAN SOCIETY OF LABORATORY MEDICINE (LLSB)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
Quality control aspects in laboratory	26.09.2019	Quality control aspects



LITHUANIA LITHUANIAN SOCIETY OF LABORATORY MEDICINE

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
National Conference	09-05-2019	Biomedical diagnostics: science and practice
National LLMD Conference	06-09-2019	Unity of Laboratory Diagnostics and Clinical Practice
Joint International Conference of LLMD and Lithuanian Cardiovascular Society	13-09-2019	Heart failure biomarkers – practice and innovations
National Conference	19-10-2019	What clinicians should know, and what laboratories should perform (dedicated to World Thrombosis Day)
National LLMD Conference	29-11-2019	Laboratory diagnostics of 2019: possibilities and clinical interpretations

REGIONAL RELATIONS

Lithuanian Society of Laboratory Medicine (LLMD) is member of Baltic Association of Laboratory Medicine (BALM). Other 2 members of BALM are: Latvian Society of Laboratory Specialists and Estonian Society of Laboratory Medicine. The main task of the Association – organization of Baltic Congresses of Laboratory Medicine held every second year in one of the Baltic Countries.

INTERNATIONAL RELATIONS

LLMD is the member of IFCC, EFLM and Clinical and Laboratory Standards Institute (CLSI); partner of The Global World Thrombosis Day Movement.





NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
29 th MACB Conference 2019	15-17 July 2019	<p>Conference theme “Clinical Laboratory Medicine in the Era of New Technologies: Challenges and Opportunities”</p> <p>Three plenary lectures, three symposiums, five educational workshops, oral and poster presentations as well as a trade exhibition was presented at the conference.</p> <p>Topics presented included:</p> <ul style="list-style-type: none"> • The Impact of New Technologies on the Current and Future Practice of Clinical Laboratory Medicine presented • New Technologies in the Management of Diabetes Mellitus presented • Confidentiality and Lab Ethics in the Era of Social Media • New Biomarkers in Disease Management • Challenges and Opportunities in Laboratory Medicine, • Establishing Reference Intervals • Importance of Quality Management <p>A pre-conference workshop on the topic of “How to Conduct A Quality Improvement Study’ was held on the first day.”</p>

EDUCATION

i) **APFCB-MACB Chemical Pathology Course Part 3 2019**

The APFCB-MACB Chemical Pathology Course is a training initiative by the APFCB and the MACB for the purpose of preparing clinical laboratory professionals for a professional certification program equivalent to a post graduate Diploma in Clinical Biochemistry. The course is the third and final series. It was held on 15-16 January 2019. The speakers included local speakers together with Dr. Tony Badrick (Australia) and Dr. Loh Tze Ping (Singapore). Lecture topics included Bone and mineral markers, Prolactin and macro prolactin, Cardiac markers and CVD, HCG measurement, Pituitary Function, Enzymology, Biochemical investigation of abnormal growth, Nucleic acid techniques, Interferences in immunoassay. Reproductive hormones, Natriuretic peptide, Chromatography, Circulating DNA, Pre analytic factors affecting test results, Urine analysis, Fluid analysis: Pleural and Peritoneal, CSF analysis, Liver Disease and Case Discussions.

ii) **APFCB- MACB Statistics Workshop**

This one-day event was conducted by Dr Tony Badrick and Dr. Loh Tze Ping (Singapore). Topics covered include Introduction to Statistics, Method Evaluation, Reference Intervals, Introduction to QC, Sigma metrics, Moving Average, Uncertainty of Measurement and QC for low volume assay.

iii) **MACB ISO 15189 Workshop**

This workshop was organised with the support of Roche Malaysia educational. The main objectives were:

- To give guidance to laboratories preparing for MS ISO 15189 accreditation
- To create better awareness on the common non-conformances and observations raised in audits and how to overcome them
- To create better understanding on the requirements of MS ISO 15189

iv) **Quality Management and Accreditation of Point of Care Testing (POCT) in Blood Gas Analysis**



This symposium was organised in collaboration with Straits Scientific Sdn Bhd and Instrumentation Laboratory on 28 August 2019. Topics covered include “POCT Quality Management and ISO 22870” as well as “POCT Challenges & Guidelines in Malaysia.

v) **Safety and Health Workshop: HIRARC for Health Care Facilities**

A safety and health workshop was held on 26 & 27 November 2019. The aim was to enhance awareness on safe and healthy working conditions particularly among laboratory workers. This workshop mainly focussed on conducting HIRARC (Hazard Identification, Risk Assessment and Risk Control) as a proactive way of managing hazard and risk.

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society’s contribution for the meeting</i>
15 th APFCB Congress 2019	17 -20 November 2019	MACB sponsored the Chronic Kidney Disease Symposium where the following topics were presented: <ul style="list-style-type: none"> • National Survey of eGFR and urine albumin reporting • Recommendations of the MACB CKD Task Force on Laboratory Reporting of eGFR and urine albumin • The implementation of eGFR reporting in the Ministry of Health Hospitals in Malaysia

REGIONAL RELATIONS

- MACB is a member of the Asia Pacific Federation of Clinical Biochemistry and Laboratory Medicine (APFCB).
- MACB president actively participated in the APFCB council meeting and made a bid to host the 17th APFCB Congress 2024. MACB also sent a big delegation to attend the 15th APFCB Congress in Jaipur, India and also sponsored a symposium
- MACB members are active members in various APFCB committees:
 - Scientific,
 - Communications and Publications,
 - Education and Laboratory Management
- MACB president, Dr Raja Elina was nominated as the APFCB travelling lecturer for the term of 2017-2019
- In 2019 MACB collaborated with APFCB to organise 2 training courses - APFCB-MACB Chemical Pathology Course and APFCB-MACB Statistics Workshop
- MACB members Dr Leslie Lai is past president of the APFCB.

INTERNATIONAL RELATIONS

- MACB is a member of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC)
- MACB has concluded the reference range study using the C-RIDL protocol with assistance from Prof Kiyoshi Ichihara.
- MACB member, Dr Leslie Lai is Chair of the IFCC Education and Management Division

ADDITIONAL INFORMATION

Further information on MACB is available on the website: <https://www.macb.org.my>



NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
2nd Quality Seminar: A WAY TO THE ACCREDITATION. BIORAD	Mexico City, Mexico, June 2019	Best quality practices in the Laboratory, which ensure the reliability of the results issued, as a way to improve the patient and donor health care
Virtual course “Diagnosis of Anemias”	July 16, 2019	Identify types of anemias
Virtual course “Analysis and Interpretation of Blood Chemistry”	May 6, 2019	Analysis and Interpretation of Blood Chemistry
Uroanalysis Quality Control Workshop	Mexico City, August 31st and 1st. of September, 2019	Contribute to a diagnosis and timely monitoring of various pathologies that affect the urian system.
CMCLabC Biomédicos de Mérida Regional Academic Workshop IFCC 2019	Merida, Yucatan, Mexico, May 22-24, 2019	Regional Academic Workshop
Program 7th DISA National Convention “Inspiration” IFCC	Guadalajara, Jalisco, Mexico, June 6 – 7, 2019.	Laboratory sciences in clinical diagnosis
Transfusion Science Course 2019	9 - 11 de Julio, 2019 City. Mexico	Transfusion Science Course
Virtual course “Leukemia Diagnosis”	August 20, 2019	Identify types of leukemia
Virtual Course “Serous and Cerebrospinal Liquids”	August 2019	Serous and Cerebrospinal Liquids
Course “Serous and Cerebrospinal Liquids “	September 28 and 29, 2019 Coatzacoalcos, Veracruz, Mexico	Serous and Cerebrospinal Liquids
Virtual Course “Blood Bank”	September 30, 2019	Establish the theoretical basis necessary for basic operations in blood banks and transfusion services
Six Sigma Virtual Quality Control Planning Workshop: Hands-on	May 2 to October 2, 2019	Six Sigma Quality Control
Course Workshop Bank of Blood and its Quality Management System Regional Hospital of Coatzacoalcos “Dr. Valentin Gómez Farías”,	Coatzacoalcos, Veracruz, Mexico. October 4 to 6, 2019	That the personnel working in the blood bank have the global knowledge about the holistic harmonization of the Quality Management System with an integral approach to the administrative technical processes, functions and activities, allowing the resources and input elements to be developed and be transformed, in order to satisfy customers through the fulfillment of their requirements.
Symposium “Diabetes. Clinical and diagnostic aspects”, Children’s Hospital of Mexico “Federico Gómez”,	November 23, 2019 City, Mexico	Obesity and type 2 diabetes are a true global epidemic that constitute a major public health problem.
Clinical Biochemistry Workshops 2019 Tlaxcala Chapter	Tlaxcala, Tlax. Mexico, February to December 2019	To provide the Clinical Chemist with knowledge on topics related to laboratory sciences for the development of their technical competences.

EDUCATION

- Distance training workshop for university teachers “Quality Management and Good Laboratory Practices. COLABIOCLI-IFCC, Virtual, June 3 to October 30, 2019
- 7th Symposium of Biomedical Sciences: Diabetes and Obesity, a dangerous combination, Faculty QFB Xalapa Universidad Veracruzana Xalapa, Veracruz. Thursday 16 May 2019



- Board Certification Committee in collaboration with the College of Pharmaceutical Sciences, 2019 Mexico, City
- Monthly Conferences on Education in Clinical Biochemistry, in collaboration with the College of Pharmaceutical Sciences, 2019 Mexico City
- Diploma of Clinical Pathology by laboratory 2019, 120 hours distributed in 8 modules
- International Online Diploma in Control of Analytical Quality in the clinical laboratory, 150 hours distributed in 8 modules.
- Integral quality assurance program in Microbiology. Virtual, 120 hours distributed in 8 modules.
- 2nd International online Diploma in analytical quality control in the clinical laboratory, 120 hours distributed in 8 modules.

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
3rd. International Congress for accreditation in the Health Sector.	August 21, 22 and 23, 2019. CIEC, WTC, CDMX	The accreditation of clinical laboratories and blood banks in Mexico
1st Mexican Congress of Clinical Laboratory Sciences.	Mérida, Yucatán, Mexico, June 26 – 29, 2019	Laboratory Science in the Safety of Patient
The XXIV Latin American Congress of Clinical Biochemistry and the XIV National Congress of Clinical Laboratories of Panama	September 11 to 13, 2019	Hemovigilance as an IMPACT FACTOR in the DECREASE OF TRANSMISSIBLE DISEASES by transfusion”

REGIONAL RELATIONS

- The National Metrology Center with the slogan “25 years providing confidence in measurements for the welfare and prosperity of the country” commemorates its 25th anniversary and the redefinition of the International System of Units.
- World Metrology Day and the commemoration of the signing of the Metro Convention.
- The Physikalisch-Technische Bundesanstalt (PTB, Germany) and the National Metrology Center (CENAM) at its cooperation meeting in the area of metrology and quality.
- Celebration of the Thirtieth Anniversary of Technical Cooperation Mexico –Germany in Metrology and Quality.
- WT ISO 15189 translation working group of the EMA
- CMISO committee TC 212 EMA

INTERNATIONAL RELATIONS

CMCLabC members are participating at the following activities in IFCC:

EB Regional Representative 2018-2020

WG-eJIFCC editorial board member, IFCC

WG-eNews member, IFCC

WG-IANT member, IFCC

C-CLM corresponding member, IFCC

C-MB corresponding member, IFCC

C-TLM corresponding member, IFCC

TF-YS corresponding member, IFCC

Member of the Committee “Traceability in Laboratory Medicine (C-TLM)”, IFCC

CMCLabC members are participating at the following activities in COLABIOCLI:

WG-PRE-LATAM full member, COLABIOCLI

WG-Ethics full member, COLABIOCLI
 WG- Guild and management academic, COLABIOCLI
 Account review commission, COLABIOCLI

ADDITIONAL INFORMATION

MUTUAL AGREEMENT OF UNDERSTANDING (MOU) WITH THE MEXICAN ACCREDITATION ENTITY TO IMPROVE LABORATORY ACCREDITATION AWARENESS.

BLOOD BANK WG AND NATIONAL PANEL OF TECHNICAL EXPERTS IN CLINICAL LABORATORY OF THE MEXICAN ACCREDITATION ENTITY.

ISO CT 212 WG1, WG2, WG3, WG4, WG5, MEXICAN ACCREDITATION ENTITY *AH DOC COMMITTEE*

MUTUAL AGREEMENT OF UNDERSTANDING (MOU) WITH THE ASSOCIATION OF QFB MX FOR CLINICAL CHEMISTRY BOARD CERTIFICATION EXAM.

CLINICAL BIOCHEMISTRY STUDENTS SECTIONS: FACULTY OF CHEMISTRY OF THE UNIVERSIDAD VERACRUZANA; TLAXCALA AND YUCATAN STATE CHAPTERS.

TLAXCALA CMCLabC CHAPTER
 YUCATAN CMCLabC CHAPTER
 HIDALGO CMCLabC CHAPTER
 MEXICO CITY CMCLabC CHAPTER

UNIVERSITIES –FACULTY OF CHEMISTRIES ADVISORY ACTIVITIES FOR POSTGRADUATE STUDIES



RUSSIA
 ASSOCIATION OF LABORATORY SPECIALISTS AND ORGANIZATIONS
 «FEDERATION OF LABORATORY MEDICINE» (FLM)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
XXIV all-Russian scientific and practical conference with international participation Laboratory service in modern realities	March 20-22	Laboratory Hematology; Cytology. Diagnostics of urogenital infections of Candida-bacterial and viral etiology. Urinary proteomics. Problems and prospects of development of specialized departments that train specialists in laboratory medicine. Informatization of the laboratory service. Laboratory diagnostics of urgent meetings. Laboratory Microbiology; Quality of clinical laboratory research in the Russian Federation and the CIS. Cognitive diseases. Clinical and laboratory characteristics. Molecular genetic research. Tumor markers in experimental and clinical Oncology. State registration of medical devices for in vitro diagnostics.
XII International Scientific and Practical Conference "Modern laboratory medicine: efficiency, accessibility, quality", Moscow	May 23-24	Exchange of experience on the organization of the laboratory service and interaction between the heads of health authorities, medical organizations and laboratories at various levels.



The First Clinical and laboratory Forum	June 21	Round table "Laboratory research in clinical recommendations". Educational sections for young specialists and doctors of clinical specialties. A meeting of the profile commission of the Russian Ministry of Health for clinical laboratory diagnostics. Meeting of the Presidium of the Laboratory Medicine Federation.
II all-Russian conference with international participation " Tumor markers: molecular genetic and clinical aspects	July 2-5	NGS in Oncology: - pharmacogenetic testing using NGS - markers of immunotherapy - bioinformatics in cancer diagnostics Pathological morphology 2.0. Biological markers in the clinical diagnosis of cancer, fundamental and clinical aspects.
V Russian Congress of Laboratory Medicine, Moscow	September 11-13	An organization, economics and legal aspects of laboratory services. Fundamental questions of Clinical and Laboratory Medicine. Etiology, early diagnosis and laboratory monitoring of infectious diseases. The latest and advanced technologies in the field of laboratory diagnostics. Round tables with the participation of public health leaders and representatives of the firms on the centralization of laboratory testing and procurement of equipment and reagents
III Russian Congress «Reasonable therapy of hemostatic disorders», Kazan	September 23-24	Anticoagulants and antiplatelet agents: patient safety. Hemostatic disorders in a complicated patient. "Un normal" pregnancy and hemostasis. Perioperative period (Blood loss and thrombosis).

EDUCATION

All meetings under the auspices of Federation of Laboratory Medicine (FLM) accredited by the Coordination Council for the Development of Continuing Medical and Pharmaceutical Education of the Ministry of Health of the Russian Federation.

Participation in each regional scientific conference allows doctors to receive up to 6 credits of continuing medical education (CME). Each Hemostasis school gets 12 CME credits.

Take part in the V Russian Congress of Laboratory Medicine enable visitors to get 18 CME credits in the field: "Clinical Laboratory" and "Bacteriology".

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
Scientific and practical conference: "Forum of laboratory medicine specialists of the Penza region: modern approaches to the organization of laboratory services, professional standards and education, promising technologies in medical practice".	February 15	Full organization of the meeting
Scientific and practical conference "Forum of laboratory medicine specialists of the Republic of Sakha (Yakutia): modern approaches to the organization of laboratory services, professional standards and education, promising technologies in medical practice"	March 15	Full organization of the meeting



Hemostasis school. Thrombotic and hemorrhagic complications in obstetrics, gynecology and cardiology, Novosibirsk	April 5-6	Full organization of the meeting
Scientific and practical conference "Forum of laboratory medicine specialists of the Yamal-Nenets Autonomous district: modern approaches to the organization of laboratory services, professional standards and education, promising technologies in medical practice"	April 12-13	Full organization of the meeting
Hemostasis school. Thrombotic and hemorrhagic complications in obstetrics, gynecology and cardiology, Irkutsk	April 18-19	Full organization of the meeting
Scientific and practical conference "Forum of laboratory medicine specialists of the Kaliningrad region: modern approaches to the organization of laboratory services, professional standards and education, promising technologies in medical practice"	May 17	Full organization of the meeting
Scientific and practical conference "Forum of laboratory medicine specialists of Krasnodar region: modern approaches to the organization of laboratory services, professional standards and education, promising technologies in medical practice"	September 6	Co-organization with the Ministry of health of Krasnodar region
Scientific and practical conference "Forum of laboratory medicine specialists of the Stavropol territory: modern approaches to the organization of laboratory services, professional standards and education, promising technologies in medical practice"	September 20	Co-organization with the Ministry of health of Stavropol territory
Scientific and practical conference "Forum of laboratory medicine specialists of the Orenburg region: modern approaches to the organization of laboratory services, professional standards and education, promising technologies in medical practice"	October 18	Co-organization with the Ministry of health of Orenburg region
Hemostasis school. Diagnosis and correction of blood coagulation disorders, Tyumen	October 25-26	Full organization of the meeting
Scientific and practical conference "Forum of laboratory medicine specialists of the Moscow region: modern approaches to the organization of laboratory services, professional standards and education, promising technologies in medical practice"	November 19	Co-organization with the Ministry of health of Moscow region
Scientific and practical conference "Forum of laboratory medicine specialists of the Oryol region: modern approaches to the organization of laboratory services"	November 28	Co-organization with the Department of health of the Oryol region
Hemostasis school. Diagnosis and correction of blood coagulation disorders, Tomsk	December 13-14	Full organization of the meeting

INTERNATIONAL RELATIONS

Chairman of the Preanalytics Committee FLM participated in work of 5th EFLM conference on Preanalytical Phase (Zagreb, Croatia) and AACC Optimizing quality in the clinical laboratory: focus on the preanalytical phase (Alexandria, VA USA).

Speakers from Germany, the Netherlands, Norway, Serbia made presentations at the V Congress of Laboratory Medicine.



SAUDI ARABIA SAUDI SOCIETY FOR CLINICAL CHEMISTRY

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>
5th Annual Meeting Saudi Society for Clinical Chemistry Riyadh, Saudi Arabia, Crowne Plaza Hotel	3 rd – 5 th December 2019

Saudi Society for Clinical Chemistry held the 5th Annual meeting 3rd – 5th December 2019 in Riyadh.

A pre-conference workshop was held in 3rd December 2019 covering the topics on Method Validation, American Society of Clinical Pathology (ASCP) & international Federation of Clinical Chemistry (IFCC).

The keynote speaker for the conference and the IFCC representative was Prof Rajiv Erasmus, President, South African Association of Clinical Biochemistry (SAACB). The conference was accredited by Saudi Commission for Health Specialties for 22 CME with more than 400 delegates attended the meeting.

The Scientific Program included 7 sessions with more than 26 speakers and almost 50 posters. The invited speakers were from international, regional and national well known clinical bochemists.

This scientific program included sessions about Biomarkers of Diseases, Cardiac/Lipids, Automation, Biochemical Genetics & Pediatrics Disease, Laboratory Management and finally awarding session.

Clinical laboratory companies including international and local representatives held different booth presentations and meetings at the exhibition hall and held presentations within the conference at the same time. The exhibition court included more than 10 booths for different collaborators; Diamond (ROCHE, and SNIBE), Platinum (ABBOTT and BIORAD), Golden (BECKMAN) Silver (ALSALHIYAH, AnalyticaOne, BECKTON & DICKINSON), Standard (ALREDWAN, ABDULLAH FOUAD, SEBIA, RANDOX, BINDING SITE). Conference partens;The Arab Federation of Clinical Biology, International Federation of Clinical Chemistry and Laboratory Medicine, American Society for Clinical Pathology, Saudi Commission for Health Specialties, Saudi society for clinical laboratory.

By the end of the meeting there was Poster Session Awards Announcement with more than 40 posters printed, and 3 prizes for the best 3 posters (photos attahed below) with a total amount of 10,000 SR.

Other activities held by the SSCC in 2019 are summarized in the following table:



	ACTIVITY	City	DATE
1	Immunoassay Workshop: Supported by Snibe	Riyadh	March 18, 2019
2	Immunoassay Workshop: Supported by Snibe	Jeddah	March 20, 2019
3	Highlights on clinical chemistry pediatric 1 st seminar	Dammam	March 31, 2019
4	CAP Educational Workshop	Riyadh	April 18, 2019
5	Immunoassay Workshop: Supported by Snibe	Dammam	April 21, 2019
6	Immunoassay Workshop: Supported by Snibe	Abha	April 22, 2019
7	Protein Electrophoresis Workshop: Supported by SEBIA	Riyadh	April 24, 2019
8	Immunoassay Workshop: Supported by Snibe	Medina	June 16,2019
9	Immunoassay Workshop: Supported by Snibe	Riyadh	June 18,2019
10	Immunoassay Workshop: Supported by Snibe	Arar	June 20,2019
11	Global Health (Booth)	Riyadh	10-12 Sep,2019
12	Immunoassay Workshop: Supported by Snibe	Riyadh	Sep 16,2019
13	Immunoassay Workshop: Supported by Snibe	Jeddah	Sep 18,2019
14	Newborn screening awareness campaign	Riyadh	Sep 27,2019
15	Health & Hospital Administration	Riyadh	Oct 10,2019
16	Laboratory and diagnostic congress (SSCLS)	Jeddah	13-15 Oct 2019
17	Breast Cancer Awareness Month	Riyadh	Oct 20,2019
18	AACC Middle East Dubai (Booth)	UAE, Dubai	1-2 Nov 2019
19	The 5th annual conference Saudi society for clinical chemistry	Riyadh	3-5 Dec 2019

REGIONAL MEETINGS

Name of the meeting	Date	Society's contribution for the meeting
MedLab Dubai	5 February 2019	Speakers for Scientific Sessions
Saudi MedLab Expo	13 – 15 Oct 2019	Speakers for Scientific Sessions
AACC Middle East	1-2 Nov 2019	Speakers for Scientific Sessions

INTERNATIONAL RELATIONS



Collaboration between the ASCP and SSCC has been started by presenting a workshop in the 3rd Dec by the ASCP in the 5th annual meeting of the SSCC in Saudi Arabia. The ASCP speaker was Mr. Nael Soudi (ASCP-USA)

ADDITIONAL INFORMATION

Photos from the 5th Annual meeting for the SSCC held at 3rd-5th December 2019



Side talks between delegates



Speakers with the organizing member



Dr. Mads Nybo



Dr Nashat Nafouri



Speakers and delegates



Exhibition



Exhibition



Prof. Rajiv Erasmus



SERBIA SOCIETY OF MEDICAL BIOCHEMISTS OF SERBIA (DMBS)

NATIONAL MEETINGS

Name of the meeting	Date	Topic
15 th Belgrade Symposium for Balkan Region	May April 11 and 12, 2019, Belgrade	<ul style="list-style-type: none"> • Neighbouring countries: The same professional aim • Laboratory medicine achievements in neighbouring countries • Forum of young researchers
22 nd Annual Ivan Berkeš Scientific Conference	November 28, 2019, Belgrade	Presentations of doctoral and master thesis from previous year (www.dmbj.org.rs) Granted Awards of the Profesor Ivan Berkeš Fund to the best graduated students of the Pharmaceutical Faculty University of Belgrade

EDUCATION

1. Quality Indicators: pre-preanalytical and pre-analytical phases of laboratory diagnostic investigation
2. Laboratory Management
3. Novelties in Laboratory Medicine

4. QM development and application in accredited laboratory
5. Laboratory safety
6. Validation of the Laboratory Methods
7. Laboratory Medicine Environmental Health and Safety

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
27 th Meeting of Balkan Clinical Laboratory Federation	October 27-31, 2019	SMBS MEMBERS PARTICIPATE WITH FOUR LECTURES
XXIII IFCC-EFLM EuroMedLab	2019, Barcelona, May 19-25	Members of SMBS participate with lectures and poster presentations

REGIONAL RELATIONS

Cooperation with all Societies from Balkan region, members of Balkan Clinical Laboratory Federation (BCLF) (see www.bclf.info)

INTERNATIONAL RELATIONS

Cooperation with other Societies members of IFCC and EFLM

Participation in EFLM activities

Participations in Meetings organised by IFCC and EFLM

Dr Snežana Jovičić

Corresponding Member PFLM-WG:

My activities in the EFLM WG Patient Focused Laboratory Medicine included a survey of mobile health applications using laboratory medicine data. I had worked with other members of the WG on the quality evaluation of these apps, and I presented results of that work as a lecture at the 3rd EFLM Strategic Conference in Mannheim. At the WG meeting held at that time, it was decided to pursue further with this work, and to focus on the benchmarking for the quality of apps not intended for medical professionals.

Zorica Šumarac, corresponding member of the EFLM WG-PRE

Activities in 2019.:Participation in projects of the EFLM WG-PRE:

1. Venous Blood Sampling Guideline
2. Catheter sampling
3. Diagnostics pathway/Demand management
4. Awareness Campaign
5. Unsuitable Specimens
6. Management of Haemolysed Specimens – practical recommendation
7. Haemolysis in blood tubes for glucose
8. Manufacturer declarations
9. Citrate tubes
10. Stability project

Participation in the organization of the 5th EFLM-BD European Conference on the Preanalytical Phase ; Participation in the organization of the EFLM-AACC Conference 2019; Participation in the EFLM WG-PRE meeting in November 2019 (Zagreb, Croatia); Participation in conducting EFLM WG –PRE Survey on Demand management in Serbia;

Activity of Corresponding members in 2019:

WG: Postanalytical Phase (WG-POST)	Svetlana	IGNJATOVIC	Corresponding Member	Serbia	3 rd term: 2017-2018
WG: Preanalytical Phase (WG-PRE)	Zorica	SUMARAC	Full Member	Serbia	3 rd term: 2017-2018
WG: Accreditation and ISO/CEN standards (WG-A/ISO)	Neda	MILINKOVIĆ	Corresponding Member	Serbia	3 rd term 2017-2018
WG: Register (WG-R)	Snezana	JOVICIC	Corresponding Member	Serbia	1 st term: 2017-2018

ADDITIONAL INFORMATION

The Society of Medical Biochemists of Serbia published international JOURNAL OF MEDICAL BIOCHEMISTRY, the Official Journal of the Society, in which many scientists from region published own papers (www.dmbj.org.rs/jmb; www.degruyter.com/view/j/jomb)



SLOVENIA

SLOVENIAN ASSOCIATION FOR CLINICAL CHEMISTRY AND LABORATORY MEDICINE (SZKKLM)



NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
Symposium Slovenian Association for Clinical Chemistry and Laboratory Medicine	Jesenice, 14.3.2019	Challenges in the field of laboratory medicine
Symposium Slovenian Association for Clinical Chemistry and Laboratory Medicine	Maribor, 6.6. 2019	Biological variability and other current topics
8 th international conference on quality of medical laboratories	Ljubljana, 15.10.2019	Theory and practice in managing quality control
Symposium Slovenian Association for Clinical Chemistry and Laboratory Medicine	Ljubljana, 3.11.2019	Treatment of cancer patients with systemic therapy and renal impairment
Symposium Slovenian Association for Clinical Chemistry and Laboratory Medicine	Ljubljana, 19.12.2019	Novelties in personalized laboratory medicine

EDUCATION

From April to June 2019; Professional education of SACCLM for the Medical Laboratory professionals with five (5) different topics in four different places in the country:

- Functional and stimulation hormone tests (Ljubljana, 23rd, 24th and 25th April 2019)
- Evaluation of laboratory methods (Ljubljana, May 7th, 8th, 9th, 2019)
- Screening tests for hemostasis and rotational thromboelastometry (Ljubljana, May 27th, 29th and 30th, 2019)
- Dementia and liquor diagnostics (Maribor, June 3rd, 4th and 5th, 2019)
- Venous and capillary blood collection (Ljubljana, June 10th, 13th and 14th, 2019)

There were 546 participants together. We have edited and designed a publication in 600 copies.

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
23 rd IFCC-EFLM European Congress of Clinical Chemistry and Laboratory Medicine	Barcelona (Spain) 19-23 th May 2019.	Evgenija Homšak, as the chair of EFLM WG-CPE, was a Chairman of the session "Laboratory Medicine training in Europe - In partnership with the IFCC Task Force for Young Scientists" and lecturer at the conference: Practical knowledge and skills management- why to participate?
15 th EFLM Symposium for Balkan Region, Neighbouring Countries: The Same Professional Aim	Belgrade April 11-12 th 2019	Evgenija Homšak, as a Slovenian national representative was a lecturer at the conference with the presented lecture: Laboratory standards in Slovenia: Growing up step by step

INTERNATIONAL RELATIONS

Through active members and national representatives of EFLM and IFCC we have established international professional relations with different countries (participation/organizing common meetings).

ADDITIONAL INFORMATION

2nd October is the Slovenian Day of Clinical Chemistry and Laboratory Medicine – “The Day of the Open doors of Clinical laboratories”. On that day we celebrate the beginnings of our professional national organization. On 2nd October each year all Clinical laboratories in the country open their doors to the public visitors, from general population to the doctors and students, who are interested to see and be informed where, by who and how the laboratory diagnostics and tests are performed. At that day the voice of Laboratory Medicine also goes/rise up through different national media (TV, radio, newspapers) to point out the role and importance of our profession and the problematic issues that concern our position, as well.



SOUTH AFRICA

SOUTH AFRICAN ASSOCIATION FOR CLINICAL
BIOCHEMISTRY AND LABORATORY MEDICINE (SAACB)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
SAACB Acid-Base Blood gas workshop	18 September 2019	Acid-Base management; Blood gas interpretation.
Receptor modeling workshop, Johannesburg	1 December 2019	Ligand-receptor modelling

EDUCATION

We have started a process of developing a series of podcasts in clinical chemistry and laboratory medicine and these are available through a number of streaming platforms including Tunein. The podcasts run for up to 25 minutes and have been compressed into less than 5MB enabling sharing and transmission across social media platforms.

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
Zambian Association of Clinical Biochemistry meeting, Livingstone, Zambia	24-28 April 2019	Funded the travel and accommodation of 4 speakers (Erasmus, Pillay, Zemlin, Chuturgoon)

REGIONAL RELATIONS

We have collaborated with the AFCC to organise a Acid-Base/Blood gas workshop in Johannesburg on 18 September 2019.

We funded 4 speakers for the Zambian Association national meeting in April 2019.

INTERNATIONAL RELATIONS

Currently, our international relations are occurring through the regional AFCC and through the IFCC and through international IFCC meetings that have taken place in 2019 where officials and members of the SAACB have participated.

Speaking engagements with other societies:



- The 12th International & 17th National Congress on Quality Improvement in Clinical Laboratories, Tehran-Iran. Title of talk: “New technologies in laboratory diagnosis” 18 April 2019- 21 April 2019 2nd talk “Risk management in the clinical laboratory”
- Africa Health Conference, Gallagher centre, Johannesburg, 28-30 May 2019 Title of talk: “Risk management in the clinical laboratory”.
- VII international congress of molecular medicine, 5-7 September 2019; Istanbul, Turkey; Title of talk: “Future potential of nanobodies in laboratory diagnostics”
- XXIV Latin American Congress of Clinical Biochemistry; Panama 11-14 September 2019; Title of talk: “Era of P4 medicine and the 4th Industrial revolution: blended communication resources for patients and laboratory professionals”
- Laboratory Medicine Congress & Exhibition & KSLM 60th Annual Meeting (LCME2019) Busan, Korea, 26-28 September 2019; Title of talk: “Developing new diagnostic probes for the laboratory using nanobodies and CRISPR-directed nucleic acid detection methods”
- Royal College of Pathologists International Pathology Day, 13 November 2019 “New diagnostic probes for point-of-care diagnostic testing(POCT)”; Panel member; panel discussion on Point-of-Care testing

ADDITIONAL INFORMATION

The SAACB is a daughter society of the Federation of South African Societies of Pathology (FSASP) and the annual meeting in South Africa is the platform the annual SAACB meeting. Unfortunately, in 2019, the FSASP did not organise a meeting so the SAACB was unable to hold an annual meeting. However, we organised the workshops described above.



SPAIN SOCIEDAD ESPAÑOLA DE MEDICINA DE LABORATORIO (SEQC^{ML})

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
XVI Meeting of Scientific Committees, Madrid	March 28-29 th	<ul style="list-style-type: none"> - An update on Diabetes Mellitus. - Application of Hemolysis-Icterus-Lypemia/Turbidity Index Analysis - An update on Sexually Transmitted Infections Diagnostic - The role of Clinical Laboratory in the Diagnostic of Inherited Metabolic Diseases. - Laboratory assessment of Nutritional Status. - The physiopathological and clinical effects of Oxidative Stress - From Evidence-Based Medicine to Evidence-Based Practice.
Interhospitalary Meeting with Residents and Young Scientists, Barcelona	September 27 th	<ul style="list-style-type: none"> - Metabolopathies and Newborn Screening
Course, Madrid	November 15 th	<ul style="list-style-type: none"> - Non Invasive Prenatal Test. Current status.
Meeting of the Spanish Society of Laboratory Medicine with Residents and Young Scientists, Barcelona	November 22 th	<ul style="list-style-type: none"> - To inform about the possibilities that SEQC^{ML} offers for the development of their professional life in the field of the clinical laboratory. - Promote relationships between residents of different hospitals

EDUCATION

Annual Educational Program 2018-2019:

XXII General Educational Program 2018-2019	641 participants
V Clinical Cases in Haematology Program 2018-2019	373 participants
IV Clinical Cases General Educational Program 2018-2019	429 participants
Clinical Cases in Point-of-Care-Testing (POCT).Program 2018-2019	348 participants
Clinical Cases in Microbiology. Program 2018-2019	251 participants

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
EuroMedLab 2019, Barcelona	May 19-21 th	- Co-organizer - Organizer of 2 Satellite Meetings
Satellite Meeting EuroMedLab 2019, Barcelona	May 18 th	- Laboratory Medicine and Quality
Satellite Meeting EuroMedLab 2019, Barcelona	May 19 th	- Standardization and Recommendations in the Laboratory of Haematology.

REGIONAL RELATIONS

SEQC^{ML} has relationships with:

- the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM)
- the Federation of European Societies on Trace Elements and Minerals (FESTEM)
- the Clinical and Laboratory Standards Institute (CLSI)
- the Ibero-American Working Group WG IAN through "Radio Microscopio"
- the Latin-American Confederation of Clinical Biochemistry (COLABIOCLI)

INTERNATIONAL RELATIONS

SEQC^{ML} has relationships with the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC).

ADDITIONAL INFORMATION

SEQC^{ML} organizes the following EQAS programs:

- Extranalytical processes : Preanalytical and Indicators
- Biochemistry: General biochemistry tests in serum and urine, Hormones, TDM, Proteins, Blood gas, POCT, Cardiac markers, Tumor markers, Trace elements, Autoimmunity, Monoclonal components and Drug abuse.
- Microbiology and Serology
- European Project EurA1c
- Urinary sediment analysis

Nowadays there are 700 centers participating in these programs with a total of 5000 inscriptions. We are expanding SEQC^{ML}- EQAS Programs and Educational Programs to Latin-American countries.

SEQC^{ML} maintains the Spanish version of Lab Tests Online with more than 348 tests and a glossary with more than 498 contents. Consulting LTO^{ES} website has increased up to a total of 150-175 consultations/month

SEQC^{ML} has a total of 2709 memberships, 368 members of 34 Commissions/ Committees/ Working Groups and 40 SEQC^{ML} Representatives in International Federations (IFCC/EFLM/ FESTEM/CLSI/ICSH)



NATIONAL MEETINGS

Molecular Diagnostics, Zurich	February 28 + March 01, 2019	Application of Cell-Free DNA Analysis to Cancer Treatment, MicroRNAs in Health and Disease, DNA Methylation-Based Molecular Profiling of Tumors of the Central Nervous System (and Beyond) - the Basel Experience, CAR T-cell Immunotherapy for Human Cancer, Epigenetic Clock for Skin and Blood Cells as Age Estimator, Circular RNAs as Therapeutic Agents and Targets, Genetics of Alcoholic and Non-Alcoholic Fatty Liver Disease, Noninvasive Blood Tests Predict Gestational Age and Preterm Delivery, Genetics of the Down Syndrome, Cutting-Edge Infectious Disease Diagnostics with CRISPR, Microbiome and Asthma, 10,000-20,000 Years of Eurasian History and Host-Pathogen Interactions.
SSCC Annual Assembly 2019, Zurich, "Fake-News or Evidence Based Laboratory Medicine"	August 28 – 30, 2019	Evidence Based Laboratory Medicine, Omega-3 Fatty Acids in Health and Disease, Role of Trace Elements in Intensive Care Patients, Nutrition State and Malabsorption Diseases, Sense and Nonsense in Allergy Testing, State of the Art of MS Diagnostics and Free Light Chains in CSF, The Role of Therapeutic Drug Monitoring of Biologics for Inflammatory Bowel Disease, Evidenced-Based Versus Personalized Prostate Cancer Screening, Rapid Differentiation Between Bacterial and Viral Infections, Therapeutic Drug Monitoring of Antibiotics: For All Drugs? For All Patients?, Diagnostics and Treatment of Iron Deficiency Anemia, Monitoring of NOAC, Conventional and Next Generation-Methods in Myeloma Workup, Which Lipid Biomarker for Optimal Cardiovascular Risk Prediction?, Management of Acute Coronary Syndromes - Diagnosis and Prevention, Heart Failure Diagnosis and Beyond, Prognosis in Stroke Patients, Sense and Nonsense of Precision Medicine.

EDUCATION

26 days of further education as a CAS in laboratory medicine, which is part of the further education curriculum in laboratory medicine in Switzerland. This CAS is offered in German at the University of Zurich (<https://www.cas-labmed.uzh.ch/de.html>) and in French at the University of Geneva (<https://www.unige.ch/formcont/cours/cas-medecine-laboratoire>).



TAIWAN - REPUBLIC OF CHINA (ROC) – Taipei

CHINESE ASSOCIATION FOR CLINICAL BIOCHEMISTRY (CACB)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
CACB Annual General Meeting in conjunction with 34th Joint Annual Conference of Biomedical Science (JACBS), Taipei, Taiwan	23-24 March 2019	We invited Dr. Tjin-Shing Jap, Professor in the School of Medicine, National Yang Ming University and Physician in the Division of Endocrinology and Metabolism, Taipei-Veterans General Hospital, to deliver a special lecture on “Epigenetic Related Endocrinology”. Dr. Jap shared recent research advances on how epigenetic regulation impacts the pathogenesis of metabolic diseases. CACB also organized a symposium in concert with the main theme of the JACBS “Translating Science into Health Care”. Three speakers shared the experiences in recent development and the implementation of mass spectrometry technology in the clinical laboratories. Jun-Jen Liu, Associate Professor of School of Medical Laboratory Science and Biotechnology, Taipei Medical University, presented “When ‘high-tech’ meets routine needs: strategy of application Mass Spectrometry in clinical lab of Taiwan.” Dr. Kang-Yi Su, Assistant Professor of Department of Clinical Laboratory Sciences and Medical Biotechnology, National Taiwan University, presented “Lung Cancer Molecular Diagnostic Development from Laboratory Site to Clinical Site.” Dr. Chia-Ni Lin from the Department of Laboratory Medicine, Chang Gung Memorial Hospital, presented “Mass Spectrometry Applications in the Clinical Laboratory”.

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
APFCB 2019: 15th Asia-Pacific Federation for Clinical Biochemistry and Laboratory Medicine Congress (Jaipur, India)	17-20 November 2019	CACB hosted a symposium to discuss about the recent advances in mass spectrometry that have been applied to the areas of toxicology, biochemistry, endocrinology and genetics. Three speakers: Dr. Jun-Jen Liu, Dr. Kang-Yi Su and Ms. Wei-Lan Chu presented the applications of mass spectrometry in the clinical laboratories in Taiwan, including the current methods for preparing patient samples before analysis by mass spectrometry, utilization of nucleotide mass spectrometry for achieving cancer precision medicine and monitoring of antiepileptic therapeutics. The challenges and opportunities of clinical application of mass spectrometry were also discussed.

REGIONAL RELATIONS

CACB President Prof Ning and Executive Director Prof Fang attended the Council meeting on November 17th during the 15th Asia-Pacific Federation for Clinical Biochemistry and Laboratory Medicine Congress in Jaipur, India.



ADDITIONAL INFORMATION

CACB was the organizer of the 34th Joint Annual Conference of Biomedical Science (JACBS) at the National Defense Medical University Campus, Taipei on 23-24th March 2019. The theme of the Conference was set as “Translating Science into Health Care” and a competition of oral presentation of “From Molecules and Cells to Human Health” was held. CACB was honored to invite the Minister of Ministry of Science and Technology (MOST), Prof. Liang-Gee Chen for the opening remarks (Figs.1&2). Prof. Pan-Chyr Yang, Academician of Academia Sinica, as invited as the Plenary Lecturer to deliver a speech entitled:” Global Rising Health Threat: Lung Cancer in Never Smokers” (Fig. 3). The Conference was concluded with nearly 2500 attendees, 980 posters and 96 vendors.



Figure 1 - Chairs from the 9 Associations and the Minister of Ministry of Science and Technology, Prof. Liang-Gee Chen at the opening ceremony of 34th JACBS.



Figure 2 - CACB board members, Chairs from the 9 Associations and the Minister of Ministry of Science and Technology, Prof. Liang-Gee Chen at the opening ceremony of 34th JACBS.



Figure 3 - Plenary Lecturer of the 34th JACBS: Prof. Pan-Chyr Yang.



TURKEY TURKISH BIOCHEMICAL SOCIETY (TBS)

NATIONAL MEETINGS

Name of the Symposium / Workshop / Meeting	Date/ City	Topic
Course on Research Techniques and applied statistic course for laboratory workers	1-2 February 2019	- This is a TBS Academy course for medical laboratory specialists
Symposium: IV. Turkey's In Vitro Diagnostic (IVD)	Feb. 20-22 2019, Izmir	- Biosensors
Workshop: What is Metrology, Why Quality of Measurement Matters	Feb 8, 2019, Hacettepe University, Ankara	- Metrology - Measurement Quality - Oktay CANKUR - Method Validation and Verification, Measurement Uncertainty- Murat TUNÇ - Metrological Traceability and Reference Materials - Kevser TOPAL - Quality control - Fatma AKÇADAĞ - Measurement Quality in Clinical Laboratories- Abdurrahman COŞKUN - TÜBİTAK UME (National Metrology Institute) Chemistry Group Laboratory Studies - Müslüm AKGÖZ
Workshop on Metrological Quality: Traceability, Measurement Uncertainty, Proof of Method Validity	March 29, 2019, SBU Istanbul Training and Research Hospital, Istanbul	- This is a joint meeting of National Metrology Institute and TBS
Symposium on Toxicology and Laboratory	April 3, 2019, Ankara	- Screening and Verification Tests in Toxicology Analysis, Dr. Çiğdem Yücel - Chemical Weapons, Dr. Levent Kenar - Abuse Drug and Substance Analysis; Audits of Laboratories, Dr. Mehmet Şeneş - Verification Laboratory Process and Experiences; Dr. Mukaddes Gürler - Laboratory Studies for Detection of Chemical Weapons; Dr. Sermet Sezigen - "Mobile Hospitals and Laboratory" Prof. Dr. Taner Özgürtaş
Symposium: TBD-BD Preanalytical Phase	April 17, 2019, Ankara	- Emergency Coagulation Tests and Preanalytical Error Sources - Dr. Çiğdem Sönmez - Central Laboratory; Stage that is Difficult to Control and Increasing Importance in Construction of City and City Hospitals: Preanalytic Process- Fatma Meriç Yılmaz - Preanalytical Error Sources Encountered in Emergency Drug Analysis (Salicylate, Digoxin, Antiepileptics) - Pınar Eker - Preanalytical Error Sources for Ammonia Test - Bağnu Orhan - Emergency Room and Blood Gas Analysis: Arterial or Venous? Levent Avşaroğulları - Preanalytical Error Sources in hCG Test - Funda Güçel - Blood Count and Preanalytical Error Sources in Emergency Laboratories - Fatma Uçar; - D-Dimer and Preanalytical Error Sources - Esra Fırat Oğuz - Drug Analysis and Preanalytical Error Sources in the Emergency Department - Alper Gümüş - Cardiac Markers and Preanalytical Error Sources - Settar Kosova - Preanalytical Stage Quality Management in Emergency Laboratories - Guzin Aykal - Blood Gas Analysis and Preanalytical Error Sources - Fehime Benli Aksungar



Venous Blood Collection Course	May 7, 2019, Ayvansaray University, Istanbul	
Venous Blood Collection Course	8 May 2019, Marmara University, Istanbul	
Symposium on Current Electrophoresis Techniques and Clinical Laboratory	June 12, 2019, Ankara	<ul style="list-style-type: none">- Agarose Gel and Immunofixation Electrophoresis Applications –Dr. Çiğdem Sönmez- Agarose Gel and Immunofixation Electrophoresis Applications, cases - Dr. Cagatay Kundak- Capillary Electrophoresis in Serum Protein Analysis and Usage Areas- Dr. Fehime Benli Aksungar- Expectations of Hematology Clinic from the Laboratory for Electrophoresis Testing.- Dr. Merih Kızıl Çakal- Helena Biosciences: Screening and Immunotyping Monoclonal Antibody using the V8 Nexus - Tony Aitchison
Symposium on Hemostasis and Laboratory	June 19, 2019, Ankara	<ul style="list-style-type: none">- Anti-Platelet Drug Resistance and Laboratory –Dr. Deniz İlhan Topçu- Quality in Coagulation Laboratory Dr. Merve Sibel Gungoren- Coagulation Screening and Mixture Tests - Dr. Cagatay Kundak- New Treatment Approaches in Hemophilia -Dr. Salih Aksu
Symposium; Guide to the Preparation, Distribution and Testing of Purified Water for Clinical Laboratories	June 27, 2019, Istanbul	<ul style="list-style-type: none">- Purpose of preparation of the manual – Doğan Yücel- Types of purified water used in clinical laboratories, their features - Oytun Portakal- Water purification techniques -Suat Hayri Küçük- Verification, monitoring and testing of laboratory reagent water – Enver Sargül- Storage, distribution, sanitation of purified water – Sabri Evren- Requirements to be considered in laboratory water systems installations and water requirements according to methods – Oğuzhan Zengi
Course: Research Techniques and applied statistic course for laboratory workers	December 13-14, 2019, Izmir	-This is a course on statistical applications in laboratory medicine and organized by TBS Academy

EDUCATION

1. “TBD Academy Course: Research Techniques and Applied Statistics Course for Laboratory Workers”. METU Vişnelik. Ankara. 1 - 2 February 2019.
2. EFLM Course: How to write a good scientific and professional article? Elvar Theodorsson, Sverre Sandberg, 26-27, 2019, Antalya
3. miRNA isolation and expression training course, October 27, Aylin Sepici Dincel, Oytun Portakal, 2019, Antalya
4. Applying Six Sigma to analytical performance in the medical laboratories, Hassan Bayat, October 28, 2019, Bodrum.
5. Mass Spectrometer use in clinical laboratory practice (Basic Course), Ali Unlu, Muhittin Serdar, Sedat Abusoglu, October 29, 2019, Antalya
6. Mass spectrometer use in clinical laboratory practice (Advance Course), Ali Unlu, Muhittin Serdar, Sedat Abusoglu, October 30, 2019, Antalya

REGIONAL RELATIONS

TBS participated in various working groups of Ministry of Health, and Social Security Agency (the LOINC coding system and reimbursement) and Turkish Chamber of Physicians. TBS launched an EQAS, APLUSTBD in Turkey and regional countries.

INTERNATIONAL RELATIONS

TBS participates in studies of working groups and task forces of IFCC and EFLM committees. TBS represents other scientific or professional bodies in Turkey such as EFLM, BCLF, IUBMB, FEBS, and WASPaLM.

ADDITIONAL INFORMATION

The International BCLF Congress-2019 and the 30th National Congress of TBS were held in Antalya in October 27-31th, 2019.



URUGUAY ASOCIACIÓN BIOQUÍMICA URUGUAYA (ABU)

NATIONAL MEETINGS

Name of the meeting	Date	Topic
Regular meetings with the Ministry of Education and Culture of Uruguay	May 16/2019	On this date ABU obtained the approval of the Statutes and the Legal Status of COLACIOCLI was recognized by the Ministry of Education and Culture of Uruguay
Meeting with the Academic Assistant of Management of the Faculty of Chemistry	May/ 2019	QF-BC Fernando Antúnez Strengthening communication links between ABU and the University (Faculty of Chemistry), promoting the dissemination of conferences and courses organized by one or the other of the institutions. Start of conversations to agree on joint activities.
Uruguayan Institute of Technical Standards (UNIT), ISO representative in Uruguay	July 9/ 2019	Work in the ISO / 212 committee where it is hoped to have a more active participation since it is currently listed as an observer country
XVI Uruguayan and X Mercosur Symposium on Thrombophilia and Pregnancy.	August/ 2019	Prof. Dra. Ana Lena: Coordination of conference on thromboelastometry
XII Uruguayan Congress of Clinical Biochemistry 2019. Motto "New Challenges in the Age of Laboratories 4.0"	October 3-5/ 2019 Radisson Hotel.Plaza.Hotel, Montevideo.	1- QF-BC Fernando Antúnez. 1.1- Coordination of the pre-congress course on Autoimmune Liver Diseases. 1.2- Coordination of the ANCA round table. 1.3-Coordination Round table "Update on Antinucleo-Cytoplasmic Antibodies 2-Prof. Dra. Cristina Servetto: 2.1- Speaker at the table "Present and future of POCT technology in the Clinical Laboratory" 2.2- Member of the Scientific Committee of the Congress. 2.3- Co-author in two presentations as posters. 3-Prof. Dr. Stella Raymondo. 3.1- Speaker at the round-table "Present and future of POCT technology in the Clinical Laboratory". 4- BC Beatriz Varela 4.1- Coordination of the pre-congress course "International Course on Interference in the Pre-analytical Phase." 4.2-Coordination round table "Reference Intervals." 4.3-Coordination round table "Impact of the pre-analytical phase on the results of the laboratory." 4.4-Coordination round table "Quality Assurance in the analytical phase a clinical approach. " 5- Prof. Dr. Ana Lena 5.1- Topic speaker: "D-dimers, a very valuable biological marker." 5.2- Coordination of tables on "Hemorrhagic disorders." and "Hemoglobinopathies" 6- BC- Jimena Blanco: 6.1- Mention for best work: "Survey of the degree of parasitic contamination of soils of an irregular settlement in the city of Montevideo", in co-authorship with the BC. Rosina Comas. 7-BC Natalia Amor, 7.1- Round Table Coordinator and Speaker at the table: "Critical Patient"



ABU Extraordinary General Assembly	October 4th/ 2019	The Assembly, called during the Congress to consider the possibility of purchasing a property to be used as ABU headquarters, which was approved.
6th meeting of Chemical Sciences	October 16-18/ 2019	Chemistry, Biochemistry, Biology, Microbiology, Environment and Metabolomics
5th Conference on Venous Thromboembolic Disease Prevention in Uruguayan Hospitals.	October/2019	Prof. Dra. Ana Lena. Speaker "Dímeros D."
Meeting of Nomination of authorities of the XIII Uruguayan Congress of Clinical Biochemistry and election of authorities.	November 19/2019	ORGANIZING COMMITTEE President: QF BC Laura Yametti Honorary President: Dra Stella Raymondo Past president: Dra Patricia Esperón Vice President: QF Fernando Antúnez Secretary: QF BC Beatriz Varela Pro-secretary: QF BC Cristina Pintos Treasurer: BC Natalia Amor Pro-treasurer: QF BC Estela Bidegain Members: BC Jimena Blanco Dra BC Ana Lena QF BC Marcelo Lucas BC Mariana Testuri Scientific Committee: Dra Patricia Esperón (President) Dr. Graciela Borthagaray Dra Ana Lena QF BC Elizabeth López Dr. Graciela Queiruga Dr. Stella Raymondo. Dra Cristina Servetto
Meeting with authorities of the Uruguayan Institute of Technical Standards in new ABU headquarter	November 21/2019	It is introduced en various guidelines of a future UNIT-ABU agreement
Meeting with the Uruguayan Institute of Technical Standards (UNIT)	November/2019	-QF-BC Fernando Antunez y QF-BC Ana Piana The consideration of an agreement was achieved where the reincorporation of ABU to ISO C-TC 212 will be implemented, also expanding the framework of activities between both Institutions.
ABU Executive Committee Meeting	November 2019	Future instances of disclosure of the career to society are proposed taking as main axis the dissemination each year of a particular pathology. The date will be the third Saturday of November of each year, coinciding with the month of the Clinical Biochemist. It is proposed that the first exchange day be in the Diabetes theme. It will be organized by ABU in conjunction with the Faculty of Chemistry.
Council of the Faculty of Chemistry	Bi-monthly meetings	Attending the meeting in the order of graduates
Standardization and Quality Control Committee (CECC)	Monthly meetings	ABU representatives on the Executive Committee (CECC)
Technological Pole of Uruguay	Monthly meetings	Attending the meeting in the order of graduates

EDUCATION

1. 2019 - Prof. Dr. Ana Lena Coordinated and taught the course on "Hematology and Pregnancy" within the framework of Permanent Education of the Faculty of Chemistry. Montevideo, Uruguay.
2. March 26, 2019-. It is decided to call 3 expert members and / or teachers to join the Annual Scholarships Commission granted by ABU and a deadline is set until April 30, 2019 to apply.
3. April 9, 2019 -It is approved that the scholarship awarded to a young scientist (BC

Natalia Pereira) corresponding to the 2018 exercise will be used in 2019, after presenting substantiated arguments.

4. May 7, 2019- Contact between the President of ABU, QF Fernando Antúnez with the Secretary of the Dean of the Faculty of Chemistry to share the organization of learning activities for graduates in the Permanent Education Program of Faculty of Chemistry.
5. May 2019 - QF-BC Laura Yametti. Teacher of the module: "Glycemia: biochemical aspects, quality and clinical utility". Distance learning course "Advances in Diabetes: Clinical, Genetic and Biochemical Aspects". COLABIOCLI 2019.
6. June-October 2019- Participation of the QF-BC Laura Yametti as a student, selected by Uruguay in the Virtual Workshop for university teachers: "Quality management and good laboratory practices". This is an OPS-COLABIOCLI workshop whose objective was to donate to the Latin American Universities the course material to be replicated in their Education Programs.
7. June 7-8, 2019. Wiener Lab Courses: "Viral diseases in pregnant women and newborns" Speaker: Dr. Angélica Distefano (Argentina). June 7 and 8, 2019. Faculty of Chemistry. Montevideo.
8. June / 2019: S. Raymondo, Coordination of the course "Advances in Diabetes: Clinical, Genetic and Biochemical Aspects" that concluded on this date starting on March 2018. Taught throughout Latin America under the auspices and in the COLABIOCLI platform, as a joint activity of the Quality Control Standardization Committee (CECC) and ABU. There were 50 registrations and two scholarships for each COLABIOCLI country. The speakers were Uruguayan Clinical Biochemists, Endocrinologists and Diabetologists with the participation of Dr. Barbara Goldsmith (USA) and Dr. Cas Weykamp (Netherlands). "
9. Junio de 2019 Curso INDULAB de: Management en Laboratorio de Análisis Clínicos". Auspicios y difusión.
10. July 8-12 / 2019: QF-BC Laura Yametti, speaker at the classroom course given in Montevideo, Uruguay "Quality Management and Good Practice in Tuberculosis Laboratories", organized by the CHLA-EP, within the framework of "Strengthening of the Tuberculosis Laboratory Network in the Americas Region," with PAHO support. Module dictated: "Compliance and continuous improvement".
11. August / 2019: Invitation to BC Beatriz Varela to teach the course "Analytical Quality Control in Serology and Immunohematology applied to the Blood Bank, organized by Biodiagnostic Cabinsur S.A. Montevideo. Uruguay.
12. August-November / 2019: Residence of BC Natalia Pereira begins in the Endocrinology Laboratory of the Durand Hospital, Section "Thyroid Axis, Phospho-calcium Metabolism, Gonadal Axis."
13. October 3rd, 2019: "I International Course on interference in the pre-analytical phase" (6 hours). Coordinates: Beatriz Varela. Speaker: Gabriel Lima Oliveira, Silvia Benozzi. XII Uruguayan Congress of Clinical Biochemistry 2019
14. October 3rd 2019, "Curso de Autoinmunidad: Hepatopatías Autoinmunes" (6 horas) Coordinan Laura Yametti y Fernando Antúnez. Conferencistas: Gabriel Carballo, Carlos Von Mühlen y Mercedes Viña XII Uruguayan Congress of Clinical Biochemistry 2019
15. November / 2019: BC Jimena Blanco. Invited to the dictate af theoretical-practical course of "Diagnosis of Human Enteroparasitosis", organized by the University School of Medical Technology, Faculty of Medicine, UdelaR



REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
46th Brazilian Congress of Analyses Clinics in Belo Horizonte, Brazil.	June 16-19/ 2019	Prof. Dr.S. Raymondo participated 1) Opening ceremony of the Congress 2) POCT Round Table with the dissertation: "Reality of laboratories in some countries of Latin America"
VII Peruvian Congress of Clinical Pathology and Laboratory Medicine:	July 18-20/ 2019	Diffusion
73rd Argentine Congress of Biochemistry of ABA, II Scientific Congress	August 20-23 / 2019	Sponsorship, dissemination and scholarships
XXIV Latin American Congress of Clinical Biochemistry COLABIOCLI - Panama 2019	September 10-13/2019	1-Prof. Dr. Cristina Servetto: 1.1- President of the Scientific Committee 1.2- Coordinator and speaker of the symposium "Promotion of Specialties in the Clinical Laboratory" 2- Prof. Dr. Stella Raymondo 2.1- President of COLABIOCLI 2.2-He led the Ordinary General Assembly in which Management Report and Balance were rendered, with Bolivia emerging as the new headquarters of COLABIOCLI. 2.3- Coordinator of a workshop: "COLABIOCLI Space". 3- Prof. Dr. Ana Lena 3.1- Speaker: "von Willebrand disease in Latin America" 4- QF-BC Ana Piana .. 4.1-Participation of the Ibero-American Nomenclature and Translation Working Group (WG-IANT) 5- BC Natalia Amor 5.1-Speaker with the topic: "Establishment of the decision criteria, for the planning of the Internal Control, in clinical chemistry tests". 6-BC Fernanda Delfino Transportation financing of the Administrative Secretary of COLABIOCLI, BC Fernanda Delfino by ABU. It was decided This step was taken to ensure the optimization of the management of the General Assembly. Delfino also collaborated by attending foreign guests of Congress and officiating when required as a translator.
Bibliographic Athenaeum- BBAA- Argentina. BC Natalia Pereira	September/ 2019	"Comparison of a Bridge Immunoassay with two Bioassays for Thyrotropin Receptor Antibody Detection and Differentiation" "Performance and Specificity of 6 Immunoassays for TSH Receptor Antibodies: A Multicenter Study".
Meeting of "Change of Authorities of COLABIOCLI in the Bolivian Society of Clinical Biochemistry (SOBOBIOCLI) in Cochabamba, Bolivia.	November 6-8/2019	Travel to COCHABAMBA, Bolivia to change the COLABIOCLI authorities and at the invitation of the new authorities, collaborate in the elaboration of the new long-term Strategic Plan for COLABIOCLI. In this instance, the Bolivian Society of Clinical Biochemistry is also honored for celebrating its 50th anniversary and inaugurating its new headquarters in Cochabamba.

REGIONAL RELATIONS

- 09/3/2019 A questionnaire was received from the COLABIOCLI Trade Union and Management Academic Commission: on the training of graduates in biochemistry and equivalent degrees in Uruguay.
- 9/3/2019 - COLABIOCLI Training Program proposes a list of possible teachers to teach courses for the COLABIOCLI Training Program:
- Graciela Queiruga: Inborn errors of metabolism / Congenital diseases
- Stella Raymondo: Point of care / Glycated Hemoglobin / Renal pathology
- Cristina Servetto: kidney stones
- Ana Lena: Hemostasis and thrombosis



- 
7. Laura Yametti: Quality management
 8. Beatriz Varela: Quality management
 9. Patricia Esperón: Genetics and molecular biology
 10. Jimena Blanco: Parasitology
 11. Ana Piana: Traceability
 12. Graciela Borthagaray: Clinical Microbiology
 13. Elizabeth López: Vascular Brain Accident
 14. Fernando Antúnez: Autoimmunity
 15. Paola Garlo: Endocrinology.

INTERNATIONAL RELATIONS

1. Active participation in the voting of IFCC authorities and integration of new associate members.
2. Request for three VLs for the XIII Uruguayan Congress of Clinical Biochemistry of 2020.
3. ABU covers 18 positions as Corresponding Members of IFCC Committees, Divisions, Working Groups and Task forces.
4. May 19-23 / 2019: Stella Raymondo attending the Barcelona EUROMEDLAB 2019 Congress with the aim of discussing with the IFCC the renewal of the COLABIOCLI-IFCC Agreement. Active participation in the C- CKD elaboration of a survey to the member countries of IFCC
5. May 21: Meeting of the Kidney Diseases Committee of IFCC, at the IFCC Meeting in Barcelona, with an extensive agenda. Work is underway on a global survey having been commissioned to translate into Spanish. This material was to be published and distributed in different countries to be completed. Unfortunately everything has been suspended by the pandemic
6. May 19-23 / 2019 QF-BC Ana Piana. Active participation in the C-TLM Traceability Committee and in the WG-IANT Working Group.
7. May / 2019: Participation of Beatriz Varela in the 71st AACC Annual Scientific Meeting and Clinical Lab Expo, in Anaheim California as exhibitor of the poster: “Defining Quality Goals: Navigating with GPS”.

ADDITIONAL INFORMATION

1. January 2018- November 2019 - Prof. Dr Stella Raymondo, President of the Latin American Confederation of Clinical Biochemistry by ABU designation, in the second mandate of Uruguay, from January 2018 until the assumption of the next President-elect issued by the General Assembly Ordinary in Panama City on September 12, 2019.
2. February / 2019: BC Beatriz Varela publication “Evaluating the Proposed CLIA Tea Changes, New proposed goals for CLIA: Fit for Purpose?”, Published on Westgard page.
3. 05/05 / 2019- On this date, the Ministry of Education and Culture of Uruguay, at the initiative of the fraction of its representatives from the Uruguayan Biochemical Association in the Executive Committee of COLABIOCLI, in compliance with the political platform approved by The Punta del Este Assembly, granted the Legal Status on
4. May 22, 2019, after approval of the Statutes presented by File 342 in 2018. These statutes and Legal Status were approved by the Ordinary General Assembly that took place in Panama on 12 / 9/2019 and from that date they are effective. This procedure also made it possible to open the COLABIOCLI account at the Banco de la República Oriental del Uruguay, which has also enabled the Pan American Health Organization to maintain the link with COLABIOCLI.
5. September / 2019: The COLABIOCLI dollar account is opened at the Banco de la República Oriental del Uruguay, which will allow the Pan American Health Organization to renew its contract with COLABIOCLI.



6. November 16, 2019- Day of the Clinical Biochemist in Uruguay, is hereinafter established for the 3rd. Saturday of November of each year.
7. December 11, 2019 - Purchase of the property where the Uruguayan Biochemical Association will stay from here: Headquarters: Torre de los Profesionales. Yaguarón 1407, Office 523, Montevideo, Uruguay CP 11100.
8. December / 2019: Publication of the article: “Breakfast can Affect Routine Hematology and Coagulation Laboratory Testing: An Evaluation on Behalf of Colabiocli WG-PRE-LATAM. BC Beatriz Varela.
9. Active participation in the Co-government (Council and Senate) of the Faculty of Chemistry, University of the Republic. (Prof. Dra. Graciela Queiruga and QF-BC Fernando Antunez)
10. Active participation in the Executive Committee of the Quality Control Standardization Committee (CECC). (Prof. Dra. Stella Raymondo, QF- BC Ana Piana, Prof. Dra. Cristina Servetto, BC Beatriz Varela and QF-BC Laura Yametti,)
11. Active union participation in conjunction with the Association of Chemistry and Pharmacy of Uruguay with representation through the Medical Union of Uruguay. (QF-BC Fernando Antunez)
12. Active Participation in the Directive Commission of the Technological Pole of Pando, Canelones, Uruguay (Prof. Dra. Stella Raymondo)
13. Fluent relationship with the Ministry of Public Health and the Ministry of Education and Culture
14. Fluent relationship with the University (Faculty of Chemistry, Medicine, Science, Engineering, etc.).



USA
AMERICAN ASSOCIATION FOR CLINICAL CHEMISTRY
(AACC)

NATIONAL MEETINGS

Name of the meeting	Date	Topic
Professional Practice in Clinical Chemistry: The Clinical Laboratorian – Critical Member of the Healthcare Team – Dallas, TX	April 25 – 17, 2019	Quality management, Informatics, Methodology/Techniques used in Clinical Chemistry, Pathophysiology of cardiovascular disease, Functions and diseases of abdominal organs, Clinical pathology and laboratory evaluation of disease
71 st AACC Annual Scientific Meeting and Clinical Lab Expo – Anaheim, CA	August 4 – 8, 2019	Multiple topic in laboratory medicine
Point-of-Care Coordinators forum – Anaheim, CA	August 8, 2019	Point of care testing coordinator topics of interest
Point-of-Care Testing Boot Camp and Beyond: Communicating, Connecting and Collaborating – Pittsburg, PA	November 8, 2019	Point of care testing communications and connectivity for POCs
Optimizing Quality in the Clinical Laboratory: Focus on the Preanalytical Phase – Alexandria, VA	November 11 – 12, 2019	Specimen ordering, collecting and transporting, Interferences and sample management, Emerging technologies in blood collection, Implementing QA/QI

EDUCATION

Online Education

CERTIFICATE PROGRAMS

1/1/2019 – 12/1/2019

- Basic Principles and Architecture of Laboratory Information Systems Certificate Program
- Clinical Laboratory Leadership and Management Certificate Program
- Laboratory Operational Management Certificate Program
- Patient Safety Essentials for Laboratory Professionals Certificate Program
- Practical Approaches to Quality Control in the Clinical Laboratory Certificate Program
- Regulatory Affairs for Laboratory Compliance Certificate Program
- Statistical Methods for Clinical Laboratorians Certificate Program
- Fundamentals of Molecular Pathology Certificate Program
- Point-of-Care Specialist Certificate Program
- Basic Concepts and Clinical Applications of Flow Cytometry Certificate Program
- Intro. Liquid Chromatography Mass Spectrometry for the Clinical Laboratory Certificate Program
- LC-MS/MS Troubleshooting for the Clinical Laboratory Certificate Program

WEBINARS

Title	Program Date
The Hidden Value of Laboratory Medicine: How to Leverage Laboratory Stewardship to Your Advantage	01/02/2019
Optimizing Microbiology Lab Operations in the Era of PAMA	02/06/2019
Implementation of a High-Sensitivity Troponin I Assay	02/13/2019
PT/INR Testing: Calibration, Correlation, Concordance	03/06/2019
Monitoring Pregnancy with Clinical Laboratory Tests	03/27/2019
Gestational Diabetes: Pathophysiology, Risk, and Outcomes	04/17/2019
The Value of the Laboratory to a Healthcare System	05/01/2019
Uncover new savings with Freight Management	05/08/2019
Thyroid Dysfunction in Pregnancy and its Effect on Neonates	05/15/2019
Breaking the Bottleneck: Implementation of a Middleware Solution for Automated Mass Spectrometry Data Review	05/29/2019
The Golden Age of the Clinical Lab-Dx: Transforming the Way Healthcare is Delivered	06/05/2019
Avoiding Insufficient Therapies and Overdosing with Co-Reporting eGFRs for Personalized Drug Therapy and Improved Outcomes	06/18/2019
Pre-Analytical Errors: An Overview and Approach to Prevention	07/03/2019
Assay Development for 1,25 di-hydroxy vitamin D (DHVD)	07/10/2019
Enhanced Patient Care, Reduced Costs and Measurable Better Healthcare Performance through Implementation of Intelligent Liver Function Testing (iLFT)	07/16/2019
Managing Change in the Laboratory – The People Side of Data Management Innovation	07/24/2019
Testing Strategies for Group A Strep – Out with the Old, In with the New	08/07/2019
Understanding and Overcoming the Challenges of Manual Inventory Management	08/14/2019
What Labs Can Do to Address the Opioid Crisis	09/04/2019



The Use of Biomarkers in Chronic Kidney Disease and the Novel Disorder Shrunken Pore Syndrome	09/11/2019
Understanding TORCH Infections from both a Clinical and Personal Perspective	09/18/2019
Improved Diagnostic Pathway and Treatment for Hospitalized Patients with Acute Kidney Injury	09/23/2019
10 Essentials of Successful, Rapid Change Management for the Lab	10/02/2019
Celiac Disease Diagnosis is Getting Better with Neo-Epitopes tTg Autoantibodies	10/16/2019
Implementing Procalcitonin in a Community-Based Teaching Hospital	10/29/2019
Improving Outcomes with Effective Chronic Disease Management at the Point of Care	11/14/2019

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
Global Lab Quality Initiative Workshop: Verifying Assay Performance: Steps To Follow To Verify Manufacturer's Claims (Cali, Colombia)	April 26-27, 2019	Provided content and speakers, in collaboration with the College of Baceteriologists of Valle del Cauca
Best of AACC Latin America, Santiago de Chile	May 6, 2019	
Global Lab Quality Initiative Workshop: Risk Management in the Clinical Laboratory: Tools to Ensure High-quality Results (Anaheim, USA)	August 5, 2019	Provided Spanish-language content and bilingual subject matter experts during AACC's annual scientific meeting
Global Lab Quality Initiative Newborn Screening Workshop: Early diagnosis of biochemical genetic disorders saves children's lives: A discussion on the merits and the process to successfully implement newborn screening (Marrakesh, Morocco)	October 24, 2018	Provided content and speakers, in collaboration with the African Federation of Clinical Chemistry
AACC Middle East (Dubai, UAE)	November 1-2, 2019	Provided content and speakers, in collaboration with Al Borg Laboratories
Best of ACC China, Shanghai	November 14 – 15, 2019	
Global Lab Quality Initiative Workshop: Adding Value to Patient Care Using Quality Control (Jaipur, India)	November 17, 2019	Provided content and speakers, in collaboration with the APFCB and the Association of Clinical Biochemists of India

REGIONAL RELATIONS

Member of the North American Federation of Clinical Chemistry and Laboratory Medicine.

INTERNATIONAL RELATIONS

AACC maintains memoranda of understanding with several national societies for the purposes of mutually beneficial education exchanges.



VIETNAM

VIETNAMESE ASSOCIATION OF CLINICAL BIOCHEMISTS
(VACB)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
QA and QC assessment	21/3/2019, Hanoi	Control material, QA, QC assessment
Improvement of Laboratory quality	4/7/2019, Hanoi 6/7/2019, HoChiMinh-City	Quality assurance, Laboratory management, Method evaluation
23rd Scientific Conference	20 – 21 September, Sam Son, Thanh Hoa	Laboratory management, QA and QC, Cardiovascular disease, Endocrinology, Immunology, Metabolic disorder, Molecular diagnostics, Oncology, POCT

EDUCATION

Workshop on Diabetes Mellitus, 6/5/2019, Hanoi

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
APFCB Congress in Jaipur, India	17 – 20 November 2019	VACB participation

REGIONAL RELATIONS

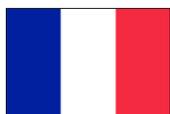
Relation with the Korean Society of Clinical Chemistry : participation at the Meeting of the Korean Society of Clinical Chemistry in Busan, Korea, September 2019; discussion on the cooperation of the VACB and the KSCC in the training, Technology in Laboratory Medicine.

Good relations with the APFCB

INTERNATIONAL RELATIONS

Good relation with IFCC

AFFILIATE MEMBER SOCIETIES



FRANCE

FRENCH NATIONAL NETWORK OF ACCREDITED LABORATORIES OF MEDICAL BIOLOGY(LABAC)



NATIONAL MEETINGS

40 th LABAC Conference, Paris	May 16 th 2019	Hematology: Clinical cases and Sigma metrics in Hematology, a new Challenges in Lab Medicine
41 st LABAC Conference Paris	October 1 st 2019	Quality management and quality control Innovative tools for scientific communication and educational information in Lab Med Accreditation Clinical cases: HBV, QC in microbiology
62 nd JIB -Journées de l'Innovation en Biologie, Paris (FR) <i>speaker</i>	21 et 22 November 2019	Innovation multidisciplinary event
Journée Roche Expert Days Paris (FR) <i>speaker</i>	22 November 2019	Accreditation & NGS
RICAI 2019 – 39 ^{ème} réunion interdisciplinaire de chimiothérapie anti-infectieuse, Paris (FR) <i>speaker</i>	16-17 December 2019	International and interdisciplinary congress on anti-infectious chemotherapy

EDUCATION

LABAC has created valuable platforms, tools, and training programs. Activities and publications in 2019 demonstrate the impact of LABAC investment into relevant areas such as quality assurance and quality management, transparency and reliability of measurement results in lab medicine

All LABAC events received IFCC and EFLM auspices

LABAC is participating at the EFLM-WG on Pre-analytical phase

Educational activities:

LABAC organized:

- Two continuous training conferences (2 days) on June 11 and November 26 2019 dedicated to “Temperature and Metrology”
- Expert meetings in partnership with the French Society of Microbiology (SFM) to facilitate

the implementation of ISO 15189 standard requirements particularly on methods verification and validation.

Representation at the national level (Cofrac)

LABAC is member of:

- the Healthcare Division Executive Committee (CS), Comité Français d'accréditation (Cofrac)
- the Committee of Accreditation (Cac) Cofrac

Scientific collaborations with the national IFCC full member SFBC

LABAC established formal collaborations with Société Française de Biologie Clinique (SFBC)

Publications in Annales de Biologie Clinique (official SFBC journal):

- Recommandations communes EFLM/COLABIOCLI relatives au prélèvement veineux
- ABC, vol 77, n:2 p: 131-54
- Recommandations pour la mise en place et le suivi des contrôles de qualité dans les LBM, ABC, vol 77 n:5, sept –Oct p:577-5

Monography:

- Métrologie des températures appliquée au LBM ("Metrology of temperature measurement in the medical laboratory"), July 2019 private press, 106 pages.

Collaborations with AFNOR (Association Française de Normalisation) and ISO groups

- JP Bouilloux is President of the national Committee AFNOR S94C « Clinical laboratory and in vitro diagnostic test systems »
- And Expert in the working group ISO/TC 212/WG1 « Clinical laboratory quality and competence »
- LABAC is committed to ISO 15189 standard revision and others standards managed by ISO TC 212. LABAC participated at the Mexico city (MX) meeting (November 2019) and will attend the forthcoming meeting in Sydney (AU), next May 2020.
- LABAC organized expert meetings in partnership with the French Society of Microbiology (SFM) to facilitate the implementation of ISO 15189 standard requirements particularly on methods verification and validation.

Partnerships with IVD Industry

- LABAC has formal collaborations with the French headquarters of the IVD Corporate members
- As example, Bio Rad is contributing to promote recommendations on accreditation. Two guidelines are submitted for publication:
- Technical Guide to Medical Laboratory Accreditation; Cofrac: SH GTA 01 – V:02
- Technical guide for accreditation: Quality control in Medical Biology; Cofrac: SH GTA 06,V: 00

REGIONAL RELATIONS

5 th EFLM Conference on Preanalytical Phase Zagreb (CR) <i>speaker</i>	22-23 March 2019	Pre-analytical challenges - time for solutions
-7 th International EuroMedLab 2019, Barcelona (SP) <i>speaker +C- WG-meetings</i>	18 May 2019	Symposium Laboratory Medicine and Quality. Satellite Meeting



6 th Congress of the African Federation of Clinical Chemistry and Laboratory Medicine, Marrakech (MO) <i>Chair sessions and speakers</i>	25 September 2019	IFCC /AFCB regional congress
CELME 2019 Symposium Cutting Edge of Laboratory Management in Europe Prague (CZ) <i>Chair session and speaker</i>	3-4 October 2019	Emerging Challenges in Laboratory Medicine
CLAQ 2019 - 3 rd Conference on Medical Laboratory Accreditation and Quality System Belgrade (SE) <i>Co-organizer and speaker</i>	9-10 December 2019	Lab medicine in the transformative decade: digital technologies, artificial intelligence and quality management

ADDITIONAL INFORMATION

The French association of accredited laboratories, LABAC, is an IFCC/EFLM Affiliate member since 2018. LABAC brings together medical biologists with a medical or pharmaceutical background practicing in private medical laboratories, in general or university hospitals or in other institutions (CEA (Atomic Energy Commission, Reference and Research Centers, military hospitals, representatives from the IVD industry, etc.). This scientific organization has a national representation in France. The members are representing today 314 legal structures of medical labs spread over the whole French Nation (see figure1) of a total of 849, and 2390/10453 medical biologists working in the whole country.

The LABAC scientific and education events is providing to the scientific community the kind of information and education needed to help all specialists in lab medicine to evolve even further in quality science, research and clinical lab practice.

Through the organization of the scientific events, LABAC is systematically inviting IFCC/EFLM officers, EB members and International specialists from IFCC full member societies to establish closest collaborations with the European and International Federations. Every year, LABAC gains in maturity and experience, benefiting from the expertise of the works of the IFCC and its regional functional units.



PHILIPPINES

PHILIPPINE COUNCIL FOR QUALITY ASSURANCE IN CLINICAL LABORATORIES (PCQACL)

NATIONAL MEETINGS

Name of the meeting	Date	Topic
PCQACL 16 th Annual Convention	September 23 - 26, 2019	"Delivering Patient-Centered Laboratory Medicine"

EDUCATION

The PCQACL Committee on Continuing Education, Training & Research has conducted the following Seminar – Workshops last 2019 :

1. Taking Laboratory Mangement to the Next Level: The Power of Management Tools Seminar-Workshop

- Date: April 3, 2019 Venue: Crowne Plaza Galleria, Ortigas Avenue, Quezon City
2. Seminar- Workshop on the Improvement of External Proficiency Testing in Clinical Chemistry and Hematology
 3. Date: June 19, 2019 Venue: Crowne Plaza Galleria, Ortigas Avenue, Quezon City
 4. 16th Annual Pre-Convention Seminar-Workshop on Quality Assurance in Clinical Chemistry, Microbiology and Blood Bank
 5. Date: September 23, 2019 Venue: Crowne Plaza Galleria, Ortigas Avenue, Quezon City
 6. 16th Annual Convention Scientific Programme
 7. Date: Sept. 24 - 26, 2019 Venue: Crowne Plaza Galleria, Ortigas Avenue, Quezon City

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
ANCLS 18 th Congress held at Yoido Kensington Hotel Kim Koo Museum & Library, Seoul Korea	November 14-15, 2019	Dr. Godwin N. Hernaez , PCQACL President delivered a lecture on the topic” Pre- Annalytics, The VMMC Experience” on November 14, 2019.
	November 14 – 15, 2019	Dr. Estela Marie C. Tanchoco, PCQACL Executive Secretary has also attended the ANCLS 18th Congress together with Dr. Hernaez and Dr. Marissa A. Orillaza, Chair of the PCQACL Committee on Continuing Education, Training & Research.

REGIONAL RELATIONS

Member of Asian Network for Clinical Laboratory Standardization and Harmonization (ANCLS)
 Member of Asian - Pacific Federation of Clinical Biochemistry and Laboratory Medicine (APFCB)
 APFCB Speakers have been invited at the plenary and other scientific sessions of the 16th Annual Convention hosted by PCQACL.

INTERNATIONAL RELATIONS

PCQACL is an active member of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC)

IFCC-Visiting Lecturer Program has always been requested to provide Speakers at the plenary lectures of the PCQACL annual conventions, seminar-workshops and other scientific sessions.

ADDITIONAL INFORMATION

- The Chief Executive Officer of the Royal College of Pathologists of Australasia (QAP), Professor Tony Badrick has graced with his presence, the PCQACL 16th Annual Convention Opening Ceremonies as the Keynote Speaker addressing over a thousand delegates comprising Pathologists, Medical Technologists, clinical laboratory Supervisors and Managers held last Sept. 24, 2019 at Crowne Plaza Galleria Manila. Dr. Badrick has been also one of the Faculties in the Pre- Convention Seminar –Workshop on Quality Assurance in Clinical Chemistry held on September 23, 2019. Furthermore, the PCQACL 16th Annual Scientific Programme has been privileged to have Professor Badrick as one of the distinguished Speakers as he shared his knowledge and expertise on the following topics:



Tony Badrick, PhD, MBA, FAACB, FRCPA

Topic	Date	Time
Keynote Address: The Future of Laboratory Quality	September 24, 2019	10:00 am –10:15 am
Using EQA to Improve Patient Outcomes	September 24, 2019	11:30 am – 12:00 nn
Benchmarking to Improve Pathology: The Philippines as an Example	September 25, 2019	9:45 am - 10:30 am

- The following renowned IFCC-VLP Speakers have also delivered the following topics:



Kenneth Andrew Sikaris, MD, FRCPA, FACCB

Topic Date Time

Topic	Date	Time
Data Mining as Laboratory Management Tool	September 25, 2019	2:30 pm - 3:15 pm
Tumour Marker Reference Intervals: Interpreting Tumour Marker Results	September 25, 2019	4:00 pm - 4:30 pm



Ellis Jacobs, PhD, DABCC, FAACC

Topic	Date	Time
Patient Safety: A Quality System Approach to POCT/AQ	September 26, 2019	9:00 am – 9:30 am
Diabetes Management at the Point of Care	September 26, 2019	11:00 am – 11:45 am





SERBIA

SERBIAN SOCIETY FOR CLINICAL LABORATORY MEDICINE AND SCIENCE (SCLM)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
<p>SERBIS 2019</p> <p>5th SERbian Biomarker Symposium (www.serbis.rs)</p> <p><i>(international congress)</i></p>	<p>Belgrade, Serbia March 26-28, 2019</p>	<p>Nutrition biomarkers for disease prevention Organiser: SCLM (IFCC, EFLM, ESPT auspiced)</p> <p>14 Sessions: optimal nutrition and health, macronutrients and cardiovascular disease, macronutrients and diabetes, macronutrients and health for the aged, nutrition and risk of cancer, nutrition and infertility, fertility, pregnancy: is there a connection?, micronutrients (vitamins) and health, “omics” era and nutrition, biomarkers and liver disease: recent insights and current challenges, obesity: the greatest epidemic of the 21st century?, micronutrients (macrominerals and microminerals) and health, the gut microbiota and metabolomics in human gut microbiota research, supplements as nutrition in a pill, SERBIS breaking taboos.</p> <p>58 speakers from 12 countries (21 speakers from AT, AU, CZ, DE, FR, GR, IE, IT, NL, UK, US, and 37 from RS)</p> <p>12 Industry sponsored Workshops</p> <p>2154 participants</p>
<p>Personalized medicine day</p> <p><i>(international symposium)</i></p>	<p>Belgrade, Serbia June 02-03, 2019</p>	<p>Implementing pharmacogenetic tests in the clinic: the future is here Organiser: SCLM (ESPT auspiced)</p> <p>10 speakers from 10 countries (NL, GR, IT, CH, SI, ES, FI, BE, FR, SR)</p> <p>3 Industry sponsored Workshops</p> <p>85 participants</p>



<p>Diabetes 2019: HbA1c critical approach, outcomes and personalized therapy <i>(international symposium)</i></p>	<p>Belgrade, Serbia September 06, 2019</p>	<p>Organiser: SCLM</p> <p>6 speakers: two international (FR, NL) and four national experts (SR)</p> <p>2 Industry sponsored Workshops</p> <p>200 participants</p>
<p>Laboratory medicine and transplantation <i>(national symposium)</i></p>	<p>Kopaonik, Serbia November 23, 2019</p>	<p>Organiser: SCLM</p> <p>16 national experts (SR)</p> <p>150 participants</p>
<p>CLAQ2019</p> <p>3rd Conference on Medical Laboratory Accreditation and Quality Systems <i>(international congress)</i></p>	<p>Belgrade, Serbia December 09-10, 2019</p>	<p>Lab medicine in the transformative decade: digital technologies, artificial intelligence and quality management Organiser: SCLM (IFCC, EFLM auspiced)</p> <p>6 Sessions covered: the impact that digital transformation can have in building innovation and sustainability in the laboratory, the application of artificial intelligence in clinical medicine and laboratory medicine, biobanking for future patient benefit and role of laboratories in managing biobanks, automatic prediction of disease phenotype-gene associations, the challenges of data science in healthcare, the trends in laboratory automation process and point-of-care testing, the economic arguments for funding laboratory diagnostics in transformative decade, laboratory procurement models that incentivize innovation and cost savings, benefits of accreditation of medical laboratory and the results of survey within EA.</p> <p>30 speakers from 12 countries (16 speakers from FR, CZ, US, PL, HR, PT, IT, GR, RO, AL, CY and 14 speakers from RS)</p> <p>6 Industry sponsored Workshops</p> <p>894 participants</p>

REGIONAL MEETINGS

Name of the meeting	Date	Society's contribution for the meeting
First International Congress of Private Sector Health Workers	Belgrade, Serbia February 22 nd -23 th , 2019	Invited lecture; Scientific Committee Membership
CardioS, 17 th International Congress on Clinical Cardiology and Heart Failure	Belgrade, Serbia April 05 th -06 th , 2019	Invited lecture; Scientific Committee Membership
Management of Sarcoidosis and Interstitial Lung Diseases	Belgrade, Serbia April 22 th -24 th , 2019	Invited lecture
The new standard of excellence in laboratory diagnostics- cobas® pro integrated solution, Launch meeting, Roche	June 05 th -07 th , 2019	Invited lectures
5 th China Clinical Laboratory Technology and Application (CCLTA) Meeting,	Suzhou, China July 19 th -21 th , 2019	Invited lecture
5 th Russian Congress of Laboratory Medicine	Moscow, Russia September 11 th -13 th , 2019	WS Invited lecture
Serbian conference on interventional cardiology, cardiovascular imaging and drug therapy-SINERGY 2019	Belgrade, Serbia September 12 th -14 th , 2019	Scientific Committee Membership
Quality Day-Innovation by Abbott Laboratories	Belgrade, Serbia October 11 th , 2019	Invited lecture
5 th ESPT congress on Precision Medicine and Personalised Health	Seville, Spain October 16 th -18 th , 2019	Scientific Committee Membership
The 27 th Meeting of the Balkan Clinical Laboratory Federation	Antalya, Turkey October 27 th -31 st , 2019	Oral presentation
8 th National Symposium of the Association of Laboratory Technologists and Technicians of Serbia with international participation	Tara, Serbia October 31 st -November 2 nd , 2019	Scientific Committee Membership
11 th Serbian Congress on Diabetes with international participation	Belgrade, Serbia November 24 th -27 th , 2019	Invited lecture, Session chairmanship

INTERNATIONAL RELATIONS

IFCC Affiliate Membership

IFCC Communications and Publications Division (CPD)
eJIFCC (WG-eJIFCC), Sanja Stankovic

IFCC ETD Committee on Mobile Health and Bioengineering in Laboratory Medicine (C-MHBLM), Sanja Stankovic

EFLM Science Committee

EFLM Task Group: Cardiac Markers, Corresponding Member Sanja Stankovic

European Society of Pharmacogenomics and Personalised Therapy (ESPT)
General Secretary/Board Member Sanja Stankovic

ADDITIONAL INFORMATION

With the idea to support education and expanding the horizons of colleagues who work in the field, SCLM has awarded one clinical chemist with registration fee for the 23 IFCC-EFLM European Congress of Clinical and Laboratory Medicine 2019, Barcelona– ES, 19 - 23 May 2019.









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