

International Federation of Clinical Chemistry and Laboratory Medicine

Advancing excellence in
laboratory medicine for
better healthcare worldwide

www.ifcc.org

Annual Report 2020



IFCC
International Federation
of Clinical Chemistry
and Laboratory Medicine

Highlights of the Year



- **New Task Forces** formed:
 - IFCC Task Force on COVID-19
 - Task Force on Global Newborn Screening (TF-NBS) - Joint Task Force of IFCC and International Society of Newborn Screening (ISNS)
 - Task Force on Global Lab Quality (TF-GLQ)
 - Task Force on Global eLearning/eAcademy (TF-GEL)
- **IFCC live webinars – 2020 Series** - <https://eacademy.ifcc.org/events/ifcc-live-webinar-series/>
Topics:
 - *COVID-19 Guidelines on Molecular, Serological, and Biochemical/Serological Testing*
 - *Advancing Internal and External Quality Assurance on a Global Scale*
 - *Expanding Newborn Screening Globally, Reducing Infant Mortality Through Early Diagnosis*
 - *Value and Impact of Laboratory Medicine in Patient Care: Developing the Evidence*
- **IFCC-AACC Pearls**, translation in Spanish
<https://eacademy.ifcc.org/topics/c%C3%A1psulas-de-la-medicina-de-laboratorio-pearls/>
- **e-Academy**, open educational resources - <http://eacademy.ifcc.org/>
- **IFCC Flow Cytometry Course**
 - March 9th -13th, 2020, Geneva (CH) - <https://www.ifcc.org/media/478143/winter-school-immuno-flyer-2020.pdf>
- **C-CMBC Courses**
 - January 29th-31st 2020, Kuala Lumpur (MY) - 1st C-CMBC Advanced Course in Molecular Diagnostics
 - March 1st-7th, 2020, La Paz (BO) – The C-CMBC Beginner’s Course in Molecular Diagnostics
-https://www.ifcc.org/media/478701/c-cmbc-course-bolivia_2020.pdf
- **DQCLM Workshop**
 - January 10th-11th 2020, Lahore (PK) - Pakistan - IFCC Developing Quality Competence in Medical Laboratories (DQCML) - https://www.ifcc.org/media/478309/dqcml-workshop_pakistan_amann_thomas_2020.pdf
- **IFCC Expert Database** - <http://www.ifcc.org/ifcc-education-division/experts/>
- Implement cooperation and agreements with **IFCC Regional Federations** and **International Organizations**

Yearly programmes on hold due to COVID-19 pandemic:

- **IFCC VLP programme** supported by Abbott - <http://www.ifcc.org/ifcc-education-division/emd-special-projects/>
- **Roche/IFCC Travel Scholarships**
- **IFCC Professional Scientific Programmes (PSEP/PMEP)**
- **IFCC FEN** - Foundation for Emerging Nations - <http://www.ifccfoundation.org/>
- **IFCC Distinguished Awards 2020**, selected and announced, presentation ceremony postponed.

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Message from the President of IFCC



With the initiation of our new strategic plan for 2020-2023, the IFCC has made significant progress towards “advancing excellence in laboratory medicine for better healthcare worldwide”. In 2020, we engaged in global activities and employed innovative approaches to achieve our goals of impacting healthcare delivery and patient outcomes, contributing to global lab quality, becoming the largest provider of free distance learning in the field of laboratory medicine, and aiding in the fight against the COVID-19 pandemic.

This past year, four new Taskforces were established to ensure the success of our strategic plan. First, the IFCC Taskforce on Global Newborn Screening was initiated to address the lack of newborn screening programs in developing countries by initiating and supporting such programs in these regions worldwide. This Taskforce is currently designing pilot programmes in several countries, with the goal of eventually expanding further. Ultimately, these programs will provide early diagnosis and enable treatment of newborns with various genetic metabolic disorders, who otherwise would be unable to access these essential services.

The IFCC Taskforce on Global Lab Quality was also established in 2020 to assist clinical laboratories in improving internal quality control and external quality assurance (IQC and EQA), directly improving global lab quality. This group has begun to plan an international IQC and EQA programs, providing these free to developing countries as well as deploying training and consulting teams for onsite IQC. The creation of a global reference interval consortium is also underway, to support the IFCC’s efforts in achieving evidence-based regional and global harmonization of reference intervals.

To further the IFCC’s goal of becoming the largest global contributor of free distance learning in the field of laboratory medicine, the IFCC Taskforce on Global eLearning/eAcademy was established. In Fall 2020, this group organized and held a live monthly webinar series. The Fall 2020 series was an extremely successful and truly international event, with each webinar garnering an audience of 2500–3500 attendees for a total of over 10,000 participants in the series from more than 100 countries around the world. A new monthly series began in January 2021 and will continue throughout the year, with leading experts presenting on an array of laboratory medicine topics.

Last but not least, the first Taskforce established in 2020 was the IFCC Taskforce on COVID-19 to summarize, critically review, and disseminate the most up-to-date, evidence-based information about the novel coronavirus as well as provide recommendations regarding test implementation. This included the formation of the IFCC Information Guide on COVID-19, an online document used to share key information and resources with laboratory professionals around the world, which has since been updated on a biweekly basis. In October 2020, this group also published interim guidelines based on available evidence, providing practical recommendations to laboratories on molecular testing of SARS-CoV-2 infection, serological testing for antibodies against SARS-CoV-2, as well as biochemical and hematological monitoring of COVID-19 patients. Based on these guidelines, the Taskforce provided a successful webinar as part of the Fall 2020 series and also assisted in the planning of the IFCC Global Conference on COVID-19, which took place in February 2021.

Reflecting on 2020, I would like to thank all the Taskforce members for their diligent work as well as all our members who remain engaged and focused on advancing the field of laboratory medicine. This past year posed unique challenges due to the COVID-19 pandemic, but due to our efforts, the IFCC made invaluable strides towards our vision, and I know we are all eager to continue this momentum into 2021.

Prof. Khosrow Adeli



EXECUTIVE BOARD (EB)

The IFCC Executive Board was not able to meet in person during 2020 but were very active, with monthly virtual meetings throughout the year, and the minutes were posted on the IFCC Website. While challenged by significant time zone differences and unpredictable internet service, the EB members were very productive in developing and implementing the new strategic plan for 2020-2023, as well managing the ongoing business of the IFCC.

The activities and achievements of the IFCC Committees, Working Groups and Task Forces, and the IFCC Members are presented in this report, and it is an impressive amount of work, performed by volunteers around the world, many of whom were also very busy providing essential services during this pandemic.

The IFCC membership, as of December 31, 2020, included 94 Full Members, 17 Affiliate Members and 47 Corporate Members. During 2020, two Full Member Societies joined: *Myanmar Medical Technologist Association (MMTA)* and *Iraqi Society for Molecular Biology and Genetics (ISMBG)*; and two Affiliate Member Societies joined: *Sociedad Andaluza de Análisis Clínicos y Medicina de Laboratorio (SANAC)* – Spain, and *Order of the Biochemists, Biologists, Chemists in Romanian Health System (OBBCSSR)* – Romania. We also welcomed six new Corporate Members: *Tosoh*, *Wuhan Life Original Biotech Joint Stock – Szybio*, *Megalab*, *LumiraDx*, *Shenzhen YHLO Biotech* and *Instrumentation Laboratory*.

2020 was the third year of my term as Secretary of the IFCC Executive Board and I would like to thank all the IFCC officers, members and colleagues who I have worked with for their cooperation and assistance. It was unfortunate that the COVID pandemic prevented our in-person meetings/congresses and the opportunities to meet old friends and colleagues, and to make new ones. The use of virtual platforms has been indispensable in allowing the IFCC to continue its important committee meetings and activities, and to provide member education, and will no doubt become a part of our on-going mode of operation. However, I am sure we are all looking forward to the resumption of in-person meetings and the opportunity to be together. Special thanks to the IFCC Office staff in Milan (Paola Bramati, Silvia Cardinale and Silvia Colli Lanzi) who have worked so hard to make this new virtual mode of operation work for all of us.

David Kinniburgh - Executive Board Secretary

TREASURER REPORT

During the third and last 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 and detailed records of all transactions were kept, and reimbursements were processed immediately after the receipt of the claims from the IFCC office. The 2021 budget requests of the IFCC Functional units were received and the expected 2021 budget was prepared and submitted to the IFCC Executive Board for approval. The IFCC functional Units were informed about their allocated 2021 budgets after receiving the approval of the EB.

The annual accounts and financial actions in 2020 were submitted to the external independent auditor to be reviewed in order to finalize the actual income and expenses at 31st December 2020.

Close collaboration was achieved with the IFCC investment bank (Credit Suisse) to optimise the financial return on IFCC investments.

1. COMPARISON OF 2020 PROPOSED BUDGET WITH ACTUALS AT 31st DECEMBER 2020

The 2020 budget was expected to be closed with a deficit of CHF -904 251. Instead, it was closed with a surplus of CHF 99 675,61 (Fig. 1). The main reason for this difference was due to the decrease in expected expenses because working meetings of the IFCC Functional Units mostly were not held physically during the pandemic.

| Summary | Budget 2020 | Actual 2020 |
|---|--------------------|------------------|
| | CHF | CHF |
| Total Operational revenues & financial income | 1,253,100.00 | 794,025.92 |
| Total Operational costs & financial charges | 2,157,351.00 | 694,350.31 |
| Profit (-loss) for the year | -904,251.00 | 99,675.61 |

Figure 1. 2020 proposed budget versus to actual at 31st December 2020.

2. TOTAL OPERATIONAL REVENUES AND FINANCIAL INCOME

The actual total operational revenues and financial income were **CHF 794,025.92** (Fig. 2).

| REVENUES & INCOME | | Budget 2020 CHF | Actual 2020 CHF |
|------------------------------------|--|---------------------|--------------------|
| 1 2:04:00 | Full members (National Societies) | 175.000,00 | 186.762,63 |
| 1 3:04:00 | Corporate members | 250.000,00 | 331.721,87 |
| 1 4:04:00 | Affiliate members | 4.500,00 | 7.980,90 |
| 1 6:02:01 | Income from CLSI royalties | 2.000,00 | 2.333,94 |
| 1 6:38:01 | Revenue for ICHCLR secretarial support | 9.000,00 | 4.263,28 |
| 1 6:39:01 | Revenue for ICHCLR sub-account | 40.000,00 | 12.798,84 |
| 1 7:02:24 | WorldLab Congress Seoul 2020 | 500.000,00 | 0,00 |
| 1 7:03:24 | EuroMedLab Congress Munich 2021 | 0,00 | 0,00 |
| 1 7:04:10 | IFCC virtual Conference "Critical role of Clinical Lab in COVID-19 pandemic" | 0,00 | 0,00 |
| 1 7:07:01 | APFCB Congress Jaipur 2019 share | 0,00 | 12.300,00 |
| 1 7:07:03 | EMD Symposium - WorldLab Seoul 2020 - Abbott | 19.000,00 | 18.993,00 |
| 1 8:00:01 | Income for Scientific Division (SD) JRC IRMM | 40.000,00 | 52.583,85 |
| 1 8:05:11 | Income for Commutability in Metrological Traceability (WG-CMT) | | 456,00 |
| 1 8:05:20 | Support to WG-APO activities | 0,00 | 4.905,70 |
| 1 9:02:10 | IFCC-AACC Pearls | 0,00 | 11.012,40 |
| 1 9:05:01 | Abbott VLP sponsorship | 45.000,00 | 48.834,65 |
| 1 9:05:04 | Income for C-CB support (scorecard study) | 0,00 | 0,00 |
| 1 10:00:01 | Elsevier Support - AACC stand & royalties | 3.000,00 | 0,00 |
| 1 10:00:02 | Income from Com. Publ. div. (CPD) Elsevier endorsement - incl ADV | 30.000,00 | 37.129,66 |
| 1 12:01:01 | Yashraj Dist Clinical Chemist Award | 10.500,00 | 0,00 |
| 1 12:01:02 | Siemens - Henry Wishinsky Award dist Intl services | 10.500,00 | 0,00 |
| 1 12:01:03 | Abbott Award for dist. contribution in education | 10.500,00 | 0,00 |
| 1 12:01:04 | Abbott Award for significant contribution to molecular diagnostics | 10.500,00 | 0,00 |
| 1 12:01:05 | Sekisui Award for Lab Med and Patient care | 10.500,00 | 0,00 |
| 1 12:01:06 | Award CLSI - NIST Seoul 2020 | 7.500,00 | 0,00 |
| 1 12:01:07 | Young investigator Award - IFCC | 0,00 | 0,00 |
| 1 12:01:08 | Hyttest Award for contr to cardiovascular diagnostic | 10.500,00 | 0,00 |
| 1 12:01:09 | Gerard Siest- Biologie prospective Award | 10.500,00 | 0,00 |
| 1 12:01:10 | Yashraj Dist women scientist Award | 10.500,00 | 0,00 |
| 1 12:02:00 | Abbott Univants Project | 23.000,00 | 23.000,00 |
| 1 13:05:03 | Income for Roche travel scholarships | 21.000,00 | 0,00 |
| 1 18:00:00 | FEN expenses re-imbursed | 100,00 | 0,00 |
| 1 18:01:02 | Realized profits on investments | 0,00 | 37.087,40 |
| 1 18:01:03 | Unrealized profits on investments | 0,00 | 0,00 |
| 1 19:80:02 | Overhead on sponsorship projects | 0,00 | 1.861,80 |
| 1 20:01:03 | Profits on exchange | 0,00 | 0,00 |
| TOTAL REVENUES & INCOME | | 1.253.100,00 | 794.025,92 |

Figure 2. The expected and actual INCOME at 31st December 2020.



3. IFCC MEMBERSHIP DUES

The income of IFCC from the annual dues of Full, Affiliate and Corporate Members collected during 2020 is shown in Fig. 3. Thanks to all member Societies and Corporate members that supported IFCC throughout the years. Their continuous contribution have 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 | 186,762.63 |
| Corporate members | 331,721.87 |
| Affiliate members | 7,980.90 |
| Total | 526,465.40 |

Figure 3. IFCC membership dues collected in 2020.

4. IFCC MEETINGS INCOME PARTITION

IFCC meetings' revenues are not a regular yearly income. The yearly income of IFCC from the recent meetings (EuroMedLab 2019 Barcelona, EuroMedLab 2017 Athens, WorldLab 2017 Durban and shares from the regional federations' meetings) subdivided by the frequency of the events is indicated below (Fig. 4). There is no meeting income from WorlLab 2020 Seoul since it has been postponed to 2022.).

| 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 Jaipur, 2019 share: CHF 12.300 | 2 years | CHF 6.150 |
| COLABIOCLI Congress Punta del Este – 2017 CHF 2.200 | 2 years | CHF 1.100 |
| EuroMedLab (Barcelona) 2019: CHF 2.262.277 – 569.425 (EFLM)=CHF 1.692.852 | 2 years | CHF 846.426 |

Figure 4. IFCC meetings income.

The income of IFCC from the membership dues and annual meetings income (excluding sponsorships funds and other revenues) in 2020:

CHF 526 465 (dues) + CHF 846 426 + CHF 6 150 (annual meetings income) = CHF 1 379 041

5. SPONSORSHIP

Divisions and some Functional Units raise sponsorships funds which give them a certain flexibility in conducting projects. These sponsorships funds 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 funds available for specific projects at 31st December 2020 to be carried to 2021 is **CHF 868 531**.

6. TOTAL OPERATIONAL COSTS AND FINANCIAL CHARGES

The actual total operational expenses in 2020 were **CHF 694 350** (Fig.5).

IFCC GENERAL EXPENES - 2020 Budget to 31st December 2020 Actuals

| | Actual expenses including sponsorship |
|---|---------------------------------------|
| 5. Organisations Affiliated w/ IFCC | 68.125 |
| 6. IFCC Int/Reg Organisations | 15.854 |
| 7. IFCC Congresses and Conferences Committee (C-CC) | 14.567 |
| 8. IFCC Scientific Division (SD) | 16.714 |
| 9. IFCC Education and Management Division (EMD) | 76.251 |
| 10. IFCC Communication Publication Division (CPD) | 63.590 |
| 11. IFCC Emerging Technologies Division (ETD) | 54 |
| 13. IFCC Special Projects | 48.776 |
| 14. IFCC Statutes & Rules | 20.538 |
| 15. IFCC Financial Report | 105.481 |
| 16. IFCC Organisational Matters | 242.783 |
| 19. IFCC Executive Board (EB) | 21.618 |
| GENERAL TOTAL | 694.350 |

Figure 5. IFCC GENERAL EXPENSES-2020



7. CASH BALANCE AT CREDIT SUISSE ON 31 DECEMBER 2020


Total amount of cash available on December 31st, 2020 including sponsorship funds (CHF 868 531) when converted into CHF currency is **CHF 2, 206, 528.37**.

CHF 1,355,255.33

USD 31,396.54

EUR 761,024.01

The total amount **CHF 2, 206, 528.37**



Created on 31.12.2020 21:21:17 +03

List of Accounts

| Account Number and IBAN | Holder | Currency | Balance | Description |
|--|---|----------|--------------|-----------------|
| 340399-81 CH39 0483 5034 0399 8100 0 | International Federation of Clini, RET20 | CHF | 1,355,255.33 | Current account |
| 340399-82-13 CH42 0483 5034 0399 8201 3 | International Federation of Clini, RET20 | USD | 31,396.54 | Current account |
| 340399-82-15 CH85 0483 5034 0399 8201 5 | International Federation of Clini, RET20 | EUR | 761,024.01 | Current account |

Total Balance by Currency

| Currency | Total | Total in CHF |
|--------------|--------------|---------------------|
| CHF | 1,355,255.33 | 1,355,255.33 |
| USD | 31,396.54 | 27,787.98 |
| EUR | 761,024.01 | 823,485.06 |
| Total | | 2,206,528.37 |

Figure 6. Cash Balance on December 31st, 2020.

8. IFCC INVESTMENT AT CREDIT SUISSE IN 2020

The important issues of the agreement with Credit Swiss 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 31.12.2019 to 31.12.2020 is shown in **Figure 7**.

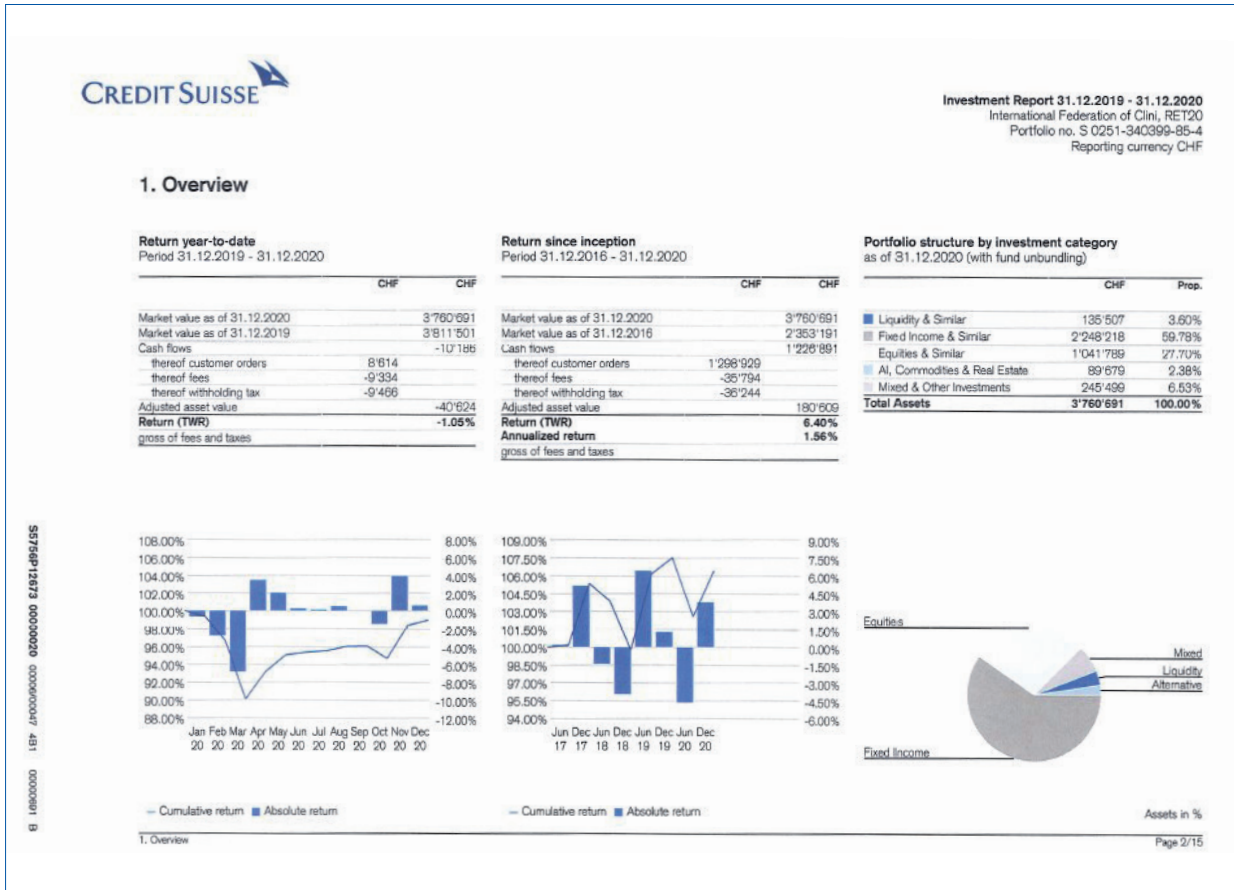


Figure 7. Credit Suisse Investments between December 31st, 2019 and December 31st, 2020.

Tomris Ozben, Treasurer

CORPORATE MEMBERS' REPORT

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

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

In 2020 IFCC was pleased to welcome *Tosoh (Japan)*, *Wuhan Life Original Biotech Joint Stock - Szybio (China)*, *Megalab (Georgia, Caucasus region)*, *LumiraDx (UK)*, *Shenzhen YHLO Biotech (China)* and *Instrumentation Laboratory (USA)* as new Corporate Members. Regrettably, in 2020 the following Corporate Members left IFCC: *SCL Healthcare (South Korea)*, *PPD (USA)*, *Zhejiang Kuake Biotechnology (China)*, *Timedico (Denmark)*, and *ADX Neuroscience (Belgium)*, 3 of them after less than 3 years of membership. By the end of 2020, the total number of IFCC's Corporate Members was 49. Interest in new IFCC Corporate Membership comes mainly from China (9 Corporate Members, followed by UK, 8 Corporate Members, USA, 7 Corporate Members, Germany and Japan, 4 Corporate Members each). Not all IFCC Corporate Members are manufacturers but several are distributors. A hospital service provider (from Georgia, Caucasus region) and a hospital (from Sri Lanka) are Corporate Members as well. In 2020, Corporate Members contributed with annual fees of ~300.000 CHF to 62.5 % 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 (together ~180.000 CHF), and congresses (e.g. contribution to WoldLab 2022 so far ~1.4 m CHF).

Over the past years, IFCC has seen an erosion in Corporate Membership and the necessity to make IFCC more attractive for Corporate Members became evident. As a consequence, the **Task Force Corporate Members (TF-CM)**, a new task force for and by the Corporate Members has been installed. Its mission is twofold: On the one hand, the task forces supports that Corporate Members' interests are better addressed within IFCC, i.e. better representation of Corporate Members, more easy discussion among Corporate Members, identification of common topics and interaction with / direct report to the IFCC Executive Board. On the other hand, a major theme of the future work of this task force will be how to increase the engagement of Corporate Members in IFCC since most Corporate Members are not actively involved in IFCC activities. (See the respective website for details of the Task Force.)

The Corporate Members make additional 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 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:** Michael Rottmann (Roche) (1st term March 2020-2023)
- **Emerging Technologies Division:** This division has two Corporate Representatives: Peng Yin (Abbott) (2nd term 2021-2023) and Markus Roessler (Roche) (1st term 2021-2023)
- **Education & Management Division:** André Ziegler (Roche) (2nd term 2021-2023)
- **Communications & Publications Division:** Tricia Ravalico (Abbott) (2nd term 2021-2023),
- **Congresses & Conferences Committee:** Cheryl Jackson (Beckman Coulter) (2nd term 2021-2023).

The following persons are Corporate Members of the respective Congress Organizing



Committees (COCs):

- **IFCC / WorldLab 2022, Seoul, South Korea:** Douglas Chung (*Abbott*)
- **IFCC / EuroMedLab 2021, Munich, Germany:** Abir Alhelou (*Abbott*)
- **IFCC-EFLM WorldLab + EuroMedLab 2023, Rome, Italy:** Angel de la Fuente (*Roche*)

The next Corporate Members Meeting will be held during AACCC, (currently scheduled for September 26-30, 2021, in Atlanta, Georgia) and I would like to encourage all members to take part in the meeting. The respective meeting details will be communicated later since due to the coronavirus pandemic itineraries might need to be adapted.

Since 2020 was the last year of my 2nd term as Corporate Representative in the IFCC Executive Board, I would like to summarize the major points we have achieved together as Corporate Members over the past 6 years:

- Creating the Task Force Corporate Members to better serve the needs of industry
- Bringing more Corporate Members into Committees, Working Groups and Task Forces
- Assuring compliance of IFCC and Corporate Members with the MedTech Europe Code
- Increasing opportunities for dialog between the IFCC Executive Board and the Corporate Members
- Maintaining Corporate Membership fees and conference sponsorship fees constant

I thank all Corporate Members and all IFCC officers, in particular those on the Executive Board, for the engaged and constructive support that I have received. I am glad to hand over to the new Corporate Representative who took over in the beginning of 2021, Joseph Passarelli from Roche. The new chair of the Task Force Corporate Members is Tricia Ravalico. I wish both of them success in all their endeavours to strengthen the role of Corporate Members within IFCC.

Rolf Hinzmann, Corporate Members Representative

COMMITTEE ON CONGRESSES AND CONFERENCES (C-CC)

The thirty-seventh (37th) meeting of the IFCC Executive Board Committee on Congresses and Conferences was held virtually on October 21, 2020.

There were several membership changes to the C-CC during 2020. Full Member T. Zima having completed his second term was replaced by P. Laitinen. Corresponding Members E. Frank and O. Maguire resigned at the end of 2019. New Corresponding Members to the C-CC as of 2020 included J. Kumalawati, A. Buño Soto and A. Cano Huizar.

The first terms for C. Jackson (Corporate Member) and M. Blanes González (Full Member) expired at the end of 2020. Both individuals agreed to serve a second term and the recommendations for their appointment for a second term (2021 – 2023) have been approved by the IFCC Executive Board.

The second term for J. Wesenberg as Chair of the C-CC ends at the end of 2020. The IFCC EB has approved the appointment of P. Laitinen as Chair for a first term (2021 – 2023). J. Wesenberg has been appointed as Consultant to the C-CC for 2021.

With P. Laitinen moving from Full Member to Chair, there will be an open Full Member position for a first term (2021 – 2023). The IFCC EB approved a call to National Presidents / National Representatives of IFCC Member National Societies for applicants to this open position. After review of the applications, the following recommendations were submitted for approval by the IFCC Executive Board: New Full Member, First Term (2021 – 2023) Antonio Buno Soto (Spain) and New Corresponding Members – Sarah Robinson (United Kingdom), Christos Tsatsanis (Greece) and Aylin Sepici Dincel (Turkey). The IFCC Executive Board approved these recommendations in early January 2021. P. Laitinen will contact the applicants to determine their acceptance of these appointments.

International Congresses of Clinical Chemistry & Laboratory Medicine (WorldLab)

IFCC ICCCLM (WorldLab) Seoul, Korea 2020 (May 24-28)- Postponed 2022 (June 26-30)

This Congress was postponed on account of the COVID-19 pandemic. The Congress was subsequently rescheduled to January 6 – 10, 2021. With the ongoing global pandemic and associated travel restrictions, this Congress has been rescheduled to June 26 – 30, 2022. Adjustments to the scientific program will be made as required.

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

Congress Chair: Prof. Sergio Bernardini

The XXV IFCC WorldLab / XXV IFCC-EFLM EuroMedLab Rome 2023 will be held in Rome from 21 to 23 May 2023. The venue is already confirmed and booked: Roma Convention Center La Nuvola. A presentation and an Italian Farewell Party planned for WorldLab 2020 Seoul has been postponed. Promotion will also occur at EuroMedLab 2021 Munich. The COC and the SPC have been appointed. The general timetable for the congress has been established. The COC and SPC are expected to meet when conditions allow.

IFCC ICCCLM (WorldLab) 2026)

The call for bids to host WorldLab 2026 has been postponed on account of the need to revise the ICCCLM Congress Guidelines. The revisions have been completed and were approved by the EB on September 17, 2020. The C-CC is waiting for the EB to decide when the call for bids to host WorldLab 2026 will be sent.

Regional Congresses of Clinical Chemistry & Laboratory Medicine

APFCB, Sydney, Australia, 2022 (October 15-18)

Congress Chair: Helen Martin

It is extremely unlikely that the Sydney 2022 meeting will go ahead as an APFCB meeting. AACB has been advised that the risk to delegate attendance is too great with Seoul only a few months before. APFCB has been asked by IFCC Exec to talk with the KSCC about WorldLab





being a joint IFCC/APFCB/KSCC meeting; this is yet to happen but will soon.

A major issue for AACB's decision was that although profits are split between hosting organisations in a defined manner, losses would be completely borne by AACB and based on advice from the Sydney Convention centre and others they are not willing to take that risk. It is highly likely (although needs agreement of Council) that APFCB Sydney will shift to 2024 and KL to 2026.

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

Congress Chair: Dra. Imma Caballé

The Final Report and the results of the Delegate Survey were sent to the members of the C-CC in June 2019. This Congress was a huge success from all aspects.

Thirty-six percent (1352 / 3720) of the delegates completed the Delegate Survey. A few minor issues with the electronic tracking of responses were discovered and corrected. Overall the survey generated very useful information.

EuroMedLab, Munich, Germany, 2021 (May 16 – 20) - Postponed 2021 (November 28 – December 2)

Congress Chair: Dr. Karl Lackner

Planning for this congress continued as required despite the COVID-19 pandemic. The program is close to complete. Sponsorships and the Exhibition are well in line with expectations. Because of the continuing COVID-19 pandemic, this Congress has been rescheduled to November 28 – December 2, 2021.

EuroMedLab, Rome, Italy 2023 (May 21-25)

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

A separate EuroMedLab will not be held in 2023.

EuroMedLab, 2025

The call for bids to host EuroMedLab 2025 has been postponed. Like the revisions to the ICCCLM Congress Guidelines by the IFCC Executive Board, it is expected that there will be comparable revisions to the EuroMedLab Congress Guidelines. The dates for the expected revisions and the call for bids to host EuroMedLab 2025 have not been determined.

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

Congress Chair: Lcda. Jovanna Borace

The final report for this congress indicated the success of this congress from all points of view.

COLABIOCLI, León, Mexico 2022 (March 23 – April 2)

Congress Chair: Dr. Marie Jezebel Vite Casanova

The COC and the congress location have been determined. Initial planning for the scientific program is underway.

AFCB, Beirut, Lebanon, 2021 (May 27 – 29)

Congress Chair: Dr. Christian Haddad

Planning for the congress has been delayed on account of the recent events in Beirut (the explosion) and Lebanon (financial collapse). The congress location has not been decided.

There is a willingness to go on with the congress, and if travelling and meeting restrictions are still in place, the congress format may change to virtual or a hybrid of on-site and virtual.

AFCC, Lusaka, Zambia, 2021 (September 23 – 25)

Congress Chair: Mr. Victor Daka

No report received.

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. The C-CC is not aware of any recent discussions regarding the future of this event.

IFCC – Abbott “Turning Science into Caring” Symposium

The program was last held in China and India in 2018. There has been concerns with respect to the various Codes of Ethical Business Practice. There has been no report of recent discussions within Abbott regarding the future of this event.

IFCC Virtual Conference - February 15 – 17, 2021

“Critical Role of Clinical Laboratories in the COVID-19 Pandemic”

This is the first of perhaps an ongoing series of IFCC virtual conferences.

Congress Guidelines and Other Documents

Review with revisions as required must be completed every three years or earlier if required.

Auspices Guidelines and Application Forms

current versions May 2020 and June 2020

ICCCLM Congress Guidelines and Application Form – current versions May 2019

A revised version of the guidelines document has been approved for use only for WorldLab 2026 and this revised version is not posted to the website.

EuroMedLab Congress Guidelines and Application Form – current versions May 2019

It is expected that guidelines document will be revised by the IFCC and EFLM Executive Boards for use with EuroMedLab 2025.

Guidance for National and International Congresses – current version May 2019

ICCCLM and EuroMedLab Congress – Evaluation and Scores Template – current version May 2019

This template is present as Form A in the ICCCLM and EuroMedLab Guidelines documents.

Scientific Program Guidelines for ICCCLM (WorldLab) – current version May 2019

Scientific Program Guidelines for EuroMedLab – current version August 2017

Review was postponed until 2020 to address any deficiencies or potential improvements based on the application of the guidelines to EuroMedLab 2019 Barcelona. Prof. Eric Kilpatrick, Scientific Programme Chair for EuroMedLab 2019 Barcelona submitted to the C-CC suggested revisions for this document. After consideration, the C-CC submitted suggested revisions to the IFCC EB that will also require consultation with the EFLM EB. Once finalized, any approved revisions will need to be considered for the Scientific Program Guidelines for ICCCLM (WorldLab).

Satellite Meeting Guidelines for an IFCC-sponsored Congress / Conference – current version May 2019

IFCC Guidelines for Compliance with Applicable Codes of Ethical Business Practice – current version May 2019

Congresses/ Conferences with IFCC Auspices

2014 – 40 events

2015 – 45 events

2016 – 70 events

2017 – 55 events

2018 – 76 events

2019 – 82 events

2020 – 52 – decrease attributed to COVID-19

The significant development in 2020 was the availability of IFCC auspices for IFCC Corporate Member events.

IFCC General Conference

The date and location of the 14th IFCC General Conference is yet to be determined.





Other Business

IFCC WorldLab and IFCC-EFLM EuroMedLab Schedule

Currently WorldLab occurs every 3 years and EuroMedLab occurs every 2 years.

This scheduling creates two problems. The first is the decreased revenue from a WorldLab that occurs outside of Europe in the same year as a EuroMedLab, e.g., WorldLab Durban and EuroMedLab Athens in 2017. The other is the lack of a major revenue generating Congress every few years, e.g., 2018, 2022 and 2024.

To address the first problem – combine WorldLab and EuroMedLab in Europe when both are scheduled to occur in the same year – this suggestion has been essentially adopted, e.g., WorldLab / EuroMedLab Rome 2023.

To address the other problem, the C-CC has submitted to the IFCC EB a recommendation to change scheduling for WorldLab to every 2 years such that WorldLab occurs in even number years and EuroMedLab occurs in the odd numbered years.

Thirty-eighth (38th) Meeting of the C-CC

The proposal to hold the 38th meeting of the C-CC in association with EuroMedLab 2021 Munich, May 24 – 28 was accepted. This decision may need to be revisited based on the date change to late in the year.

James Wesenberg, C-CC Chair

SCIENTIFIC DIVISION (SD)

During 2020, the following members served on the SD Executive Committee: Philippe Gillery (France) (Chair), Christa Cobbaert (the Netherlands) (Vice-Chair), Joseph Passarelli (United States) (Secretary), Barnali Das (India), Konstantinos Makris (Greece), Mario Plebani (Italy) (members) and Michael Rottmann (Germany) (corporate representative). Six representatives of International Organizations are invited to attend the SD meetings as consultants or observers: Ian Young (JCTLM), Heinz Schimmel (JRC), Karen Phinney (NIST), Chris Burns (NIBSC) and Yang Zhen (NIFDC), as well as Greg Miller (ICHCLR). Several virtual meetings were held during 2020 due to travel restrictions caused by the pandemic: July 1 and 10, September 10 and 15, and December 7.

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 2020 activities of the JCTLM.

Governance:

Dr. Ian Young completed his second year as Chair of the JCTLM Executive Committee, and Dr. Gary Myers and Dr. Anja Kessler continued as representatives from IFCC to the JCTLM Executive Committee. Dr. Elvar Theodorsson was appointed to succeed Dr. Graham Beastall as chair of the Working Group on Traceability: Education and Promotion.

JCTLM Membership:

The Secretariat completed the 5 year review process for JCTLM Review teams' membership which resulted in the reappointment of 75% of the review teams' members who were contacted. There were currently 60 experts contributing to the twelve JCTLM review teams, amongst which ten were new members appointed during the year.

JCTLM Database:

Database Content:

- 258 available certified reference materials
- 208 reference measurement methods or procedures
- 196 reference measurement services

The JCTLM 2020 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 2020. 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 in December 2020. There were 70 new nominations including 41 materials, 13 methods and 16 services, as well as six outstanding nominations from the previous year that had been distributed for consideration to seven JCTLM review teams in 2020.

JCTLM WG on Traceability Education and Promotion:

JCTLM Newsletter:

The JCTLM newsletter for 2020 can be downloaded at <https://www.bipm.org/utills/common/pdf/JCTLM/JCTLM-Newsletter-2020.pdf>

An additional special newsletter summarizing developments in relation to COVID can be found at <https://www.bipm.org/utills/common/pdf/JCTLM/JCTLM-Newsletter-2020-COVID-19.pdf>.

JCTLM Meetings

1-2 December, 2020: JCTLM Database WG Meeting and JCTLM WG TEP, via Zoom.

3-4 December 2020: JCTLM Executive Committee Meeting, via Zoom.



Working Group 1 (GUM):

Dr. Martin J.T. Milton is the Chairman of the JCGM. Dr. Graham White is acting as IFCC representative.

Correspondence was received requesting approval and / or comments to the Final Draft of GUM-6: (formerly numbered JCGM 103): Guide to the expression of uncertainty in measurement - Developing and using measurement models. Previously the SD provided comments to an earlier version and these responses can be found along with the Final Draft of GUM-6 at the following location on the JCGM webpages: <https://www.bipm.org/cc/AllowedDocuments.jsp?cc=JCGM>. The deadline for submission was November 10, 2020. Comments received from all Member Organizations were discussed at the next meeting of the JCGM Plenary which was planned for 7th December 2020 (Visio conference) with the hope to find a consensus as to whether this Final Draft of GUM-6 can be published. In principal, the SD approves the publication of the Final Draft of GUM-6.

Working Group 2 (VIM):

Professor Gunnar Nordin is acting as IFCC representative. The fourth edition of the International Vocabulary of Metrology (VIM4) Working Draft (WD), as approved by JCGM/WG2 at the end of the June 2020 meeting, and then updated according to the input from the Focus Groups that were established afterwards has been accomplished. Also comments received from WG2 members after the June 2020 meeting were taken into account. For ease of comparison, the changes with respect to the VIM3 were highlighted with yellow background for easier comparison:

- the bibliographical references were highlighted with red text;
- for avoiding ambiguities, the references to the identifiers of entries of previous VIM editions have been removed.

Some things are still to do, and in particular:

- French text;
- introductory texts;
- possible revision of the organization in chapters;
- references to VIM3 (and previous editions?) entries.

• Joint Research Center (JRC)

Close collaboration with JRC continues through a number of joint ventures involving SD Committees and Working Groups. The status of specific JRC reference materials is mostly covered under the respective Cs and WGs. Most notable are Certified Reference Materials (CRMs) for enzymes, autoimmune disorders, proteins, Thalassemia, and apolipoproteins.

• Clinical and Laboratory Standards Institute (CLSI)

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).

The proposal to update the CLSI EP28 guidance document on reference ranges to reflect recent advances from IFCC C-RIDL and other content was not accepted due to the very large estimated size of the revised document. Instead, CLSI issued a call for nominations for the following document revision committees to essentially replace EP28:

- EP44—Establishing Reference Intervals, 4th Ed.
- EP45—Verifying Reference Intervals in a Medical Laboratory, 4th Ed.

• 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 in 2020 were:

- cardiac troponin I

- human insulin-like Growth Factor 1
- urine albumin
- potential standards for COVID

- **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.

However, NIBSC has been heavily involved in the UK and global response to Covid19 since February/March 2020. Many work programmes are on hold until further notice, but medicines-testing activities and standardization activity continues.

International Standards established:

- 1st WHO Reference Reagent for Anti-Malaria (*Plasmodium vivax*) human plasma
- 2nd WHO International Standard Insulin-like growth factor-1
- 6th WHO International Standard for human chorionic gonadotrophin (hCG)
- 1st WHO reference reagent for anti-HPA-15b IgG antibodies
- 1st WHO IS for Herpes Simplex Virus (HSV) Nucleic Acid Amplification Techniques (NAT)
- 1st WHO IS for West Nile Virus (WNV) RNA for Nucleic Acid Amplification Techniques (NAT)

In addition to this work, two important International Standards will be established - WHO International Standards for COVID-19 (for rapid submission – Dec 2020):

- SARS-CoV-2 RNA standard.
- SARS-CoV-2 antibody standard.

- **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. His third term is scheduled to conclude at the end of 2021. The Science Committee is responsible for scientific matters within EFLM and projects which further the scientific development of EFLM (except those specifically related to quality management, which are the responsibility of the Quality Management Committee). 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 consensus of the SD is that these activities do not overlap with ours. 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.

A new Task Force has been established to address the IVDR that goes into effect in May 2022: “EFLM Task Force on European Regulatory Affairs (TF-ERA)”. Professors Michael Neumaier and Christa Cobbaert are interim co-chairs. TF-ERA is a multi-national Working Group interconnecting with diagnostic and clinical societies to assist in smooth transition of laboratory tests during the implementation phase of the EU IVDR.

- **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). The focus is primarily on public health and emerging pathogens. Much of the activities of ECBS are not relevant to the IFCC. However, 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/. Prof. Sverre Sandberg was selected to represent the IFCC to the WHO on this document. The WHO will issue recommendations coming from comments from all parties after review by the advisory panel and a 3rd version will be prepared.

As mentioned previously, the WHO has been almost completely focused on COVID-19 in 2020 and for the time being until the pandemic situation subsides.



Congresses (WorldLab, Regional and other congresses):

The SD made the following presentations:

American Association of Clinical Chemistry (AACC) Annual meeting

December 13 – 7, 2020 – held virtually due to COVID-19 pandemic:

Title: How the IFCC Scientific Division Improves Standardization in Laboratory Medicine

Chair / Moderator: Professor Philippe Gillery; Speakers: Vincent Delatour, PhD, LNE - Standardization / Harmonization of Procalcitonin Assays: Are We There Yet?; Guido Freckmann, MD - Standardizing Traceability and Analytical Performance of Continuous Glucose Monitoring Systems; Yesim Ozarda, MD, Uludag University

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**

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

During 2020 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 2021 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. (<https://labterminology.com/>)

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 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 2021 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. Project on online “dynamic” manual for the NPU terminology is continuing development in 2021. IUPAC Technical report is scheduled to be submitted in 2021. 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. Prof. Helle Johannessen is Vice-president of Division VII (IUPAC). Prof. Colin Humphries from IUPAC Exec has continued to attend the majority of Steering Committee meetings and teleconferences. Titular member Prof. Koh Furuta (KF, JPN) participated in the revision of ISO 15189.

Prof. Gunnar Nordin participated in BIPM WG2 meetings and provided input into the upcoming VIM4 (International Vocabulary of Metrology). Prof. 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 2021 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).
- Dr. Gunnar Nordin continues to be active within the Joint Committee for Guides in Metrology Working Group 2 (JCGM WG2)

List planned activities in 2021 for this Term of Reference:

- Continuation of activities described above.
- A vacant titular membership of C-NPU is open and been published through IFCC. The membership is pending.

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

During 2020 ongoing progress towards C-MD's terms of reference included:

Term of Reference 1. *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. Dr. Huggett contributed to a publication coming from C-MD (see Publications Section).

A second manuscript was published addressing the current status quo of quality control in Molecular diagnostics (see Publications Section). **List planned activities in 2021 for this Term of Reference:** Initiate a further online survey addressing SARS-CoV 2 molecular diagnostics on an international level. With this, challenges and performances of laboratories in molecular diagnostics shall be elucidated; List of EQA providers will be updated. Website will be updated.

Term of Reference 2. *To produce guidelines on clinical validation of tests, conduct and reporting of molecular diagnostic tests.* **Accomplishments Include:** The list of EQA providers was updated and will be part of the new publication Current and Future Challenges in Quality Assurance in Molecular Diagnostics by Dr. Parviz Ahmad-Nejad et al which is currently in revision and submitted to CCA. **List planned activities in 2021 for this Term of Reference:** A checklist for the verification of molecular genetic test procedures will be completed and the





document will be available on the C-MD homepage (this point has not been completed due to a lack of time during the pandemic situation).

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

Accomplishments Include: A new call for Molecular Diagnostic Network and Expert Laboratories was initiated. After reviewing within the Committee the listed laboratories were recommended. **List planned activities in 2021 for this Term of Reference:** To re-evaluate the work which has been accomplished by the MDC-lab so far. Initiate a new call for MDC Labs.

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

During 2020 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: The chair of C-TLM participated in the (virtual) annual meeting of JCTLM Database WG and JCTLM Executive Board. The results of the annual survey RELA for calibration laboratories were discussed and were among other factors responsible for the decision of listing nominated calibration laboratories in the JCTLM Database. **List planned activities in 2021 for this Term of Reference:** Due to the pandemic no further actions are currently planned for 2021. C-TLM will contribute to the next JCTLM symposium “Traceability in laboratory medicine - vital for clinical value” at WorldLab in Seoul which was postponed to June 2022. The title of the lecture will be “Traceability for Laboratory Medicine – the role of the national measurement institute” and will highlight the qualification of calibration laboratories and their impact on implementation of metrological traceability.

Term of Reference 2. *To support 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 EQA scheme RELA for calibration laboratories had been organized for the 17th time. The results of RELA2020 has been evaluated. The number of results is constantly increasing up to approximately 500 results of 55 laboratories. Laboratories from all over the world, especially from Europe and China are active as calibration laboratories or candidate calibration laboratories. All results except those for HbA1c have been published on the website (<http://www.dgkl-rfb.de:81>) with open access. In summary, it should be mentioned that despite the pandemic, the program could be realized successfully. The next survey RELA 2021 was announced; 667 orders have already been registered. The samples were sent out end of November. **Planned activities in 2021 for this Term of Reference:** The evaluation of RELA2021 will be in May 2021. 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. These projects will be pending, however; the effects of the pandemic on progress cannot yet be estimated. Nevertheless, 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 (e.g. the IFCC HbA1c network).*

Accomplishments include: HbA1c Network. It is standard for the IFCC Network to organize two intercomparison studies a year. Due to the pandemic the first study has been postponed to a later date. **Planned activities in 2021 for this Term of Reference:** The HbA1c network will continue its activities in 2021.

Additional Information: The RELA procedure manual has to be revised and limits of equivalence

for new measurands have to be added. This will be an additional project for 2021.

- **C-Reference Intervals and Decision Limits (C-RIDL)**; Chair: Yeşim Özarda (TR)
- During 2020 ongoing progress towards C-RIDL terms of reference included:

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

Accomplishments include: The study to compare direct and indirect approaches for the determination of reference intervals has been finished. Indirect reference intervals were calculated with the most used and popular methods (i.e. Bhattacharya, Hoffman, Arzideh methods) in the literature. The results of indirect reference intervals were compared with the direct reference intervals that are originated from Bursa, Turkey. The C-RIDL has submitted a manuscript to the special issue of CCA. **List planned activities in 2021 for this Term of Reference:** The paper on the comparison of the indirect and direct reference intervals will be published in 2021.

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: In 2020, the indirect reference interval study of the same biochemical parameters with the Global study has been 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. The results of the Global Reference Intervals Study performed by C-RIDL have been previously downloaded on the web-page of IFCC, C-RIDL. 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 2 papers.

List planned activities in 2021 for this Term of Reference: After 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 and age-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 2021 for this Term of Reference:** After the publication, the effect of gender and age-related changes in the reference intervals will be published on the webpage of C-RIDL.

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 2021 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 2021 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: A review of article on indirect reference interval studies has been written with the collaboration of the indirect reference intervals study group named 'Number group' in the Netherlands and a group of researcher working on reference intervals in Spain (see Publications below). **List planned activities in 2021 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 with the collaboration of the indirect reference intervals study group named 'Number group' in the Netherlands.

Term of Reference 7. *To 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: IFCC president, Professor Khosrow Adeli has organized a meeting on the IFCC Webpage/Database on Reference Intervals (A Global Resource for Clinical Laboratories around the World). In the discussion, the chair of C-RIDL has expressed her opinion that the C could play an important role on this project. **List planned activities in 2021 for this Term of Reference:** According to decision of this study group with Professor Khosrow Adeli, suggested activities will be planned.

Additional Information

Chair of C-RIDL, Yesim Ozarda presented on "Challenges and Advances in Reference Intervals and Decision Limits" at the IFCC Symposium (Symp. 2112) at the 2020 AACC Annual Scientific Meeting & Clinical Lab Expo, on 17 December 2020.

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

During 2020 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.*
- Coordinate programs to evaluate free thyroid and TSH assays with regards to their analytical performance.*
- Develop reference intervals for free thyroid hormones and TSH.*
- 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: A1: In an effort to establish a network of reference laboratories for FT₄, 4 network members Ref4U (Belgium), CDC Clinical Reference Laboratories (USA), Radboud University Medical Center of Nijmegen (The Netherlands), and Reference Material Institute for Clinical Chemistry Standards (Japan), conducting a second interlaboratory method comparison, performing the IFCC International conventional reference measurement procedure (RMP) that is traceable to SI in accordance with ISO 17511. This second study, encompassing samples with FT₄ concentrations spread over the entire measurement range, will be used to establish the network. As the second study is ongoing, operational rules for the network are being established. Note, finalization of this second study has been delayed due to each lab internal priorities and responses provoked by the COVID-19 pandemic.

A2: 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 provides opportunities for using the protocol in other countries.

A3: 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. The request for approval by the ethics committee of the UGent is initiated. Feedback was delayed because of the ethics committee's prioritization of COVID-19 related submissions. Due to changing legislation, additional administration compared to the past is needed. All documents are being finalized and generalized so that similar requests in additional collection centres outside Belgium can be initiated.

A4: The stability study, initiated upon certification of the FT₄ and TSH harmonization/standardization panel in 2015 ended in 2020. Final FT₄ and TSH measurements were conducted by one of our industry partners. Data-analysis is ongoing.

B1: The committee successfully started a collaboration with the U.S. NIST to assess suitability of

potential reference materials for fT4. NIST materials were included in the inter-laboratory study.
B2: CDC Clinical Standardization Programs is planning to launch a standardization program for fT4 in spring 2021, which is aligned to the IFCC reference system.

C1: 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 in Nepal. Currently waiting for the Nepal society of clinical chemistry to reach back on next steps.

C2: The committee provided technical assistance to colleagues in Japan to help with establishing harmonized reference intervals for TSH. These intervals will be recognized by regulatory bodies and clinical stakeholders.

C3: The committee successfully established contact with PIs of the EUThyroid project to help with harmonizing/standardizing fT4 and TSH tests used in the study. Committee will reach out to EUThyroid once the inter-lab study is completed and the reference laboratory capacity is established.

C4: The committee successfully reached out to PIs in Croatia to help with harmonizing reference intervals for TSH. Approaches to help the PIs with their study are currently being explored.

C5: 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.

C6: The American College of Pathologists is using an accuracy-based survey for thyroid function tests with reference values for fT4 aligned to the IFCC reference system.

D1: The website C-STFT is currently under revision; it is the intention to revise and make it more accessible for a broader type of readers. Progress was delayed due to COVID-19 changes in priorities. Revisions is planned to be finalized in 2021.

D2: A compilation was made from the previous outreach efforts to stakeholders to inform them about changes in assay calibration and to collect information about possible concerns related to these changes. This compilation was shared with the committee members and has been made available on the C website for the broader public.

D3: A paper about the work of the committee was accepted for publication. Revision of the manuscript is currently ongoing.

List planned activities in 2021 for this Term of Reference: A1: Finalize interlaboratory study for fT4 and establish formal network of reference laboratories. This includes network protocols and ISO compliant SOPs.

A2: Finalize collection protocol for TSH follow-up panel and start collection of TSH specimens.

A3: Revise TSH harmonization protocol, if needed, based on findings for the harmonization efforts performed in Japan.

A4: Publish findings from the interlaboratory studies, and if agreeable with colleagues' from Japan, on the TSH harmonization.

B1: Coordinate with national standardization and harmonization efforts, such as the CDC Clinical Standardization Programs.

B2: Reach out to EQA providers to ensure accuracy-based surveys are aligned to the IFCC reference system.

B3: Complete evaluation of NIST materials and publish findings.

C1: Develop approaches/protocols to align ongoing reference interval activities to the IFCC reference system as interim until assays are standardized/harmonized.

C2: Provide technical assistance to national efforts developing reference intervals or conducting studies that may be used for developing reference intervals.

D1: Conduct meetings or workshops at national conferences such as the annual AACC meeting to promote standardization of fT4 and harmonization of TSH.

D2: 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.

D3: Conduct one in-person committee meeting outside major meetings. In addition, focus meetings at conference such as Worldlab on outreach and education.



D4: Educate stakeholders on the upcoming changes in FT4 calibration (targeted information on website and at scientific meetings and other communication channels).

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

During 2020 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 Imperial School of Medicine has provided the materials for a second commutability study. The reagent kits and the patient samples are already in the JRC. The antibodies for value assignment have been purified. Developing reference materials for IgG and IgA anti TTG antibodies is progressing – the aim is to make one material with values for both antibodies assigned. The candidate materials also have good titres of antibody to deamidated gliadin and this may be a further standardization project for the future. Initial commutability studies are complete and the bulk serum is in the JRC waiting for normal on-site working to resume, then the processing will start with the delipidation stage and then back on track for the RM preparation and evaluation. As a result of the difficulties in assigning mass units to the anti B2 glycoprotein 1 material the C explored the possibility of working with NIBSC and having the material approved by the WHO. The preliminary application to the WHO through NIBSC was approved in October 2020 and progressing with submitting the full application and documentation. Ultimately, the value will be assigned to the material prepared by the JRC in arbitrary units (optimally IU/ml but it may be needed to accept values in U/ml). NIBSC will “curate” the material with only a small number of vials available from NIBSC. Enquiries and sales will be redirected to the JRC. Considering the difficulties and lack of commutability of the calibrant material that should have been used for the formal value assignment of this reference material, this is the best way forward.

Term of Reference 3. *To identify or produce commutable materials that could be used as interim calibration material for autoantibody assays.* **Accomplishments include:** Progress on the IgG and IgA anti TTG materials is slow due to the global pandemic but once normal working resumes, the C will explore other antigens on this material e.g., antibodies to deamidated gliadin. **List planned activities in 2021 for this Term of Reference:**

FDA and CE: There remains significant reluctance by companies in adopting the reference materials for IgG anti MPO and IgG anti PR3 and the global pandemic has given companies another reason not to change. However, personal communication with some companies suggests that they may look to the CRMs when developing new versions of the IgG anti MPO and IgG anti PR3 methods; **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 future activities. Until the use of ERM-DA476/IFCC and ERM DA 483/IFCC is embedded into the 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:** EQA providers have been diverted from normal operations towards the EQA schemes for COVID antibodies; however, the C continued discussion with UKNEQAS and the Royal College of Pathologists of Australasia Quality Assurance Programs



but the progress depends on some co-operation from companies to enable the C 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.

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

During 2020 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: A pilot study has been performed. Prof. Cathie Sturgeon (CS) prepared samples enriched with the IS 95/646 and has sent them to Prof. Etienne Cavalier's (EC) laboratory. EC also prepared other matrices (Roche universal diluents, Sigma, Horse serum, patient pool Abbott diluents) to check the commutability of the Standard. For each concentration tested, 20 native serum samples were used to bracket it. The assays used were Roche, Abbott (2nd generation), DiaSorin and Fujirebio (3rd generation). Results were presented during a virtual meeting on June 29th. Essentially, the pools prepared by CS are mostly commutable, but the limits used to make them commutable are quite broad (+/25%) which "consumes" the capital of total error available based on biological variation of PTH. Nevertheless, this is the state of the art and it was proposed to move on with other methods. CS is preparing new pools that will be tested by as many methods as possible in EC's lab. Samples should be received in December 2020 or January 2021. **Liaison with other societies:** EC contacted K-DIGO representatives, but K-DIGO does not endorse any other initiative. The Council of ERA-EDTA (European Renal Association-European Dialysis and Transplantation Association) has endorsed the Committee and Standardization projects. **List planned activities in 2021 for this Term of Reference:** Achieve and finalize the commutability study. Return to working on PTH RMP.

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

- **PINP:** EC and Prof. Vincent Delatour (VD) have designed a commutability study by enriching various matrices with PINP provided by IDS. Methodology is the same as the one used for PTH. The Roche Universal Diluent has been found to be commutable for IDS, Roche and Orion PINP assays. Results were presented to the Committee by VD during the virtual meeting of June 29th. In addition:

- A manuscript has been accepted in CCLM.
- An equation allowing harmonization has been proposed.
- A commutability study is ongoing.
- A study on biological variation of PINP and other markers on remaining samples from EuBIVAS has been performed, and a paper has been published (see Publications Section below).
- An Editorial on PINP has been written.

List planned activities in 2021 for this Term of Reference

- Evaluate the opportunity to develop a RMP for PINP.
- Prepare commutable standard to calibrate assays (with the support of the LNE).
- Submit the various papers mentioned.

- **CTX:** A paper on the multicenter study has been written, but was put on hold because of the poor quality of the results. Additional studies were performed which provided clarity as to what happened. EC has proposed a new version of the manuscript. This version has been approved by all authors (and had already been analyzed by the SD). He sent it to IDS and Roche and will submit it by the end of 2020.

A study on biological variation of CTX on remaining samples from EuBIVAS has been performed and the paper has been published in Osteoporosis International.

Manufacturers should work to improve the issues observed during the multicentre study. This is mandatory for the future of the marker. - **Other bone biomarkers:** Different other biomarkers





have been measured in Liege to evaluate their biological variation: osteocalcin, FGF-23 and uCuP-MGP. The manuscript has been accepted in Osteoporosis International. **List planned activities in 2021 for this Term of Reference:** Consider manuscripts for the other bone markers.

Term of Reference 3. Vitamin D metabolites assay standardization. Accomplishments include: The manuscript on measurement uncertainty has been submitted and is currently under review. There have been some difficulties to recruit pregnant women due to the COVID situation for a follow-up study. **List planned activities in 2021 for this Term of Reference:** Complete the study on VTD in pregnant women.

■ Working Group

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

During 2020 ongoing progress towards WG-HbA₂ terms of reference included:

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

Accomplishments include: A paper describing the principle of the RMP based on isotopic dilution and mass spectrometry and its preliminary validation was published in 2018 in Clin Chim Acta. The characterization of purity and content of the recombinant hemoglobins (rHbA and rHbA₂) recently purchased by the JRC (Geel, BE) was performed by Dr. Arsene (PTB, DE) in collaboration with the JRC lab of Dr. G. Auclair (JRC). After a purification step of the rHbA₂, needed because of a contamination from a E. coli protein, two stock solutions have been prepared. **List planned activities in 2021 for this Term of Reference:** The stock solutions of the rHbs will be distributed to the four reference laboratories (2 in Europe and 2 in China) and a ring trial will be performed to assess the robustness of the RMP implemented in the four MS laboratories. 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: Before the summer of 2020 a set of 10 hemolysates were prepared at the JRC from 10 different blood units, from non-carriers and beta-thal carrier subjects, shipped to Belgium from the unit in Milano. The final step of the lyophilization was not performed due to Covid-19 lockdown in Belgium. **List planned activities in 2021 for this Term of Reference:** A set of approximately 3000 vials per level will have to be prepared at JRC and processed in order to release the Certified Reference Materials, according to the procedures of the Center. Some of the components of the WG will take part in the validation and value assignment activities.

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

During 2020 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: Ongoing restrictions during 2020 have impacted plans set out during 2019. The CDT Working Group has provided support via Zoom meetings to a candidate laboratory from Italy with great potential of joining the network for using the RMP.

List planned activities in 2021 for this Term of Reference: Continue to raise awareness of the IFCC approved RMP through online meetings and electronic communications when approached by current CDT users still hesitant to switch from classic to CDTIFCC. Actively seek further participants globally as candidate laboratories with progression to network status through participation in the annual IFCC CDT 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. Weykamp's MCA NL laboratory section now overseen by Dr. Carla Siebelder.

Laboratory performance is assessed on a pass/fail criterion and HPLC RMP performance is assessed in further detail by Dr Schellenberg. The 2020 Cycle took place during the first quarter of this year with participants' results submitted by end May. Performance and participation were presented and discussed during the WG's annual meeting via Zoom on 06 August 20. There were five successful IFCC networked laboratories this year, with one candidate lab 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 2021 for this Term of Reference:** Cycle of blind IFCC samples will take place during late spring / early summer 2021, following prior requests which will be sent to all prospective participants (network labs and manufacturers). Results will be presented and discussed during the WG CDT meeting anticipated during the EuroMedlab Munich event.

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. A further CDT manufacturer participated in the standardization process and passed this year's blind study. In addition, WG members have been in discussion with another manufacturer towards reviewing their approach to improve alignment closer to CDTIFCC. **List planned activities in 2021 for this Term of Reference:** Continue to assist the remaining commercial participants in successfully achieving the CDTIFCC goal. The WG will endeavour to support the definitive 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. **List planned activities in 2021 for this Term of Reference:** To maintain the above activities ongoing in other countries.

Additional Information

- **Providing scientific support for the production and delivery of authorized RMP**
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
- **JCTLM nomination**
Work in progress

- **WG-Standardization of Albumin Assay in Urine (WG-SAU) (a joint committee with the Laboratory Working Group (LWG) of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), USA; Chair: Jesse Seegmiller (US)**

During 2020 ongoing progress towards WG-SAU terms of reference included:

Terms of Reference 1. *The project objectives are to: 1.) Develop a candidate reference measurement procedure suitable to analyze native patient urine specimens; 2.) Use and apply Standard Reference Material in the candidate reference measurement procedure to value assign the calibration of the candidate reference measurement procedure.* **Accomplishments include:** Reference Materials for urine albumin: Standard Reference Material SRM 2925 Pure Albumin became available for purchase from the National Institute of Standards and Technology (NIST) in 2020. SRM 3666 in Frozen Human Urine is in preparation. **List planned activities in 2021 for this Term of Reference:** Value assignment of the candidate reference measurement procedure calibrators was planned, but halted due to the SARS-CoV-2 pandemic.

Terms of Reference 2. *Perform comparison studies on 40 urine specimens for urine albumin*





using the reference measurement procedures from Mayo Clinic (LC-MS/MS), NIST (LC-MS/MS), Singapore (LC-MS/MS) and the University of Minnesota Advanced Research and Diagnostic Laboratory (LC-MS/MS).

Accomplishments include: The comparison study plan was agreed upon by the LWG. This consisted of disseminating 40 urine specimens amongst the different laboratories to analyze and compare results.

List planned activities in 2021 for this Term of Reference: Comparison studies were halted due to the SARS-CoV-2 pandemic.

Term of Reference 3. Validation metrics needed for a liquid chromatography tandem mass spectrometry (LC-MS/MS) candidate reference measurement procedure. Accomplishments include:

Validation of the University of Minnesota's LC-MS/MS candidate reference measurement procedure was performed. This measurement procedure examines 6 human serum albumin peptides and evaluates two MS/MS MRM transitions per peptide after proteolysis treatment with trypsin. In addition, the corresponding ¹⁵N internal standard peptides were monitored using MRM. The validation encompassed the following experiments: Intra-assay imprecision, inter-assay imprecision (N=21 days), recovery, carryover, stability (Day 0-28 at room temperature, 4-80C, 200C and -800C), sample comparison, interference and specificity studies. Each peptide was validated independently over a period of 21 separate days, where the imprecision was determined to be between 4-8 %CV throughout the calibration range of 3-200 mg/L. Three quality control urine specimens were also examined. **List planned activities in 2021 for this Term of Reference:**

Given the findings from this validation study it was agreed upon through consensus by the NIDDK-LWG it would be necessary to perform replication to improve imprecision < 5 %CV. This was an empirical determination and the group decided the RMP final validation would require N=4 replicates to meet the imprecision requirements for a JCTLM certified measurement procedure. Moving forward with this particular candidate reference measurement procedure will involve 4 replicates of all calibrators, quality controls and specimens. Additional validation studies surrounding 4 replicate analyses were halted due to the SARS-CoV-2 pandemic.

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

During 2020 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:

The COVID-19 situations halted the activities in 2020. **List planned activities in 2021 for this Term of Reference:** Finalization of the protocol and testing of NIST SRM 1949 with various company assays and assignment of PAPP-A value for this material. 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.

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

During 2020 ongoing progress towards WG-HbA₂ terms of reference included: The overall goal of the WG-GH is to achieve standardization of growth hormone through secondary reference materials and a reference measurement procedure. A long recognized problem in the reliable measurement of GH is the lack of standardization of different assays that are currently used. Standardization of the GH assays has been hampered by the unavailability of a commutable certified reference material and of an acknowledged reference method. The WHO standard IS 98/574, against which all current assays are calibrated, was found not to be commutable when tested in different matrices. To address these issues, the WG is currently organizing a commutability study at two reference laboratories using LCMS/MS. The difference in bias will be compared with a pre-determined criterion based on medically relevant differences. The goal is to determine how close the bias of a RM (reference material) and the CS (clinical representative

samples) are to each other. A RM is commutable if the systematic difference, or bias, for the RM and the average bias for the CS between two measurement procedures (dRM), at the RM level, is within an agreed criterion. A maximum of dRM, named the commutability criterion (C), is already decided. Once the reference material and reference measurement procedure is finalized the following commercial assay will be studied:

| | |
|----------------|------------------|
| Siemens | Immolute 2000/XP |
| DiaSorin | Liaison |
| BeckmanCoulter | Access/DXi |
| IDS | Isys |
| Roche | Cobas/Elecsys |

- **WG-Standardization of Insulin Assays (WG-SIA);** Chairs: Mike Steffes (US) and Jesse Seegmiller (US)

During 2020 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:** Established a RMP for insulin at the University of Minnesota. Completed with a manuscript in process. **List planned activities in 2021 for this Term of Reference:** Manuscript in process.

Term of Reference 2. *Review accomplishments of other investigators in the Working Group.* **Accomplishments include:** Anecdotal interactions. **List planned activities in 2021 for this Term of Reference:** Interaction among all groups by a virtual meeting, reviewing accomplishments in each laboratory establishing a RMP.

Term of Reference 3. *WHO Reference Material for Insulin.* **Accomplishments include:** None. **List planned activities in 2021 for this Term of Reference:** During planned virtual meeting status of latest/current Reference Material will be discussed.

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

During 2020 ongoing progress towards WG-TNI terms of reference included:

Term of Reference 1: *Write and submit a proposal to the USA's National Institutes of Standards and Technology (NIST) for funding collection of whole blood samples from normal volunteers. These samples are to be processed to lithium heparin plasma and used as a diluent for creation of RM 8121.*

Accomplishments include:

- The proposal for grant funding was completed and submitted to NIST in early 2020. The proposal was written with the guidance and assistance of Drs. Phinney and Lowenthal from NIST.
- Unfortunately, although receiving approval from the Ethics Committee, due to the COVID-19 pandemic collections could not begin. This is because all non-COVID-19 research was halted from March through September 2020 at University of Maryland School of Medicine.
- Funding for the whole blood collection was approved by NIST in the early summer of 2020.
- Currently, whole blood is being collected that is being processed to lithium heparin plasma and will be utilized as a diluent for blending with elevated cardiac troponin I samples from MI patients. These elevated samples have been collected and are archived at -70°C in monitored freezers located at the University of Maryland School of Medicine. The blending will be done to produce a set of 4 samples that will be termed RM 8121.
- All volunteers for the normal plasma are being tested for infectious diseases including Hep A, B, C and HIV. All samples used must be negative.
- Each subject will also be tested for anti-cardiac troponin I antibodies.
- To date, whole blood has been collected from 25 normal volunteers. These samples have been processed to plasma and are archived at -70°C. Approximately 50% of the





amount of samples required for blending into the cTnI concentration series of 4 samples that will be RM 8121 has been collected so far. **List planned activities in 2021 for this Term of Reference**

- Unfortunately, the COVID-19 pandemic shut down all research activities at the University of Maryland from March to September, 2020, and re-started with a phased approach. The COVID-19 pandemic also impacted NIST's activities. As a result, the WG-TNI fell behind its time-lines for accomplishing planned 2020 activities. One particularly regrettable outcome of the COVID-19 delay was that the C was unable to submit an article to the SD's special collection/issue of the IFCC journal describing its work. Most of the WG-TNI's activities are now transferred to 2021, and are as follows:
 - Continue to work closely with Drs. Lowenthal, Phinney, Robert Payne and knowledgeable members of the laboratory community to produce RM 8121. The endpoint is making this resource openly available to all in the laboratory medicine field, worldwide through NIST.
 - 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 after review by the SD.
 - Design and if time allows, conduct a round robin study with RM 8121 and initiate validation and characterization among commercial high sensitivity cTnI assays. This information will be intended as a step toward harmonizing and to assess the possibility of cTnI harmonization.

Term of Reference 2: *Assist NIST in developing the design specifications, and the Request for Proposal for blending the lithium heparin diluent with elevated cTnI samples from MI patients and producing RM 8121 and transfer into cryo-vials for long term storage at NIST.*

Accomplishments include:

- After meeting with stakeholders and NIST, the WG-TNI determined that the optimum RM should consist of a series of sample vials with increasing cTnI concentrations. The rationale was because such an RM would allow harmonization of the dynamic range such as is characteristic of temporal cTnI release after myocardial injury.
- Thus the NIST RFP specifies that RM 8121 will be a set of four (4) samples, labelled Vials A-D that will have increasing concentrations of cTnI. For the specification, the values 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 linear range, i.e. ~25-fold higher than Level C, target concentration, ~6000 ng/L (range 5,000 ng/L – 7000 ng/L).
- It was determined after meeting with stakeholders that the volume of each vial in the set A-D should be 0.7 mL.
- It was determined that 10,000 to 16,000 vials must be produced for RM 8121.
- There were a number of points at which the concentration of cTnI must be checked during production to assure the series of vials comprising RM 8121 are each at their specified concentration.
- The RFP was made public; several organizations responded with bids for RM 8121 production.
- The contract for blending the lithium heparin plasma and high concentration cTnI samples into pools for RM 8121 vials A-D was awarded.
- Solomon Park Inc. in Washington State, a company that NIST has previously worked successfully, was awarded the contract for blending the elevated cTnI samples and lithium heparin diluent to produce RM 8121. Solomon Park will also aliquot vials A-D into

their respective vials to form the RM 8121 sample sets. **List planned activities in 2021 for this Term of Reference:**

- The WG-TNI and NIST will collaborate with Solomon Park Inc. in Washington State to design each step in blending the elevated cTnI samples and lithium heparin diluent for RM 8121 production. The team will also design workflow for aliquoting of RM 8121 materials into vials A-D.
- The WG-TNI and NIST will be present on site to monitor the production of RM 8121.
- The blending and creation of the RM 8121 sets of vials A-D should be completed in the fall of 2021.
- Design of the round robin with hs-cTnI manufacturers will be completed by 31-December-2021
- Depending on timing of events, the shipment of RM 8121 may be initiated at the end of 2021 or early in 2022.
- Proposal submitted to the 2021 AACC Annual Meeting for Session on the production for RM 8121 and path forward.
- Presenting data at EUROMEDLAB, Munich on RM 8121.

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

During 2020 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:

- Round Robin / Commutability study of blood Nfl (plasma and serum) has been performed, comparing data from seven immunoassay platforms.
- Pilot Round Robin study of candidate reference methods for CSF tau, based on mass spectrometry, has been performed.
- Round Robin study of candidate RMPs for CSF amyloid beta 1-40 is ongoing.

List planned activities in 2021 for this Term of Reference: Continuation of the above.

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

- **WG – Commutability in Metrological Traceability (WG-CMT);** Chair: Greg Miller (US)

During 2020 ongoing progress towards WG-C terms of reference included:

Term of Reference 1: *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 2020. **List planned activities in 2021 for this Term of Reference:** None unless a request is received.

Term of Reference 2: *Establish procedures to use commutable reference materials, and to correct for non-commutability bias, in a metrological traceability hierarchy.* **Accomplishments include:** Report published (see publications section). **List planned activities in 2021 for this Term of Reference:** None; completed

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 in a metrological traceability hierarchy or for surveillance of harmonization/standardization status of results from different measurement procedures.*

Accomplishments include: Ongoing. **List planned activities in 2021 for this Term of Reference:** This item will continued to be developed by the WG.

Term of Reference 4: *Provide recommendations on verifying commutability for replacement batches of a reference material.* **Accomplishments include:** Not started. **List planned activities in 2021 for this Term of Reference:** None planned.

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





During 2020 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 MoU between IFCC and IATDMCT was signed and became effective July 2020. This MoU allows both parties to run the WG-ID as a joint WG, which makes sense, since the WG-ID members are also well organized in the “Immunosuppressive Drugs Committee” of the IATDMCT (www.iatdmct.org/scientific-committees/scientific-committees-immunosuppressive-drugs.html). From 2021 on, the activities of the WG-ID will be also shared with the ISD committee of the IATDMCT.

The critical evaluation of the two possible reference methods published (Grote-Koska et al, Taibon et al.) was postponed from 2020 to 2021 due to the pending JCTLM acceptance process of the Taibon et al. (<https://doi.org/10.1016/j.clinbiochem.2019.11.006>) method. With the end of January 2021 the Taibon et al. method covering cyclosporine A, tacrolimus, sirolimus and everolimus was published by the JCTLM. **List planned activities in 2021 for this Term of Reference:** Continue on these activities and to focus on the Terms of Reference as outlined.

Term of Reference 2. Measurement comparison initiative. **Accomplishments include:** Activities have been postponed for the time being. **List planned activities in 2021 for this Term of Reference:** To be defined.

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

During 2020 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 2020, the WG prepared an experimental strategy to prove equimolar digestion, which is an absolute requirement to establish traceability to SI though peptide-based quantitation. At the LUMC site, the behavior of peptides in alternative matrices was evaluated, and it was observed that a non-digested serum matrix is necessary. Further experiments for apo(a) have been delayed due to delayed delivery of materials due to COVID, and are now planned for 2021.

To improve the performance of the cRMP, new internal standard peptides were procured, which each have C-terminal labelled arginine or lysine. The MS transitions were updated accordingly. This results in more consistent performance of the internal standard peptides. Using these internal standard peptides, a new internal standard mixture that reflects average serum samples was produced, aliquotted and labelled and sent out to the three candidate reference laboratories. This mixture reduced the imprecision, particularly for apoA-I, as the concentrations variance was largest for this protein.

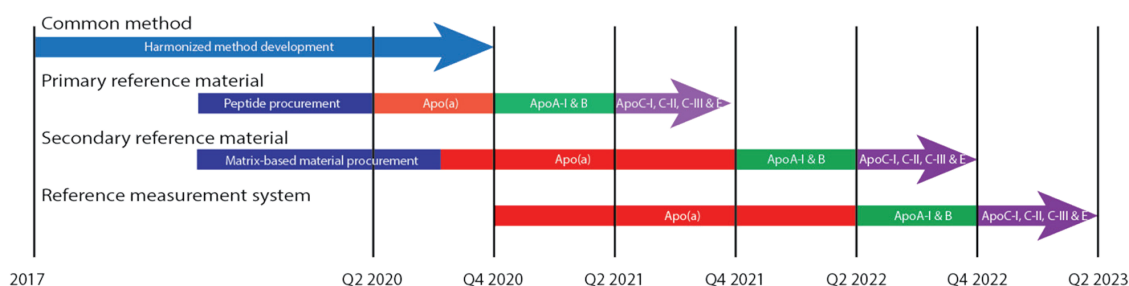
Besides the internal standard mixture, a novel system suitability sample was also produced, aliquotted, labelled and distributed. To further improve the precision of the cRMP, the LC gradient was optimized, which resulted in a reduction of the average CV over all peptides in the system suitability test from 6% to 4%.

Based on these improvements, the SOP has been updated and is now being used by the cRMP laboratories to measure the samples from the apo(a) commutability study. **Reference materials.**

A first batch of peptides to serve as primary reference materials for the apos A-I, B, C-I, C-II, C-III and E was procured, and an initial purity assessment was performed on these peptides. The purity of the peptides is sufficient for them to serve as candidate primary reference materials, and a larger batch of these peptides will now be ordered. **List planned activities in 2021 for this Term of Reference: Reference measurement procedure:** A manuscript on the

development of a harmonized LC-MS based reference method, including results of the ring trial performed during the first apo(a) commutability study, as well as the fundamental choices made and performance of the method achieved is in preparation and expected to be finalized in Q1 2021. The final experiments to prove equimolar digestion of apo(a) will be performed before Q2 2021, while these experiments for apoA-I and B will be performed by Q4 2021. The laboratories will participate in the (2 or 3) commutability studies that are planned for 2021, and will provide support during the cRM characterization and stability studies. **Reference materials:** Second commutability assessment will be performed on the most promising apo(a) materials. Moreover, an initial commutability study to evaluate the potential of secondary reference materials for apoA-I and B will be conducted by Q2 2020, and a similar study for apos C and E is foreseen for Q4 2021. Procurement of large batch of peptide based primary reference materials for apos A-I, B, Cs and E will be done in Q1 2021. Full purity assessment will be performed for these peptides, stability will be assessed and values will be assigned before the end of Q4 2021.

Timelines



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: Native human serum samples have been secured from the Dutch NEO study, which consists of ~ 1500 individuals from the general population. It is planned to determine reference values in these individuals. Moreover, ~5000 obese individuals, at higher risk of developing CVD are included. The classical lipid parameters have been determined in these samples at baseline. The collection of 10-year follow up from patient health records, including cardiovascular endpoints has just been finalized. It is planned to assess the additional value of the apolipoprotein panel on top of the classical lipid panel in these individuals. Measurement of these samples at the LUMC has been initiated, and is foreseen to be finalized by the end of 2021. **List planned activities in 2021 for this Term of Reference:** The baseline samples of the NEO study will be measured using the LUMC apolipoprotein method. This method can be recalibrated against the cRMS once all parts are in place. The reference values will be determined in these samples, as well as the added value of the quantitation of apolipoproteins (a), A-I, B, C-I, C-II, C-III and E.

Besides the NEO study, study protocols will be developed to be able to investigate the added value of multiplexed serum apolipoprotein quantitation on top of traditional serum lipids in alternative studies.

Additional Information: There is currently lots of interest from both pharma and the IVD-industry in global standardization of serum apo(a), apoA-I and apoB and in the establishment of a multiplex Reference Measurement System for apolipoproteins, especially because the current WHO-IFCC reference materials are running out of stock and because new therapies for Lp(a)/apo(a) lowering are coming to the market.

Outreach: NHLBI in Bethesda, USA invited Drs. Hubert Vesper (HV) and Christa Cobbaert (CC) to a NHLBI workshop in November 2019. Consequently, the message of the upcoming SI-traceable IFCC RMS for apo's has been spread in the USA since that NHLBI meeting. Therefore,



HV and CC were recently re-invited to participate in a National Lipid Association (NLA) Think Tank meeting on Lp(a)/apo(a) standardization.

The lab of Professor Marcovina at University of Washington, the founder of the WHO-IFCC RMS for apo(a), ApoA-I and apoB no longer exists, which means that the current ELISA gold standard method for the apo's is no longer in place. The remaining Reference Materials have been given to CDC (Dr. Hubert Vesper's lab). Therefore, the necessity for establishing a sustainable RMS and a network of calibration laboratories is now greater than ever. **Funding:** For continuing the IFCC WG-activities, active fund raising has to restart in 2021.

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

During 2020 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 2020 a final draft SOP for the RMP of pancreatic amylase was developed by the working group. Objecting an interlaboratory comparison different materials were acquired:

- Two human serum pools prepared/provided by the Calibration laboratory in Hannover (Dr. Grote-Koska)
- Two processed materials prepared/provided by MCA Lab (Dr. Weykamp)

Essential reagents were provided by Roche Diagnostics (Dr. Weber). Materials and reagents were distributed and an interlaboratory comparison was performed to check the status quo of the reference system. Four reference laboratories were involved: RfB-Calibration Laboratory 2 (Dr. Denis Grote-Koska, Germany), Laboratori de Referència d'Enzimologia Clínica (Dr. Francesca Canalias Reverter, Spain), LabWest – HagaZiekenhuis (Dr. Marjan Veuger, Netherlands), Roche Diagnostics (Dr. Friederike Weber, Germany).

The results are convincing, a full evaluation is forthcoming and will be followed by investigations of uncertainty components to build the uncertainty budget. **List planned activities in 2021 for this Term of Reference:** Evaluation of the inter laboratory comparison study is planned. The WG has to determine if further optimization of the RMP with subsequent investigation is necessary. Otherwise a completion of verification of the procedure is planned prior to publication.

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

Accomplishments include: No further activity is planned prior to finalization 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: In 2019 characterization studies of the new ERM reference material ERMAD456/IFCC of pancreatic amylase were performed by well-respected sites of WG-PE and others. Stability studies were performed in the calibration laboratory in Hannover for EC-JRC. The material is now released and available. In 2020 investigations concerned to stability monitoring are performed in the RfB-calibration laboratory in Hannover (Dr. Grote-Koska). **List planned activities in 2021 for this Term of Reference:** Activities are depending on the needs of the JRC. So far no plans were communicated.

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

During 2020 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 harmonization/ commutability study protocol was written and ratified by the IFCC-FIT WG. The study commenced in November 2020. Analytical work is being carried out by the research team lead by Dr. Sally Benton at the bowel cancer screening hub in Guildford.

List planned activities in 2021 for this Term of Reference: The aim is to complete the analytical aspect of this study in early 2021. Results will be reviewed and a decision made as to whether

a commutable standard has been found and whether FIT methods can be harmonised.

Term of Reference 2. *To standardize the pre-analytical phase.* **Accomplishments include:** A decision was made in 2020 that this is not something the working group should focus on. The pre-analytical phase is vast and a lot of the factors that cause pre-analytical variation are manufacturer specific and cannot be changed.

List planned activities in 2021 for this Term of Reference: Remove from the Terms of reference for the group.

Term of Reference 3. *To establish EQA and 3rd party IQC programmes.* **Accomplishments include:** No progress made in 2020. **List planned activities in 2021 for this Term of Reference:** The FIT-WG will aim to engage with EQA companies to obtain guidance on requirements in terms of EQA to help provide the recommendations formed from the group.

Term of Reference 4. *To determine impact of assay interference of Hb variants and other factors*

Accomplishments include:

The group made a decision that there is not much further that can be done on this so it will be removed from TOR. **List planned activities in 2021 for this Term of Reference:** Remove from the Terms of reference for the group.

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

During 2020 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:** A paper on pre-analytical aspects of cfDNA analysis was written and submitted to IFCC for approval. The approved manuscript was submitted to CCA Q4 2020. **List planned activities in 2021 for this Term of Reference:** Adjust manuscript according to reviewers.

Term of Reference 2. *Setting up proficiency testing for cfDNA.* **Accomplishments include:** EQMN collaboration not further investigated. **List planned activities in 2021 for this Term of Reference:** Participation in second round proficiency testing to identify additional needs.

Term of Reference 3. *Organizing international workshops.* **Accomplishments include:** An international cfDNA workshop in The Netherlands as well as at the ESPT Summerschool in Kile were cancelled due to COVID-19. **List planned activities in 2021 for this Term of Reference:** Organize a cfDNA workshop at the SANTORINI/ESPT congress in Santorini (May 2021), at the ESPT Congress (Rome, Oct 6-7, 2021) and in Utrecht (Netherlands). Uncertain if COVID allows meetings. For the Rome meeting, a virtual alternative will be organized. **Term of Reference 4.** *Defining grant proposals to address unmet needs.* **Accomplishments include:** Not started yet. **List planned activities in 2021 for this Term of Reference:** To be determined.

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

During 2020 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). For the protein-based primary calibrator, further experiments are needed to confirm the identity of low abundant impurities by top-down approaches and correct raw amino-acid analysis results.
- In order to improve method's sensitivity, sample preparation was thoroughly optimized



through development of different separation methods to extract PCT from the other proteins. The limit of quantification is now 0.25 ng/mL. Method validation is now completed and is the subject of two scientific publications. The first paper was submitted to Analytical and Bioanalytical Chemistry in Dec 2020. The second publication is under preparation and will be submitted by end 2020 or early 2021.

List planned activities in 2021 for this Term of Reference:

- Finalize purity assessment and value assignments of the protein-based primary calibrator.
- Investigate possible approaches to improve the limit of detection.

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

- Ten external quality assessment scheme (EQAS) providers from eight different countries were approached to share results of their PCT EQAS : ANSM in France, CSCQ in Switzerland, Equalis in Sweden, Instand and RfB in Germany, Labquality in Finland, Probioqual in France, RCPA in Australia, SKML in The Netherlands and WEQAS in the UK. Between 2014 to 2020, 2220 routine laboratories conducted 27500 PCT measurements using 137 EQA materials which PCT concentration ranging from 0.05 ng/mL to 43.66 ng/mL (median 3.02 ng/mL). Different types of serum-based EQA materials were used: fresh pools not spiked with exogenous PCT, frozen materials with and without spiking with exogenous PCT, lyophilized materials with and without spiking with exogenous PCT. The need to improve comparability of PCT measurements was evaluated according to between-lab CV%. The mean between lab CV% was 15.6% but greatly varied across EQA Schemes. In the best cases, a between lab CV of 6-8% was observed, suggesting that comparability of PCT results is quite satisfactory but in other surveys, between lab CVs of 20-25% were observed, suggesting that comparability of PCT results is poor and must be improved. As commutability of EQA materials was not evaluated, it can be speculated that differences in estimates of between lab agreement is (at least partially) due to variable commutability levels of the EQA materials. This confirms the need to evaluate commutability of EQA materials before a conclusion can be made regarding the need to improve comparability of PCT assays.
- Due to the coronavirus crisis, collection of large single donation in the lab of Prof Tsatsanis was stopped between March and May and then resumed in June. So far, 23 large single donations were collected but only 10 of these have a volume sufficient to be measured by all immunoassays. In parallel, small single donations (leftovers) were collected with the objective to prepare pools that will be used as EQA materials which commutability will be evaluated: 123 samples were collected in the lab of Prof Tsatsanis and 450 samples were collected in the lab of Dr Dupuy. Samples collection will soon be expanded thanks to partners of EMPIR project SEPTIMET.

List planned activities in 2021 for this Term of Reference:

- 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.
- The design of the study will be finalized with a focus on the following points:
 - 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
 - determine in what labs measurements will be conducted
 - invite EQA providers sharing their materials to include these in the study

Term of Reference 3. *Evaluate the need for standardization of PCT assays. Accomplishments include:*

- EQA data were gathered (see ToR #2) and a review of all published correlation studies was



conducted.

- The ICHCLR identified PCT standardization as high priority with high clinical impact
- Consultation of IVD manufacturers was initiated and revealed 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 stable anchor reference method could be helpful to monitor 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 2021 for this Term of Reference: Organize a commutability study coupled with a correlation study:

- 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 2021 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 concentrations 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 2021 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 on recalibrating their assays

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

During 2020 ongoing progress towards WG-CDT terms of reference included:

Term of Reference 1. Work package 1 (WP 1): *Establish a Traceability Chain to a Defined Measurand Definition of a Traceability Chain: Establish traceability of glucose values obtained by continuous glucose monitoring (CGM) to materials and methods of higher metrological order. Traceability is a prerequisite for an appropriate assessment of accuracy and measurement uncertainty.*

Accomplishments include: Discussions about background information and the methods, performance of one conference call and one on-going e-mail conversation, preparation of a pre-final consensus document. **List planned activities in 2021 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): *CGM Analytical Performance: Procedures & Metrics*

1. Establish procedures suitable for assessment of analytical performance of CGM systems
2. Establish metrics and corresponding minimum acceptance criteria for the analytical performance of CGM systems.

Accomplishments include: Discussions about background information and the methods, performance of one conference call and one on-going e-mail conversation. **List planned activities in 2021 for this Term of Reference:** Further discussions and input to this work package via conference calls and via e-mail. Next virtual meeting will take place in February 2021.

Term of Reference 3. Work package 3 (WP 3): *Work with ISO on a New CGM Guideline Establishment of 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 the International Organization for Standardization (ISO) is interested: The working group is intended to cooperate with ISO to define acceptable procedures and acceptance criteria used to assess analytical performance criteria of CGM systems, with similar scope as that of ISO 15197, which defines procedures and acceptance criteria for systems for self-monitoring of blood glucose. In the future, CGM will also play a role in hospitals. Criteria for the use in in-clinic settings need to be established as well. **Accomplishments include:** Internal discussions via a conference call and via e-mail conversation which is on-going. **List planned activities in 2021 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).

Publications by Committees and Working Groups:

C-MD:

- Payne DA, Russomando G, Linder MW, Baluchova K, Ashavaid T, Steimer W, Ahmad-Nejad P; IFCC Committee for Molecular Diagnostics (C-MD). **External quality assessment (EQA) and alternative assessment procedures (AAPs) in molecular diagnostics: findings of an international survey.** Clin Chem Lab Med. 2020 May 8:/j/cclm.ahead-of-print/cclm-2020-0101/cclm-2020-0101.xml. doi: 10.1515/cclm-2020-0101. Online ahead of print. PMID: 32383687
- Ahmad-Nejad P, Ashavaid T, Vacaflares Salinas A, Huggett J, Harris K, Linder MW, Baluchova K, Steimer W, Payne DA, IFCC Committee for Molecular Diagnostics (C-MD). **Current and Future Challenges in Quality Assurance in Molecular Diagnostics** – in Revision; submitted to CCA

C-TLM:

- The results of RELA2020 are published on the website (<http://www.dgkl-rfb.de:81>).

C-RIDL:

- Ozarda Y (as one of the co-author in a related-review article that has been published in Adv.Lab. Med): **Big data and reference intervals: rationale, current practices, harmonization and standardization prerequisites and future perspectives of indirect determination of reference intervals using routine data** (<https://doi.org/10.1515/almed-2020-0034> | Published online: 07 Aug 2020).

C-STFT:

- Vesper HW, Van Uytfanghe K, Hishinuma A, Raverot V, Patru MM, Danilenko U, van

Herwaarden T, Shimizu E. **Implementing reference systems for thyroid function tests – A collaborative effort.** Submitted to CCA

In preparation

- Ribera A, Zhang L, Dabbs-Brown A, Sugahara O, Poynter K, Van Uytvanghe K, Shimizu E, van Herwaarden T, Botelho JC, Danilenko U, Vesper HW. **Development of equilibrium dialysis ID-UPLC-MS/MS candidate reference measurement procedure for free thyroxine in human serum.**
- **Standard Operating Procedure “Reference Measurement Procedure for Determination of Free Thyroxine in Human Serum by Equilibrium Dialysis Isotope Dilution-liquid chromatography tandem mass spectrometry (ID LC-MS/MS)“.**
- Ribera A, Ribeiro CMB, Poynter K, Botelho JC, Van Uytvanghe K, Danilenko U, Vesper HW. **Preanalytical considerations for free thyroxine and triiodothyronine assays.**

C-HAT:

- Monogioudi, E., Martos, G., Sheldon, J., Meroni, P. L., Trapmann, S., Zegers, I. **Development of a candidate certified reference material for anti-beta 2 glycoprotein I IgG – commutability studies**, Clin Chem Lab Med 2021; 59(2): 325–332

C-BM:

- Cavalier E, Lukas P, Bottani M, Aarsand AK, Ceriotti F, Coşkun A, Díaz-Garzón J, Fernández-Calle P, Guerra E, Locatelli M, Sandberg S, Carobene A; European Federation of Clinical Chemistry and Laboratory Medicine Working Group on Biological Variation and IOF-IFCC Committee on Bone Metabolism Osteoporos Int. **European Biological Variation Study (EuBIVAS): within- and between-subject biological variation estimates of β -CTX, PINP, osteocalcin, intact-FGF 23 and uCuP-MGP - a cooperation between the EFLM Working Group on Biological Variation and the International Osteoporosis Foundation-International Federation of Clinical Chemistry Committee on Bone Metabolism.** 2020 Aug;31(8):1461-1470. doi: 10.1007/s00198-020-05362-8. Epub 2020 Apr 8. PMID: 32270253.
- Vasikaran SD, Bhattoa HP, Eastell R, Heijboer AC, Jørgensen NR, Makris K, Ulmer C, Kanis JA, Cooper C, Silverman S, Cavalier E. **Harmonization of commercial assays for PINP; the way forward.** Osteoporos Int. 2020 Mar;31(3):409-412. doi: 10.1007/s00198-020-05310-6.
- Cavalier E, Eastell R, Rye Jørgensen N, Makris K, Tournis S, Vasikaran S, Kanis JA, Cooper C, Pottel H, Morris HA; IFCC-IOF Joint Committee for Bone Metabolism (C-BM). **A multicenter study to evaluate harmonization of assays for N-terminal propeptide of type I procollagen (PINP): a report from the IFCC-IOF Joint Committee for Bone Metabolism.** Clin Chem Lab Med. 2019 Sep 25;57(10):1546-1555. doi: 10.1515/cclm-2019-0174.

WG-SHb₂:

- Mosca A, Paleari R, Hartevelde CL, on behalf of the IFCC ICSH. **Joint Working Group for standardization of HbA₂. A roadmap for the standardization of hemoglobin A₂.** Clin Chim Acta 2021; 512:185-90, doi.org/10.1016/j.cca.2020.11.008

WG-CMT:

- Miller WG, Budd J, Greenberg N, Weykamp C, Althaus H, Schimmel H, Panteghini M, Delatour V, Ceriotti F, Keller T, Hawkins D, Burns C, Rej R, Camara JE, MacKenzie F, van der Hagen E, Vesper H, for the IFCC Working Group on Commutability. **IFCC Working Group Recommendations for Correction of Bias Caused by Noncommutability of**



a Certified Reference Material Used in the Calibration Hierarchy of an End-User Measurement Procedure. Clin Chem 2020;66:769-78.



WG-ID:

Participation of several WG members (Seger, Langman, Kunicki, Pawinski, Wieland, Shipkova) in the preparation of the guidance publication: Bergan S. et al. **Mycophenolate Personalized Therapy: Consensus Report by the International Association of Therapeutic Drug Monitoring and Clinical Toxicology**. Therapeutic Drug Monitoring, 2021, in press.

WG-APO MS:

1. Cobbaert CM, Althaus H, Begcevic Brkovic I, Ceglarek U, Coassin S, Delatour V, Deprez L, Dikaios I, Dittrich J, Hoofnagle AN, Kostner GM, Kronenberg F, Kuklennyik Z, Prinzing U, Vesper HW, Zegers I, Ruhaak LR; IFCC Working Group for Standardization of Apolipoproteins by Mass Spectrometry (WG-APO-MS). **Towards an SI-Traceable Reference Measurement System for Seven Serum Apolipoproteins Using Bottom-Up Quantitative Proteomics: Conceptual Approach Enabled by Cross-Disciplinary/Cross-Sector Collaboration**. Clin Chem. doi: 10.1093/clinchem/hvaa239. *In press*.
2. Ruhaak LR, Cobbaert CM. **Quantifying apolipoprotein(a) in the era of proteoforms and precision medicine**. Clin Chim Acta. 2020 Dec;511:260-268. doi: 10.1016/j.cca.2020.10.010.
3. **A manuscript on the development of a harmonized LC-MS based reference method, including results of the ring trial performed during the first apo(a) commutability study, as well as the fundamental choices made and performance of the method achieved is in preparation and expected to be finalized in Q1 2021.**

WG-FIT:

- Benton SC, Symonds E, Djedovic N, Jones S, Deprez L, Kocna P, Auge JM, on behalf of the International Federation of Clinical Chemistry Faecal Immunochemical Test Working Group (IFCC FIT-WG). **Faecal Immunochemical Tests for Haemoglobin: Analytical Challenges and Potential Solutions**. Submitted to Clinica Chimica Acta journal:

WG-cfDNA:

- Danesi R, Lo YMD, Oellerich M, Beck J, Galbiati S, del Re M, Lianidou E, Neumaier M, van Schaik RHN, on behalf of the IFCC Working Group 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**. (CCA, revision in progress).

WG-PCT:

- Activities conducted by IFCC WG-PCT are described in a paper that was accepted early January 2021 for publication in the IFCC SD Special issue of CCA.
- Results of the PCT EQA schemes and an analysis of all published correlation studies are subject to a publication that was submitted to clinical chemistry in Dec. 2020. All EQA providers involved in the study are co-authors of the paper. The article is currently in revision.
- An article describing optimization of the sample preparation of the candidate reference method was submitted to analytical and bioanalytical chemistry in Dec 2020. The paper is currently under review.
- A second article describing the validation of the candidate reference method is under preparation and will be submitted early 2021.

WG-CGM:

- **Standardization process of continuous glucose monitoring: traceability and**

performance.

Published in Clinica Chimica Acta, 2021.

- **Continuous Glucose Monitoring – What should be optimized and considered in the future?**

Scientific short, submitted to American Association for Clinical Chemistry (AACCC), 2020.

Philippe Gillery, SD Chair and Joseph Passarelli, SD Secretary





EDUCATION AND MANAGEMENT DIVISION (EMD)

The EMD EC was supposed to meet on 2-3 April 2020 in Milan but the meeting was cancelled due to the COVID-19 Pandemic. The EMD EC met several times in 2020 via Zoom: Monday, June 22nd 2020; Tuesday, July 14th 2020 where a meeting was also held with Chairs of EMD Committees, Working Groups and Special Projects; Thursday, October 8th 2020 and Wednesday, December 2nd 2020.

Due to the establishment of new IFCC Task Forces, namely, Task Force on Global eLearning/eAcademy and Task Force on Global Lab Quality, the following EMD Committees and Special Project were terminated at the end of 2020 due to overlapping objectives and activities: Distance Learning (C-DL), Analytical Quality (C-AQ), Proficiency Testing (C-PT) and Developing Quality Competence in Medical Laboratories (DQCML). Many of the activities planned for 2020 by the EMD functional groups that involved face-to-face meetings/workshops and symposia were either postponed, cancelled or held virtually.

Prof. Leslie Lai's second and final term as the EMD Chair ended on 31st December 2020.


■ **Committees**

● **C-Clinical Molecular Biology Curriculum (C-CMBC);** Chair: Verena Haselmann (DE)

1. Execution of the 1st C-CMBC Advanced Course in Molecular Diagnostics that was held in Kuala Lumpur, Malaysia from 29th till 31st of January 2020. This course was organised in collaboration with Dr Raja Elina, President of the MACB. The programme and especially the in-silico training units (e.g. assay validation, evaluation of ddPCR results, evaluation of NGS data sets) were highly appreciated by the 28 participants.
2. The annual meeting of the C-CMBC could not take place due to the fact that the IFCC WorldLab in Seoul was postponed to 2022. A Committee meeting was held during the Advanced C-CMBC course in Malaysia as well as during the beginner's course in La Paz, Bolivia. We were able to rework the outline and protocols of the beginner's course and substantially improve the in-silico part. However, meetings with potential future applicant country representatives could not take place due to the current circumstances.
3. The C-CMBC Beginner's Course took place in La Paz, Bolivia, from 1st till 7th of March 2020. In total, 36 students (instead of usually 20) participated in the course. This course attracted a great deal of public attention due to the first reports of COVID-19 infections within Bolivia and the increasing interest in Molecular Genetics. Thus, the committee chair was invited to a TV interview together with the local host, Dr. Vacaflares. Additionally, all tutors were interviewed about genetics and the course which was broadcasted on TV and streaming platforms.
4. The 2nd C-CMBC Advanced Course that was supposed to have taken place in Turkey, had to be postponed until further notice. New organisation alignments will take place upon stabilisation of current health care situation.
5. A telephone conference and several calls between the C-CMBC members took place throughout 2020. Our new junior member Rodrigo Pessoa Rojas from Bolivia will apply for a poster presentation as part of the next WorldLab meeting.
6. A report of the IFCC Beginner's Course in La Paz was written in collaboration with the new junior member and has been published in the IFCC eNews.
7. As a result of the beginner's course in La Paz, Bolivia, the junior member will extend his specialisation in Genetics by undertaking a six-month attachment at the Institute of Clinical Chemistry of the University Hospital in Mannheim, Germany.
8. PUBLICATIONS: None

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

1. Further presentations have been completed following workshops and plenary lectures conducted in Malawi. These need to be formatted for the eAcademy.

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2. Workshops:
 - a. Workshop held in Lahore, Pakistan on 10th and 11th January 2020 in collaboration with DQCML. However, Prof Amann was unable to gain entry into the country and Annette Thomas was the sole IFCC representative delivering her own and Prof Amann's presentations. Annette Thomas also facilitated the workshop with the support of Professor Asim Mumtaz and conducted 3 laboratory visits on Day 3. A full report was provided to the EMD Chair in February 2020.
 - b. Workshop and Annual Conference in Lilongwe, Malawi, 19th to 20th February 2020. "Quality Laboratory Medicine: a driver for better healthcare in Malawi". Dr Tony Badrick and Annette Thomas attended as IFCC-Abbott Visiting Lecturers. Workshop topics organised were "What is quality in laboratory medicine and how is it measured?" and "How can EQA improve the quality of laboratory medicine?" Both also gave plenary lectures: "Experiences gained from international projects to introduce EQA", and "The role of the laboratory in diagnosing and monitoring diabetes".
 3. To develop a Quality Ladder: 4 chapters are now complete: – Pre-analytical errors, EQA, post analytical errors and Quality management. Unfortunately the IQC module was not completed due to the author's busy work schedule. The Committee Chair has asked for contribution from an alternative expert in this area. The final versions were due to be discussed at the face to face meeting organised in Seoul which was postponed. Annette Thomas will review and edit the drafts received to date.
 4. Patient-Based Real Time Quality Control (PBRTQC) project – Three publications have been produced to date by this very active subgroup:
 - i. 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.
 - ii. 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.
 - iii. Implementation of patient-based real-time quality control. T Badrick, A Bietenbeck, A Katayev, HH van Rossum, TP Loh, Critical Reviews in Clinical Laboratory Sciences, 1-16, May 2020.
 5. New member, Tony Badrick, joined the Committee in 2020; Alexander Haliassos completed his 2 terms of office.
 6. As the C-AQ has now been terminated – the PBRTQC will need to be supported under an alternative Committee.
 7. PUBLICATIONS: see point 4.

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

1. Submission of Talks to IFCC eAcademy.

Proposed for 2020:

- a. Andrew Don-Wauchope (ADW) to finalise talks on Guidelines.
- b. Annalise Zemlin (AZ) and Karina Rodriguez-Capote (KRC) – talks from Morocco Symposium (EBLM – what it is and what it is not and EBLM and Personalised Medicine – Friends or Foes?).
- c. AZ and Seema Barghava (SB) – talks from Jaipur Symposium (Folic Acid Supplementation – is there enough evidence to justify it? and Prevalence of micronutrient deficiencies – do we need fortification?).
- d. Nuria Giménez Gomez (NG) – will develop a talk on PSA Guidelines with her co-author.



- e. SB – Six sigma – need quality for evidence
- f. ADW – economic evaluations
- g. Outstanding talks from this year: Bias and STARD guidelines (AZ)
- h. All proposed talks need to first be sent to AZ so that can first be discussed with Prof Loralie Langman to see if suitable for eAcademy

Outcome 2020:

- a. SB and AZ submitted talks:
 - i. SB: Hypertension and Six sigma – need quality for evidence.
 - ii. AZ: Glycation – VLP talk presented in Egypt February 2020; must add MCQ for talks (POCT, EBLM and Audits)
 - iii. These talks were sent to Prof Loralie Langman and feedback has been received.
- b. Talks from ADW, KRC and NG postponed to 2021 due to pandemic.

2. EBLM Questionnaire and Survey

Proposed for 2020

- a. Survey was presented as a poster at EuroMedLab and AACC – now in the process of writing up as a publication. Aim to complete in 2020 – members on draft 3. For possible submission to CCLM and if rejected to eJIFCC (all members co-authors).
- b. 2nd part of survey was performed in Spain and presented as poster at EuroMedLab by NG (Applying EBLM in Lab Medicine). Survey was translated and sent to IFCC members in November 2019. The aim was to analyse the results and present as a poster at CSCC, AACC in 2020 (all members as co-authors).

Outcome 2020:

- a. Committee is in process of writing up original survey for submission. NG has translated and will place on a Google Drive.
- b. Abstract 2nd survey was submitted to CSCC for a poster presentation and accepted. Although congress was cancelled, manuscript was published in Clinical Biochemistry.

3. Guideline Review

Proposed 2020:

- a. Wytze Oosterhuis resigned as member and never sent data of guideline appraisal that he performed.
- b. Begin guideline appraisal in 2020

Outcome 2020: Guideline appraisal project postponed due to pandemic.

4. Congress Attendance

Proposed 2020:

- a. CSCC June 2020
 - I. Symposium on EBLM accepted (AZ, SB, ADW and KRC)
 - II. Will apply in the new year for a workshop (NG and KRC)
 - III. Possible round table session
 - IV. Poster new survey results (all members)
- b. AACC 2020
 - I. Applied for joint IFCC-AACC symposium
 - II. Poster new survey results
- c. Seoul 2020
 - I. Poster new survey results
- d. Individual members activities
 - I. AZ: AFCC and India
 - II. AZ and SB – possible symposium in New Delhi late 2020

Outcome:

- a. Chemical Pathology Conference in Alexandria, Egypt - SB and AZ attended as VLP – presented Six Sigma (SB) and Folate supplementation – what is the evidence? and

EBLM and Audits (AZ) on behalf of committee.

b. CSCC 2020 cancelled due to pandemic. However, EBLM symposium was presented virtually on 30 July 2020:

- Application of EBLM in the Age of Precision Medicine - AZ
- Guidelines Implementation – ADW
- Evidence for implementing point of care testing – KRC
- Stopping tests and starting new test: Application of EBLM – SB

These talks were well received and led to interesting discussion. The questions were addressed and written up for the CSCC October newsletter.

c. Seoul 2020 – SB was invited to present at symposium on EBLM – postponed to 2022.

d. AACCC 2020 – joint symposium with AACCC Personalized Medicine Division accepted. Congress cancelled due to pandemic but was presented virtually on 14 December 2020:

- EBLM – friend or foe? – AZ
- EBLM – what it is and what it is not – KRC

5. Possible publications

Proposed 2020:

- a. EBLM survey – all members. On version 3 – for completion 1st half 2020.
- b. Systematic reviews – ADW and committee – for completion 2nd half 2020.
- c. Possible review on EBLM and personalised medicine (with Xander van Wijk from AACCC and all members. Start 1st draft 2020).

Outcome 2020: Survey and review on systematic reviews postponed due to pandemic.

6. EBLM Website and social media:

Proposed 2020:

- a. Members to send all EBLM-related activities for last 5 years to AZ for updating.
- b. Members to send all EBLM-related activities for last 5 years to AZ for updating.
- c. Update links on website.

Outcome 2020: Postponed due to pandemic.

7. AZ – Invited Speaker Omnia Health – Live Africa October 2020 – Evidence of biochemical tests in COVID-19.

8. New member R. Khalil – from Egypt (Young scientist), KRC is now a consultant.

9. PUBLICATIONS: CSCC poster abstract – Clinical Biochemistry

• **C-Clinical Laboratory Management (C-CLM);** Chair: Praveen Sharma (IN)

1. Perform one conference call meeting in February 2020.

- a. Performed on February 29, 2020, via Skype with the attendance of all full-members and two corresponding members.
- b. A second video conference call meeting was performed on July 09, 2020 with the attendance of all full members and three corresponding members.

2. To complete the textual learning materials and recording the presentations in association with pursuing the workshops related to the Laboratory Leadership Training Certificate Program.

- a. Revised Title: Basic Problem Solving Tools for Quality Improvement - A Pocket Guide for Laboratory Professionals.
- b. The second draft of the chapters has been circulated for editing. The release for publication is due and postponed to Q2 in 2021.

3. To finish the monograph entitled “Practical Approaches to Quality Systems Set-up for Compliance with the Internationally – Acceptable Requirements” (formerly known as a joint monograph with C-AQ, the title has been revised) which has been under review in 2018 and 2019 and publish it within the first quarter of 2020.

- This project is due and will be published in Q1 of 2021.



4. To conduct at least one workshop.
 - One symposia was scheduled for IFCC WorldLab at Seoul, but now with the postponement of WorldLab, this symposium will be held in June 2022. A new application on the same agenda will be considered for upcoming meetings depending on the COVID-19 status worldwide.
 - An AACC University by C-CLM was supposed to have been held during the AACC meeting in July 2020, Chicago. However, this event has been postponed to 2021. The date is to be determined by the AACC.
 - The next meeting in which C-CLM will participate is POCT: Making The Point to be held during September 6-7, 2021 in Rome, Italy. The following talks will be given by the following speakers:
 - Training and competency strategies for point-of-care testing (Sedef Yenice)
 - Leading POCT networks: Operating POCT programs across multiple sites and vast geographical areas (Edward Randell).
 - POCT in Developing Countries (Praveen Sharma)
 5. To provide at least two presentations to the eAcademy.
 - Prof Aye Aye Khine Wamono has already provided two presentations to the eAcademy.
 - Additionally, according to the VLP requirements, SY and ER have provided copies of their presentations and the slide scripts to the eAcademy.
 6. To produce the following monographs which have been in progress since 2019:
 - Basic Problem Solving Tools or Basic Tools for Quality Improvement
 - Project Management Basics for Laboratory LeadersThe release for publication is planned by Q2 in 2021.
 7. C-CLM has submitted a symposium proposal entitled “Sustaining high quality clinical laboratory services in a rapidly changing world” for the COLABIOCLI Regional Federation Congress, Leon, Mexico, 2022.
 8. A symposium proposal of C-CLM on ”Essential leadership skills: shaping future leaders for success in laboratory management” was accepted by the IFCC WorldLab Seoul Congress Organising Committee for May 27, 2020. Time: 14:30-16:30, Room: #105 (1st Floor Coex, Max capacity: 150 seats). This has been postponed to the new WorldLab dates in June 2022.
 9. The functional meeting of C-CLM was scheduled to be held on May 26, 2020, at the IFCC WorldLab Congress in Seoul, South Korea. Due to postponement of IFCC WorldLab, the functional meeting of C-CLM is now scheduled to be held during EuroMedLab 2021.
 10. Apart from the previous event to be held in 2020, another AACC University programme on ‘From Trial to Innovation: Embracing Disruption and Challenge in Leadership Excellence’ has been proposed to the Organising Committee to be held during the AACC Annual Meeting in 2021.
 11. Webinar Speaker/Moderator
 - PS presented a talk on “Co-morbidities associated with COVID-19” in the webinar organised by SNIBE entitled “Serological markers in the treatment and management of COVID-19”.
 - PS was the speaker of the first webinar of Association of Clinical Biochemists of India (ACBI) webinar series. He delivered a talk on “Role of Biochemical investigations in COVID-19”.
 - PS was the moderator of a webinar organised by SNIBE entitled “COVID-19: Immune response and Clinical Diagnostic”
- Conference participation
- PS was an invited speaker and delivered a symposium talk on “External Quality Assurance System in Clinical Chemistry: Present Status in India” at the 61st Annual Meeting of KSLM-LMCE Congress, 2020.

12. PUBLICATIONS:

- i. Mitra P, Misra S, Sharma P. COVID-19 Pandemic in India: What Lies Ahead. *Ind J Clin Biochem.* 2020;35(3):257–9. <https://doi.org/10.1007/S12291-020-00886-6>
- ii. Lingeswaran M, Goyal T, Ghosh R, Suri S, Mitra P, Misra S, et al. Inflammation, Immunity and Immunogenetics in COVID-19: A Narrative Review. *Ind J Clin Biochem.* 2020;35(3):260–73. <https://doi.org/10.1007/S12291-020-00897-3>
- iii. Mitra P, Suri S, Goyal T, Misra R, Singh K, Garg MK, et al. Association of Comorbidities with Coronavirus Disease 2019: A Review. *Annals of the National Academy of Medical Sciences (India).* 2020 (4); s-0040-1714159. <https://doi.org/10.1055/S-0040-1714159>
- iv. Ladha N, Bhardwaj P, Charan J, Mitra P, Goyal JP, Sharma P, et al. Association of Environmental Parameters with COVID-19 in Delhi, India. *Ind J Clin Biochem [Internet].* 2020 Aug 19 [cited 2020 Aug 23]; Available from: <http://link.springer.com/10.1007/s12291-020-00921-6>
- v. Charan J, Kaur R, Bhardwaj P, Kanchan T, Mitra P, Yadav D, et al. Snapshot of COVID-19 Related Clinical Trials in India. *Ind J Clin Biochem [Internet].* 2020 Aug 10 [cited 2020 Aug 23]; Available from: <http://link.springer.com/10.1007/s12291-020-00918-1>

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

1. Work with VLP speakers and invite them to contribute their talks to filling the gaps in the curricula where we do not have presentations already in the eAcademy.
2. Continue to identify and recruit potential speakers working in conjunction with the eAcademy coordinators to fill in the gaps in the curricula.

| Name | Topic | Invitation | Reply | Acceptance |
|-----------------|--|------------|-------|------------|
| M. Plebani | Quality and patient safety in laboratory medicine | 08/22/2019 | y | 11/19/19 |
| M. Plebani | Uncertainty in laboratory medicine | 08/22/2019 | y | 11/19/19 |
| K. Adeli | Lipid guidelines: emerging evidence on importance of non-fasting and postprandial lipids | 08/22/2019 | y | 08/25/19 |
| B. Gouget | Building bioethics into the future of lab medicine | 08/22/2019 | | |
| C. Cobbaert | Apolipoprotein profiling for addressing residual cardiovascular risk | 08/22/2019 | y | 10/23/19 |
| E. Jacobs | Patient Safety: A Quality System Approach to POCT QC / QA | 08/22/2019 | | |
| S. Yenice | Developing a Roadmap for Laboratory Utilization Management Program | 10/15/2019 | | |
| S. Parthasarthy | Aproprotein E, Alzheimer, Atherosclerosis, Inflammation, Oxidative stress | 10/15/2019 | y | 10/15/19 |
| E. Randel | Promotion of Appropriate Laboratory Test Utilization: From Financial Accountability to Appropriateness and Quality of Care | 10/15/2019 | y | 10/16/19 |
| T. Annesley | Principles of Scientific Writing | 12/30/2019 | | |
| N. Rifai | Publication Ethics | 12/12/2019 | y | 12/16/19 |
| A. Zemlin | Hyperglycaemia: Past, Present and Future | 12/31/2019 | y | 01/02/20 |
| S. Bhargava | Achieved Six Sigma: What next? | 12/31/2019 | | |
| R. Erasmus | Vitamin D Supplementation: What is the Evidence? | 12/31/2019 | | |
| A. Thomas | The Role of the Laboratory in Diagnosing and Monitoring Diabetes | 12/31/2019 | y | 01/10/20 |



| | | | | |
|---------------|--|------------|---|----------|
| A. Wu | Implementation of High Sensitivity Cardiac Troponin for Acute Coronary Syndromes | 02/10/2020 | | |
| A. Wu | High Resolution Mass Spectrometry for Drugs of Abuse Testing | 02/10/2020 | | |
| W. Oosterhuis | Measurement Uncertainty, Total Error and Analytical Performance Specifications | 02/10/2020 | | |
| D. Gruson | Interference in Immunological Assays | 02/10/2020 | y | 02/11/20 |
| D. Gruson | Thyroid and Infertility | 02/10/2020 | y | 02/11/20 |

3. In conjunction with the C-leL, record and publish the above-noted contents. Please see C-leL report for the list of recorded and published contents.
4. Work with AACC/Nader Rifai to get the Pearls translated into Spanish and co-publish with eAcademy. Please see C-leL report for the list of recorded and published content.
5. The C-DL membership was disbanded in August of 2020, following notification of the committee's discontinuation. The Chair has been working solo tying up loose ends for the remainder of the year.

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

Like most other groups, most activity has either been postponed or cancelled due to COVID-19.

1. 1. Work with the Shanghai Center for Clinical Laboratory and the Chinese Diabetes Society (CDS) to develop a Laboratory Certification Programme based on the now operating Manufacturers Certification Programme. Postponed due to COVID-19
2. Continue to develop the EuroA1c study, expanding into new countries. To write an update paper describing the current situation of HbA1c quality based on Sigmametrics. Under strict COVID-19 restrictions EuroA1c trial was completed. Paper describing latest surveys is currently being written.
Annual Network inter-comparison study completed
3. Start working with the German Laboratory and Diabetes National Societies to introduce standardised reporting of results across Germany. This will be a long-term project taking several years to complete.
Postponed due to COVID-19
4. Finalise the WHO Laboratory Handbook. This continues to take time due to bureaucracy, but should be completed this year.
Postponed due to COVID-19.
5. Deliver two Symposia at the IFCC WorldLab meeting in Seoul.
Postponed until 2022 due to COVID-19.
6. Develop a position paper on the use of HbA1c for diagnosis to include standardised guidelines. Evidence of different practices will be collected from relevant societies (clinical and laboratory).
Postponed due to COVID-19.
7. Develop a symposium for submission to the IFCC-EFLM EuroMedLab Munich 2021.
Postponed until November 2021 due to COVID-19.
8. Develop an information strategy for workshops on key topics in collaboration with African Federation.
Postponed due to COVID-19.
9. Two additional planned symposia cancelled due to COVID-19.
10. The committee and committee members have been approached by several manufacturers to deliver webinars. Manufacturers have stated that the committee provides a valuable source of experts for educational programmes.
11. Webinars delivered by committee members.

12. PUBLICATIONS

- i. Lenters-Westra E, English E. Are hemoglobin A1c point-of-care analyzers fit for purpose? The story continues Clin Chem Lab Med (Accepted/In press) Oct 2020. Barron, E., Misra, S., English, E., John, G., Sampson, M., Bachmann, M. O., Barth, J., Oliver, ii. N., Alberti, G., Bakhai, C., O'Neill, S., Young, B., Wareham, N. J., Khunti, K., Jebb, S., Smith, J. & Valabhji, J., Experience of Point-of-Care HbA1c testing in the English National Health Service Diabetes Prevention Programme: an observational study. BMJ Open Diabetes Research and Care (Accepted/In press) 21 Sep 2020.
- iii. Butler AE, English E, Kilpatrick ES, Östlundh L, Chemaitelly HS, Abu-Raddad LJ et al. Diagnosing type 2 diabetes using Haemoglobin A1c: A systematic review and meta-analysis of the diagnostic cut point based on microvascular complications. Acta Diabetologica. 2020 Sep 11 Accepted/In Press.
- iv. Lenters-Westra E, English E. Investigating the Quality of POCT Devices for HbA1c: What Are Our Next Steps? J Diabetes Sci Technol. 2019 Nov, 13(6):1154-1157.
- v. Arsene F Hobabagabo, Nana H Osei-Tutu, Thomas Hormenu, Elyssa M Shoup, Christopher W DuBose, Lilian S Mabundo, Joon Ha, Arthur Sherman, Stephanie T Chung, David B Sacks, Anne E Sumner. Improved Detection of Abnormal Glucose Tolerance in Africans: The Value of Combining Hemoglobin A_{1c} With Glycated Albumin. Diabetes Care. 2020 Oct;43(10):2607-2613. doi: 10.2337/dc20-1119. Epub 2020 Aug 14.
- vi. Sampson M, Clark A, Bachmann M, Garner N, Irvine L, Howe A, Greaves C, Auckland S, Smith J, Turner J, Rea D, Rayman G, Dhatariya K, John WG, Barton G, Usher R, Ferns C, Pascale M; Norfolk Diabetes Prevention Study (NDPS) Group. Lifestyle Intervention With or Without Lay Volunteers to Prevent Type 2 Diabetes in People With Impaired Fasting Glucose and/or Nondiabetic Hyperglycemia: A Randomized Clinical Trial. JAMA Intern Med. 2020 Nov 2:e205938. doi: 10.1001/jamainternmed.2020.5938. Online ahead of print. PMID: 33136119.

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

1. Finalise Clinical Scorecard Study for hs-cTn assay comparability. As reported, specimen analyses (960 patients) from 3 cohorts (Hennepin, Mayo, Scotland) were completed on all 9 assays. Clinical data will be merged in early January 2020. Plan in 2020 will be to submit educational abstracts to both the IFCC meeting in Korea (January 2020 deadline) and AACC in Chicago (February 2020 deadline), as well as prepare and submit at least 2 manuscripts.

Report: Study was completed for all measurements on 8 hs-cTn assays. Initial statistical analysis has been completed. Initial findings will be presented at the 12 January 2021 Zoom C-CB meeting with C-CB members and corporate representatives. Plan is to start preparation of manuscript and abstract submissions.

2. Organise and submit proposals for workshop and or symposium presentations for IFCC and industry sponsored meetings pertaining to educational guidelines on hs-cTn and natriuretic peptide assays. Apple is an invited speaker at the 37th Nordic Congress in Medical Biochemistry 9-12 June 2020 in Trondheim, Norway.

Report: As we all know COVID-19 pandemic put a stoppage to all meetings in person. However, a few presentations were successfully and virtually made by some members:

- a. Kavsak: at 2020 CSCC virtual meeting-2020 Educational Recommendations on Cardiac Biomarkers: An Update from the IFCC Committee on Clinical Applications of Cardiac Bio-Markers;
- b. Kavsak & Lam: at 2020 CSCC virtual meeting: Latest IFCC Recommendations for Natriuretic Peptides in Heart Failure - Analytics and Clinical Considerations;
- c. Apple & Jaffe: at 2020 AACC virtual meeting: High-sensitivity cardiac troponin in the clinical laboratory and in clinical practice.

3. Hire an APP development group/person, in collaboration with the diagnostics companies,





to build, test and go to production, and maintain an APP based on high sensitivity cardiac troponin and natriuretic peptide assays, utilising educational materials that have been published by the C-CB. The goal is to educate clinicians in emergency medicine, cardiology, internal medicine and surgery, as well as our colleagues in laboratory medicine, in the analytical and clinical aspects of cardiac biomarker assays.

Report: This activity will be carried over to 2021, as the challenge and costs of building and implementing an APP has been slow, especially during COVID-19 lock-down.

4. Planned future IFCC C-CB Meetings: South Korea May 2020, AACC Chicago July 2020, New Hampshire October 2020.

Report: Both South Korea and New Hampshire meetings have been rescheduled to 2022 and 2021, respectively. C-CB looking towards 2021, with proposals for 2021 activities being planned.

5. Finalise three new educational cardiac troponin initiatives for manuscripts:
 - a. continue ongoing collaborative effort between AACC Academy and IFCC C-CB to initiate a white paper on biological variation/RCVs/deltas;
 - b. new collaboration with the IFCC POC committee initiated regarding preparation of a publication on POC troponin assays and education materials addressing the current state of art of POC assays;
 - c. provide an educational paper for the January 2021 Clinical Chemistry special CV issue in the ABCs on implementation of hs-assays in laboratory and clinical practice.
 - d. Collaborative paper with EFLM for special issue of CCA paper.

Report: We had success in having the following manuscripts accepted, and soon to be in print soon.

- a. Apple FS , Fantz CR, Collinson PO. Implementation of high-sensitivity and point of care cardiac troponin assays into practice: some different thoughts . Clin Chem 2020 accepted; in press January 2021 issue.
 - b. Kavsak PA, Hammarsten O, Worster A, Smith SW, Apple FS. Cardiac troponin testing in patients with COVID-19: a strategy for testing and reporting results. Clin Chem 2020: doi.org/10.1093/clinchem/hvaa225; in press January 2021 issue.
 - c. Wu AHB, Kavsak PA, Aakre KM, Christenson RH, Apple FS, Peacock WF, Hollander JE, de Lemos JA, Morrow D, Januzzi J, Jaffe AS. Lot to lot variation for commercial high sensitivity cardiac troponin: can we realistically report down to the assay's limit of detection. Clin Chem 2020; doi:10.1093/clinchem/hvaa160.
6. Continue to update table postings on the IFCC C-CB webpage for the Troponin & NP Analytical Assay Characteristics Tables 2 to 3 times yearly.

Report: We continued to post updated tables (2 updates in 2020), under the guidance of Dr Amy Saenger and the help of corporate members.

7. Continue to distribute Educational Materials addressing cardiac troponin and natriuretic peptide assays using mouse-pads and stick-drives at national and international IFCC, Laboratory Medicine, Cardiology and Emergency Medicine meetings; that include PDFs of the growing list of published documents from the C-CB.

Report: As there were no in-person meetings in 2020 due to COVID-19, no distribution of educational materials occurred. Materials are prepared and hopefully, distribution will start again, as soon as appropriate, in 2021.

8. Grow 'Social Media' presence as Body developed a twitter handle that went live at the Glasgow meeting (@Ccbifcc). Discussions on initiation about developing a code of conduct for the C-CB to tweet statements on behalf of the committee; allowing open access to post comments/tweets. Use of social media to combat some of the published materials which conflict with appropriate use of hs-cTn assays as well as produce videos of individuals/ KOLs as an educational venue to post on our website page.

Report: This activity will be carried over to 2021 due to COVID-19 and unexpected increased clinical commitments for C-CB members in their day-to-day work place.

- **C-Kidney Disease (C-KD)**; Chair: Flavio Alcantara (BR)
report not received
- **C-Point of Care Testing (C-POCT)**; Chair: Adil Khan (CA)
 9. POCT Satellite Symposium at IFCC WorldLab in Seoul 2020
Due to the COVID-19 pandemic, the IFCC WorldLab in Seoul has been rescheduled to June 26th-30th 2022.
 10. Continue working on Position Paper on Point-of-Care Testing outside the hospital settings.
This has gone through several revisions and is planned for completion in 2021.
 11. Continue working with C-CB on educational guideline on POC Troponin Assays.
The C-POCT has provided their feedback on this educational guideline.
 12. Prepare lecture for POCT for C-IDL eAcademy.
This has gone through several revisions and is planned for completion in 2021.
 13. Develop a guideline to help GPs on POCT Management.
The first draft was produced but is being revised with the intention of creating a customisable guideline that can be used globally in different settings. Will also get feedback from C-CLM.
 14. Develop a guideline to help regulate/limit the POC tests requested in laboratories.
Guideline was developed and given to Dr. Marielle Kaplan (Israel). She has proposed it to her national society.
 15. Develop guideline to help standardise POC testing in Egypt.
Guideline was developed with the help of Prof. Rania Sharkaway (Egypt), Prof T Matsha (South Africa) Prof Annalise Zemlin (South Africa), Prof Rajiv Erasmus (South Africa). Prof. Sharkaway will propose this to her national society.
 8. Dr. Adil I. Khan chaired a webinar on 21st May 2020, on 'Role of blood gas in overall management of COVID-19 patients' (organised by Roche and supported by the IFCC Congresses and Conferences Committee). C-POCT members have also been active in writing articles and have been invited to be guest editors for journals related to POCT. *Practical Laboratory Medicine* (Guest Editor, Dr. Julie Shaw) and *Archives of Pathology and Laboratory Medicine* (Guest Editor, Dr. Adil I. Khan).
 9. PUBLICATIONS:
Catering for the point-of-care testing explosion. Adil I. Khan, Mazeeya Khan, Rosy Tirimacco. (Submitted to JIFCC).

- **C-Proficiency Testing (C-PT)**; Chair: Armand Perret-Liaudet (FR)

This first year of chairing the C-PT was difficult for me. The pandemic has affected the smooth functioning of the committee by altering communication possibilities, by altering the possibilities of dissemination (delay of the main meetings), by altering my own ability to devote more time to the project (priority to the proper functioning, management and reorientation of the biological activities of our laboratory). In addition, there was a long misunderstanding with the company Insoft (see discussion below). However, the group was able to function.

1. The main project of the committee is the implementation of an online database – web application (PTDB) accessible via web browsers and also via specific applications, for the major mobile platforms. The database is designed to be accessible by different entries. Main functional part of this database, 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, including 69 providers from all around the world. This part is maintained with the cooperation of the IFCC EMD C-AQ and EQALM. The PTDB can be consulted directly at <http://ptdb.ifcc.org/providers>.



2. In response to email sent in 2019 via the IFCC office (Silvia Cardinale) to the EQA-PT providers and the National Representatives, one Indian EQA-PT provider updated their records for the PTDB.
3. Other entries of this database are both analytes and methods that have to be filed with all possible synonyms.

In 2018, we have chosen CSF neopterin as an example of an analyte to implement (lack of EEQ programme) in the PTDB. After finalising the document (IFCC General Conference in Budapest, November 2018), design and production of suitable control materials that can be used for the development of EQA-PT schemes for neopterin in CSF was done. First stability studies conducted over August to September 2019 were successful and the feasibility of the project was confirmed in 2020 by checking the stability of neopterin in the control material up to one year at different temperatures.

4. Introduction of features in our project that can help IVD manufacturers during the implementation was done, leading to a modification of features requests at the end of 2019.

These requests were sent to InSoft for development and implementation (A Haliassos). InSoft requested and received clarification and precise instructions on this subject. However, InSoft did not progress further with the project, finally mentioning problems of understanding. After the last discussion between InSoft and APL, it was decided to build the proof of concept by adapting the biological words in a more understandable language for computer scientists.

5. The members of C-PT checked the definition of “uncommon measurand”.
6. The members of C-PT revised the request document of IVD manufacturer: they need to check and finalise this document taking account of remarks by InSoft.
7. EQA Providers Websites. The main problem is the heterogeneity of information accessibility between different websites. This is a major challenge for the new TF, in order to facilitate the search for information on these websites.

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

1. PAPERS, the planned papers and their progress are as follows:
 - i. A review of the use of economic modelling for laboratory tests – Lead: Paul Julicher. This has been completed and accepted for publication by the Annals of Clinical Biochemistry subject to minor corrections.
 - ii. The value proposition for the use of CRP by point-of-care testing in patients with acute cough – Lead: Andrew St John. A version of the paper was completed but was rejected by two journals; work will continue on an amended version.
 - iii. The value proposition for the use of BNP/NT-pro BNP in the diagnosis of heart failure in primary care – Leads: Chris Price/Maurice O’Kane. There was insufficient time to work on this paper.
 - iv. The value proposition for the use of donor-derived cell-free DNA in transplant monitoring – Lead: Michael Oellerich. Paper has been published as part of the special issue of the Journal of Applied Laboratory Medicine (see below).
 - v. Contributory papers to a special issue on Value in Laboratory Medicine for the Journal of Applied Laboratory Medicine – Coordinator: Rob Christenson. Committee members contributed 5 papers to this special issue and are listed below under publications.

A number of other papers were published in the area of value and included the acknowledgement that they were part of the work of the IFCC-WASPaLM Committee for the Value Proposition in Laboratory Medicine. They are listed below under publications.

2. WORKSHOPS

None of the planned workshops could take place due to the COVID-19 pandemic.

3. SYMPOSIA AND ORAL PRESENTATIONS

Planned presentations by Andrew St John at AACC, ACB Focus and Maurice O’Kane at the ACB-EFLM Workshop on Test Evaluation, did not take place.

Virtual presentations by Michael Oellerich on the Value Proposition took place at the Biotech Atelier (Sofia 25.09.2020) and at the AACC annual meeting (14.12.2020).

4. Two members of the Committee, Andrew St John and Paul Jülicher, together with Khosrow Adeli, contributed to an IFCC Webinar entitled “Value and Impact of Laboratory Medicine in Patient Care: Developing the Evidence” which was broadcast on 25th November 2020. Several thousand IFCC members registered and there was positive feedback and a number of questions.

5. The Committee will continue for a 2nd term of office commencing on Jan 1, 2021.

6. PUBLICATIONS

- i. Price CP, McKinley P, St John A. What is the return on investment for laboratory medicine? The antidote to silo budgeting in diagnostics. *British Journal of Healthcare Management*. 2020. <https://doi.org/10.12968/bjhc.2019.0075>
- ii. St John A. Determining value – Do laboratory professionals need to learn more about the ‘dismal science’? *Annals of Clinical Biochemistry*. 2020; 57: 337–338.
- iii. Price CP, St John A. Will COVID-19 be the coming of age for point-of-care testing? *BMJ Innov*. 2020;0:1–3. doi:10.1136/bmjinnov-2020-000466
- iv. St John A. The Pursuit of Value in Laboratory Medicine – Progress and Challenges. *Clin Biochem Rev* 2020; 41: 3-11.
- v. Christenson RH, Grenache DH, Oellerich M. Special Collection on the Value of Laboratory Medicine. *The Journal of Applied Laboratory Medicine*, September 2020, <https://doi.org/10.1093/jalm/jfaa120>
- vi. Price CP, McGinley P, St John A. Where Is the Value of Laboratory Medicine and How Do You Unlock It? *The Journal of Applied Laboratory Medicine*, September 2020, <https://doi.org/10.1093/jalm/jfaa116>
- vii. Price CP, St John A. The Role of Laboratory Medicine in Value-Based Healthcare. *The Journal of Applied Laboratory Medicine*, September 2020, <https://doi.org/10.1093/jalm/jfaa136>
- viii. Giusepi I, St John A, Jülicher P Who Conducts Health Economic Evaluations of Laboratory Tests? A Scoping Review. *The Journal of Applied Laboratory Medicine*, September 2020, <https://doi.org/10.1093/jalm/jfaa107>
- ix. Oellerich M, Christenson RH, Beck J, Schütz E, Sherwood K, Price CP, Keown PA, Walson PD. Donor-Derived Cell-Free DNA Testing in Solid Organ Transplantation: A Value Proposition. *The Journal of Applied Laboratory Medicine*, May 2020, <https://doi.org/10.1093/jalm/jfaa062>
- x. Jülicher P, O’Kane M, Price CP, Christenson R, St John A. Health economic evaluations of medical tests: translating laboratory information into value- a case study example. Accepted for publication in *Annals of Clinical Biochemistry* subject to minor corrections.

- **WG-Laboratory Errors and Patient Safety (WG-LEPS)**; Chair: Mauro Plebani (IT)
report not received
- **WG-Harmonisation of Interpretive Comments EQA (WG-ICQA)**, Chair: Magdalena Turzyniecka (ZA)
report not received
- **WG-Personal Support (WG-PS)**; Chair: Graham Beastall
 1. Continue to operate the Register of Experts (RoE) matching experts to inquirers and adding new experts as appropriate. Completed





2. Continue to operate the Mentoring Programme matching mentors with affiliates and adding new mentors as appropriate. Completed
3. Audit the effectiveness of the Mentoring Programme. Not Completed
4. Promote the opportunities afforded by WG-PS. The campaign will be launched through IFCC Members, TF-YS and 'Lab-Surfing' and via social networking. The aim is to identify individuals who would benefit from being connected to an Expert or Mentor. Partly completed
5. The Covid-19 pandemic affected the professional lives of all laboratory medicine specialists during 2020. Their focus was understandably localised and short-term. As a result, the requests made to WG-PS were very few in number.
6. MEETING/CONFERENCE CALLS HELD
None, but effective interaction with the IFCC Office. Thanks to Silvia Cardinale for her excellent support
7. PUBLICATIONS: No peer-reviewed publications but informal articles appeared in a number of newsletters.

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

In 2020, 9 VLPs and 16 Visiting Lecturers were approved but because of COVID-19 pandemic only 4 of the approved VLPs took place. The VLP applications approved in 2020 are shown in the appended table.

| IFCC Visiting Lecturer Programme Applications approved for 2020 | | | | | | |
|---|---------------------------------|------------------|-----------------------------|--|---|------------------------|
| Period | Location | Date of approval | Applicant | Speaker/s | Lectures/workshops | notes |
| February | EGYPT (Alexandria) | 23.12.2019 | Rania ElSharkawy | Rajiv Erasmus (ZA) | 1) Vitamin D Supplementation: what is the evidence 2) Leadership and Excellence | |
| | | | | Annalise Zemlin (ZA) | 1) Hyperglycaemia: past ,present and future 2) Clinical audits and improvement in quality | |
| | | | | Seema Bhargava (IN) | 1) Achieved Six Sigma: What next 2) Quality Control Dilemmas | |
| 19-20 February | MALAWI (Lilongwe) | 06.11.2019 | Elias Chipofya | Rajiv Erasmus (ZA) | 1) Quality Workshop 2) Chronic kidney disease - a growing problem for Africa | sost. Renze Bais |
| | | | | Tony Badrick (AU) | 1) Quality Workshop 2) Experiences gained from international projects to introduce EQA | |
| | | | | Annette Thomas (UK) | 1) Quality workshop 2) The role of the laboratory in diagnosing and monitoring diabetes | |
| 5-7 March | PAKISTAN (Karachi) | 27.11.2019 | Aysha Hasbib Khan | Dianne Webster (NZ) | 1) Plenary Lecture: Essential of establishing a Newborn Screening Program 2) Workshop: Essential of establishing a Newborn Screening Program | |
| | | | | Amy R.U.L. Calhoun (US) | 1) Plenary Lecture: Implementation of Newborn Screening program: addressing mistakes and way forward 2) Workshop: Development of a rare disease registry | |
| 13-15 March | MEXICO CONAQUIC (Chiapas) | 19.02.2020 | Alejandra Cano Huizar | Montserrat Blanes Gonzales (PY) | 1) Generating value through diagnostic tests (1,5 hours conference) 2) Update in endocrinology quality system (8 hours workshop) | Spanish language |
| 23-25 April | ARGENTINA (San Luis) | 28.01.2020 | Maria Alejandra Arias | Ramon Deulofeu (ES) | 1) El laboratorio en la valoración del estado nutricional de los pacientes 2) Vitaminas pasado, presente y futuro | Cancelled |

| | | | | | | |
|-----------|-----------------------------|------------|-----------------|---------------------------------|---|-----------|
| 27 May | KOREA (Seoul) | 10.12.2019 | Jeong-Ho Kim | Nader Rifai (US) | 1) Principles of scientific writing 2) Publication ethics | Cancelled |
| 14-17 Oct | URUGUAY (Montevideo) | 09.01.2020 | Stella Raymondo | Alan Wu (US) | 1) Promote Lab Medicine. The time to act is now 2) Implementation of high sensitivity cardiac troponin for acute coronary syndromes 3) High resolution mass spectrometry for drugs of abuse testing | Cancelled |
| | | | | Damien Gruson (BE) | 1) Interference in immunological assays 2) The impact of digital transformation and artificial intelligence on laboratory services 3) Thyroid and infertility | |
| | | | | Wytze Osterhuis (NL) | 1) Assing clinical utility to the laboratory reports 2) Reflective testing: adding value to laboratory testing 3) Measurement uncertainty, total error and analytical performance specifications | |
| 23-24 Oct | SLOVENIA (Portoroz) | 07.02.2020 | Evgenija Homsak | Santiago Fares Taie (AR) | 1) IFCC TF-YS -Networking with Millenials, preparing for the future 2) TSH Reference Values in elderly population | Cancelled |
| 15 August | SINGAPORE | 26.08.2019 | Sharon Saw | S. Bernardini (IT) | 1) New Technologies in Clinical Laboratory Diagnostics 2) The role of GTSs in the context of neurodegenerative diseses and urologic oncology | Cancelled |

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

Because of the pandemic, most of the working group's activities had to be cancelled.

1. Winter school of Cytometry: Applications in Immunology was successfully organised and held in Geneva university from 9-13 March 2020.

There were 12 students from several countries, including Poland, Montenegro, Brazil, France and Switzerland.

Speakers were from Switzerland, France, Luxemburg, Germany, Morocco and Algeria, from different fields like research in immunology, medicine or veterinary sciences. Precautions were organised in view of the infectious risk. The course was completed just before the lockdown in Europe.

2. Munich Workshop March 2020 cancelled
3. Egypt Workshop cancelled
4. A Latin America School in Brazil cancelled
5. Munich Workshop September cancelled
6. Chile or Argentina Workshop cancelled
7. Turkey cancelled
8. Sudan cancelled

Activities 2 to 8 could not be organised because of the pandemic.

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

1. DQCML Workshop in Lahore, Pakistan, held on January 10 - 11, 2020.
2. DQCML Workshop planned in detail to take place in Ramallah, Palestine on August 20th and 21st, 2020, could not take place due to several reasons; the main one being the Covid-19 pandemic (see attachment to this report).
3. A presentation on DQCML's activities and a "Drop in" session addressing developing countries in order to consider their application for workshops and advice and other help at the IFCC WorldLab 2020 Congress in Seoul was cancelled due to the Covid-19 pandemic.
4. PUBLICATIONS: IFCC eNews No. 3 – March 2020, p. 5-8.

Leslie Lai, EMD Chair



COMMUNICATIONS AND PUBLICATIONS DIVISION (CPD)

The following members served on the CPD Executive Committee in 2020: 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).

The IFCC website contributed greatly to supporting the laboratory in the pandemic with the IFCC Information Guide on COVID-19, the web-publication that has grown with weekly (and now bimonthly) updates, and with the COVID-19 resource page.

The following is a summary list of the key CPD activities in 2020:

- The planned face-to-face meetings in Seoul and Chicago could not take place owing to the pandemic and the postponement of Worldlab Seoul 2020 and the AACC annual meeting 2020. Instead, we held two Zoom meetings on 25 May 2020 and 28 July 2020.
- CPD Chair, Prof. Tahir Pillay (ZA), continues 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) continues his first term and is also CPD Vice chair.
- eNews Editor, Dr Katherina Psarra (GR,) continues her first term.
- WG eJIFCC Chair, and eJIFCC editor, Prof János Kappelmayer (HU), was appointed CPD Vice Chair.
- WG-IANT Chair dr Raul Girardi (AR) was appointed after Maria del Carme Pasquel ended her second term.
- Calls for nominations were opened for CPD functional unit member position vacancies.
- There was a renewal of the agreement with Elsevier
- We 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.
- 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 2020-2022 MEETINGS:

The planned CPD symposium at WorldLab Seoul 2020 was as follows (held over until 2022):

A New Era in Medical Laboratory Diagnostics Management: Application of Advanced Mobile & Web Technology

Chair: Dr. Tahir Pillay, South Africa

- *Role of technology in patient management and precision medicine*
Tahir Pillay – South Africa
- *Mobile technology and management of point of care instruments.*
Ronda Greaves – Australia
- *Using mobile technology to manage big data collection.*
Khosrow Adeli – Canada
- *New developments in web technology to enable medical diagnostics lab management.*
Eduardo Luis Freggiaro – Argentina

CPD symposium proposal: COLABIOCLI León, Mexico 18 -22 April 2022

The “new normal” of communication in data and education in laboratory medicine in the post-Covid era

Chair: Dr. Tahir Pillay, South Africa

- *The 4th Industrial Revolution post-Covid-19: how has blended communication resources for patients and laboratory professionals changed”*
Tahir Pillay – South Africa

- *Educational resources for the clinical laboratory in the IFCC Latin American corner post-Covid*
Maria Del Carmen Pasquel Carrera - Ecuador
- *Education and distance learning strategies in the IFCC during and after the pandemic*
Eduardo Freggiaro - Argentina
- *Impact of Covid-19 on communication and public relations for laboratorians*
Rajiv Erasmus – South Africa

■ Committees

• **Committee on Public Relations (C-PR);** Chair: Rajiv Erasmus (ZA)

The Committee emphasizes the importance of continuous education and proposes to translate the eAcademy webinars into several languages. C-PR has proposed several communication strategies including a WeChat and WhatsApp accounts and these were discussed in the 2020 CPD meetings. The display posters will be updated for the future events.

The C-PR is developing new **BROCHURES**, so to reflect the new IFCC pay-off and a new, shortened IFCC slide deck that could be useful for IFCC speakers to introduce IFCC during their presentations.

A call for nominations has been issued to complete membership. The appointment was completed in late 2020.

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

The previously merged C-IDL committee was split into CPD C-leL and EMD C-DL with Eduardo Freggiaro chair of the CPD Committee on Internet and eLearning.

After the Jaipur meeting (November 2019), CPD appointed three new members in order to complete the committee's membership: Deniz Topcu from Turkey, Rojeet Shrestha from Nepal and Sibtain Ahmed from Pakistan. They effectively joined the group on January 2020. After a short two month period, the pandemic situation interrupted many of the planned activities and most of the committee objectives were put on hold in order to attend urgent tasks and projects related to COVID-19. A face-to-face meeting scheduled in May 2020 was not possible owing to the cancellation of IFCC Worldlab congress. The committee continued to communicate via WhatsApp. Insoft suggested this option as the best and official way of communication. It was well received by members but it is not frequently used. As usual emails are the first option to solve issues. Recently the PMS storage quota was reached so Insoft support will be needed. Janine Grant continued serving as Website Editor even when her term in office was finished. Her commitment was remarkable so we expressed our gratitude for her impressive work. Janine was invited to continue as committee consultant and she kindly accepted this role.

The current C-leL Membership is as follows:

| Name | Position | Country | Term | Time in Office |
|---------------------------|-----------------|----------------|-----------------|-----------------------|
| Eduardo Freggiaro | Chair | AR | 1 st | 2018 01 - 2020 12 |
| Lorena M. Brennan Bourdon | Member | MX | 1 st | 2019 05 - 2021 12 |
| Rojeet Shrestha | Member | NP | 1 st | 2020 01 - 2022 12 |
| Deniz Topcu | Member | TK | 1 st | 2020 01 - 2022 12 |
| Sibtain Ahmed | Member | PK | 1 st | 2020 01 - 2022 12 |
| Janine Grant | Consultant | AU | | |

The committee now has 5 members. Deniz Topcu is the current Website Editor. The handover on this demanding position was really excellent. He understood the job quickly thanks to the tuition offered by Janine Grant and Silvia Colli-Lanzi. Rojeet Shrestha continued serving as *Social Media Coordinator*.



- **KNOVIO Platform for eAcademy's content production:**

KNOVIO platform is working very well and Speakers find the tool easy-to-use. However, occasional small Internet breaks caused issues during the recordings. Since the eAcademy content is slides with voiceover, the narration tool in PowerPoint is still a good alternative for content production.

- **New content on eAcademy:**

During 2020, 8 new modules have been published. The list of topics are as follows:

- Implementing value-based laboratory testing - Aye Aye Khine
- Relevance of Clinical Audits and EBLM to improve Quality - Annalise Zemlin
- Urea Cycle Defects - Lena Jafri
- POCT Advantages and Disadvantages - Annalise Zemlin
- Conflict resolution - Aye Aye Khine
- Introduction to Patient Based Real Time QC - Tony Badrick
- Ethics & Professionalism for IFCC Volunteers (Part 1) - Joesph Wiencek
- Ethics & Professionalism for IFCC Volunteers (Part 2) - Joesph Wiencek

These last two modules on Ethics were produced in cooperation with the Task Force on Ethics (TF-E) by a direct request of the IFCC Executive Board.

Current numbers of available educational materials on eAcademy: 129

- Modules 88
- External links 41

- **New strategy to seek eAcademy modules:**

C-DL scanned the next lectures of VLP's Speakers in order to identify topics and create modules for eAcademy. Many VLP Speakers has been invited to collaborate (22) and some have already accepted the invitation (13). However, since all the congresses were cancelled a reminder for recording the modules will be sent.

Thanks to this strategy Dr. Mario Plebani is currently recording 2 modules:

- Quality and Safety in Lab Medicine
- Uncertainty in Lab Medicine

Dr. Plebani recorded these videos a few month ago but, unfortunately he experienced some technical issues and the lectures were lost. These modules will be recorded again and will be ready for publication soon.

This is the list of Speakers and its lectures invited to produce eAcademy modules:

| | |
|------------------------------|--|
| <i>Khosrow Adeli</i> | Lipid guidelines: emerging evidence on importance of non-fasting and postprandial lipids |
| <i>Bernard Gouget</i> | Building bioethics into the future of lab medicine |
| <i>Christa Cobbaert</i> | Apolipoprotein profiling for addressing residual cardiovascular risk |
| <i>Ellis Jacobs</i> | Patient Safety: A Quality System Approach to POCT QC / QA |
| <i>Sedef Yenice</i> | Developing a Roadmap for Laboratory Utilization management program |
| <i>Sampath Parthasarthy</i> | Aproprotein E, Alzheimer, Atherosclerosis, Inflammation, Oxidative stress |
| <i>Ed Randel</i> | Promotion of Appropriate Laboratory Test Utilization: From financial accountability to Appropriateness and Quality of Care |
| <i>Tom Annesley</i> | Principles of scientific writing |
| <i>Nader Rifai</i> | Publication ethics |
| <i>Annalise Edith Zemlin</i> | Hyperglycaemia: Past, present and future |
| <i>Seema Bhargava</i> | Achieved Six Sigma: What next |
| <i>Rajiv Timothy Erasmus</i> | Vitamin D Supplementation: What is the evidence |
| <i>Annette Thomas</i> | The role of the laboratory in diagnosing and monitoring diabetes |
| <i>Alan Wu</i> | Implementation of high sensitivity cardiac troponin for acute coronary syndromes |

| | |
|-------------------------|--|
| <i>Alan Wu</i> | High resolution mass spectrometry for drugs of abuse testing |
| <i>Wytze Oosterhuis</i> | Measurement uncertainty, total error and analytical performance specifications |
| <i>Damien Gruson</i> | Interference in immunological assays |
| <i>Damien Gruson</i> | Thyroid and infertility |

This strategy could be implemented with authors when their papers are accepted for publication in the eJIFCC.

A procedure that covers the steps from invitation to final publication has been agreed by all the partners involved in eAcademy development: C-IeL, C-DL, IFCC Office and Insoft.

In order to track every step of this procedure, in real time, an online spreadsheet was created.

- **IFCC/AACC agreement on “Pearls in Lab Medicine”:**

Thanks to this agreement, the AACC provided 24 “Pearls in lab medicine” to be recorded with Spanish narration. The Pearls are short video presentations (10-15 min.) about a very specific lab medicine topic. AACC shared the English transcriptions and slides of the Pearls. IFCC will translate these transcripts into Spanish and then will record a Spanish narrated version of the Pearl.

This is a two-year plan (12 pearls per year) with a budget of USD 12.000 provided by The Boston Children’s Hospital.

The translation of the first set is in progress and videos will be recorded soon. The first two “Cápsula” (Pearl in Spanish) were completed and published:

- COVID-19 by Prof. Dr. Giuseppe Lippi
- Spanish version of AACC Tamizaje Neonatal Pearl of Laboratory Medicine

These pearls will be offered in the eAcademy frame according to the terms signed in the MOU. We are working to find the best place to deliver these videos since they do not fit the eAcademy template or format.

- **eAcademy miscellaneous contents:**

Like the AACC pearls, we have identified many valuable educational materials that certainly do not fit the eAcademy format requirements. Therefore, we are designing a new place inside eAcademy to offer these useful educational contents.

- **eAcademy Coordinators:**

Paul Hamilton and Rojeet Shrestha (RS) were working as coordinators. They helped to produce some contents. Since the numbers of members from C-DL and C-IeL rose from 4 to 10, this approach could be dismissed.

RS is trying to get learning objectives, MCQs and CV for the 18 videos from the 2017 ICPLM meeting in Durban. Once they are completed and approved by C-DL we will publish them on eAcademy.

- **Spanish subtitles in eAcademy:**

The new Chair of WG-IANT, Dr Raúl Girardi, expressed his commitment to continue with the collaborative translation project hosted in the platform “Amara”. Up to now, 10 modules are now offered in eAcademy with closed captions in Spanish.

- **Umbraco’s eAcademy update:**

The CMS of the website was updated last year. However, the update of the Umbraco version that manage the eAcademy website is still pending. After this version update, website and eAcademy administrations will be unified.

- **Social Media Activities:**

The number of followers in Facebook page is 28,446. It means that IFCC ranks number 1 in professional societies of clinical chemistry.



IFCC Twitter currently contains 2,318 followers and 904 tweets. LinkedIn account has 2013 followers. Instagram account has 556 followers and 409 posts.

- **Website activities:**

The handover between editors was successfully completed. Interactive membership map was updated

- Iraqi Society for Molecular Biology and Genetics (ISMBG) and Myanmar Medical Technologist Association (MMTA) were added
- Status Mongolia in the map was corrected

A broken link of related webinars <https://www.ifcc.org/ifcc-education-division/webinars/> was updated as well as Corporate Members' logos banner. Tosoh Corporation logo was added.

A new picture button was created and added to the IFCC media section to link COVID information. A weekly update of IFCC Information Guide on COVID-19 is published regularly.

An average of 2-3 publication per week are reviewed and published.

- **Social Media Policy:**

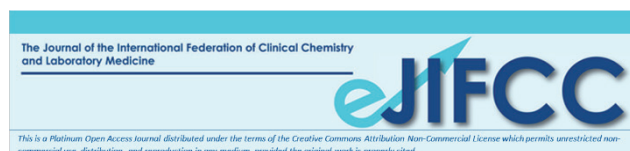
C-leL wrote the final version of this policy and it will be submitted to CPD for approval.

FUTURE PLANS:

- Produce new modules for eAcademy in liaison with C-DL.
- Update Umbraco version of eAcademy.
- To ask Insoft for a mock-up of the website layout in order to do a major update of website's design.
- Improve the search engine and the file tracking system of the website.
- To start a round of discussions (involving functional units) to find new ideas and features for a big update of IFCC App (i.e. interactive clinical cases or clinical scenarios as proposed by C-CLM).
- Deployment of eAcademy Phase 2 with the launch of some completed modules.
- Development of eAcademy Phase 3.
- Explore the feasibility of an IFCC Virtual Congress and prepare a proposal.
- To liaise with the Committee on Mobile Health and Bioengineering in Laboratory Medicine (C-MHBLM) to explore possible joint ventures (i.e. Big Data on lab medicine, Mobile Apps).

■ Working Groups

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



In the past year, the eJIFCC has been engaged with trying to obtain an Impact factor. There have been some challenges in the communication with Clarivate. The submission was re-initiated in May 2020. The journal has also been dealing with plagiarism and has now taken up a subscription with Ithenticate.

Statistics of submissions to eJIFCC (May 2020)

| | |
|------------|----|
| Submitted: | 30 |
| Rejected: | 17 |

| | |
|-------------------------------------|---|
| No response after major revision: | 2 |
| Accepted after minor revision: | 5 |
| Accepted after major revision: | 2 |
| Accepted as a letter to the Editor: | 3 |
| Accepted as submitted: | 2 |
| Under review: | 3 |

Submitting countries and number of free submissions in 2019-2020

- Ethiopia 21
- Marocco 10
- India 8
- Nepal 3
- Spain 4
- Pakistan 4
- Argentina 2
- Malta 2
- Nigeria 2
- One submission from: Austria, Bangladesh, Belgium, Canada, Denmark, Italy, Kenya, Philadelphia, Portugal, Syria, Togo

Volumes in 2020

Issue 1 - Thematic Issue Gabriel Oliveira Lima

Issue 2 - Free communications -June 2020

Issue 3 - Free communications – September 2020

Issue 4 - Thematic issue. Ed: Nilda Fink; Ethics in Laboratory medicine- December 2020

- **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 2020 the rate of publication continued with monthly frequency. 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 since 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/>

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: Raúl Girardi (AR)

Dr Girardi from Argentina, took over as the new chair from January 2020. 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 into 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 in IFCC / RIA / DIV.



DIAGNÓSTICO
IN VITRO

3 DIV issues were published in February, June and October 2020 both in PDF version and flip version,

- DiV sections are:
- 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

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

EL MICROSCOPIO



In 2020 The Iberoamerican web Radio El MICROSCOPIO continued its support to the dissemination of IFCC journals and broadcasted 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 broadcasted 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

Tricia Ravalico (Abbott) has provided great support for IFCC public relations. Her 2020 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 vehiculated through the different IFCC communications channels.

WEB EDITOR ACTIVITIES

The IFCC website contributed greatly to supporting the laboratory in the pandemic with the IFCC Information Guide on COVID-19, the web-publication that has grown with weekly (and now bimonthly) updates, and with the COVID-19 resource page.

- **Continued Activities:**
 - News section update
 - 2-3 per week review and publish news
 - A weekly update of IFCC Information Guide on COVID-19
 - Update of interactivemembership
 - Tracking of web site analytics
- **Planned Activities:**
 - Website design update

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 ISO15189 standard; assess the clinical value of each test with regard to addressing unmet clinical need.

Membership

To date ETD in total is composed by 72 members from 27 Countries.

During 2020 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 (CHN) (Corporate members). Four consultants: Maurizio Ferrari (IT), Larry Kricka (US), Jason Park (US) and Helen Martin (AU).

Functional Units Meetings

Two electronic meetings of Executive Committee were held during 2020: June 19th and December 4th

Each Functional Unit of ETD met 3-5 times electronically during 2020.

Relationship with other IFCC Divisions

The ETD shares projects 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 by working in synergy.

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. Professor Eric Kilpatrick is the EFLM SC chair.
- Healthcare Information and Management Systems Society (HIMSS)
Healthcare Information and Management Systems Society, Inc. (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 2021.
- 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.
- Society for the Study of Inborn Errors of Metabolism (SSIEM) and International Society for Neonatal Screening (ISNC)

The C-ETPLM is collaborating with SSIEM and ISNC to conduct a survey on COVID impact on Paediatric Laboratory Medicine. ETD liaison is Tim Lang.

Congresses and Conferences 2020

1. Journées Francophones de Biologie Médicale, November 24th : Pandémie SRAS COV2: Big bang de l'accélération numérique .
2. Journées de Biologie Clinique, December 10th: Navigate lab medicine's and healthcare's digital transformation.
3. Journées de Biologie Clinique, December 11th: E-cardiology and Laboratory Medicine
4. AACCC 2020, December 15th: Successful strategies for the clinical implementation of next generation sequencing in oncology in a hospital.
5. AACCC 2020, December 16th: Tumor Mutation Burden (TMB): A Potential Novel Biomarker for Therapeutic Selection

Congresses and Conferences organised during 2020 and expected in 2021

1. IFCC Global Conference on COVID-19, February 15th: "Emerging tools in fighting Covid- 19"- symposium n. 2 and "Emerging Tools in Fighting COVID-19"- symposium n.10.
2. 8th International Symposium on Critical Care Testing and Blood Gases, Biarritz June 10-11 2021
3. Conference POCT: Making the Point, Rome September 6-7, 2021
4. Journées Francophones de Biologie médicale (5e JFBM) Rennes (FR) Oct 6th: Session: For a heavy dose of digital to deliver high performance in a new healthcare landscape
5. EuroMedLab Munchen 2021: Dec 1st "Viewpoint 6 Regulating direct-to-consumer testing 2.0: Protecting the consumer"
6. Journée de l'innovation en biologie (JIB) Dec 8-11, Paris (topics tbd)
7. ICPLM to be held in Munich prior to the EuroMedLab congress (26-28/11/2021)

Surveys Published on ETD website

1. First update to the volatolomics survey.
2. Breath analysis literature focused on COVID-19 testing.
3. Survey of Breath Analysis for Covid Diagnosis Analyzers.

Publications

1. Gruson D, Bernardini S, Dabla PK, Gouget B, Stankovic S. Collaborative AI and Laboratory Medicine integration in precision cardiovascular Medicine. Clinica Chimica Acta, 2020; 509, 67-71.
2. Loh LP, Ho CS, Hartmann MF, Zakaria R, Lo CWS, van den Berg S, et al (2020). Influence of isotopically labeled internal standards on quantification of serum/ plasma 17 α -hydroxyprogesterone (17OHP) by liquid chromatography mass spectrometry. CCLM; 2020 Sep 25;58(10):1731-1739
3. Nuccetelli M, Pieri M, Grelli S, Ciotti M, Miano R, Andreoni M, Bernardini S. SARS-CoV-2 infection serology: a useful tool to overcome lockdown? Cell Death Discov. 2020 May 26;6(1):38
4. Nuccetelli M, Pieri M, Gisone F, Bernardini S. Combined anti-SARS-CoV-2 IgA, IgG, and IgM Detection as a Better Strategy to Prevent Second Infection Spreading Waves. Immunol Invest. 2020 Sep 18:1-13. doi: 10.1080/08820139.2020.1823407. Epub ahead of print. PMID: 32945214; PMCID: PMC7544959.
5. Ciotti M, Ciccozzi M, Terrinoni A, Jiang WC, Wang CB, Bernardini S. The COVID-19 pandemic. Crit Rev Clin Lab Sci. 2020 Sep;57(6):365-388. doi: 10.1080/10408363.2020.1783198. Epub 2020 Jul 9. PMID: 32645276.



6. Kricka LJ, Polevikov S, Park JY, Fortina P, Bernardini S, Satchkov D, Kolesov V, Grishkov M. Artificial Intelligence-Powered Search Tools and Resources in the Fight Against COVID-19. *EJIFCC*. 2020 Jun 2;31(2):106-116.
7. Nuccetelli M, Pieri M, Grelli S, Ciotti M, Miano R, Andreoni M, Bernardini S. SARS-CoV-2 infection serology: a useful tool to overcome lockdown? *Cell Death Discov*. 2020 May 26;6:38.
8. Nicolas C Nicolaidis, Christina Kanaka-Gantenbein, Nektaria Papadopoulou-Marketou, Amalia Sertedaki, George P Chrousos, Ioannis Papassotiriou. Emerging Technologies in Pediatrics: The Paradigm of Neonatal Diabetes Mellitus. *Crit Rev Clin Lab Sci* 2020 May 1;1-10.
9. Woollard G, McWhinney B, Greaves RF, Punyalack W. Total Pathway to Method Validation.
10. *CCLM*; 2020 Oct 25;58(11):e257-e261. doi: 10.1515/cclm-2020-0525.
11. Gruson D, Bernardini S, Dabla P, Gouget B, Stankovic S. Integration of artificial intelligence and laboratory medicine: opportunities for cardiovascular medicine. *eJIFCC*, 2020 Jun 4;509:67-71.


eNews IFCC Publications

1. Chavagnac DC, Mabarek MA, Gouget B, Peoc'h K. Digitalisation and integration of AI in Lab Medicine; Jan-Feb 47-49.
2. Gouget B. Uplifting the medical lab cybersecurity; March 33-34
3. Giannoli JM, Bouilloux JP, Gouget B. Labac: showing the way from compliance to excellence; March 40-43.
4. Gouget B. A pandemic crisis and globalization: a long-term fight; April 9-11
5. Blancheotte F, Ferre V, Klouche M, Gouget B. JIB Paris: at the crossroads of innovation, ethics and professional performance; April 31-32.
6. Gouget B. Diagnostic, trust, solidarity and humanism; May 21-23.
7. Stankovic S, Bernardini S, Gouget B. CLAQ Serei Belgrade: Deep dive in AI, innovation and quality management; May 29-32.
8. Gouget B. Igniting the AI and eHealth creative sparks at APFCB in Jaipur; June 13-16.
9. Ethical digital technologies to flatten the curve; June 26-28.
10. Gouget B. Social distancing and the truth of masks; Jul/Aug 10-12.
11. Lensky M. Video promoting contribution of lab medicine professionals during Covid-19; Jul/Aug 16-18.
12. Gouget B. A dose of AI in developing vaccines at pandemic speed. Sept 26-28.
13. Gouget B. Life with the virus: a new norm; Oct 18-20.
14. Blancheotte F, Ferre V, Gouget B. JIB 2020: innovation, cultural changes and redesigning lab medicine in Covid era; Oct 24-25
15. Gouget B. Lockdown 2.0 and curfew: the unspoken toll on the elderly; Nov 18-20.

Ongoing Projects

■ **Committees**

- **C-Mobile Health and Bioengineering in Laboratory Medicine (C-MHBLM)**; Chair: B. Gouget (FR)
Focused on:
 1. Role of Mobile Health, Artificial Intelligence and Digital Laboratory Medicine in the fight against the COVID-19 pandemic
 2. Benchmarking of mobile contact tracing and warning applications to reduce the spread of the SARS-CoV-2

- 
3. Coronavirus: a common approach for safe and efficient mobile tracing and warning apps
 4. mHealth applications improve clinical outcomes of patients with chronic diseases; remote patient monitoring systems
 5. mHealth opportunities in emerging countries in the COVID era
 6. AI in precision medicine, AI: LabMed and clinical applications
 7. Ethics and AI

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

The C-OT webpage has been updated. The Chair of the Committee, Greg Tsongalis, resigned and a call for membership has been sent to NSs. We thank Greg for the great job he did in making the Committee.

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

The C-ETPLM webpage has been updated. Focused on:

1. Delivery of ICPLM
2. Delivery of online workshop on reference ranges

- **Working Groups**

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

Focused on:

1. Second update to the volatolomics survey
2. IFCC eNews article to summarize work of the WG-Vol (2019-2021)

After these activities the WG will be closed.

- **WG-Guidance for the Implementation of Custom-made Genomic Panels (WG-GCP)**;

Chair: J. Morrisette (US)

Focused on:

1. Design and development of the genomics webpage (part of the IFCC website). Content is under development for short educational talks discussing genomics basics, implementation and bioinformatic principles
2. Survey to IFCC affiliated laboratories
 - Initial survey: cusp of COVID
 - Redesigned survey under review with plans to send to IFCC affiliated laboratories in March 2021

New Working Groups starting from 2021

Two new WGs have been approved by the EB:

“Single Cell and Spatial Transcriptomics” (WG-SCST; Chair Andrew South)

“Artificial Intelligence and Genomic Diagnostics” (WG-AIGD; Chair Larry Kricka).

Sergio Bernardini, ETD Chair



TASK FORCES

Task Force on Ethics (TF-E)

Achievements during 2020:

- e-IFCC journal number entirely dedicated to Ethics in Laboratory Medicine was published. This special issue of the eJIFCC incorporates a series of manuscripts that summarizes part of relevant aspects on Ethics. Seven manuscripts were included, being four of them an updating of classical ethical topics, two referred to more recent challenges in Ethics and an opinion paper.
- Ethics “toolkit” for Member Societies was updated and uploaded at the website.
- TF-Ethics website and section on “Highlights of recent events in Bioethics” was updated
- Documents collected stratified by organization on COI, code of ethics & relationship with industry were incorporated (partially done).
- TF-Ethics held a committee zoom meeting with new authorities.

Plans for 2021:

- To prepare and edit a 2021 webinar on relevant topics on Ethics during pandemic
- To prepare an IFCC code of Ethics for Laboratory Medicine professionals
- To update annually 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 (partially done) .
- To held TF-Ethics bimonthly zoom meetings
- To prepare a document on Inequities, bioethics and Health care. As the pandemic shed light on a lot of disparities related the healthcare, is proposed a document and a possible article widely available to make sure that all IFCC members and related organizations are aware of the challenges in this area.

Nilda Fink, TF-E Chair

Task Force for Young Scientists (TF-YS)

Due to COVID-19 pandemic, many activities have been postponed.

I. TF-YS educational sessions & networking 2020

1. **POSTPONED 2022: TF-YS Functional meeting at IFCC WorldLab 2020, May 24-28, Seoul, South Korea.** Young Scientists volunteer program, travel grants by IFCC-TFYS. All Core members to be supported by TFYS Budget 2020
2. **POSTPONED 2022: YOUNG SCIENTISTS FORUM AT IFCC WORLTLAB SEOUL, 2020-** Pre Congress Satellite meeting of approx 50-60 young scientists for 1-1.5 day with deliberation of talks and topics close to the need and Networking of young scientists. Further they will continue joining main congress. Selection criteria and budget estimation will be determined and proposed to IFCC-EB with support of Treasurer and Liaison IFCC TFYS, Prof Tomris. The event will be supported by IFCC & IVD as per action and future outcomes.
3. **POSTPONED: Young Scientist Session at CALILAB 2020, 23-26 Sep 2020, Argentina.**
4. Young Scientist Session at Congresso Nazionale SIBioC YOUNG SCIENTISTS, Virtual, October 6-8, 2020, Italy.
5. Young Scientist Session at XIII Congreso Uruguayo de Bioquímica Clínica. Uruguay Virtual, October 15-17, 2020.

6. Young Scientist Session at VIII CONVERSATORIO COLABIOCLI. Colombia Virtual, October 28th, 2020.
7. Young Scientist Session at Russian Congress of Laboratory Medicine. Forum “IFCC TF-YS: Young Scientists Around the World”. Russia Virtual, November 18-19, 2020
8. Young Scientist Session at Conversatorio Colegio de Microbiólogos y Químicos Clínicos de Costa Rica. Costa Rica Virtual, December 3rd, 2020.

II. Webinar Series

IFCC TF-YS obtained an unrestricted grant from Thermo Fisher to support a webinar about Automatization in Mass Spectrometry. Due to COVID-19 and the impossibility to coordinate with the 3 selected speakers we decided to postpone it until 2021.

III. Mentorship programme Interviews

3 Mentorship Interviews published on the IFCC website: <https://www.ifcc.org/task-force-young-scientists-web-pages/mentorship-programme/>

IV. Lab-Surfing

Lab-Surfing.com is now upgraded with new features LinkedIn, Hospital / Laboratory information, Mentor information, monthly newsletters. Registered users: 794 (December 2020)

V. TFYS Survey

Now the members have been added approx. 2000 globally to all social media channels. Claudia Imperiali is coordinating the 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.

VI. EI Microscopio

Active participation in the selection of interviews and creation of questions for the different topics.

VII. DIV

During 2020 we published 3 articles in the YS section: <https://www.ifcc.org/div/>

VIII. SJBM video

This initiative, as well as the edition of the video, was conducted by a union of young medical biologists from France (SJBM), with the support of the national representative society SFBC and IFCC-TF-YS.

To improve visibility and promotion of laboratory medicine professionals at an international level, different YS from all around the world created a video with the attached text message: “You may not see lab workers, but all over the world, they are devoting all of their energy to fight COVID19 pandemic. Your health and security, our priority.” The video was shared on YouTube and Facebook with currently more than 140 000 views.

<https://www.youtube.com/watch?v=qMz6GI9xsOY&feature=youtu.be>

Plan of Actions for 2021

I. TF-YS educational sessions & networking 2021:

1. IFCC TF-YS online session during IFCC virtual conference - Critical role of clinical laboratories in COVID-19 pandemic. February 2021.
2. 1st EFLM/AFCB Conference & 34th National Days of Clinical Biology - Digital Version - “Laboratory Medicine for Mobile Societies” 34th National Days of Clinical Biology - February 18th, 19th and 20th 2021



Young scientists confronting COVID-19 pandemic.

Moderators: *Mohamed Yassine Kaabar (TN), Rami S.H Assaad Khalil (EG) Pradeep Kumar Dabla (IN);*

Young scientists' opportunities during COVID-19 pandemic- *Santiago Fares Taie (Argentina);*

COVID-19 infodemic, misinformation and fake news: What can young scientists do? *Giulia Sancesario (IT);*

C-Reactive Protein and procalcitonin: Biomarkers for severity, treatment and prognosis of COVID-19 *Jitender Sharma (IN);*

Effects of the COVID-19 pandemic on packed red blood cell units' supply in a Tunisian blood deposit *Emna Hammami (TN)*

3. EUROMEDLAB Congress, Munich, 28th November – 2nd December 2021.

IFCC TF-YS symposium:

Moderators: *Rosa Sierra Amor (MX), Santiago Fares Taie (AG)*

Motivation in the Clinical Laboratory - *Santiago Fares Taie (AG);*

Time Management Tools for the Young Laboratory Professional - *Joe El-Khoury (US);*

Career management for Young Laboratory Scientists - *Giulia Sancesario (IT);*

Conflict Management amongst Young Laboratory Scientists - *Ashlin Rampul (ZA).*

4. Organizing: TF-YS Functional meeting at EUROMEDLAB Congress, Munich, December 2021.
5. Young Scientist Session at CALILAB 2021, Argentina.

II. Webinar Series & Mentorship programme Interviews

Next 3 webinars series to be continued with L3 Healthcare for organizing and technical help.

Suggested Topics: “Rapid test for COVID-19 diagnosis”, “Microbiota / Metagenomics”, “Cancer Immunotherapy”, “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.

III. Lab-Surfing

Lab-Surfing is a Laboratory professional social media designed and created in order to fulfil the objectives of IFCC-TFYS & unattended 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 the laboratory skills.

Lab-Surfing.com needs to continue improving communication among YS. Social media including Facebook and Instagram will be addressed to achieve this goal.

IV. Capillary programme

This programme aim to increase the participation of TFYS corresponding members during national meetings. It is an initiative of Dr Giulia Sancesario in her plan for the TFYS. **What is the CP:** The CP is the formation of a network of thousands of YSs all around the world, by stimulating the formation of YS-WGs within the national societies which belong to the IFCC. And Connecting already existing WGs under the umbrella of the IFCC.

A Survey was conducted of corresponding members, and National YS-WGs have been mapped.

V. 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.

VI. EI Microscopio

Active participation in the selection of interviews and creation of questions for the different topics.

VII. 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.

VIII. YS SECTION IN IFCC JOURNAL

YS have been offered a special section in IFCC journal to publish scientific articles.

IX. Professional Scientific Exchange Programme (PSEP).

IFCC president (Prof. Adeli Khosrow) intends to promote and expand the PSEP. It is not a TF-YS project, but it is our duty to share and promote this programmes among YS.

X. YS Worldwide Survey

Dr. Claudia Imperiali will be in charge of coordinating the YS Survey to dilucidated the differences among careers around the world. This is an ambitious project that will include answers from the 5 continents. The results will be published in IFCC Journal.

XI. Social Media

Dr Ashlin Rampul and Dr. Intan Wibawanti Masfufa will focus on social media: Facebook, Instagram, Twitter to improve visibility and information about the projects that are been promoted by the IFCC TF-YS.

XII. Leadership Workshop for YS of Latin America

Promote the development of a critical mass of young leaders, with leadership skills and strategic planning of projects with social impact.

The Workshop will be promoted by YS members of the TS-YS from Latin America.

XIII. IFCC TF-YS Leadership Workshop

Promote the development of a critical mass of young leaders, with leadership skills and strategic planning of projects with social impact. The Workshop will be promoted by YS members of the TS-YS.

*Santiago Fares Taie, TF-YS Chair
Giulia Sancesario, TF-YS Co-Chair*

Task Force History (TF-H)

Almost 20 years after the first edition of the IFCC Milestones (Kobe 2002) and before the publication of the next 70 years IFCC anniversary book (2002-2022), this "IFCC Milestones 2002 - 2020 Golden Achievements" edition is providing an update on the evolution of the IFCC since the beginning of the 21st Century. The IFCC Milestones 2002-2020 is dedicated to Professor Howard Morris who occupied, with boundless enthousiam, a unique position in the history of the IFCC. The e new "IFCC 2002 - 2020 Milestones" will allow you to learn more about the IFCC, its function and its operations, as well as to better understand the IFCC spirit and mission statement to continue being the leading organisation in the field of laboratory medicine. http://www.ifcc.org/media/478750/ifcc_milestones_2020_web.pdf

IFCC has been subject to waves of changes in the past twenty years. The world is changing, society is changing, technology is changing, and so laboratory medicine and IFCC are. With this in mind, the TF on History is preparing the 70th anniversary history book to be distributed at Worldlab Roma 2023 . The objective is to better understand the evolution and transformation

of IFCC, and to analyse, the impact of the innovation and disruptive technologies on the evolution of IFCC scientific activities, strategies and governance since the beginning of the new millennium facing the transformation of the healthcare systems and societal needs.

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



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 established 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:

- March 17: two hour video conference
- July 2: two hour video conference
- October 1: two hour video conference

No in-person meetings could be held due to the pandemic.

Topics focused on in 2020:

1. To develop structures and processes for improved communication / engagement among Corporate Members:
 - *the EB agreed to allow the TF to communicate directly with all corporate members without going through the IFCC office - ensures autonomy and independence*
 - *meeting minutes were distributed to all company representatives*
2. To make real progress to promote the value provided by lab testing: build on COVID-19.
3. To investigate how to create formal collaboration channels between the IFCC, regulators and clinical societies:
 - to reduce the regulatory burden via harmonized global regulatory requirements
 - to harmonize standards and guidelines
 - to achieve more favorable reimbursement
4. To share best practices with respect to the In-vitro Diagnostica Regulation (IVDR).
5. To ensure full compliance to the MedTech Europe Code compliance rules.
6. To provide actionable input to the EB on frequency, venues, and locations of IFCC conferences to enhance value to its corporate members.
7. To encourage CMs to nominate colleagues for full membership to all Committees, Working Groups and Task Forces (not just corresponding membership).
8. To promote the significant contributions being made by corporate members to the IFCC EB, to all its members and the outside world.

Topics for 2021:

1. To update and refine the TF-CM Terms of Reference.
2. To develop a strategic IFCC / Corporate Member roadmap.
3. To develop a process to assess costs versus value for any corporate sponsorship or

funding request.

4. To provide direct input to the EB on the value to corporate members for new Task Forces, Committees and Working Groups being considered.
5. To continue to provide input to the EB on frequency, venues, and locations of IFCC conferences to enhance value to its corporate members.
6. To further improve and enhance Corporate Members' engagement:
A survey to all CMs will be initiated to better understand needs and interests to maximize the value of IFCC membership.
7. To engage other professions and different stakeholders beyond traditional laboratory medicine.
8. To develop processes that could support the IFCC to influence global regulations and guidelines.
9. To pursue the opportunities of data analytics in laboratory diagnostics.

Future / Proposed Meetings:

- January 8, 2021: three hour video conference
- Virtual meeting in the Spring
- Meeting in early Summer, either in person or virtually, depending on the pandemic
- In late September in conjunction with the AACC conference
- In late November in Munich, Germany in conjunction with EuroMedLab 2021

The TF-CM chair will need to step down with his transition to the EB as the next Corporate Representative. Nonetheless, he will remain on the TF-CM in 2021 as a member and as the EB Corporate Representative. This will ensure continuity.

The TF-CM is in excellent hands moving forward in 2021 under the new leadership of Ms. Tricia Ravalico who was appointed by the EB at the end of 2020.

Joseph Passarelli, TF-CM Chair

Task Force on COVID-19

Background

The leading objectives of this TF encompass the provision of regular updates on epidemiology, pathogenesis and laboratory diagnostics of COVID-19, the development of practical recommendations for harmonizing the use of diagnostic tests for COVID-19 and biosafety measures for managing the specimens, as well as the organization of international studies to improve the knowledge on pathogenesis, diagnostics and therapeutic management of COVID-19

Educational sessions, workshop, functional meeting conducted:

- 2020 Lectureship on Critical Care Medicine on COVID-19. COVID-19 – approach to laboratory testing and biosafety. Speaker Panel: Giuseppe Lippi, Khosrow Adeli. Moderator: Dr. David Kinniburgh
- IFCC Free Webinar on COVID-19 Guidelines on Molecular, Serological and Biochemical/ Hematological Testing - 23 September, 2020. Speaker Panel: Giuseppe Lippi (Italy), Andrea Rita Horvath (Australia), and Khosrow Adeli (Canada); Chair: Khosrow Adeli
- Virtual Conference: Critical Role of Clinical Laboratories in COVID-19 Pandemic. 15 - 17 February, 2021.

Articles published:

- Setting minimum clinical performance specifications for tests based on disease prevalence and minimum acceptable positive and negative predictive values: Practical

considerations applied to COVID-19 testing. Loh TP, Lord SJ, Bell K, Bohn MK, Lim CY, Markus C, Fares Taie H, Adeli K, Lippi G, Sandberg S, Horvath A. *Clin Biochem.* 2021 Feb;88:18-22. doi: 10.1016/j.clinbiochem.2020.11.003. Epub 2020 Nov 20. PMID: 33227233 Free PMC article.

- Editorial and Executive Summary: IFCC Interim Guidelines on Clinical Laboratory testing during the COVID-19 Pandemic. Lippi G, Horvath AR, Adeli K. *Clin Chem Lab Med.* 2020 Oct 7;58(12):1965-1969. doi: 10.1515/cclm-2020-1415. PMID: 33027045 No abstract available.
- IFCC Interim Guidelines on Biochemical/Hematological Monitoring of COVID-19 Patients. Thompson S, Bohn MK, Mancini N, Loh TP, Wang CB, Grimmmler M, Yuen KY, Mueller R, Koch D, Sethi S, Rawlinson WD, Clementi M, Erasmus R, Leportier M, Kwon GC, Menezes ME, Patru MM, Gramegna M, Singh K, Najjar O, Ferrari M, Lippi G, Adeli K, Horvath AR; IFCC Taskforce on COVID-19. *Clin Chem Lab Med.* 2020 Oct 7;58(12):2009-2016. doi: 10.1515/cclm-2020-1414. PMID: 33027044
- IFCC Interim Guidelines on Serological Testing of Antibodies against SARS-CoV-2. Bohn MK, Loh TP, Wang CB, Mueller R, Koch D, Sethi S, Rawlinson WD, Clementi M, Erasmus R, Leportier M, Grimmmler M, Yuen KY, Mancini N, Kwon GC, Menezes ME, Patru MM, Gramegna M, Singh K, Najjar O, Ferrari M, Horvath AR, Lippi G, Adeli K; and the IFCC Taskforce on COVID-19. *Clin Chem Lab Med.* 2020 Oct 7;58(12):2001-2008. doi: 10.1515/cclm-2020-1413. PMID: 33027043
- IFCC Interim Guidelines on Molecular Testing of SARS-CoV-2 Infection. Bohn MK, Mancini N, Loh TP, Wang CB, Grimmmler M, Gramegna M, Yuen KY, Mueller R, Koch D, Sethi S, Rawlinson WD, Clementi M, Erasmus R, Leportier M, Kwon GC, Menezes ME, Patru MM, Singh K, Ferrari M, Najjar O, Horvath AR, Adeli K, Lippi G. *Clin Chem Lab Med.* 2020 Oct 7;58(12):1993-2000. doi: 10.1515/cclm-2020-1412. PMID: 33027042
- Staff rostering, split team arrangement, social distancing (physical distancing) and use of personal protective equipment to minimize risk of workplace transmission during the COVID-19 pandemic: A simulation study. Lim CY, Bohn MK, Lippi G, Ferrari M, Loh TP, Yuen KY, Adeli K, Horvath AR; IFCC Task Force on COVID-19. *Clin Biochem.* 2020 Dec;86:15-22. doi: 10.1016/j.clinbiochem.2020.09.003. Epub 2020 Sep 12. PMID: 32926883 Free PMC article.
- Laboratory practices to mitigate biohazard risks during the COVID-19 outbreak: an IFCC global survey. Loh TP, Horvath AR, Wang CB, Koch D, Lippi G, Mancini N, Ferrari M, Hawkins R, Sethi S, Adeli K; International Federation of Clinical Chemistry and Laboratory Medicine Taskforce on COVID-19. *Clin Chem Lab Med.* 2020 Jun 4;58(9):1433-1440. doi: 10.1515/cclm-2020-0711. Print 2020 Aug 27. PMID: 32549123
- Operational considerations and challenges of biochemistry laboratories during the COVID-19 outbreak: an IFCC global survey. Loh TP, Horvath AR, Wang CB, Koch D, Adeli K, Mancini N, Ferrari M, Hawkins R, Sethi S, Lippi G; International Federation of Clinical Chemistry and Laboratory Medicine Taskforce on COVID-19. *Clin Chem Lab Med.* 2020 Jun 4;58(9):1441-1449. doi: 10.1515/cclm-2020-0710. Print 2020 Aug 27. PMID: 32549122
- Molecular, serological, and biochemical diagnosis and monitoring of COVID-19: IFCC taskforce evaluation of the latest evidence. Bohn MK, Lippi G, Horvath A, Sethi S, Koch D, Ferrari M, Wang CB, Mancini N, Steele S, Adeli K. *Clin Chem Lab Med.* 2020 Jun 25;58(7):1037-1052. doi: 10.1515/cclm-2020-0722. PMID: 32459192 Review.
- Biosafety measures for preventing infection from COVID-19 in clinical laboratories: IFCC Taskforce Recommendations. Lippi G, Adeli K, Ferrari M, Horvath AR, Koch D, Sethi S, Wang CB. *Clin Chem Lab Med.* 2020 Jun 25;58(7):1053-1062. doi: 10.1515/cclm-2020-0633. PMID: 32396137

Other activities:



- Developing and maintaining the IFCC Information Guide on COVID-19, an online resource providing key information on laboratory guidelines, biosafety, and other important resources to assist member societies around the world and their clinical laboratories as they face the challenges posed by the COVID-19 outbreak.

Giuseppe Lippi, TF-COVID-19 Chair





FOUNDATION FOR EMERGING NATIONS – FEN

The activities of the FEN were severely impacted during 2020 as a result of the Covid-19 pandemic.

The FEN Board held two meetings in January and April during which it:

- Approved the annual report and accounts for 2020
- Achieved tax exemption from the Swiss Regulatory Authority
- Awarded four 'Support a Professional Scholarships' to applicants from Malawi, Vietnam and Pakistan

The onset of the pandemic meant that it has not been possible for the scholarship recipients to visit their host laboratories in S Korea and the UK. The scholarships have been held over into 2021.

Fundraising for the FEN is contingent on the completion of ongoing projects. Therefore, no attempts were made to raise fresh funding during the year.

The Board welcomed Mr Joseph Passarelli as representative of the IFCC Corporate Members.

The Board acknowledges the excellent support of Paola Bramati.

The Board hopes that 2021 will be a more productive and effective year.

Graham Beastall, FEN Chair



FEDERATIONS

REGIONAL FEDERATIONS 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



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. Almost all of the training of Arab Clinical Biology Societies in 2020 was delivered through webinars, related to the pandemic (SARS-CoV-2). Majority of countries have restricted and banned face-to-face meetings (congresses) and encouraged virtual contacts. The main activities of 6 Arab Societies and AFCB were the following

Clinical biology Activities of the Arab Societies

1- Algeria - Association Nationale des Laboratoires d'Analyses Médicales (ALAM)

- Biochemistry: Glycated haemoglobin - The automations of molecular biology;
- Virology: Pertussis News, Biological diagnosis of measles, Screening for cervical cancer by HPV;
- Microbiology: Screening and confirmation of diagnosis of STIs, The diagnosis of respiratory infections;
- Covid-19: Place of Biological Diagnosis in covid-19 disease, Diagnostic tools for Covid-19 and feedback from public and private medical biology laboratories, 3 months after the start of the epidemic in our country, Prize in biological load of SARS-CoV-2, After Covid-19;
- Autoimmunity: Chronic inflammatory bowel diseases: Controlling the continuum for appropriate management;
- Quality: The fundamentals of quality control, Accreditation tools;
- Genetics: Research for DPD deficiency;
- Oncology: Place de Roche Diagnostics in oncology;
- Endocrinology: Elecsys Androstenedione, a new assay for the management of endocrinopathies, AMH and female fertility.

2- Lebanon: Syndicat des Biologistes du Liban (SBL)

- Sars-Covid-2: When? How? Why? What hospital and health system labs need to know about operational support and logistic during the Covid-19 outbreak;
- Anticoagulant therapy webinar series in collaboration with the school of nursing and the

division of cardiology at the American University of Beirut Medical Center.

3- Libya: Libyan Association of Clinical Pathology (LACP)

- Organization of local LACL training courses;
- Collaboration with Libyan accreditation center to finalize the drafts of licensing requirements;
- Practical training and course in collaboration with scientific council of laboratory medicine on Clinical Biochemistry, Clinical Haematology, and clinical microbiology, and blood bank modules;
- Participation on setting medical laboratory national plan for Covid-19 management with CDCs, Biotechnology center, and scientific council of laboratory medicine;
- Planning for meeting with international cooperation office in ministry of health to organize training in different laboratory subjects form International NGOs;
- Providing a presentation on role of Flow cytometry in haematology malignancy diagnosis;
- Joining Columbia University and institute of Pasteur in Tunis as member of panellist for monthly seminar on genetics in North Africa and Middle-East;
- Attendance of universal health coverage workshop with WHO, and use of research outcome in policy making;
- Attendance of seminar organized by WHO on quality in Fragile conflict vulnerable countries.

4- Palestine: Medical Technology Association Palestine (PMTA)

During 2020, there were held some scientific events in the first two months of the year, and because of the Covid-19 pandemic all the events did not occur as planned

- Scientific Conference: Road to the laboratory informatics: instruments, software, safety, and data management;
- Scientific Lecture: Thalassemia Trait Diagnosis;
- Scientific Lectures: The importance of the continuous education in keeping up with the scientific development;
- 2nd scientific Days.

5- Saudi Arabia: Saudi Society for Clinical Chemistry (SSCC)

- 2nd International Meeting in Clinical Chemistry & Laboratory Medicine & 6th Annual Meeting Saudi Society for Clinical Chemistry, Saudi Arabia (virtual meeting);
- 2 Journal Club Meetings;
- Pediatric Laboratory Medicine;
- Selected Topics in Genetic Cancer – Alborg;
- Covid-19: Laboratory Medicine & COVID-19 , How does the laboratory services function in the Covid-19 outbreak, Covid-19 Webinar on laboratory medicine , Experience Sharing from South Korea and UK, Covid-19 Webinar on Inflammation Biomarkers , Critical Care Management of Covid-19 patients , Interpretation of Procalcitonin at the Bedside & Clinical Utility of Procalcitonin in Covid-19 Patient;
- 1st Saudi international conference for clinical laboratory sciences (partner);
- Familial hypercholesterolemia (FH) Awareness day webinar;
- Genomic Medicine and its Application in Saudi health care system;
- Prostate cancer awareness;
- 2nd International Meeting in clinical Chemistry and Laboratory Medicine;
- 6th Annual Conference Saudi Society for Clinical Chemistry and Workshop.

6-Tunisie: Société Tunisienne de Biologie Clinique (STBC)

- Covid-19: Regional meetings ALAM/SJBM/SMCC/SFBC/FIFBCML: The medical biologist facing Covid-19,
- 3 Biologist's Wednesday (Case-reports presentation and discussion);
- Laboratory diagnostic procedure in front of polycythemia;



- Pre-analytical phase in biochemistry;
- Antibiogram in 2020;
- Tropical cutaneous mycosis encountered in Tunisia;
- SEPSIS DAY 2020;
- Diagnosis and management of the haemolytic disease of the foetus and new-born;
- Quality management in microbiology and in parasitology;
- Antifongigram.

AFCB Activities (2020)

❖ EFLM/AFCB Collaboration

EFLM-AFCB Steering committee for Laboratory Medicine in Mobile Societies (JTF-LM4MS) has organized three meeting: the 1st face to face Steering Committee meeting January 25, 2020 Hammamet Tunisia, and 2 Virtual meetings:

- Objective: preparation of the EFLM / AFCB (LM4MS) congress on February 18-20,2021.

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

- AFCB/EB Virtual Meeting February18-20, 2021 Hammamet Tunisia;
- 16th virtual and hybrid AFCB Congress Lebanon May -27-29 , 2021;
- 17th AFCB congress Morocco 2024.

Abderrazek Hedhili, AFCB Representative



AFCC
African Federation of Clinical Chemistry



2020 disrupted many of the activities that the AFCC had proposed. However we were still able to achieve a few which are listed below:

1. We developed a plan for 2020/21
2. AFCC supported the 5th Annual meeting of Chemical Pathology/MRC/University of Alexandria, Egypt, 15-16th February, 2020 at which 5 speakers from South Africa participated
3. AFCC developed and submitted a draft POCT Policy for Egypt to Ministry of Health, Egypt, March, 2020
4. The AFCC assisted in organizing a POCT conference (postponed due to COVID 19)
5. AFCC supported the organization of the Malawian Association of Laboratory Scientists Inaugural Conference, Lilongwe, Malawi, 19 -21st February, 2020 – Invited talks – Prof Erasmus
6. South African Association of Clinical Biochemistry organized several Expert Webinars- 4th June, 2020 – Dr Westgard, 19th August, 2020, Modern Urine Analysis – Prof Delanghe 15th July 2020, Diabetes from differential diagnosis to risk estimation – Dr Gruson
7. AFCC has interacted with Biochemical Society of Zambia to organize AFCC Regional Conference from 23-25th September, 2021, Lusaka, Zambia
8. AFCC was invited to participate in Kenyan Association of Clinical Pathology Conference, Nairobi, Kenya, 13-16, October, 2020 (Speaker, Prof Erasmus, President, AFCC)
9. AFCC participated in Malawian Association of Medical laboratory Scientists Webinar on Leadership 7th December, 2020 by giving a talk on Ethical Leadership
10. AFCC has been engaging actively with African Society of Laboratory Medicine to support joint academic activities in Africa
11. AFCC is in the process of revamping its website

On behalf of AFCC Board, we would like to thank IFCC leadership for continuing to support AFCC and its activities. It truly continues to make a difference

Rajiv Erasmus, AFCC President
Hilary Lumano, AFCC Secretary
Aramide Onakoya, AFCC Treasurer



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

Education and Laboratory Management Committee Report

The Education and Laboratory Management Committee (C-ELM) consists of the following: Lia Gardenia Partakusuma (Indonesia); Tze Ping Loh (Singapore); Ronda Greaves (Australia); Elina Raja (Malaysia); July Kumalawati (Indonesia); Endang Hoyaranda (Indonesia); Jozi Habijanac (Roche Corporate); Amit Manjure (Siemens Corporate); Rojeet Shrestha (Japan); Hong-yew Lim (Roche Corporate).

The impact of the global pandemic of 2020 has restricted many of the activities of the C-ELM, however we have continued with existing projects as well as some new initiatives.

APFCB Travelling Lecturer

The APFCB Visiting Lecturer for 2021/22 is Helen Martin from Australia. Whilst there are travel restrictions on this key role, virtual lectures will continue. On the 26th November 2020, Helen was a Plenary Lecturer at the MACB meeting and delivered a lecture entitled “Adding value with patient report commenting.”

APFCB - Roche – 12th Chemical Pathology Course – Vietnam

This is an ongoing annual event organised by Roche in collaboration with Rhonda Greaves from Australia. In 2020, the virtual event attracted approximately 400 participants and consisted of a mixture of invited and local speakers presenting on routine chemical pathology topics. The course is supported and endorsed by many prestigious local and international medical organizations and associations, such as International Federation of Clinical Chemistry and Laboratory Medicine (IFCC), Asia-Pacific Federation for Clinical Biochemistry and Laboratory Medicine (APFCB), Australasian Association of Clinical Biochemists (AACB), Vietnamese Association of Clinical Biochemists (VACB), Ho Chi Minh City Association of Clinical Biochemists (HACB), Ho Chi Minh City Association of Medical Laboratory Technologists (HAML), Bach Mai Hospital, Cho Ray Hospital and other medical organizations and Associations

APFCB / VACB / Roche Lean Project

The Lean project continues with the support of Roche in Vietnam though at a reduced pace because of COVID-19.

APFCB Becton Dickinson Pre-Analytical Improvement Project

The collaboration of APFCB with BD to provide our members with a digital guideline for pre-analytical procedures has now been finalised with the first part which contains:

Module A1 - Phlebotomist Attributes

Module A2 - Specimen Collection via Venipuncture

Module A3 - Specimen Collection via Vascular Access Devices

Module A4 - Specimen Transportation.

All are in the format of PDF slides, in English.

The next Modules will be Module B1 - Continuous Improvement and B2 - Troubleshooting.

APFCB-AACC Workshops

The APFCB has been collaborating with the AACC with their Global Lab Quality Initiative (GLQI) as part of the Asia Pacific Working Group (APWG). It was not possible to run any workshops in 2020, however it is planned to run one in Mongolia in August 2021.

The C-ELM has organised a two-day virtual workshop on Laboratory Testing of COVID-19. The program is given below.

APFCB virtual workshop Complete Guide on Laboratory Testing of COVID-19

As the information of laboratory diagnosis and monitoring of COVID-19 is rapidly evolving with new information arising in daily basis, laboratory professional need a constant update on the



developments. Furthermore, many developing countries are struggling to meet requirement of appropriate testing not only because of lack of resources but also due to lack well-trained laboratory professionals on the molecular assays. To help lab professionals with appropriate guide in COVID-19 testing, APFCB committee for Education and Laboratory Management is glad to present a virtual workshop that contain a series of lectures from experts as a complete guide on Laboratory Testing of COVID-19. The complete list of presentations available are as follow. Certificate of participation will be provided to the participants after completion of the webinar.

- **Lecture 1: Epidemiology and Clinical Aspects of COVID-19**
Speaker: Ranjit Sah, Assistant Professor, Institute of Medicine, TU Teaching Hospital, Nepal
- **Lecture 2: General aspect of Laboratory diagnosis of COVID-19**
Speaker: Tjan Sian Hwa, Head of Clinical Laboratory Department Premier Jatinegara Hospital, Jakarta, Indonesia
- **Lecture 3: Basic on molecular assays for the detection of SARS-CoV-2**
Speaker: Rojeet Shrestha, Assistant Professor, Faculty of Health Sciences, Hokkaido University, Japan
- **Lecture 4: Technical guide to establishing a molecular diagnostics laboratory**
Speaker: July Kumalawati, lecturer, Clinical Pathology Department, Medical Faculty, Universitas Indonesia
- **Lecture 5: Method evaluation, validation and Quality control for NAAT of COVID-19**
Speaker: Miswar Fattah, Indonesia
- **Lecture 6: Molecular POCT for COVID-19**
Speaker: Donal Huda Nasil, National Public Health Laboratory, Malaysia
- **Lecture 7: Serological testing for COVID-19**
Speaker: July Kumalawati, lecturer, Clinical Pathology Department, Medical Faculty, Universitas Indonesia
- **Lecture 8: Biochemical monitoring of severe covid-19 and laboratory biosafety**
Speaker: Kay Weng Choy, Chemical pathologist, Northern Pathology Victoria, Australia
- **Lecture 9: IFCC Guidelines on Molecular & Serological Testing of SARS-CoV-2 and Biochemical Monitoring of COVID-19 Patients**
Speaker: Khosrow Adeli, President IFCC

Scientific Committee Report

Mass Spectrometry Harmonisation WG

The Mass Spectrometry Harmonisation WG which is Chaired by Dr Ronda Greaves is undertaking a multicentre study of the influence of internal standard on the analysis of 17-hydroxyprogesterone by LCMSMS, in association with RCPAQAP – AACB and IFCC Emerging Technologies Division Paediatric Hormonics Working Group.


Publication: Influence of isotopically labeled internal standards on quantification of serum/plasma 17 α -hydroxyprogesterone (17OHP) by liquid chromatography mass spectrometry. Loh TP, Ho CS, Hartmann MF, Zakaria R, Lo CWS, van den Berg S, de Rijke YB, Cooke BR, Hoad K, Graham P, Davies SR, Mackay LG, Wudy SA, Greaves RF. Clin Chem Lab Med 2020;58(10):1731-9.

APFCB-WASPaLM TF-CKD

APFCB / WASPaLM Task Force on Chronic Kidney Disease which is chaired by Dr Pavai Sthaneswar is undertaking a survey of testing and reporting practices for CKD related laboratory indices in the region in order to ascertain concordance of reporting practices with current guidelines and industry standards. It is hoped that the results of the survey would help harmonize practice according to current recommendations throughout the region.

WG on Diabetes Testing Harmonisation in APFCB Region

The Diabetes Testing Harmonisation WG chaired by Dr Mithu Banerjee is similarly conducting



surveys of diabetes testing and reporting practices in the region. Results of surveys conducted in the Philippines and India have been presented at the PAMET conference in 2018 and the APFCB Congress in 2019 respectively. Surveys have been concluded in Sri Lanka and Singapore and the results are being analysed for publication. It is clear that whilst most laboratories follow recommended practices, there is some lag in laboratory practices in some areas which could benefit from activities to harmonize and update practice. Ideally, this would be locally driven, led by each national professional body, but APFCB would certainly support these activities going forward.

Publication: Trends in laboratory testing practice for diabetes mellitus. Banerjee M, Vasikaran S. eJIFCC 2020;31:(3):231-41.

Harmonization of Reference Intervals WG

The Harmonization of Reference Intervals WG chaired by Dr Tze Ping Loh plans to derive and compare indirect reference intervals from paediatric to geriatric subjects from laboratories within the Asia-Pacific region. To achieve this, they are calling on interested laboratories that are serving primary care (Non-hospital) patients to contribute de-identified laboratory results for derivation of indirect reference intervals study. The output of this study will be returned to the participating laboratories to help inform their practices. It is hoped that the results of this study may contribute towards regionally relevant paediatric to geriatric reference intervals for patient care, as well as provide insights into biological variation within the region.

Submitted for publication in CCLM: Comparison of nine methods for univariate statistical exclusion of unhealthy subpopulations for indirect biological variation and reference intervals studies. Tan RZ, Markus C, Vasikaran S, Loh TP.

WG to Analyse Laboratory Data for Improving Diagnostics

Dr Mohamed Saleem is chairing a WG to Analyse Laboratory Data for Improving Diagnostics. Results of benchmarking surveys in the region will be used to support healthcare goals for improved disease management. The support of Roche Diagnostics for this activity is acknowledged.

Masterclass in Interpretative Commenting on Clinical Chemistry Reports - Webinars

Webinars to discuss and analyse interpretative comments and to educate laboratory professionals on the addition of interpretative commenting are in progress. Five Webinars on various endocrine topics have been concluded with wide participation from the region. Future webinars are planned on a monthly basis. I would like to acknowledge the immense support of Dr Pearline Teo of Siemens Healthcare Pte Ltd for this activity. The recordings of the webinars and resource materials are available on the APFCB website under the heading of **Webinars**: <https://www.apfcb.org/webinars.html>

Communications and Publications Committee(C-CP)

Dr. Raja Elina Raja Aziddin, Chair,
Dr. Purvi Purohit – Web Editor
Dr. Rojeet Shrestha – Media Coordinator
Dr. Pradeep Dabla
Will Greene – Roche
Lim Ai Tin - Siemens

The main objective of the APFCB Communications and Publications Committee(C-CP) is to communicate and promote the activities of APFCB to clinical laboratory personnel, clinicians and health care policy makers in its member countries, in the region and worldwide. The C-CP is responsible for the online publication of APFCB news, for the development and promotion of the APFCB website and coordination of the online activities of the APFCB. It also provides information and educational material in electronic form to National Societies and Full Members,



Corporate and Affiliate Members.

Realising how the Covid-19 pandemic had disrupted the many scheduled seminars, conferences and training courses, the C-CP took the initiative since April 2020, to actively update the APFCB website with the latest information on webinars, online courses, virtual conferences of the APFCB, its member societies and international professional bodies so as to provide its members access to education and training. In addition to this, scientific publications, guidelines, recorded and live webinars on COVID-19 and other topics of interest have been uploaded on the APFCB website.

Realising how social media has become a powerful platform to communicate and disseminate news and information, the C-CP had since August 2020, started to actively use this powerful tool. News and updates of APFCB's recent activities, publications, congress and events, nominations and awards, and various eLearning materials produced by the APFCB are now officially available on Facebook, Twitter, LinkedIn, Instagram and YouTube.



Links to APFCB social media pages are as follows:

Facebook Page: <https://www.facebook.com/APFCB/>

Twitter: https://twitter.com/APFCB_LM

Instagram: https://www.instagram.com/apfcb_lm/

LinkedIn: <https://www.linkedin.com/company/apfcb/>

YouTube: <https://www.youtube.com/channel/UCoiicTsnVX-COjklgZHQ54Q>

Despite the pandemic, the C-CP was able to successfully publish two issues of the APFCB News in 2020. The two issues highlighted the activities of APFCB member societies.

The newsletter also featured an article from APFCB Founding member and Past President, Dr Tan It Koon.

The reports from member societies gave interesting insight how different countries in the region were coping with the pandemic. Activities of the IFCC and APFCB Committees (Scientific, Task force on CKD, Communication and Publications, Congresses & Conferences, Education and Laboratory Management) were also reported in this issue. A feature article was contributed by APFCB Founding member and Past President, Dr Tan It Koon and a poem as a tribute to healthcare front liners in the battle of Covid-19 by APFCB Past President, Mr Joseph Lopez. The APFCB News 2020 Issue 2 also published 4 scientific articles that were contributed by its corporate members.

Sunil Sethi, APFCB President

1.0 AFFILIATED NATIONAL SOCIETIES.

1. **ARGENTINA** - Biochemical Confederation of the Argentine Republic
2. **BOLIVIA** - Bolivian Society for Clinical Biochemistry
3. **BRAZIL** - Brazilian Society of Clinical Analysis
4. **CHILE** - Chilean Society of Clinical Chemistry
5. **COLOMBIA** - National College of Bacteriology of Colombia
6. **COSTA RICA** - College of Microbiologists of Costa Rica
7. **DOMINICAN REPUBLIC** - Dominican College of Bioanalyses
8. **ECUADOR** - Ecuadorian Society for Clinical Biochemistry (
9. **GUATEMALA** - Association of Chemical Chemists and Bacteriologists of Guatemala
10. **HONDURAS** - Collegue of Microbiologists and Clinical Chemists of Honduras
11. **MEXICO** - Mexican College of Clinical Laboratory Sciences
12. **PANAMA** - National College of Clinical Laboratory Workers of Panama
13. **PARAGUAY** - Association of Biochemists of Paraguay
14. **SPAIN** - Spanish Asociacion of Cincal Laboratory
15. **URUGUAY** - Uruguayan Biochemical Association

2.0 EXECUTIVE COMMITTEE BOARD MEMBERS 2020-2021

President, Alvaro JUSTINIANO-GROSZ (BOLIVIA)
Past president, Stella RAYMONDO (URUGUAY)
Vice-President, Luis Fernando BARCELOS (BRAZIL)
Treasurer, Rosa Ines SCALIER (BOLIVIA)
Treasurer, Lisandra MORALES JURADO (BOLIVIA)
1st Member, Jovanna BORACE (PANAMA)
2nd Member, Fernando ANTUNEZ (URUGUAY)
3rd Member, Ma Elena ARREDONDO (CHILE)

Accounts Review Commission

Alejandra ARIAS (ARGENTINA)
Fernando VALLEJOS (ECUADOR)
Jezabel VITE-CASANOVA (MEXICO)

Regional Representative at IFCC.

Rosa SIERRA-AMOR (2018-2020)

2.1 STRATEGIC PLAN (2020-2022)

- Strengthening the institutional image;
- Strengthening COLABIOCLI member associations;
- Emphasizing on the participation of young professionals;
- Promoting the strengthening of national regulatory regulations and frameworks, with the aim to recognize the quality management systems in laboratories;
- Strengthening national structures that promote continuous quality improvement;
- Strengthening the role of clinical biochemical professionals, clinical laboratory professionals or their equivalents as part of the health team;
- Identifying agenda items to expand lab territory;
- Developing ongoing training programmes, facilitating access for different countries;
- Strengthening relationships with universities and scientific institutions.



2.2 COLABIOCLI BUDGET

Prepared for the term 2020-2022

2.3 COLABIOCLI EXECUTIVE BOARD MEETINGS

- COLABIOCLI Executive Committee meeting in Cochabamba - Bolivia two virtual meetings with presidents of affiliated members national societies of COLABIOCLI in June and December 2020.
- Monthly Executive Committee meetings via online.
Rules and procedures were put in place for COLABIOCLI Scholarships, Proficiency Testing programs for affiliated societies, Young scientist below 40 years old scholarships applications, Auspices of Academic activities given by COLABIOCLI and the data base for the Latin American training program.

3. LEGAL STATUS. The bank account is in Uruguay to avoid taxes charges based on country economy differences.

4. COURSES, WEBINARS. CONSERVATORIES

4.1 *Quality Management and good laboratory practices. Forum and conservatories*

- Quality Management. proposal for an interdisciplinary training for health professionals;
- Challenges of academic evaluation in virtuality;
- Risk Management;
- Strategies for developing virtual clinical laboratory practices.

4.2 *Leadership course for affiliated COLABIOCLI Members in Latin America*

4.3 *Webinars*

- Glycosylated hemoglobin: analitic aspects and importance for the diagnosis and control of diabetes mellitus;
- Leadership and sustainable development of clinical laboratories and the role of young professionals in collaboration with Costa Rica affiliated society.

4.4. *Conservatories*

- Response from public health laboratories to the covid-19 latinoamerica pandemic;
- Strategic planning of the post-pandemic clinical laboratory (Planificación estratégica del laboratorio clínico post pandemia);
- The laboratory's role in pandemic;
- The role of biochemical professionals challenged before and after the pandemic;
- Biosecurity under the post-pandemic;
- Challenges for vocational training virtual training tool;
- University teaching linked with quality in times of virtuality;
- Young professionals clinical laboratory challenges during covid 19 (Los jóvenes profesionales del laboratorio clínico los desafíos a partir del covid 19);
- Management indicators in the clinical laboratory;
- Safety and quality in hyperimmune plasma production for covid 19 patients.

5.0 ACTIVITIES AND PROJECTS WITH THE PANAMERICAN HEALTH ORGANIZATION (PAHO)

SURVEYS. New items are to be incorporated to the previous survey, unfortunately difficulties were found in most of the countries to complete the surveys.

6.0 DISSEMINATION OF THE LATINAMERICAN TRAINING PROGRAM

Update of the database of experts in different areas from affiliated countries.

7.0 PAN AMERICAN SOCIETY FOR CLINICAL VIROLOGY (PASCV).

Interest to organize a course at the XXV COLABIOCLI Congress in León 2022

8.0 SBAC DIGITAL

Virtual event of the Brazilian society. 50 scholarships were given to each affiliated society of COLABIOCLI. Themes of actuality and COVID-19.

9.0 WORKING GROUPS AND COMMISSIONS.

9.1 Commission of Academic Union and Management Affairs

Chair: Carlos Navarro (Argentina)

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).

<https://colabiocli.com/comision-academico-gremial-y-de-gestion/>

9.2 Pre-Analytical Working Group

Chair: Gabriel Oliveira Lima (Brazil)

Secretary: Beatriz Varela (Uruguay) Secretary

Members: Eduardo Aranda (Chile), Patricia Ochoa (Argentina), Ma. Elena Arredondo (Chile), Michelle Brennam (México), Patricia Ochoa (Ecuador), Silvia Flores (Perú),

<https://colabiocli.com/grupo-de-trabajo-wg-pre-latam/>

9.3 Accreditation Management working group.

Chair: Rosa Sierra-Amor. (Mexico)

Carlos Peruzzetto (Argentina), Leonardo Aguirre (Chile), Edgard Espinoza (Ecuador), Beatriz Varela (Uruguay), Sandra Quintana (Mexico), Thamara Andrade (Ecuador)

Corresponding Members: Magali 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)

<https://colabiocli.com/grupo-de-trabajo-gestion-de-acreditacion/>

9.4 Bioethics Working Group.

Chair: Nilda Fink (Argentina)

Graciela Queiruga (Uruguay), Olga Torre (Guatemala), Marta Ascurra (Paraguay), Garbiñe Saruwatari-Zabala (Mexico), Fernando Momo (Argentina).

9.5 Young Scientist Latin America Group.

Proposal for the creation of the Latin American Group of Young Scientists. Professionals in Biochemistry and equivalent degrees in Latin America

10 SCHOLARSHIPS

Scholarships were given to several professionals from COLABIOCLI affiliated societies to attend various activities and events as described here bellow.

- 1) Virtual Diplomate to quality control of clinical analysis: Costa Rica, Paraguay and Uruguay;
- 2) Virtual Diplomate in Bacteriology and antimicrobial susceptibility: Panama, Paraguay, Bolivia;
- 3) International Diplomate on Analytical Quality Management based on ISO 15189: Uruguay, Costa Rica, Panama;
- 4) International Diplomate on Uranalysis: Paraguay, Bolivia, Uruguay;
- 5) International Diplomate on Diagnosis in Hematology: Guatemala, Panama, Costa Rica;
- 6) Virtual Diplomate on Clinical Pathology for the Laboratory (3rd generation): Uruguay, Costa Rica and Bolivia;



- 7) On Line Course on Techniques and Stain for the Diagnosis of Vector Transmitted Hemoparasitosis: Costa Rica, Bolivia and Panama;
- 8) There are two more courses to be assigned, one is on Urinary Mycosis and on Medical Mycology.
- 9) Ten more scholarships to laboratory professionals based on the agreement with AEFA for the course Verification of Quantitative Analytical Methods.
- 10) A three months scholarship for a professional from Latin America sponsored in full by the Foundation Jose Luis Castaños of the Spanish Society of Laboratory Medicine (SEQC) that included travel and lodging expenses.

11 XXV LATIN AMERICAN CONGRESS OF CLINICAL BIOCHEMISTRY AND II CONGRESS OF THE MEXICAN ASSOCIATION OF CLINICAL LABORATORY SCIENCES.

A new date was assigned to the XXV COLABIOCLI Congress due to Covid 19 pandemic. COLABIOCLI and the affiliated society hosting the congress, the CMCLabC agreed to postpone it to **March 30 to April 2nd 2022**. The new date was informed to IFCC and to the affiliated member societies.

For the XXV COLABIOCLI Congress, the following commissions were assigned: Administration, Scientific Activities, Logistics, and infrastructure, Advertising and Publications, Congress Agenda, Preliminary Program and other business related to the congress advertising process.

12 CONGRESS OF COLABIOCLI AFFILIATED SOCIETIES.

- 12.1 XIII Uruguayan Congress of Clinical Biochemistry – First virtual Congress of the Uruguayan Biochemistry Association. "COLABIOCLI" Round Table Discussion: «Vision and Challenges of Biochemical Professionals and equivalent titles of Latin America and the Caribbean" October 15-17, 2020.
- 12.2 Auspices to the first virtual Congress of the National College of Bacteriology of Colombia, "The challenge of Innovating", November 14-17, 2020.

13. IFCC

Reports to IFCC EB were done by the Regional Representative periodically.

COLABIOCLI scholarships were provided with the support of IFCC.

Simultaneous Translation was authorized for the XIII Uruguayan Congress of Clinical Biochemistry. First Virtual congress and three IFCC VLP on line were also approved.

The organization of an IFCC Virtual Conference on Covid 19 for February 2021, included the participation of five Latin American scientists.

14. RULES AND PROCEDURES

Rules and procedures had been put in place for COLABIOCLI Scholarships, Proficiency Testing programs for affiliated societies, Young scientist below 40 years old scholarships applications, Auspices of Academic activities given by COLABIOCLI and the data base for the Latin American training program.

15.0 COLABIOCLI COLLABORATORS

1. Portugal was accepted as collaborator of COLABIOCLI by the Executive Board. The National society will be formally presented at the next COLABIOCLI Assembly taking place during the Brazilian Society congress in November 2021.
2. Brazilian Proficiency Testing PNCQ under the auspices of the Brazilian Society of Clinical Analyses signed an agreement with COLABIOCLI to provide 30 proficiency testing programs to laboratories from COLABIOCLI Affiliated societies during one year. An education program was organized virtually on THE IMPORTANCE OF THE EXTERNAL QUALITY ASSESSMENT PROGRAMS (EQAS), and on the IMPLEMENTATION OF INTERNAL QUALITY CONTROLS IN CLINICAL LABORATORIES.

16.0 COLABIOCLI Web page.

- Strengthening the entity on social networks as well as launching the new website and its moodle platform.
- Pronouncement of COLABIOCLI officially regarding permanent support for biochemical professionals and equivalent title working in clinical analysis laboratories at times of pandemic, weighing their leading role in diagnosing and supporting the management of patients with covid 19. (

17.0 OTHER BUSINESS

1. COLABIOCLI president received an invitation to attend the 50th Anniversary of the Spanish Society of Clinical Laboratory, AEFA – ESPAÑA
2. COLABIOCLI President was interviewed by the Bioengineering Magazine from Norway: “As How Latin America faces the Pandemic from the Clinical Laboratories. Role of Professionals”.
3. COLABIOCLI President was interviewed by EL MICROSCOPIO about the Strategy plan, the activities and how the region was encountering the pandemic on COVID-19.

Álvaro Justiniano Grosz, COLABIOCLI President
Rosa Sierra-Amor, COLABIOCLI Regional Representative

GENERAL MEETING

General issues

The EFLM President, Ana-Maria Simundic (AMS), greeted the audience and welcomed the delegates to this remote General Meeting (GM) and explained that the remote modality was actually forced by the COVID-19 pandemic. Overall, 24 out of 40 Full Members' national representatives were connected with Zoom at the opening of the GM plus 2 Affiliate Members' national representatives. One further Full Member's national representative joined the meeting at h. 13.00. No matters arose from the minutes of the last GM in Barcelona on May 19, 2019. Minutes were thus otherwise approved.

The EFLM Secretary, Giuseppe Lippi (GL), presented some new membership applications (reported below) and asked whether all the NRs would agree that public voting will be carried out, using the formula "is there anybody against the proposal?". Full Members' national representatives had nothing against, and this modality was hence approved. The results of the public voting for the new for proposal were as follows:

- ✓ The Laboratory Medicine Association of Georgia to become EFLM Full Member. Nobody had anything against, so that the name of the NS has been officially unanimously accepted as EFLM Full Member
- ✓ The Academy of Clinical Science and Laboratory Medicine, Ireland to become EFLM Affiliate Member. Nobody had anything against, so that the name of the NS has been officially unanimously accepted as EFLM Affiliate Member
- ✓ The Serbian Society for Clinical Laboratory Medicine and Science to become EFLM Affiliate Member. The EFLM GM approved the name of the NS with 13/24 votes in favor. Serbia voted against, whilst 9 NS abstained from voting (in alphabetical order: Croatia, Hungary, Israel, Italy, Kosovo, Lithuania, Portugal, Sweden and Switzerland).
- ✓ The Order of Biochemists, Biologists and Chemists in the Romanian Health System to become an EFLM Affiliate Member. Nobody had anything against, so that the name of the NS has been officially unanimously accepted as EFLM Affiliate Member

President's report and new projects - A.M. Simundic, President

AMS presented her report and described the new and ongoing projects. Power point presentation with this report can be viewed and downloaded from EFLM's website. AMS then presented the proposal to extend EFLM Academy membership to European individuals from non-EFLM National Societies. Nobody had anything against. Former EFLM President, Michael Neumaier, added that the collaboration with ESR is strategic and there will be a joint plenary session with the ESR in EuroMedLab 2021. This will also pave the way to further scientific collaborations, fundraising and grants application.

Treasurer's report - K. Kohse, Treasurer

The EFLM Treasurer, Klaus Kohse (KK), gave a report on the following: (a) Audit 2019; (b) Balance sheet 2019; (c) Internal budget 2019; (d) Preliminary budget 2020. Audit of the EFLM financial matters had been done in accordance with GAAP (Belgian Generally Accepted Accountant principles) by the certified auditor in Bruxelles. The members present at the GM unanimously (with 24/24 votes in favor) certified the EFLM account and balance sheet 2019, which will now be published through the accountant. Approval of the accounts by the General Meeting also constitutes the discharge for EB members in charge during 2019. KK has also presented the Internal Budget 2019 and asked for its formal approval. EFLM GM approved the Internal budget 2019 with 24/24 votes in favor. The full presentation is available in the EFLM website.

Electronic voting for amendment of Art 17 of the EFLM bylaws - G. Lippi, EB



Secretary

GL, EFLM Secretary, proposed article's amendment to introduce the possibility of electronic voting for the election of the EFLM Executive Board. Unfortunately, the quorum for this kind of decision ($\frac{3}{4}$ of Full Members; i.e., 30 NSs) could not be reached, so that the voting was postponed to the next GM.

Reports from Committee Chairs

(Power point presentations and below listed reports can be viewed and downloaded from EFLM's website)

Report from the Science Committee - E. Kilpatrick, C-S Chair.

Report from the Profession Committee - E. Homsak, C-P Chair.

Report from the Quality & Regulations Committee - F. Vanstapel, C-QR Chair.

Report from the Education & Training Committee - D. Pasalic, C-ET Chair.

Report from the Communication Committee - D. Rajdl, C-C Chair.

Report from IFCC President - K. Adeli, IFCC President

Khosrow Adeli (KA), IFCC President, 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. A brief discussion arose on the opportunity of promoting a laboratory day. Bernard Gouget also highlighted that the IFCC is planning a history book, which would include also the history of its Federations, thus also of the EFLM.

Closing remarks (date and place of next General Meeting) - G. Lippi, EB Secretary

GL communicated that next GM will be held in 2021, during EuroMedLab, in Munich. The exact dates and place for the next GM will be communicated by e-mail as soon as defined.

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 (E. Homsak, 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 (K. Adeli, IFCC President)

Khosrow Adeli (AK) 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.

EXECUTIVE BOARD

The leading activities of the EB during the year 2020 can be seen from the Minutes of the past EB meeting.

COMMITTEES

Committee – Communication (C-C)

C-C focused mainly on three objectives:

- implementation of new tools that improve effectivity of EFLM channels
- building a new C-C team
- introduction of "Infographics" summarizing results of EFLM publications

We have implemented MailerLite tool for management of mailing list and sending e-mails to our subscribers. This tool provided us a more in-depth overview about our subscriber's behavior and preferences and highly improved visual attractiveness of our e-mails. Furthermore, we have started using social media aggregator tool to simplify publication of our posts in social media. It helped us to reach more than 3 thousand followers on Facebook and sustained growth in other social media channels. To help with needs of EFLM academy, we started using Vimeo service



for hosting our video content. During the COVID-19 pandemic, newly adopted EFLM ZOOM account helped to sustain communication within EFLM. Official registration of EFLM as a non-profit organization opened us doors to use professional version of Canva for free. Canva is an online tool for production of designs for web, social media, and other communication channels. Almost complete renewal of C-C members led to increased motivation and productivity of our team. This enthusiasm was reflected in starting a new activity: production of simplified graphical representation of each EFLM publication. These “infographics” are used for propagation of EFLM publication and this activity received a great attention of our subscribers and followers.

Committee – Education and Training (C-ET)

In 2020 many activities were postponed due to pandemic situation. All live postgraduate courses were cancelled but the Working Group on Congresses and Postgraduate Education (WG-CPE) started to prepare proposals for organization of on-line PGC courses on “Biostatistics”, “How to write a good scientific paper” and also prepared a proposal for a new PGC “Leadership skills”. WG expect that at least two courses will be realized in 2021. WG-CPE also prepared a survey related to organization of the new speaker bureau, which was circulated with national societies (evaluation is in progress).

The WG on Laboratory Medicine Credit Points (WG-LMCP) planned to investigate once more the expecting benefits of credits among EFLM member societies with preparation the new survey which is ongoing. WG also preparing revision of accreditation SOP, standards and application forms.

According the well-established tasks WG on e-learning and Distance Education (WG-DE) maintained and upgraded the e-learning platform. WG-DE also organized and released 4 webinars in 2020.

Committee – Profession (C-P)


The C-P activity in 2020 focused mainly in five objectives:

1. Progress with achieving recognition of Specialists in Laboratory Medicine
2. Growing the EFLM Register (EuSpLM)
3. Growing the EFLM Academy
4. EFLMLabX
5. TG: EFLM Syllabus Courses

In January, C-P prepared a CTF document as a joint statement on the proposed Common Training Framework and sent it to EU-based national associations for their comments. According to their comments, it was updated and sent to EB for approval in June 2020. In November, the CTF document was sent to CCLM and published in December 2020. Today, we have 21/27 EU Member States that can meet the equivalence of EFLM Standards. 15/21 EU Member States that could meet equivalence could also meet the stricter requirements of the proposed EFLM Common Training Framework under EU Directive 2013/55 / EC (Recognition of professional qualifications - with regulatory status of the profession). We are ready to present the CTF document to the EU Commission in 2021 to continue the progress in achieving EuSpLM recognition.

In support of this process, the WG-Register confirmed an increase (approximately three times since January 2019) of applications for EuSpLM Register (3099 to November), which was mainly achieved by block entry (90%) and additionally (10%) from individual applications. By the end of 2020, Memorandum of Understanding (MoU) for group enrollment had been agreed with 18 national societies (8 new in 2020 Belgium, Bosnia and Herzegovina, Finland, Hungary, Ireland, Israel, Russia and Serbia).

The launch of the EFLM Academy in December 2019 proved to be a success. The number of registrants for the Academy increased steadily in 2020. Until November 2020, the total number of members of the Academy is 4386 (with and without EuSpLM): through NS block enrollment (maximum share of registrants) (Total: 3940 (90%) members from 4386, without EuSpLM



certificate: 1102 (28%) members from total 3940; individual registration (Total: 446 (10%), without EuSpLM registration: 185 out of 446) The total number of members of the Academy without EuSpLM, joined by both channels, is 1363. C-P (Chair) announced in the EFLM News (July 2020) an important change for potential members of the Academy that it is now open to anyone (not just EFLM members) interested in laboratory medicine. There are a few differences in the additional benefits of membership of the EFLM in comparison to non-EFLM Academy membership: enrollment in the EFLM EuSpLM register, which will only be possible by applying to the EFLM Academy and eligibility for EFLM grant applicants.

C-P has also prepared an updated version of the Guide to Academy and EuSpLM register: Academy of the European Union for Clinical Chemistry and Laboratory Medicine and the European Register of Laboratory Specialists: Guide to the Academy and the Register, version 4 - 2020 and published it in CCLM in November 2020. C-P updated the site accordingly with any changes.

The EFLMLabX practice exchange project has unfortunately been postponed due to the Corona crisis. Significant support for the project was achieved through the introduction of an EFLM Bursaries programme. We have prepared criteria for the bursaries for YS (EFLM countries), we have received 2 applications (from Turkey and Ukraine), both have been accepted and the realization has been postponed to 2021 (due to Covid). For the announcement and for better visibility, the Chair of C-P E. Homsak hold the EFLMLabX Webinar in March 2020.

In 2020, the TG: EFLM Syllabus Courses was transferred from C-ET to C-P under the new leadership of Gilbert Wieringa. TG prepared a plan for the courses, which would be implemented in the next 2-3 years in cooperation with other committees (communication and science) and members of the working group (e-learning).

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 when to repeat measurements and the detection of and the actions to undertake when analytical processes are out of control. Risk management and process care are leading principles in the development of these documents.

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 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 Committee Chair is also active in the EFLM Task Force: European Regulatory Affairs (TF-ERA). This Task Force follows up on the implementation phase of the new EU IVD regulation.

Committee – Science (C-S)

2020 is a year where science has come to the fore, but for reasons we would rather it did not need to. The eight Working Groups (WGs) under this Committee (Biological Variation, Guidelines, Harmonisation, Patient Focused Laboratory Medicine, Postanalytical Phase, Preanalytical Phase and Test Evaluation), the three Task Groups (TGs) (Biological Variation Database, Cardiac Markers and Performance Specifications Based on Outcome Studies) and the five Task and Finish Groups (TFG) (Practical Approach to Uncertainty, Urinalysis, Autoimmunity Testing, Laboratory Diagnostics of CKD, HIL interference) have been working as hard as is possible considering the circumstances.

Many group members found they were having to devote all their time in assisting to combat coronavirus and numerous planned face-to-face meetings necessarily had to be cancelled.



Nonetheless, despite these challenges, groups made the transition to videoconferencing and have remained productive. Highlights include the 9 papers produced this year by the Biological Variation Working Group along with further development of the biological variation database. The CKD questionnaire to EFLM members had a huge impact judged by the fact nearly 1,000 responses were returned and the work of the Test Evaluation group on in vitro Diagnostic Regulation in the EU has spawned a whole new Task Force to address this topic for the whole profession.

It is hoped that 2021 may lead to some return of normality, not just for the populations inside and outside of Europe, but for their laboratory professional organisations as well. 2020 has proven we cannot live and work in isolation and that co-operation between nations is needed more than ever to tackle the largest and smallest problems facing us.

MEETINGS

In 2020, due to the COVID-19 no events have been held.

WEBINARS

EFLM has organized four Webinars during 2020:

- Communication Between Laboratory and Clinician: Key for Proper Medical Care
Speaker: Avi Peretz (IL) - Moderator: Dganit Itzhaky (IL) - Date: 19 May 2020
- Updates on COVID-19 biology and diagnostics
Speaker: Giuseppe Lippi (IT) - Moderator: Daniel Rajdl (CZ) - Date: 28 May 2020
- Urinalysis
Speaker: José A. T. Poloni (BR) - Moderator: Timo Kouri (FI) - Date: 30 June 2020
- The present and future of POCT
Speaker: Kleantli Dima (GR) - Moderator: Petros Karkalousos (GR) - Date: 29 September 2020

PUBLICATIONS

1. Biological Variation of Cardiac Troponins in Health and Disease: A Systematic Review and Meta-analysis
Diaz-Garzon J, Fernandez-Calle P, Sandberg S, Ozcurumez M, Bartlett WA, Coskun A, Carobene A, Perich C, Simon M, Marques F, Boned b, Gonzalez-Lao E, Braga F, Aarsand AK, EFLM Working Group on Biological Variation and Task Group for the Biological Variation Database
Clin Chem Lab Med 2020 doi 10.1515/cclm-2020-1490
2. Biological variation of serum insulin: updated estimates from the European Biological Variation Study (EuBIVAS) and meta-analysis
Carobene A, Gonzalez Lao E, Simon M, Locatelli M, Coskun A, Diaz-Garzon J, Fernandez-Calle P, Sandberg S Aarsand AK, on behalf of the EFLM Working Group on Biological Variation
Clin Chem Lab Med 2020 doi 10.1515/cclm-2020-1490
3. A proposed common training framework for specialists in laboratory medicine under EU directive 2013/55/EC (The recognition of professional qualifications)
Wieringa G, Queraltó J, Homšak E, Jassam N, Cavalier E, Svinarov D, Krleža JL, Christou S, Pikner R, Rennebod Larsen T, Tomberg K, Linko-Parvinen A, Sapin V, Baum H, Kroupis C, Bagoly Z, Costelloe S, Sciacovelli L, Stasulans J, Vitkus D, Meunier D, Solnica B, Reguengo H, Mambet C, Kovac G, Krhin B, Ohlson M, Buhagiar G, Simundic A-M
Clin Chem Lab Med 2020 doi.org/10.1515/cclm-2020-1504
4. The Academy of the European Federation of Clinical Chemistry and Laboratory Medicine and the European Register of Specialists in Laboratory Medicine: guide to the Academy and the Register, version 4 – 2020
Wieringa G, Jassam N, Homsak E, Rako I, Racek J



- Clin Chem Lab Med 2020 doi.org/10.1515/cclm-2020-1507
5. Harmonization of antineutrophil cytoplasmic antibodies (ANCA) testing by reporting test result specific likelihood ratios: position paper
Bossuyt X, Damoiseaux J, Rasmussen N, van Paassen P, Hellmich B, Baslund B, Blockmans D, Vermeersch P, Lopez-Hoyos M, Vercammen M, Barret E, Hammar F, Leinfelder U, Mahler M, Olschowka N, Roggenbuck D, Schlumberger W, Walker R, Rönnelid J, Cohen Tervaert JW, Csernok E, Fierz W for the European Federation of Laboratory Medicine (EFLM) Task and Finish Group "Autoimmunity Testing," the European Autoimmune Standardization Initiative (EASI) and the European Consensus Finding Study Group on autoantibodies (ECFSG)
Clin Chem Lab Med 2020 doi.org/10.1515/cclm-2020-1178
 6. Critical appraisal and meta-analysis of biological variation estimates for kidney related analytes
Jonker N, Aslan B, Boned B, Marques-García F, Ricós C, Alvarez V, Bartlett W, Braga F, Carobene A, Coskun A, Díaz-Garzón J, Fernández-Calle P, Gonzalez-Lao E, Minchinela J, Perich C, Simón M, Sandberg S, Aarsand AK, on behalf of the European Federation of Clinical Chemistry and Laboratory Medicine Working Group on Biological Variation and Task Group for the Biological Variation Database
Clin Chem Lab Med 2020 doi.org/10.1515/cclm-2020-1168
 7. European Biological Variation Study (EuBIVAS): within- and between-subject biological variation estimates for serum biointact parathyroid hormone based on weekly samplings from 91 healthy participants
Bottani M, Banfi G, Guerra E, Locatelli M, Aarsand AK, Coşkun A, Díaz-Garzón J, Fernandez-Calle P, Sandberg S, Ceriotti F, González-Lao E, Simon M, Carobene A; on behalf of the European Federation of Clinical Chemistry and Laboratory Medicine Working Group on Biological Variation
Ann Transl Med 2020;8:855 doi.org/10.21037/atm-19-4498
 8. The CRESS checklist for reporting stability studies: on behalf of the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) Working Group for the Preanalytical Phase (WG-PRE)
Cornes M, Simundic A-M, Cadamuro J, Costelloe SJ, Baird G, Kristensen GBB, von Meyer A, Nybo M and Gómez Rioja R, on behalf of the Working Group for the Preanalytical Phase (WG-PRE), of the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM)
Clin Chem Lab Med 2020 doi.org/10.1515/cclm-2020-0061
 9. Biological variation of morning serum cortisol: Updated estimates from the European biological variation study (EuBIVAS) and meta-analysis
Carobene A, Guerra E, Marqués-García F, Boned B, Locatelli M, Coşkun A, Díaz-Garzón J, Fernandez-Calle P, Sandberg S, Aarsand AK on behalf of the European Federation of Clinical Chemistry, Laboratory Medicine Working Group on Biological Variation
Clin Chim Acta 2020 doi.org/10.1016/j.cca.2020.06.038
 10. Thoughts and expectations of young professionals about the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM)
Bauçà JM, Imperiali CE, Robles J, Díaz-Garzón J, Vuljanic D, Begovic E, Tikhonov A, Alic L, Nikler A and Simundic AM
Clin Chem Lab Med 2020 doi.org/10.1515/cclm-2020-0717
 11. Exact time of venous blood sample collection – an unresolved issue, on behalf of the European Federation for Clinical Chemistry and Laboratory Medicine (EFLM) Working Group for Preanalytical Phase (WG-PRE)
von Meyer A, Lippi G, Simundic AM, Cadamuro J.
Clin Chem Lab Med 2020 doi.org/10.1515/cclm-2020-0273
 12. How well do laboratories adhere to recommended guidelines for dyslipidaemia

management in Europe? The CARDiac MARKer Guideline Uptake in Europe (CAMARGUE) study

De Wolf HA, Langlois MR, Suvisaari J, Aakred KM, Baum H, Collinson P, Duff CJ, Gruson D, Hammerer-Lercher A, Pulkki K, Stankovic K, Stavljenic-Rukavina A, Laitinen P, for the EFLM Task Group on Cardiac Markers

Clin Chim Acta 2020 doi.org/10.1016/j.cca.2020.05.038

13. Critical appraisal and meta-analysis of biological variation studies on glycosylated albumin glucose, and HbA1c

Ricós C, Fernández-Calle P, Gonzalez-Lao E, Simón M, Díaz-Garzón J, Boned B, Marqués-García F, Minchinela J, Perich MC, Tejedor-Ganduxé X, Corte Z, Aarsand A, Asland B, Carobene A, Coskun, Sandberg S.

Adv Lab Med 2020 doi.org/10.1515/almed-2020-0029

14. The European Biological Variation Study (EuBIVAS): weekly biological variation of cardiac troponin I estimated by the use of two different high-sensitivity cardiac troponin I assays
- Cerioti F, Díaz-Garzón MJ, Fernández-Calle P, Maregnani A, Aarsand AK, Coskun A, Jonker N, Sandberg S, Carobene A; European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) Working Group on Biological Variation*

Clin Chem Lab Med 2020 doi:10.1515/cclm-2019-1182

15. Analytical Performance Specifications for Lipoprotein(a), Apolipoprotein B-100, and Apolipoprotein A-I Using the Biological Variation Model in the EuBIVAS Population
- Clouet-Foraison N, Marcovina SM, Guerra E, Aarsand AK, Coşkun A, Díaz-Garzón J, Fernandez-Calle P, Sandberg S, Ceriotti F, Carobene A, the European Federation of Clinical Chemistry and Laboratory Medicine Working Group on Biological Variation*

Clinical Chemistry 2020 doi.org/10.1093/clinchem/hvaa054

16. European Biological Variation Study (EuBIVAS): within- and between-subject biological variation estimates of β -isomerized C-terminal telopeptide of type I collagen (β -CTX), N-terminal propeptide of type I collagen (PINP), osteocalcin, intact fibroblast gr
- Cavalier E, Lukas P, Bottani M, Aarsand AK, Ceriotti F, Coşkun A, Díaz-Garzón J, Fernández-Calle P, Guerra E, Locatelli M, Sandberg S, Carobene A & on behalf of the European Federation of Clinical Chemistry and Laboratory Medicine Working Group on Biological Variation and IOF-IFCC Committee on Bone Metabolism*

Osteoporos Int 2020 doi.org/10.1007/s00198-020-05362-8

Giuseppe Lippi, EFLM Executive Board Secretary



The NAFCC was formed by CSCC and AACC in 2014. Dr. Ann Gronowski served as the NAFCC representative to the Executive Board 2018-2020.

Dr. Stephen Hill was selected to be the 2021-2023 NAFCC representative to the EB.

Planning is underway for the 2021 joint AACC/CSCC annual meetings to occur in Anaheim, CA, September 19-23. The organizing committee is led by Dr. Nathalie LePage.

AACC held its Annual Scientific Meeting & Clinical Lab Expo in a fully virtual format December 14-17, 2020.

Ann M Gronowski, NAFCC Representative



Full Member Societies



ARGENTINA

CONFEDERACIÓN UNIFICADA BIOQUÍMICA DE LA REPÚBLICA ARGENTINA (CUBRA)



NATIONAL MEETINGS

*All meetings were carried out via zoom

- **Government Board CGP** 21th June; 03th July; 27th July; 07th August; 12th & 21th August; 04th & 24th September 2020 in Buenos Aires – Argentina.
- **Instagram Live about Biochemistry and Pandemic** (Cubra's President Dr. Maria Alejandra Arias participated) organized by Coordinadora de Colegios de Ley & ECUAFYB 11th May 2020 in Buenos Aires – Argentina.
- **Webinar “Tecnologías moleculares para el diagnóstico clínico”**, (Cubra's Secretary Dr. Carlos Navarro participated) organized by CADIME 29th July, 2020 in Buenos Aires – Argentina.
- **Book Presentation by Dr. Rubén Torres** “Mitos y Realidades de las Obras Sociales” 11th August 2020 in Buenos Aires – Argentina.
- Meetings of the **Permanent Technical Commission of the Unique Biochemical Nomenclator of C.U.B.R.A.** (CTP-NBU -CUBRA) 18th August 2020 in Buenos Aires – Argentina.
- **Virtual Conference “El Laboratorio frente al SARS-CoV2”** 04th November 2020 in Buenos Aires – Argentina.
- **Virtual Conference “Dengue”** 11th November 2020 in Buenos Aires – Argentina.
- **Workshop Seminar “Calidad en Laboratorios y Organizaciones de Salud”** 26th November 2020 in Buenos Aires – Argentina.
- **LATAM Hospitals 2020 Virtual Conference** in which were presented the committees that are part of CUBRA 30th November 2020 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 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 – Superintendencia de Servicios de Salud

Ministerio de Educación 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 Cycle Talks** “Rol de los profesionales bioquímicos, desafío antes, durante y después de la pandemia” 26th August 2020.
- **IFCC – WG-IANT Meeting** (Cuba’s President Dr. Maria Alejandra Arias participated) 01th September 2020.



AUSTRIA

AUSTRIAN SOCIETY OF LABORATORY MEDICINE AND CLINICAL CHEMISTRY (ÖGLMKC)

NATIONAL MEETINGS

| Name of the meeting | Date | Topic |
|--|-------------------|-------|
| Außerordentliche Jahrestagung der ÖGLMKC | 7. - 9. Juli 2021 | |



BELGIUM

ROYAL BELGIAN SOCIETY OF LABORATORY MEDICINE (RBSLM)

NATIONAL MEETINGS

| | | |
|---|--------------|------------------------------------|
| Joint annual meeting of the Royal Belgian Society of Laboratory Medicine (RBSLM) in collaboration with the Belgian Society for Gerontology and Geriatrics | Nov 20, 2020 | Laboratory medicine in the elderly |
|---|--------------|------------------------------------|

EDUCATION

Clinica Chimica Acta and Acta Clinica Belgica are official journals of the Royal Belgian Society of Laboratory Medicine (RBSLM)



CHINA (CN)

PEOPLE'S REPUBLIC OF CHINA (PRC) - BEIJING
CHINESE SOCIETY OF LABORATORY MEDICINE (CSLM)

NATIONAL MEETINGS

| Name of the meeting | Date | Topic |
|---|--------------|---|
| The 16 th National Congress of Laboratory Medicine(2020 NCLM) | 2020.9.24-26 | Laboratory Medicine |
| Biochemical inspection skills and safety prevention and control on-line seminar | 2020.3.26 | Biosafety prevention and control of clinical chemistry tests and selection of test items under the COVID-19 epidemic. |
| Microbiological and Molecular Diagnostics | 2020.5.13 | 1. Advances in molecular epidemiology and clinical significance of methicillin-resistant staphylococcus aureus 2. Advances in molecular epidemiology and clinical diagnosis principles of Clostridium difficile |
| Biochemistry and Immunology (Immune direction) | 2020.5.27 | 1. Clinical significance of quantitative detection of five classic hepatitis B serological markers and interpretation of the latest guidelines for prevention and treatment of chronic hepatitis B (2019 edition) 2. Viral hepatitis: clinical case sharing and interpretation of laboratory results |





| | | |
|--|------------|---|
| Laboratory and Clinical | 2020.6.10 | <ol style="list-style-type: none"> 1. Communication between clinical and microbiology laboratory - discussion of common clinical problems 2. Treatment plan of department of severe infection 3. Nutritional treatment strategies for severe infections 4. Drug resistance characteristics of carbapenem-resistant enterococcal bacteria 5. CRE infection in abdominal cavity after liver transplantation in children 6. Antibiotics selection and PK/PD in children with CRE infection |
| Scientific Research and Teaching | 2020.6.23 | <ol style="list-style-type: none"> 1. Exploration in clinical laboratory -- construction of cardiovascular laboratory diagnosis discipline 2. Personal research experience and experience |
| Blood and Body Fluids | 2020.7.8 | <ol style="list-style-type: none"> 1. Establishment and verification of automatic examination rules for coagulation test results 2. Multicenter establishment and improvement of urine routine intelligent audit rules |
| Biochemistry and Immunology (Biochemistry direction) | 2020.7.22 | <ol style="list-style-type: none"> 1. Diabetes-related laboratory tests 2. Clinical application of detecting HbA1c by HPLC |
| Laboratory and Clinical | 2020.8.5 | <ol style="list-style-type: none"> 1. Abnormal lymphocyte in peripheral blood- a case report 2. Seemingly ordinary fever to be checked - importance of laboratory report 3. Fever to be checked - intermittent fever with anemia 4. Diagnosis of multiple myeloma: communication between laboratory and clinical 5. Peripheral blood appearance of multiple myeloma |
| Scientific Research and Teaching | 2020.8.19 | <ol style="list-style-type: none"> 1. Strategy for medical laboratory patent applications 2. Understanding and thought on teaching for students of Medical Laboratory Technology |
| Biochemistry and Immunology (Immune direction) | 2020.9.9 | <ol style="list-style-type: none"> 1. Clinical diagnostic pathways for autoimmune diseases 2. One, two, three you don't know about the direct immunofluorescence tests for antinuclear antibodies |
| Microbiological and Molecular Diagnostics | 2020.9.16 | <ol style="list-style-type: none"> 1. Laboratory test for Aspergillus 2. How to combine clinical thinking with laboratory results for IPA diagnosis in ICU |
| Blood and Body Fluids | 2020.9.29 | <ol style="list-style-type: none"> 1. Requirements for quality control of routine hemagglutination items 2. Standardization of blood coagulation test |
| Scientific Research and Teaching | 2020.10.13 | <ol style="list-style-type: none"> 1. Biomarkers and new targets for diagnosis and treatment of respiratory critically ill associated infections 2. Discussion on the clinical diagnosis and treatment of community-acquired virulent pneumonia |



| | | |
|--|------------|--|
| Laboratory and Clinical | 2020.10.28 | 1. "Abnormal HbA1c" -- Starting from a case 2. Understand test methodology and initiate cause search based on abnormal results 3. Return to clinical practice based on the laboratory test |
| Microbiological and Molecular Diagnostics | 2020.11.12 | 1. Mining the human microbiome marker 2. Construction and application of intelligent POCT platform based on biosensor and micro nano technology |
| Biochemistry and Immunology (Biochemistry direction) | 2020.11.18 | 1. Laboratory detection of M protein 2. M protein screening experience in Peking Union Medical College Hospital |
| Blood and Body Fluids | 2020.11.25 | 1. Standard interpretation on "D-Dimer test" 2. Clinical application of thrombus elastography |
| Biochemistry and Immunology (Immune direction) | 2020.12.23 | 1. Clinical thyroid function test interpretation 2. Influencing factors of thyroid hormone assay |

EDUCATION

1. Cooperated with Mindray group for enterprise scholarship on several medical universities and colleges.
2. Interpretation of expert consensus on nucleic acid detection of 2019 novel coronavirus. Webcast, Laboratory Medicine Network.
3. Challenges and countermeasures of molecular diagnosis under the epidemic. Webcast, National Health Commission Capacity Building and Continuing Education Center.

REGIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Society's contribution for the meeting</i> |
|--|----------------------|--|
| Fujian Province laboratory management experience and scene case analysis meeting | December 26-27, 2020 | Invited lecture, Session chairmanship |
| ISO15189 and medical laboratory standardization construction meeting | November 12-14, 2020 | Invited lecture, Session chairmanship |
| COVID-19 Related Lab Tests and Prevention | 2020.06.12 | Support, President and speakers. |
| The 16 th Jilin Congress of Laboratory Medicine | 2020.11.14 | Support and speakers |
| Seminar on New Technology and Progress in Laboratory Medicine | Jan 10-11,2020 | Division of Clinical Immunology played the role as organizer,Speaker |
| Training class for improving medical laboratory quality management ability | 2020-11-6 | Organizer |
| Seminar on Laboratory Safety and New Technology Application under the Situation of COVID-19 Pandemic | Mar 21, 2020 | Division of Clinical Immunology played the role as organizer,Speaker |

INTERNATIONAL RELATIONS

1. Professor Chengbin Wang joined Taskforce on COVID-19, International Federation of Clinical Chemistry (IFCC) and participated in several guidelines concerning COVID-19, eg. "IFCC Interim Guidelines on Molecular Testing of SARS-CoV-2 Infection", "IFCC Interim Guidelines on Biochemical/Hematological Monitoring of COVID-19 Patients", "IFCC Interim Guidelines on Serological Testing of Antibodies against SARS-CoV-2".
2. COVID-19 Clinical Diagnostics Webinar (8 Episodes in total), Mar-Apr 2020
The COVID-19 Webinar series was co-held by Chinese Medical Association, CSLM and

supported by Mindray Medical Corp. Chinese experts in the field of clinical laboratory medicine who gained hands-on experience in the diagnosis of COVID-19 shared their valuable knowledge with global peers. The webinar series consisted of 3 global episodes (over 100 countries) and 5 regional webinars (Asia Pacific, India, CIS including Russia, Africa French-speaking Region and Latin America). Total number of online viewers was over 20,000 (700 to 5700 audiences online for each episode) among 110 countries worldwide.



Featured topics covered the Detection of virus by various routine diagnostics method to the basic prevention guidance for lab technicians and has received global praise and recognition. The webinar was highly appraised by experts worldwide and has been interpreted into 8 languages and also uploaded on Youtube.

ADDITIONAL INFORMATION

The 16th National Congress of Laboratory Medicine of Chinese Medical Association (2020 NCLM) sponsored by Chinese Medical Association and Laboratory Medicine Society of the Chinese Medical Association will be held in Qingdao from September 24 to 26, 2020. This is a grand meeting of China laboratory medicine in 2020, and it is held once a year.

This conference covered the latest research achievements and development trends in clinical laboratory and laboratory management, and will conduct extensive and full exchange and discussion on the new situation and challenges faced by laboratory medicine. First-class experts in China were invited to attend the meeting and give special reports. The conference also held continuing education, paper exchange, young and middle-aged English speech competition, laboratory knowledge and skills competition, laboratory photography exhibition, clinical laboratory equipment new technology exchange and exhibition.



CROATIA CROATIAN SOCIETY OF MEDICAL BIOCHEMISTRY AND LABORATORY MEDICINE

NATIONAL MEETINGS

| Name of the meeting | Date | Topic |
|--|------------------|---|
| 31 st CSMBLM Virtual Symposium; Zagreb, Croatia | October 17, 2020 | Hemodialysis - clinical and diagnostic challenges |

EDUCATION

Education Committee

Webinars of CSMBLM in 2020:

1. POCT - dilemmas and possible solutions (December 11, 2020)
2. Circulating tumor cells, opportunities and challenges (March 30, 2020)

3. Extended neonatal screening by tandem mass spectrometry (March 5, 2020)
4. Direct oral anticoagulants: from a laboratory point of view (February 6, 2020)



Committee for the scientific and professional development

- Final version of the National Recommendations for the standardization of the sweat test was completed. The document has been translated into English.
- National Recommendations for Laboratory Diagnosis of Systemic Autoimmune Diseases - Recommendations for the Determination of Antinuclear Antibodies (ANA) were sent for publication in the journal Biochemia Medica in June 2020. A revision of the article is underway.
- Article related to the processing of data from the post-analytical phase of laboratory work from CROQALM from 2019-2020 was published in the journal Biochemia Medica and another article is in the process of being published.
- Recommendations for pleural, pericardial, and peritoneal fluid and recommendations for synovial fluid were published and are available on the CSMBLM website.
- WG of CSMBLM and Croatian Chamber of Medical Biochemists for validation and verification of methods presented the results of a survey in the form of a scientific paper.
- The WG for Coagulation has prepared the final version of the article (under review).

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 2020, CROQALM performed three rounds of external quality control (March, June, September). In December 2020, annual report for each participant was sent to Croatian Chamber of Medical Biochemists and applications for EQA in 2021 was opened.

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. In 2020, the journal published 3 issues.

Information and Public Relations Committee (IPRC)

In this difficult, pandemic year, with lack of social events and impossibilities in contact, Committee for Information and Public Relations, has been working entirely online. We organized several meetings, welcomed some new members, updated the official web page and events. Committee prepared and sent more than 50 newsletters to CSMBLM members together with one hundred notifications on official page. Also, we presented official social media page of the CSMBLM. For this year we have plans for online and live events organization regarding promotion of the laboratory medicine profession.



CZECH REPUBLIC
CZECH SOCIETY OF CLINICAL BIOCHEMISTRY (CSKB)

NATIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Topic</i> |
|--|----------------------------|---|
| Clinical Biochemistry Symposium | 23 – 27 OCT 2020 Online | General clinical biochemistry |
| 41 st Immunoanalytical Days -online | 22 – 24 NOV 2020 Online | Immuno assays, biobanking, endocrinology, downsydrom, tumpour markers |

| | | |
|---|--------------------|-------------------------------------|
| 50th Bilobab | Postponed for 2021 | National meeting of lab technicians |
| RANK 2020 Rutinne Analysis of Nucleic Acids | 5 – 6 FEB 2020 | Nucleic acides |

EDUCATION

No change

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), PharmDr. (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

At all meetings the Czech Society of Clinical Biochemistry guarantees scientific programme (Society's contribution)

| <i>Name of the meeting</i> | <i>Date</i> | <i>Topics</i> |
|--|-------------|--------------------------------|
| Quality Contro Day – Online | 24 NOV 2020 | Quality Control |
| Monoclonal Gamapathy Working Day Online | 10 SEP 2020 | Myeloma and MGUS diagnostics |
| Pilsen - region with the highest renal Carnonoma incidence Online webinar | 28 MAY 2020 | Oncology |
| Prognostics Value of Cardiac Markers Online webinar | 14 MAY 2020 | Cardiology |
| Coagulation Factors Assessment Online webinar | 23 APR 2020 | Coagulation |
| Free Lite Change Assessment Online webinar | 14 APR 2020 | Heamthooncology |
| AIHA in Blood Bank Online webinar | 24 MAR 2020 | Heamathology and blood banking |
| Menhir of Professor Masopust | 23 JAN 2020 | Miscellaneous |
| 10 local meetings cancelled due to COVID 19 | | |

INTERNATIONAL RELATIONS

International relations

9 members in IFCC Committees and Working Groups

8 members in 11 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 2020:
 CSKB Guideline: Tumour Markers in Clinical Practice
 CSKB Guideline: POCT Methods in General Practitioner Practice
 CSKB Guideline: Bone Turnover Markers in Osteoporosis
 CSKB Guideline: Diabetes Mellitus – Laboratory Diagnostics and Monitoring – update 2020



ESTONIA ESTONIAN SOCIETY FOR LABORATORY MEDICINE



NATIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Topic</i> |
|----------------------------|------------------------------|---|
| XXI Summer School | August 27-28, 2020, Sangaste | New dyslipidemia guidelines by EFLM, biochemistry of dyslipidemia; experiences with coronavirus in different laboratories, analysis on sewage water as a tool of coronavirus epidemiology; distant learning during pandemic; differential diagnostics of icterus; CDT and ethanol metabolites; toxicological tests and expertise; gene therapy; autoantibodies in melanoma; AIDS and lung disease |

EDUCATION

Interdisciplinary seminar "Laboratory tests – whether, to whom, why?", December, 11, 2020, virtual. Due to COVID-situation in 2020, a lot of planned events were cancelled.

REGIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Society's contribution for the meeting</i> |
|---|------------------------------------|--|
| XV Baltic Congress in Laboratory Medicine | November, 6-7, 2020, Riga, virtual | ESLM participated in organization of the Congress, together with Latvian (main organizer) and Lithuanian societies (BALM). |

INTERNATIONAL RELATIONS

ESLM is the member of the following international organizations: IFCC, EFLM, BALM, ESCMID, EUCAST

Marina Ivanova is the national representative in EUCAST

Helle Järv is a member of EUCAST subcommittee AFST

Kadri Klaos is the member of EUCAST subcommittee AMST

Marika Jürna-Ellam is the member of EUCAST subcommittee ECMM

Agnes Ivanov is a member in the IFCC Working Group "Laboratory Errors and Patient Safety" (WG-LEPS) and corresponding member in IFCC TF-POCT

Marge Kütt is a corresponding member in the EFLM Working Group „Patient Focused Laboratory Medicine“ (WG-PFLM)

Galina Zemtsovskaja is a corresponding member in IFCC working groups: Committee on Clinical Applications of Cardiac Biomarkers (C-CB); Committee on Bone metabolism (C-BM);

Harmonization of Interpretive Commenting EQA (WG-ICQA)

ADDITIONAL INFORMATION

Together with Estonian Society of Bioanalysts, ESLM published issue No 6 (2020) of the journal "Eesti Laborimeditsiin" ("Estonian Laboratory Medicine") (in April).

ESLM participated actively in working out national diagnostic algorithms for SARS CoV-2.

Representatives of ESLM, Marge Kütt and Paul Naaber, participated in the advisory group of the national Health Board during the pandemic.

There are 2 sections in ESLM:

- Section of clinical microbiology
- Section of laboratory physicians

There are working groups in the fields of

- Laboratory terminology,
- LOINC (Logical Observation Identifiers Names and Codes),
- Laboratory Quality,
- Kidney Biomarkers,
- Cardiac Markers,
- Laboratory Hematology,
- Diagnostics of Urogenital Infections
- Protein electrophoresis
- Flow cytometry

The following guidelines were compiled:

- Strategy for testing SARS CoV-2 by ESLM& ESI (2020)
- Recommendations of ESLM for laboratory testing of SARS CoV-2

17 laboratories are sending out-patients' laboratory test results electronically to the National Digital Health Record.

New forms of visual display of dynamical changes are under development into National Digital Health Record.



FINLAND

FINNISH SOCIETY OF CLINICAL CHEMISTRY (SKKY)

NATIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Topic</i> |
|--------------------------------|----------------|---|
| Annual meeting (partly online) | 23 Sep 2020 | Annual mandatory meeting |
| Labquality Days | 6.-7. Feb 2020 | General clinical chemistry, participation in the scientific working group |

EDUCATION

We have promoted international virtual meetings and congresses for the members.
We have published the Finnish society's national journal "Kliinlab" (6 journals in 2020).

REGIONAL RELATIONS

We have kept contact to the members the society via e-mail and social media.
Board meetings were organized online since April 2020.
We have kept contact to other Nordic societies of clinical chemistry via online meetings. We have planned future events and education. However, no specific plans have been made due to uncertain time schedule.

INTERNATIONAL RELATIONS

We have kept contact to international working groups using online meetings. We have participated in international co-operation and promoted e.g. working groups and task forces for the members of our society.

ADDITIONAL INFORMATION

Due to COVID-19 pandemic member meetings and educational events were cancelled.



FRANCE
SOCIÉTÉ FRANÇAISE DE BIOLOGIE CLINIQUE (SFBC)



NATIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Topic</i> |
|---|--|--|
| National meetings with SFBC auspices (+ SFBC members in the scientific committee) | | |
| "Biomed J" (live meeting) | March 5 th - 7 th , 2020 / Paris | Actualities in practical biology (focus on biochemistry and molecular genetics) |
| 4èmes Journées Francophones de Biologie Médicale | Virtual meeting (November, 2020) | <ul style="list-style-type: none">• COVID-19 biology• IFCC session on AI and E-Health |

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 and WEBINARS

- **Participation of SFBC members in International meetings**
 - AACC National Meeting 2020, Virtual Event (Pr Philippe Gillery, Session Chair)
 - Journées de l'innovation en Biologie (December 8th - 11th, 2020)
 - IFCC Workshop: Navigate lab medicine's and healthcare's digital transformation
Chairs: B Gouget, D Gruson
 - Virtual Round table with 14 IFCC representatives: The Specialist in Lab Medicine at the forefront of prevention and at the heart of public health. Chair B. Gouget
- **IFCC Webinars with the participation of AFCCB, APFCB and EFLM members**
 - The Covid and the Heart : Pronostic value of CV Biomarkers and e-management of Cardiac injury
 - (July 8th, 2020) Chair: B Gouget, D Gruson (speaker)
 - Myths and truth about immunity against SARS CoV2/ Are biological tests the Key (July 28th, 2020)
 - Chair: B Gouget, D Gruson (speaker)
 - Artificial intelligence ad cardiac biomarkers trends (September 22th, 2020)
 - Chair: B.Gouget, D Gruson (speaker)

REGIONAL RELATIONS

EFLM: Participation of SFBC members

| Functional unit | Name | Surname | Position |
|--|--------------------|--------------------------|----------------------------|
| 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 | BOUILLLOUX | Corresponding Member |
| WG: Guidelines (WG-G) | B er enice | SHELL | Member - Young Scientist |

INTERNATIONAL RELATIONS

- SFBC Committee on International Relations:
 - Prof.P. Gillery
 - Prof. J. Goudable
 - Dr B. Gouget
 - Pr S. Lehmann
- SFBC representatives:
 - IFCC: Prof. P. Gillery
 - EFLM: Prof. J. Goudable
 - WASPaLM: Prof. P. Gillery, Dr G. Boursier
- Participation in the International Advisory Board of IFCC/EFLM meetings:
 - IFCC WorldLab Seoul 2022 (Pr P. Gillery, ISC Member)
 - Workshop "Barriers to global standardization of clinical laboratory testing: reference materials and regulations" (Pr P. Gillery, Member Organizing Committee), virtual meeting, December 2021
 - EFLM/IFCC EuroMedLab Munich 2021 (Pr P. Gillery, Chair of the Scientific Programme Committee, Jo lle Goudable, ISAB)
 - WorldLab - EuroMedLab Roma 2023 (Pr P. Gillery, Member of the Scientific Programme Committee)
 - IFCC Council, and chair Arabic Federation /FIFBCML session (Dr B. Gouget)
- SFBC: founding member of the FIFBCML : F d ration Internationale Francophone de Biologie Clinique et de M decine de Laboratoire.
- 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, 2020-2022 |
| Committees | |
| – 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, 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 in Metrological Traceability (WG-CMT) | V. Delatour, Member |



- Apolipoproteins by Mass Spectrometry (WG-Apo MS)
- Standardisation of Albumin Assay in Urine (WG-SAU)
- Standardisation of Pregnancy-Associated Plasma Protein (WG-PAPPA)
- Standardization of Troponin I (WG-TNI)
- Standardisation of Hemoglobin A₂ (WG-HbA₂)
- ✓ **Education and Management Division (EMD)**
Committees
 - Committee on Point of Care Testing (C-POCT)
 - Committee on Proficiency testing (C-PT)
 - Committee on Analytical Quality (C-AQ)
 - Committee on Education in the Use of Biomarkers of Diabetes (C-EUBD)
 - Committee on Chronic Kidney Disease Working Group
 - Flow Cytometry (WG-FC)
- ✓ **Emerging Technology Division (ETD)**
 - Committee on Mobile Health and Bioengineering in Laboratory Medicine (C-MHBLM)
 - Committee on Omics Translation (C-OT)
 - Emerging technologies in Pediatric Laboratory Medicine (C-ETPLM)
- ✓ **Task Forces (TF)**
 - Task Force on History (TF-H)
 - Task Force for Young Scientists (TF-YS)
- ✓ **Nominations Committee**

V. Delatour, Member
 L. Pieroni, Corresp. Member
 R. Garnotel, Corresp. Member
 G. Lefèvre, Corresp. Member
 M. Arock, Corresp. Member
 M. Vaubourdolle, Member
 A. Perret-Liaudet, Member
 A. Vassault, Corresp. Member
 P. Gillery, Corresp. Member
 J.P. Cristol, Corresp. Member
 C. Lambert, Chair, 2019-2021
 B. Gouget, Chair, 2018-2020
 M. De Tayrac, Member
 A. Mailloux, Corresp. Member
 B. Gouget, Co-Chair, 2019-2021
 M. Lenski, Corresp. Member
 B. Gouget, Past-Chair, 2018-2020

ADDITIONAL INFORMATION

SFBC Board 2020

- **Executive Board:**
 - President Pr Vincent SAPIN
 - Vice-President Pr Jean-Louis BEAUDEUX
 - Past-President Pr Marc DELPECH
 - General Secretary Dr Véronique ANNAIX
 - Treasurer Dr Philippe CHATRON
- **Scientific Committee:** Dr Delphine COLLIN-CHAVAGNAC
Dr Katell PEOC'H
- **Editors in Chief ABC:** Dr Laurence PIERONI
- **Educational Committee:** Dr Christine AUGEREAU-VACHER
Dr Fabrice GUERBER
Dr Isabelle AIMONE-GASTIN
- **International Relations:** Pr Philippe GILLERY
Pr Joëlle GOUDABLE
Dr Bernard GOUGET
Pr Sylvain LEHMANN
- **National Relations:** Dr Marie-Françoise GAUDEAU-TOUSSAINT
Dr Carole POUPON
Dr Laurence MOULY
- **Young Scientist:** Dr Guilaine BOURSIER



HUNGARY

HUNGARIAN SOCIETY OF LABORATORY MEDICINE (MLDT)

NATIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Topic</i> |
|--|--|---|
| Laboratory diagnosis of SARS-CoV-2 infection | from 15 October 2020 online presentations were available for four weeks | Molecular biological diagnosis of COVID-19, serological tests, clinical picture and cases |
| QualiCont Forum 2020 | 7 February 2020 | External quality control, cardiac biomarkers, laboratory diagnostics of diseases of the thyroid gland, tumor markers of breast cancer |

REGIONAL RELATIONS

Regionally, Hungarian professionals in laboratory medicine have good relations with similar experts in Croatia, Austria and Romania. Some colleagues working in Hungarian labs originally come from Romania.

INTERNATIONAL RELATIONS

IFCC Communications and Publications Division, Vice-Chair: Prof. Janos Kappelmayer

Editor of eJIFCC: Prof. Janos Kappelmayer

IFCC Scientific Division, Committee on Bone Metabolism, Member: Dr. Harjit Pal Bhattoa

EFLM Working Group: Postanalytical Phase, Expert/Consultant: Dr. Eva Ajzner

EFLM Working Group: Congresses and Postgraduate Education, Member: Dr. Zsuzsa Bagoly

EFLM Working Group: Promotion & Publications, Chair: Dr. Harjit Pal Bhattoa

EFLM EuroLabNews, Editor: Dr. Harjit Pal Bhattoa



INDIA

ASSOCIATION OF CLINICAL BIOCHEMISTS OF INDIA (ACBI)

NATIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Topic</i> |
|--|-------------|--------------|
| Due to the Covid Pandemic, our scheduled National meet in December 2020 was shifted to December 2021 | | |

EDUCATION

Due to complete lockdown enforced in India, no physical meeting was organized in 2020.

The association then decided to start a series of webinars to keep our members engaged and informed. Eminent scientists from India and abroad were invited to participate in the webinars.

The following webinars were organized:



ACBI Webinar on Shift in Paradigm - Lab Medicine & COVID-19 16th December 2020

MODERATOR

Endang Hoyaranda

Prodia Group Indonesia - Director
APFCB - Vice President



SPEAKERS

Praveen Sharma

Professor (Biochemistry), AIIMS
Jodhpur, Chair APFCB-C&C, Chair
IFCC C-CLM



**Role of Biochemical
Investigations in
COVID-19**

Sunil Sethi

Associate Professor, National
University Health System, Singapore,
APFCB - President



**Operational Challenges
& Lab Management
during COVID-19**

Pradeep Dabla

Professor (Biochemistry),
GIPMER, Consultant IFCC TFFS



**Artificial Intelligence-a
modern tool to fight
COVID-19**

Registration link (Scan QR code)

https://zoom.us/join/zoom/register/WN_wWUeL7XRsw9xsM3b-8dnQ

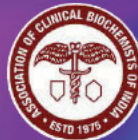
Date: 16th December 2020

Time: 1 pm IST



Sir Ganga Ram Hospital

**9TH
ANNUAL
CME**



Department of Biochemistry
Sir Ganga Ram Hospital, New Delhi, India
cordially invites you to an online CME on

**CARDIOVASCULAR RISK STRATIFICATION
IN PATIENTS AND HEALTHY POPULATION
ROLE OF LABORATORY MEDICINE**

AGENDA



1:45 PM – 4:35 PM

**09 DEC
2020**



December 17th, 2020
(Thursday)



India Time
15:00-16:30 (IST)



Please scan above QR
code for registration



COVID-19: Immune Response and Clinical Diagnostic



Prof Praveen Sharma, Ph.D., FACBI, FAMS, FAACC (Moderator)

- Professor, Dept of Biochemistry AIIMS, Jodhpur
- Former Head, Department of Biochemistry, Dean (Research)
- Controller of Examinations, All India Institute of Medical Sciences, Jodhpur-342005 (India)
- President ACBI (2003-2004 and 2014-2016)
- President, INCLAB (2017 to date)
- Chair, IFCC-CCLM (2020 to date)
- Editor-in-Chief, LJCB (2008 to date)
- Chairman, APFCB Congress and Conferences (2019 to date)
- Former Chairman, APFCB Communication Committee (2010-2019)
- Chief Editor, APFCB News (2010-2019)
- Director, INCLAB, Jodhpur (2014 to date)
- Assessor (NABL)
- International Lead Assessor (AERSSC)



"The Tri-dent" - Story of 3 Biomarkers in COVID19

Prof C.N. SRINIVAS, MD, DNB, MNAMS, FCAP (Speaker)

- Director, Dept of Laboratory Medicine, Transplantation Immunology and Molecular Laboratory
- Director, Center of Excellence in Phlebotomy
- Director, Certificate Course in Laboratory Quality Management System at MIDT INTERNATIONAL HOSPITALS, CHENNAI
- Global Outreach Consultant-ASCP
- ISO 15189:2013 Assessor, NABL-QCI Med Lab Lead Assessor and CAP-LAP Inspector
- WHO Trainer for GCLP and Lab Quality Management Systems
- Editorial Board Member for Two of the Medical Journals
- Trained under Dr. John Gerlach, President of ASHI, Fellowship under Him in Molecular Diagnostics, Flow Cytometry and Transplantation Immunology
- Father of Urine Automation in India






Variation of Immune Response in COVID Cases

Dr Deepasankari T.L., MBBS, MD (Speaker)

- Consultant Clinical Microbiologist at Microbiological Laboratory, Coimbatore
- Member in HISICON
- Member in IAMI
- Infection Control Officer at Women's Center and Medservs, Coimbatore



Serological markers in treatment and management of COVID-19

Aug. 18th, 2020 (Tuesday)
India Time 4:00-6:00 pm (GMT+5.5IST)
Italy Time 12:30-2:30 pm (CEST)

To register for the webinar
 Please scan the QR code
 Or use following page for registration
<http://online.bioconferencing.com/webcast/Snibe20200818.html>

Co-morbidities associated with COVID-19

Prof. Praveen Sharma (Moderator)

- PhD (Med), FACBI, FAMS, FAJCC
- Professor, Dept of Biochemistry AIIMS Jodhpur
- Former Head, Department of Biochemistry, Dean (Research)
- Controller of Examinations, All India Institute of Medical Sciences, Jodhpur-342005 (India)
- President ACBI (2005-2004 and 2014-2015)
- President, InSLAR (2017 to date)
- Chair, IFCC-CCLM (2020 to date)
- Editor-in-Chief, UCS (2006 to date)
- Chairman, APFCB Congress and Conferences (2019 to date)
- Former Chairman, APFCB Communication committee (2010-2019)
- Chief Editor, APFCB News (2010-2019)
- Director, NRCLP, Jodhpur (2014 to date)
- Assessor (NABL)
- International Lead Assessor (AIFCCG)

Case Discussion and Role of Routine Laboratory Parameters in COVID-19 Patients

Prof. Dr. Barnali Das

- MD, DNB, PGDHMM
- Consultant in Laboratory division of Kokilaben Dhirubhai Ambani Hospital & Medical Research Institute, Mumbai
- Executive Member, Scientific Division, International Federation of Clinical Chemistry & Laboratory Medicine (IFCC)
- Chair of American Association of Clinical Chemistry (AACC) India Section
- Member of the IFCC Committee for Standardization of Thyroid Function Tests (IFCC S-CTFT), 2011-2017
- College of American Pathologist (CAP) Inspector & NABL Assessor

Serology screening in COVID-19 pandemic: opportunities and pitfalls

Prof. Sergio Bernardini

- MD, PhD
- Chair, Emerging Technologies Division of IFCC
- Full Professor in Clinical Biochemistry in University of Rome Tor Vergata, Italy



Emerging Biomarkers and Case Study on Cardiac Disease

Date: Nov. 23rd, 2020 (Monday)
 India Time: 17:00-18:30 IST

Dr. Testler F. Ashavaid, Ph.D., F.A.C.B, CSci., FACBI (Moderator)

- Consultant Biochemist, Chief of Labs (Admin) and Director-Lab Research at P. D. Hinduja Hospital, Mumbai
- National Lead Investigator for Familial Hypercholesterolemia (FH) in India by European Atherosclerosis Society (EAS FH)
- Member, Molecular Diagnostic Committee (CMD), International Federation of Clinical Chemistry and Laboratory Medicine (IFCC)
- Collaborator in IFCC-C-RIID, Global Study on Reference Intervals
- Chartered Scientist, the Science Council, UK
- Fellow of the National Academy of Clinical Biochemistry, USA
- National and International Auditor for College of American Pathologists

Validation / Verification of Immunoassays: High Sensitive Troponin I, the Game Changer in Emergency Room

Dr. Barnali Das, MBBS, MD, DNB & PGDHMM (Speaker)

- Consultant in Laboratory Division of Kokilaben Dhirubhai Ambani Hospital & Medical Research Institute, Mumbai
- Executive Member, Scientific Division, International Federation of Clinical Chemistry & Laboratory Medicine (IFCC)
- Chair of American Association of Clinical Chemistry (AACC) India Section
- Member of the IFCC Committee for Standardization of Thyroid Function Tests (IFCC S-CTFT), 2011-2017
- Corresponding Member, IFCC Committee for Reference Interval & Decision Limit
- College of American Pathologist (CAP) Inspector & NABL Assessor

Cardiac Biomarkers: The Good, The Bad and The New

Dr. Aditi Gupta, Ph.D, Green Belt (Six Sigma) (Speaker)

- Lead Consultant-Biochemistry at Aster Labs
- NABL Assessor
- Life Member of ACBI (Association of Clinical Biochemist of India)

REGIONAL RELATIONS

Many members of ACBI are actively participating in the affairs of APFCB. Dr Praveen Sharma (Jodhpur), Dr. Pradeep Dabla, Dr Purvi Purohit, Dr Prasenjit Mitra as chairpersons/members of various divisions & sub-committees.

ADDITIONAL INFORMATION

The 47th Annual National Conference of the association will be held at Science City, Kolkata from 8 – 11th. December 2021. The organizing secretary is Dr Subir Kumar Das.

The following were elected as office bearers of ACBI for the year 2021:

PRESIDENT:

Dr. L. M. Srivastava

Professor; Consultant-Advisor

Department of Biochemistry and Lab Medicine
Sir Ganga Ram Kolmet Hospital
New Delhi - 110005

VICE PRESIDENT (I) & ORGANIZING SECRETARY, ACBICON 2021

Dr. Subir Kumar Das,
Professor & Head
Department of Biochemistry
College of Medicine & JNM Hospital, WBUHS
Kalyani, Nadia 741235, West Bengal

VICE PRESIDENT (II)

Dr. Seema Bhargav
Chairperson and Senior Consultant
Department of Biochemistry & Professor
GRIPMER, Sir Ganga Ram Hospital
New Delhi

ADVISOR

Prof. K.P. Sinha
Director, Biochem Lab
East Boring Canal Road
Patna-800001

SECRETARY:

Dr. Rajiv Ranjan Sinha
Professor & Head
Department of Biochemistry
Government Medical College
Bettiah. W. Champaran

TREASURER:

Dr Krishna Ranjan Prasad
Professor, Dept.of Biochemistry, Katihar Medical College
A-12 Sector D, Kankerbagh Colony
Patna - 800 020, Bihar

JOINT SECRETARY:

1. Dr. Ram Binay Sinha
Professor & Head
Department of Biochemistry
Patna Medical College
Patna – 800 004

2. Dr. Prasenjit Mitra
Department of Biochemistry
AIIMS, Basni phase -2
Jodhpur

ZONAL COUNCIL MEMBERS

North Zone:

Dr. Dharamveer Yadav
Assistant Professor
Dept. of Biochemistry
S.M.S. Medical College
Jaipur – 302 004

South Zone:

Dr. Kanan Vaidyanathan
Professor & Head
Department of Biochemistry
Pushpagiri Institute of Medical Sciences & R.C.
TIRUVALLA - 689 101, Kerala

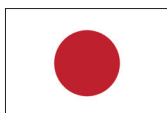
West Zone :

Dr. Sadanand Naik
Head ept. Of Biochemistry & Endocrinology
K.E.M. Hospital
Raasta Peth
PUNE - 411 011

Central Zone:

Dr. Shivani Pandey
Assistant Professor
Department of Biochemistry
King George's Medical University
Lucknow – 226003
Uttar Pradesh





JAPAN JAPAN SOCIETY OF CLINICAL CHEMISTRY (JSCC)

NATIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Topic</i> |
|--|-----------------|---|
| The 60 th Annual Meeting of the Japan Society of Clinical Chemistry | 2020/10/30-11/1 | <p>2 Special Lectures:</p> <ol style="list-style-type: none">1) Clinical Chemistry -Past / Present / Future- (Tozuka M)2) Qualitative changes in serum and cerebrospinal fluid HDL (Miida T) <p>3 Educational Lectures:</p> <ol style="list-style-type: none">1) Evaluation of "muscle quality" in the field of sports and health science2) Molecular mechanism of taste substance acceptance that determines taste3) Construction of regenerative medicine and drug discovery model using cell sheet <p>9 Symposia:</p> <ol style="list-style-type: none">1) Current status and issues of immunotoxicity in drug research and development2) Case report/Discussion: Pitfall in laboratory test 20203) Ingenuity of accuracy assurance in clinical chemistry laboratories: How to guarantee the accuracy and add value of test results before and after analysis4) Utilization of blood drug concentration measurement results required by Specified Drug Treatment Management Fee 1 (TDM)5) Immunoglobulin / M protein test and clinical practice6) Screening for primary dyslipidemia7) GA Symposium -Together with the project report-8) How to ensure the quality of analytical clinical tests again9) Clinical chemistry pioneered by mass spectrometry -Current status and possibilities |

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 Tokyo on Nov 1, 2020.

REGIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Society's contribution for the meeting</i> |
|--|--------------|---|
| Hokkaido branch : The 30 th branch regular meeting | Sep 12, 2020 | Each branch supervises the meeting of each region |
| Tohoku branch : The 31 st branch general meeting | Nov 22, 2020 | Each branch supervises the meeting of each region |
| Kanto branch : The 28 th branch general meeting | Nov 1, 2020 | Each branch supervises the meeting of each region |
| Tokai & Hokuriku branch : The 340 th branch regular meeting | Feb 23, 2020 | 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
- Nomenclature, Properties and Units (C-NPU) in collaboration with IUPAC: Koh Furuta, Member

SD Working Groups:

- Standardization of Albumin Assay in Urine (WG-SAU): Yoshihisa Itoh, Member
- Immunosuppressive Drugs (WG-ID): S Masuda, Member
- Pancreatic Enzymes (WG-PE): Shigeru Ueda, Member
- Fecal Immunochemical Testing (WG-FIT): S Takehara, Y Doi, M Fujimura, T Fukuda, H Hayashi, T Ichiyanagi, T Kosaka, Y Masuda

Education Management Division (EMD) Committees:

- Education in the Use of Biomarkers in Diabetes (C-EUBD): Asako Sato, Member

Emerging Technologies Division (ETD) Committees:

- Committee on Mobile Health and Bioengineering in Laboratory Medicine (C-MHBLM): Kazuhiko Kotani, Member

International Journal Editor

Associate Editors 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 1,850 members including MD and PhD belong to JSCC and 9 blocks were divided as 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)

REGIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Society's contribution for the meeting</i> |
|--|----------------|---|
| BALM2020 (15th Baltic Congress of Laboratory Medicine) | 6.-07.11.2020. | Covid-19, paediatric, infectious diseases, women's and men's diseases, new technologies |





LEBANON LEBANESE SOCIETY OF CLINICAL BIOLOGY

NATIONAL MEETINGS

Since the beginning of the COVID-19 pandemic, the Lebanese Ministry of Public Health (MOPH) appointed a committee of 13 members from the Syndicate of Clinical Pathologists in Lebanon (SDBL) to monitor the performance of laboratories specialized in SARS-CoV-2 testing. The committee supervised the setting up of 90 Coronavirus testing laboratories till now through:

- setting standards for the establishment of these laboratories.
- setting standards to ensure the safety, quality and technique of these laboratories. Moreover, monitoring how they eventually conform to these standards and how they report their results.
- inspecting the 90 laboratories through on-site visits by members of the SDBL to assure adherence to the above standards.
- establishing an internet page on the syndicate website “www.sdblb.org” containing all prevention measures, guidelines, tutorials as well links to relevant scientific website. The SDBL page also includes the check-list and standards required to open a coronavirus testing laboratory as well as the up-to-date guidelines and decisions published by the MOPH during the pandemic.
- analyzing the performance of kits and their distribution.
- following up on the results declared by the laboratories for epidemiological surveillance purposes.
- organizing webinars to guide and clarify all aspects of the pandemic.

Besides our focus on the pandemic, the SDBL also concentrated on other issues such as:

- organizing webinars regarding chronic diseases and cancer.
- preparing for the congress of the Arab Federation of Clinical Biology (AFCB) which is scheduled to be held between the 27th and 29th of May 2021.
- organizing meetings, training sessions and a whatsapp group for the young and new members of the syndicate so that they may get introduced to each other which will facilitate future communication, research and publications.
- helping new members in their search for jobs and to negotiate fair salaries and job descriptions. A representative of the new members is actually the host and administrator of the SDBL site.
- establishing a plan to monitor the suppliers that introduce kits in the Lebanese market price from conservation and distribution aspects by asking the MOPH to inspect if they are following good practices.
- forming a list of newly introduced tests with their prices in conjunction with the MOPH.
- working on updating outdated legislation with the MOPH.



LITHUANIA LITHUANIAN SOCIETY OF LABORATORY MEDICINE

NATIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Topic</i> |
|--|-------------|---|
| National Conference (<i>on-line</i>) | 29-10-2020 | What clinicians should know, and what laboratories should perform (dedicated to World Thrombosis Day) |
| 12th Annual Conference of the Lithuanian Society of Laboratory Medicine (<i>on-line</i>) | 02-12-2020 | Laboratory diagnostics of 2020: possibilities and clinical interpretations |

REGIONAL MEETINGS

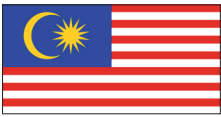
| <i>Name of the meeting</i> | <i>Date</i> | <i>Society's contribution for the meeting</i> |
|--|---------------------|---|
| XV Baltic Congress of Laboratory Medicine (<i>on-line</i>) | 6 – 7 November 2020 | Co-organizer of the Congress |

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.



MALAYSIA

MALAYSIAN ASSOCIATION OF CLINICAL BIOCHEMISTS (MACB)

NATIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Topic</i> |
|---------------------------------------|-----------------------|--|
| 30 th MACB Conference 2020 | 26 – 28 November 2020 | "Innovative Solutions – The Way Forward in Laboratory Medicine" |
| MACB Annual General Meeting | 28 November 2020 | 30 th MACB AGM – appointment of the new council members and auditors for the term 2020-2022 |

EDUCATION

Webinars

1. "Laboratory Role in the Battle Against Covid-19" – 26th August 2020

This is the first live webinar organised by the MACB. The webinar focused on experience sharing of Malaysian laboratories involved in the testing of Covid-19 patients during the current Covid-19 pandemic. Lectures on the following topics : Molecular Testing of Covid-19: Sungai Buloh Experience, Serology Testing for Covid-19 and The Importance of Supporting Tests in the Management of Covid-19 Patients were delivered by 4 local speakers. This webinar was supported by Roche Diagnostics (M) Sdn. Bhd.

2. "The Power of Laboratory Medicine to Achieve Measurable Better Healthcare" - 4th September 2020.

This webinar received the auspices of the APFCB and was supported by Abbott Diagnostics. The objective of the webinar was to create awareness for the UNIVANTS of Healthcare Excellence Award and to promote collaboration across disciplines. Lectures in this webinar were delivered by 3 speakers. The first lecture on the topic of Unifying for Something Greater: The Univants of Healthcare Excellence Program was delivered by Tricia Ravalico. The second lecture was delivered by Dr. Eleanor Dow on the topic of Intelligent Liver Function Testing (ILFT): A Cost-Effective Way to Increase Early Diagnosis of Liver Disease and the third lecture was delivered by Dr. Marthias Orth on the topic of Avoiding Insufficient Therapies and Overdosing with Co-Reporting e-GFRs for Personalized Drug Therapy and Improved Outcomes.

3. "Myocardial Injury in the Era of High Sensitivity Troponin" - 9th September 2020.

The webinar discussed the latest updates in the guidelines related to high sensitivity troponins and their clinical utility within Asia Pacific. The webinar was delivered by Dr.



Pearline Teo of Siemens Healthineers, Singapore and was supported by Siemens Healthineers.

4. “Blood Collection Tube Verification and Validation webinar series”

This webinar series was conducted in 3-parts and was supported by BD.

Part 1: “The Science Behind Blood Collection Tube and Tube Validation” was held on 18th September 2020 and was delivered by Dr. Puneeta Bhatia.

Part 2: “Tube Verification Protocol Design” was held on 16th October 2020 and was delivered by Mr Brian Smith.

Part 3 : “Blood Collection Tube Verification: What Your Text Book Do Not Teach You” was held on 4th December 2020 and was delivered by Kala Devi Nadarajan.

The webinars discussed the regulatory guidelines for blood collection tube selection and validation, how to design a validation protocol and the variables that should be considered during verification to ensure adequate performance in clinical use.

REGIONAL RELATIONS

1. The MACB is a member of the APFCB.
2. In 2020 the MACB organised one webinar under the auspices of the APFCB
3. APFCB Travelling Lecture, Helen Martin presented a lecture at the 30th MACB Conference 2020 which was held virtually.
4. The MACB established a local organising committee for the APFCB Congress 2026.
5. MACB activities for 2020 were reported in issues 1 and 2 of the APFCB News.

INTERNATIONAL RELATIONS

1. IFCC-MACB Advanced Molecular Biology Workshop

This advanced workshop was organized by the Malaysian Association of Clinical Biochemists (MACB) in collaboration with the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC). It was supported by Universiti Kebangsaan Malaysia (UKM). It was held on 29 – 31 January 2020 at the UKM, Jalan Raja Muda Abdul Aziz, Kuala Lumpur. The workshop was carried out in 3 parts over the 3 days.

2. Enrolment to the EFLM Academy

MACB has enrolled some of its members to the European Federation of Laboratory Medicine (EFLM) Academy for the year 2021.



MYANMAR

MYANMAR MEDICAL TECHNOLOGIST ASSOCIATION (MMTA)

NATIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Topic</i> |
|----------------------------|--------------------|---|
| MMTA Meeting | 23 . February 2020 | Covid-19 Crisis |
| MMTA Meeting | 12 . April 2020 | To provide volunteer service for the Laboratories to support Covid-19 Treatment |

REGIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Society's contribution for the meeting</i> |
|----------------------------|-----------------|---|
| Health Regional Meeting | 17. August 2020 | Detection and prevention of Covid-19 |
| Yangon Region | | in Yangon Region |



NORWAY

NORWEGIAN SOCIETY OF MEDICAL BIOCHEMISTRY (NSMB)

NATIONAL MEETINGS

Cancelled

EDUCATION

National educational video meetings once a week all year.

REGIONAL MEETINGS

Cancelled



PARAGUAY

ASOCIACIÓN DE BIOQUÍMICOS DEL PARAGUAY (ABP)

NATIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Topic</i> |
|--|---------------|--|
| Meetings at the Ministry of Public Health and Social Welfare with representatives of the General Directorate for the Control of Health Professionals, Establishments and Technology, the Scientific Societies of Clinical Chemistry, Hematology, Microbiology and the Association of Biochemists of Paraguay | February 2020 | Regulation of the certification and recertification of biochemical specialists. |
| Meeting at the Public Health Commission of the Honorable Chamber of Deputies with representatives of said commission and the Association of Biochemists of Paraguay | 10-08- 2020 | Draft Law that regulates the Profession of Biologist. |
| Meeting at the Ministry of Public Health and Social Welfare with Vice ministers and representatives of the Biochemical guild | 08-14-2020 | Draft Law that regulates the Profession of Biologist. Professions Catalog |
| Virtual meeting with representatives of the Ministry of Health, the National Agency for the Evaluation and Accreditation of Higher Education, the National Council of Higher Education, the Faculty of Chemical Sciences, the Faculty of Exact and Natural Sciences and the Association of Biochemists of Paraguay | 25-08-2020 | Bill that regulates the Profession of the Biologist. |
| Participation in Public Hearing called by the Science and Technology Commission of the Honorable Chamber of Deputies | 03-09-2020 | Bill that regulates the Profession of the Biologist with the approval of the Senate of the Nation. |
| Meeting at the Ministry of Public Health and Social Welfare with representatives of the General Director of Legal Advice of the Ministry of Public Health, Social Welfare and the Association of Biochemists of Paraguay | 12-14-2020 | In the framework of the celebration of the Biochemist's Day, the draft decree was presented which will regulate Law No. 5986/17 on the Biochemist. |

EDUCATION

- First Pre-Congress Webinar of the IX NATIONAL CONGRESS OF CLINICAL BIOCHEMISTRY and I PARAGUAYAN CONGRESS OF BIOCHEMISTRY AND LABORATORY SCIENCES within the framework of the ALAM 2021 Congress (Via Zoom), on 09-17-2020, Speakers: Dr. Cristóbal Avivar (Spain), Dr. Hernán Fares Taie (Argentina), Dr. Luis García de Guadiana (Spain). Coordinator: Prof. Dr. Montserrat Blanes.



- Third Pre-Congress Webinar - Endocrinology of the IX NATIONAL CONGRESS OF CLINICAL BIOCHEMISTRY and I PARAGUAYAN CONGRESS OF BIOCHEMISTRY AND LABORATORY SCIENCES within the framework of the ALAM Congress 2021 (Via Zoom), on: 10-22-2020, Speakers: Dra. Fanny Corrales Ríos (Paraguay), Dr. Sandra Filippini (Argentina), Dr. María Eugenia Bianchi (Argentina), Dr. Cecilia Fenili (Argentina). Coordinator: Prof. Dr. Montserrat Blanes
- Call for COLABIOCLI / ABP Scholarships 2020: Scholarship awarded to Biochemist Fátima Rodríguez Acosta.
- Call for Virtual Diploma Scholarships for ANALYTICAL QUALITY CONTROL IN CLINICAL LABORATORY, 03-13-2020: Scholarship awarded to Biochemist Candy Santacruz.
- Call for Virtual Diploma Scholarships for “CLINICAL BACTERIOLOGY AND SUSCEPTIBILITY TESTS ANTIMICROBIANA” 03-26-2020: Scholarship awarded to Biochemist Rolando Cáceres.
- Call for Scholarships “INTERNATIONAL DIPLOMA IN QUALITY MANAGEMENT ACCORDING TO ISO 15189”, 08-06-2020.
- Call for Scholarships “INTERNATIONAL DIPLOMA OF DIAGNOSTIC HEMATOLOGY”, 08-17-2020.
- Call for Scholarships “VIRTUAL DIPLOMA OF CLINICAL PATHOLOGY BY CLINICAL LABORATORY (3rd.Generation)”, 08-19-2020.
- Call for Scholarships “VIRTUAL DIPLOMA IN SELECT TOPICS OF DIAGNOSTIC HEMATOLOGY BY LABORATORY (ADVANCED LEVEL), 10-15-2020
- Participation in the XIII Uruguayan Congress of Clinical Biochemistry, October 15, 16 and 17/2020, President of ABP Dr. Mercedes Álvarez.
- Call for Scholarships “ONLINE COURSE OF MYCOSIS IN URINARY TRACT”, 12-5-2020
- Call for Scholarships “THEORETICAL COURSE OF MEDICAL MYCOLOGY”, 01-04-2021, scholarship awarded to Bioq. Carolina Duré.

REGIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Society's contribution for the meeting</i> |
|--|-------------|--|
| Virtual meeting with presidents of National Entities affiliated to COLABIOCLI (Via Zoom). | 06-12-2020 | Real time interaction of the presidents and members of the affiliated entities was achieved. |
| Virtual meeting with the presidents of National Entities affiliated to COLABIOCLI (Via Zoom). | 12-16-2020 | Stimulate youth leadership through scholarships and virtual courses. |
| <ul style="list-style-type: none"> • Organization of the IX National Congress of Clinical Biochemistry and 1st of Biochemistry in Clinical Laboratory Sciences within the framework of the XXV Latin American Congress of Microbiology ALAM to be held from August 27 to 30, 2021, Organizing Committee: President - Dr. José Pereira, Vice President - Dra. Raquel Cáceres, Finance Secretary Dr. Mercedes Álvarez, President of the IX National Congress of Biochemistry - Prof. Dr. Montserrat Blanes. • Participation in the 2020 Conversation Cycle of the Latin American Confederation of Clinical Biochemistry (COLABIOCLI) - Quality management in the clinical laboratory, its incorporation into the university curriculum. Lecturer: Prof. Dr. Juana Ortellado de Canese. • Participation in the Accreditation Management Working Group - Bioq. Hasmi Aramí Cristaldo Rodríguez and Bioq. Edgar Rodrigo Ayala Torres. • Participation in the Working Group on Bioethics - Dr. Marta Ascurra • Active participation of the national representative in the Colabiocli voting, Dr. Natalie Weiler | | |

INTERNATIONAL RELATIONS

- Participation in the election of positions of the Executive Bureau, January to April 2020 Prof. Dr. Montserrat Blanes.
- Participation in the organization of Euromedlab Munich 27 Nov to 2 Dec 2021, Prof. Dr. Montserrat Blanes.
- Participation in the meetings of the CCC Congress and Conference Committee, within the framework of the International IFCC Congress Seoul June 2020, to be held in June 2022 - Prof. Dr. Montserrat Blanes.



- Participation in the Symposium: External Quality Assessment, Alternative Assessment Procedures, and Critical Risk Values in Molecular Diagnostics: Findings of an International Survey by the IFCC C-MD. Session 2115 December 16, Topic: Alternate Assessment for Molecular Diagnostics: Pathway to Quality Assurance for LDTs and Rare Analytes - Prof. Graciela Russomando, MSc, PhD.
- Participation of the Scientific Publication: External Quality Assessment, Alternative Assessment Procedures, and Critical Risk Values in Molecular Diagnostics: Findings of an International Survey, 05-08-2020 - Prof. Graciela Russomando, MSc, PhD.
- IFCC Working Group on Global Newborn Screening, Dr. Marta Ascurra.
- Participation of the national representative in the IFCC voting, Dr. Natalie Weiler
- Participation in the elections by the Executive Bureau, January to April 2020 - Prof. Dra. Montserrat Blanes
- Participation at the WG IANT Ibero American Nomenclature and translation Member and Past Chair - Prof. Dr. Montserrat Blanes



SAUDI ARABIA SAUDI ASSOCIATION FOR CLINICAL CHEMISTRY

NATIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> |
|---|---------------------------------|
| 2 nd International Meeting in Clinical Chemistry & Laboratory Medicine & 6 th Annual Meeting Saudi Society for Clinical Chemistry, Saudi Arabia (virtual meeting) | 1-3 rd December 2020 |
| <p>Saudi Society for Clinical Chemistry held the 2nd International Meeting in Clinical Chemistry & Laboratory Medicine & 6th Annual meeting 1-3rd December 2020 virtually.</p> <p>The keynote speaker for the conference and the IFCC representative was Dr Graham Beastall from United Kingdom, Past President IFCC. The conference was accredited by Saudi Commission for Health Specialties for a total of 35 CME Hours, 19 hours for the program and 16 hours for the workshops with more than 1000 delegates attended the meeting.</p> <p>The Scientific Program included 9 sessions with more than 34 speakers mainly 10 KSA speakers, 7 Regional speakers (Oman & UAE), 10 International speakers (UK, USA, & Italy) and 7 speakers from industry workshops, and total 14 posters.</p> <p>This scientific program included sessions about Laboratory Management, Tumor Biomarkers, COVID-19, Accreditation and Quality Management, Point of Care Testing, General Clinical Chemistry, Toxicology, Education & Research in addition to Industry workshop and poster presentation session.</p> <p>Clinical laboratory companies including international and local representatives held a dedicated session within the conference. The sponsored companies were more than 10; Diamond (ROCHE, SNIBE DIAGNOSTIC, & SIEMENS HEALTHINEERS), Platinum (AL JEEL (Biorad), ABBOTT, & BECKMAN), Golden (BECTON DICKINSON), Silver (AnalyticaOne & TAMER), Bronze (ALREDWAN, ABDULLAH FOUAD, & AL BORG MEDICAL LABORATORIES). Conference partners; International Federation of Clinical Chemistry and Laboratory Medicine (IFCC), The Arab Federation of Clinical Biology (AFCB), American Society for Clinical Pathology (ASCP), Saudi Commission for Health Specialties (SCFHS), Saudi Society for Clinical Laboratory Sciences, Saudi Quality Council & Virtual Medical Academy.</p> <p>By the end of the meeting there was Poster Session Awards Announcement with 14 posters printed, and 4 prizes for the best 4 posters (photos attached below) with a total amount of 12,000 SR.</p> <p>Total activities held by the SSCC in 2020 are summarized in the following table:</p> | |

| | ACTIVITY | PLACE | TYPE | DATE |
|----|--|--------|--------------|-----------------|
| 1 | Journal Club Meeting | Riyadh | Journal Club | Feb 12, 2020 |
| 2 | Pediatric Laboratory Medicine | Riyadh | Seminar | Feb 20, 2020 |
| 3 | Selected Topics in Genetic Cancer – Alborg | Jeddah | workshop | Feb 22, 2020 |
| 4 | How does the laboratory services function in the COVID-19 outbreak | Online | webinar | April 19, 2020 |
| 5 | تياقوو ةعانم .. اوحصت اوموص | Online | Awareness | May 12, 2020 |
| 6 | COVID-19: Experience Sharing from South Korea and UK | Online | webinar | June 10, 2020 |
| 7 | COVID-19 Webinar on laboratory medicine | Online | webinar | June 16, 2020 |
| 8 | 1 st Saudi international conference for clinical laboratory sciences (partner) | Online | Virtual | Aug 27,29, 2020 |
| 9 | Familial hypercholesterolemia (FH) Awareness day webinar | Online | Awareness | Sep 24, 2020 |
| 10 | عجارتت لفتحص .. هبتنا | Online | Awareness | Oct 03, 2020 |
| 11 | Genomic Medicine and it's Application in Saudi health care system | | Awareness | Oct 21, 2020 |
| 12 | Laboratory Medicine & COVID-19 | Online | webinar | Oct 28, 2020 |
| 13 | prostate cancer awareness | Online | Awareness | Nov 03, 2020 |
| 14 | Critical Care Management of COVID-19 patients | Online | webinar | Nov 09, 2020 |
| 15 | COVID-19 Webinar on Inflammation Biomarkers | Online | webinar | Nov 16, 2020 |
| 16 | Interpretation of Procalcitonin at the Bedside & Clinical Utility of Procalcitonin in COVID-19 Patient | Online | webinar | Nov 23, 2020 |
| 17 | 2 nd International Meeting in clinical Chemistry and Laboratory Medicine 6 th Annual Conference Saudi Society for Clinical Chemistry + Workshop | Online | Virtual | Dec 1,2,3, 2020 |
| 18 | Comprehensive Workshops for laboratory results | Online | Virtual | Dec 07, 2020 |
| 19 | Journal Club Meeting | Online | Journal Club | Dec 21, 2020 |

EDUCATION

Many free educational webinars and workshops were held throughout 2020. They are shown in the table above. Most of them were focused on COVID-19 lab updates, prevention and precaution

REGIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Society's contribution for the meeting</i> |
|----------------------------|-------------------|--|
| MedLab Dubai | 3rd February 2020 | Speakers for Scientific Sessions Med Lab 2020, Dubai (Title: update of laboratory markers for early detection of diabetic nephropathy) in addition to booth presentation |

REGIONAL RELATIONS

1st March the SSCC joined the Arab Federation Clinical Biology (AFCB) and has become part of the one of the regional federation of the IFCC. This will support the society to share common goals for education of laboratory medicine with the AFCB.

INTERNATIONAL RELATIONS

Collaboration between the ASCP and SSCC has continued with two presentations which were given by two ASCP invited speakers; Dr Kamran Mirza, Associate Professor, Pathology Loyola University Chicago, Health Sciences Campus (ASCP-USA) & Dr. Roger Betholf, Professor (with Tenure), University of Florida Health Science Center, ASCP-USA

ADDITIONAL INFORMATION

Photos from different events throughout 2020:

The 6th Annual meeting for the SSCC held at 1st – 3rd December 2020:

DAY 1,
TUESDAY 1 DEC 2020

PLENARY LECTURE:
KEYNOTE IFCC LECTURE

SPEAKER:
DR. GRAHAM BEASTALL
IFCC PAST PRESIDENT GLASGOW,
UK

TOPIC:
The Future of Laboratory
Medicine in a Changing
World

TIME:
4:15 PM – 5:00 PM

www.sccc.med.sa

DAY 2,
WEDNESDAY 2 DEC 2020

SESSION 5:
POINT-OF-CARE TESTING

SPEAKER:
DR. ADIL KHAN
ASSOCIATE PROF. OF PATHOLOGY/DIRECTOR
OF POCT & CLINICAL CHEMISTRY, TEMPLE
UNIVERSITY HEALTH SYSTEM
LEWIS KATZ SCHOOL OF MEDICINE, TEMPLE
UNIVERSITY-PHILADELPHIA, USA

TOPIC:
Point-of-Care Testing and
the Covid-19 Pandemic

TIME:
6:40 PM – 7:05 PM

www.sccc.med.sa

Meeting

Video

Prof. Khalid Alharbi

Dr. Heba Kary

Dr. Manal Al Kindi

Dr. Laila Abdel-warith

6th Annual Meeting for the Saudi Society for Clinical Chemistry

20+ 100 CHAT

2nd International Meeting in Clinical Chemistry and Laboratory Medicine

IFCC

Tumor Biomarkers session: Prof. Khalid Alharbi (Moderator), Dr. Heba Kary (speaker), Dr. Manal Al Kindi (speaker), and Dr. Laila Abdel-warith (speaker).

SSCC Webinar: Critical Care Management of COVID-19 Patients:

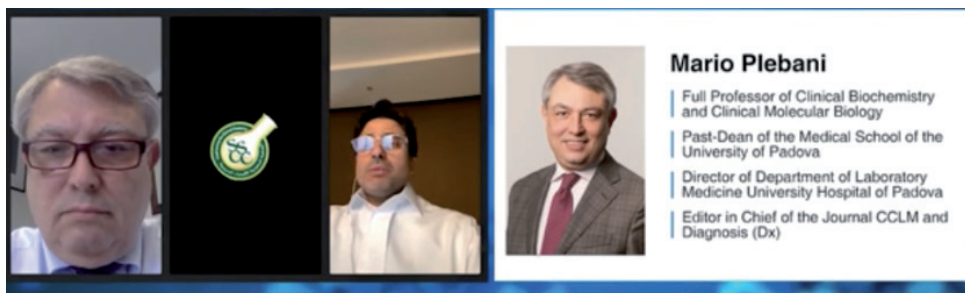
Dr. Pietro Caironi



Dr. Pietro Caironi, MD
Department of Anaesthesia and Critical Care
AOU San Luigi Gonzaga, University of Turin,
Italy

San Luigi Gonzaga

SSCC Webinar: COVID-19 Webinar on Laboratory Medicine:



COVID-19 Webinar on Laboratory Medicine covered by the SSCC: This photo was taken during the webinar. It shows Prof. Mario Plebani (speaker) and Dr. Ali Al Othaim (Moderator).



SERBIA SOCIETY OF MEDICAL BIOCHEMISTS OF SERBIA (DMBS)

NATIONAL MEETINGS

| Name of the meeting | Date | Topic |
|---|--|---|
| 22 nd Serbian Congress of Medical Biochemistry and Laboratory Medicine with international participation, and 16 th Belgrade Symposium for Balkan Region | September 23-25 th 2020 Due to COVID-19 Congress and Symposium moved to September 2021 | The new concept in quality management in medical laboratories, organization of external quality control in laboratory and pre-analytical and analytical errors management: Diagnostics and treatment by utilizing new generation of laboratory methods and innovations in personalized medicine; Novel trends in laboratory medicine and the risk assessment of metabolic and endocrine disorders; Accreditation in medical laboratories www.dmbj.org.rs |
| 23 rd Annual Ivan Berkeš Scientific Conference | November 28, 2020, Belgrade | In 2020, the year of the global pandemic the activities of the Society of Medical Biochemists of Serbia (SMBS) were suspended. and the annual scientific conference "Professor Ivan Berkeš" did not take place. However, the year 2020 was also the year of the 110 th anniversary of the birth of Professor Ivan Berkeš. On this occasion, SMBS published the monograph "Life and work of Professor Ivan Berkeš and Foundation laureates: where are they and what are they doing today" dedicated to professor Berkeš's life and work, and to the laureates of its annual award. The authors of the monograph are Professor Nada Majkić-Singh, the founder of the Foundation and its <i>spiritus movens</i> , and Snežana Jovičić, who, as the IFCC eNewsletter liaison member, was writing a series of articles covering the conference over the past years. However, the Foundation did not miss to hand the well-deserved awards to the best students of the Faculty of Pharmacy in 2020, Milena Simić (Master of Pharmacy-medical biochemist) and Milan Beljkaš (Master of Pharmacy). SMBS congratulate them on their first success, wishing them fruitful careers in pharmacy and medical biochemistry, like the ones their predecessors have. |

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

| <i>Name of the meeting</i> | <i>Date</i> | <i>Society's contribution for the meeting</i> |
|--|--|--|
| 28 th Meeting of Balkan Clinical Laboratory Federation, Sofia | Meeting is postponed to September 2021 | SMBS MEMBERS WILL PARTICIPATE WITH FOUR LECTURES and posters |



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 2020: 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 2020:

| | | | | |
|---|----------------------------|----------------------|--------|---------------------------------|
| 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;SCIndex <https://scindeks.ceon.rs/journaldetails.aspx?issn=1452-8258&lang=en>)



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 | ZOOM meeting, 11.11.2020 | Laboratory diagnostics in Pediatrics |

EDUCATION

Due to the Covid pandemic, all regular meetings and activities planned for 2020 have been canceled or postponed to the next year. We have launched a new issue of Laboratory Medicine, professional journal of Slovenian Association for Clinical Chemistry and Laboratory Medicine

REGIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Society's contribution for the meeting</i> |
|---|--|--|
| IFCC C-MHBLM «ARTIFICIAL INTELLIGENCE & CARDIAC BIOMARKERS TRENDS» | Webinar, 22 th September 2020 | Evgenija Homšak, was a speaker at the meeting |
| JIB | Virtual Conference 8-11 th December 2020 | Evgenija Homšak, as a Slovenian national representative was a lecturer at the conference (Round table on Covid Pandemic) |

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. Due to Covid Pandemic we were not able to organize these events. However, we have managed to rise the voice of Laboratory Medicine 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.



NATIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Topic</i> |
|--|--|---|
| XIV National Congress of Clinical Laboratory (LabClin). Virtual meeting. (Co-organizer) | November 8-14 th | |
| XVIII Meeting of Scientific Committees. | Posposed due to the pandemic situation. New data: 2-5 March 2021. Virtual meeting. | <ul style="list-style-type: none"> - An update on Urine sediment. - Patient Safety. - Quality specifications. EFLM Biological Variation Data Base. - Ovarian cancer. - Gonadal funtion. - Accreditation in genetics laboratories. |
| Interhospitalary Meeting with Residents and Young Scientists, | Posposed due to the pandemic situation. New data: April 16 th 2021. Virtual meeting. | <ul style="list-style-type: none"> - Pregnant women approach in a multidisciplinary team. Laboratory medicine Importance. |
| Course. | Posposed due to the pandemic situation. New data: May 2021. Virtual meeting. | <ul style="list-style-type: none"> - Analytical validation of the clinical laboratory measurement procedures |

EDUCATION

Annual Educational Program 2019-2020:

- XXIII General Educational Program 2019-2020 634 participants
- VI Clinical Cases in Haematology Program 2019-2020 427 participants
 - V Clinical Cases General Educational Program 2019-2020 419 participants
 - Clinical Cases in Neurochemistry. Program 2019-2020 286 participants
 - Implementation of the management requirements of the UNE-EN ISO15189: 2013 Standard: Case study. Program 2019-2020 309 participants

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 Phase.
- Biochemistry: General biochemistry tests in serum and urine, HIL indices, Commutable sera with reference values, Urinary sediment analysis, Hormones, TDM, Proteins, Blood gas-POCT, Cardiac markers, Tumor markers, Haemoglobin A1c, Drugs of abuse in urine, Trace elements, Autoimmunity and Allergy.
- Microbiology and Serology

SEQC^{ML} also participates in the European Project EurA1c.

Nowadays there are 720 centers participating in these programs with a total of 7450 inscriptions. We are accrediting our programs according to ISO 17043 and 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 320 tests and a glossary with more than 498 contents. Consulting LTOES website has registered an average of

377,430 consultations/ month.

SEQC^{ML} has a total of 2858 memberships, 374 members of 33 Commissions/ Committees/ Working Groups and 39 SEQCML Representatives in International Federations (IFCC/EFLM/ FESTEM/CLSI/ICSH).



SWITZERLAND SWISS SOCIETY FOR CLINICAL CHEMISTRY (SSCC)

NATIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Topic</i> |
|---|-------------|--------------|
| All meetings were canceled due to the SARS-Cov-2 pandemic | | |

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>). In 2020 most of these courses were held as podcasts or virtual courses.



TAIWAN - REPUBLIC OF CHINA (ROC) – TAIPEI CHINESE ASSOCIATION FOR CLINICAL BIOCHEMISTRY

NATIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Topic</i> |
|---|-----------------|--|
| Annual General Meeting (in conjunction with 2020 Annual Meeting of Taiwan Society of Laboratory Medicine) | 7 November 2020 | Progress on identifying novel biomarkers and therapeutic targets for immunotherapy |

REGIONAL RELATIONS

A contribution of national society report to APFCB News 2020 Issue 2 published in November 2020

ADDITIONAL INFORMATION

CACB held the annual General Meeting and scientific symposium jointly with 2020 Annual Meeting of Taiwan Society of Laboratory Medicine at National Taiwan University Hospital International Convention Center on 11/7-8 2020. The symposium discussed the role of laboratory medicine in immunotherapy. Three speakers presented the progress on identifying novel biomarkers and therapeutic targets for immunotherapy. Dr. Mi-Hua Tao, Research Fellow of Academia Sinica, gave a keynote lecture on “Current status of cancer immunotherapies and future aspects”. Dr. Shuen-lu Hung, Professor of Cancer Vaccine & Immune Cell Therapy Core Lab, at Chang Gung Memorial Hospital, presented “Precision immune cell therapy for cancers: targeting neoantigens”. Dr. Huang-Yu Yang, Associate Professor of Nephrology, Chang Gung Memorial Hospital shared his findings on “MiRNAs as biomarkers and clinical therapeutic targets”.



CACB president, Board members and the invited speakers Drs. Mi-Hua Tao, Shuen-lu Hung, Huang-Yu Yang at the annual General Meeting and scientific symposium.



ACB president Ms. Hsiao-Chen Ning gave opening remarks at the annual General Meeting.

Planning of 2021 events:

CACB held its Executive Board meeting on September 14th, 2020 and planned for the upcoming annual General Meeting and scientific symposium. Due to COVID19 pandemic, the 35th Joint Annual Conference of Biomedical Science (JACBS) was postponed to 2021.



CACB president Ms. Hsiao-Chen Ning (center in the front) and Board members at the Executive Board meeting on September 14th, 2020.

CACB is also planning for its 2021 annual meeting in conjunction with the 35th JACBS, which has been rescheduled to March 27-28, 2021. CACB will hold a symposium on “Toward Next Generation Clinical Diagnostics and Therapeutics”. CACB invited Dr. Wen-Chien Chou to give a keynote lecture on “Precision Medicine: from blood cancers” and Drs. Wen-Hui Ku, Sui-Yuan Chang and Kuan-Ying Arthur Huang will also share their recent findings at the symposium.



TURKEY TURKISH BIOCHEMICAL SOCIETY (TBS)

NATIONAL MEETINGS

| Name of the meeting | Date | Topic |
|--|-------------------------|--|
| IFCC and EFLM Committees // Working Groups' Meeting | 09/02/2020 | Notification of The Association by IFCC Working Group Representatives |
| Turkish Journal of Biochemistry Editors' Meeting | 10/02/2020 | The ways for improvement of Turk J Biochem was discussed |
| 5 th Turkey In Vitro Diagnostic (IVD) Symposium_ Izmir Branch of TBS | 19/02/2020 - 21/02/2020 | Health Biotechnology “Red Biotechnology”; The Use of Biotechnology in the Medical and Pharmaceutical Industry |
| TBS Academy Webinar: Biosafety Precautions for Medical Biochemistry Laboratory Workers in Covid 19 Pandemic: Example of Antalya Training and Research Hospital | 24/04/2020 | Biosafety Precautions For Laboratory Workers In Clinical Laboratories Güzin AYKAL |
| TBS Academy Webinar: EQ Approach in COVID-19 PCR tests and EQA Program produced entirely in Turkey | 19/05/2020 | EQ Approach in Covid 19 PCR tests: Doğan YÜCEL • Khosrow ADELI • Selda ERENŞOY • Faruk AYDIN • Orhan ÇÖMLEK • Ümit ZEYBEK • Erdal ATAÇ • Mustafa KOLUKIRIK • Berna ASLAN • Müjdat AYTEKİN |
| TBS Academy Symposium: Covid-19: Clinic and Laboratory | 27/06/2020 | Laboratory and clinical integration • Arzu SAYINER • Serhat ÜNAL |



| | | |
|--|-------------------------|---|
| TBS Webinar: About the Additional Payment KLIMUD-TBD Joint Meeting: Importance of Medical Laboratories and Additional Payment Regulation | 20/07/2020 | Additional Payment Regulation • Cihan COŞKUN • Yüce AYHAN • İbrahim KARAKUŞ • Semra DEMİR |
| TBS Academy Webinar: COVID-19 - Clinic And Laboratory: Current Situation And Near Future | 21/09/2020 | Clinic and Laboratory • Güzin AYKAL • Mehmet ŞENEŞ • Çiğdem SÖNMEZ • Doğan YÜCEL • Murat AKOVA |
| TBS Academy Webinar: Scientists of the Republic // Information Technology and Medical Laboratory | 29/10/2020 | Information Technology and Medical Laboratory SESSION 1: A Scientist in Gallipoli Peninsula • Miral DIZDAROĞLU SESSION 2: What is Artificial Intelligence and What is Not? • Ebru Akçapınar SEZER Laboratory Medicine in the Age of Artificial Intelligence and the Future • Hikmet Can ÇUBUKÇU Information Technologies that Facilitate Clinical Laboratory Processes: Approval Support Systems and Other Middleware Applications • Deniz İlhan TOPCU |
| 31 st National Biochemistry Congress: Virtual Congress | 18/12/2020 – 20/12/2020 | Session Titles: Omics, Immunology, Cancer, Covid 19 and Laboratory Tests, Nutrition and Laboratory. Key notes: Scientific Roadmap To Enlighten The Brain; Genetic Engeneering in Immunology and Cancer; Drug Design in Cancer Therapy Based On DNA Repair; Individual Reference Ranges; Ministry of Health E-Health Applications Satellite Symposia by Industry: Which Vaccine (APLUS/Berko Drug); SARS-CoV-2 Laboratory Tests and Contribution to Pandemic Management (Abbott Diagnostics); COVID-19 Diagnostic Solutions and the Importance of POC Antigen Tests (BD Diagnostics); Coagulation Laboratory Management in Covid 19 Process (ROCHE Diagnostics) Social Activities: • "Non-Route Travel Stories"; "Fake News" – Rotasız Seyyah Mehmet Genç • Fake News and Scientific Posttruth – Yalın Alpay "Oral Presentations" Sessions Nazmi Özer Award Ceremony |

EDUCATION

Laboratory Mathematics Course -2 - Measurement Uncertainty, Current Approaches in External Quality Control Evaluation, Six Sigma 29/01/2020

- Abdurrahman Coskun

TBD Academy - Distance Education Event -COVID-19 And Clinical Laboratory: Evidence-Based

Approach To Unanswered Questions About COVID-19 06/06/2020

- A.Muhittin Serdar

TBD Academy Distance Education Event - COVID-19 Pandemic Process and Diagnostic Tests Methodology 20/06/2020

- Ebru Saatçi
- Gökhan Metan

INTERNATIONAL RELATIONS

International Meetings:

June 29, 2020: Meeting of Committee On Bone Metabolism

- Prof. Dr. Aylin Sepici Dinçel, Board Member of TBS

July 17, 2020: EFLM General Assembly

- Prof. Dr. Abdurrahman Coşkun, Board Member of TBS

October 15, 2020: Meeting of WASPALM

- Prof. Dr. Ali Unlu, Board Member of TBS

October 16, 2020: FEBS General Assembly

- Prof. Dr. Ali Unlu, Board Member of TBS

January 14, 2020:

- Prof. Dr. Sedef Yenice, who has served as the chairman of the IFCC Clinical Laboratory Committee) (IFCC- C-CLM) since 2014, has been elected as a board member of the IFCC Education And Management Unit (IFCC-.EMD-EC) and VLP (Visiting Lecturer Program) chair.

2020:

- Dr. Hikmet Can Çubukçu, has been selected as a member of IFCC Task Force on Global eLearning / eAcademy (TF-GEL).

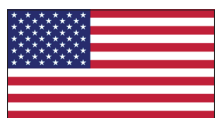
ADDITIONAL INFORMATION

- The World Health Organization's document "Laboratory biosafety guidance related to coronavirus disease 2019 (COVID19)" was translated into Turkish and published (March 2020) (<http://turkbiyokimyadernegi.org.tr/upload/48/COVID-19.Labguvenligi.pdf>).
- A list of biosafety measures for laboratory personnel was prepared by TBS Working Group on Safety Against COVID-19 and shared with laboratory personnel in Turkey (<http://turkbiyokimyadernegi.org.tr/upload/48/TBD.COVID-19.guvenlik.pdf>).
- A biosafety guideline against COVID-19 for laboratory professionals was prepared and shared with laboratory personnel throughout Turkey (<http://turkbiyokimyadernegi.org.tr/upload/48/COVID-19.Labguvenligi.pdf>).
- Furthermore, an Information Technology Working Group and a Body Fluid Analysis Working Group were established under the TBS Academy roof, in addition to other working groups.
- Scientific support was provided to the studies of Ministry Of Health And Social Security Institution.
- Scientific support was provided for the studies of The Turkish Medical Association (TMA) and TMA- Coordination Committee Of Medical Specialty Societies.
- TBS attended to The Medical Specialty Education Congress organised by Turkish Chamber of Physicians (11-12/12/2020).

Three guidelines were prepared by TBS Working Group on Preanalytical Phase of Coagulation Assays, Blood Gas Analysis and Complete Blood Count.

TBS has performed the External Quality Control Program, which is produced in Turkey, for one year.

A book has been prepared on COVID-19 and laboratory medicine and published under the publisher Türkiye Klinikleri.



USA AMERICAN ASSOCIATION FOR CLINICAL CHEMISTRY (AACC)



NATIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Topic</i> |
|---|------------------------|--|
| AACC International CPOCT Online – Live virtual meeting | October 2, 2020 | Point-of-care testing technologies, management strategies, and impact of laboratory machine learning and artificial intelligence |
| Fully virtual 2020 AACC Annual Scientific Meeting and Clinical Lab Expo | December 13 – 17, 2020 | Multiple topics throughout laboratory medicine |
| Fully virtual 18 th Annual Point-of-Care Coordinators Forum | December 17, 2020 | Topics of interest for point-of-care testing coordinators |

EDUCATION

WEBINARS

- SARS CoV-2: Rising to the testing challenge in the United States | Apr 29, 2020
- The Role of Laboratory Diagnostics in SARS-CoV-2 Infection and Related Comorbidities: Experiences and Population Management Strategies from Highly Affected Regions of China and Italy | May 06, 2020
- Clinical Application of High-Sensitivity Cardiac Troponin Testing in the Emergency Setting | May 14, 2020
- Curbing the opioid crisis: The role of the clinical laboratory for pain management | May 20, 2020
- Cytokine Storm Syndrome and COVID-19 | May 27, 2020
- The Role of Procalcitonin and Other Biomarkers in the Diagnosis and Management of Infectious Disease | Jun 11, 2020
- Laboratory & Clinical Perspectives: Understanding Findings of Sex-Specific 99th Percentile URLs for High Sensitivity Cardiac Troponin Assays Derived From Universal Sample Bank | Jun 17, 2020
- Analytics in the Clinical Laboratory with R: An Expert Panel | Aug 20, 2020
- Current State of COVID-19 Point-of-Care Testing: Blood Gases, Biomarkers, and Future Directions | Sep 23, 2020
- Utilizing Procalcitonin For Antibiotic Stewardship: Lessons Learned | Nov 10, 2020
- SARS-CoV-2 Testing: Selecting the Right Test for the Right Person | Nov 12, 2020
- SARS-CoV-2 Testing: Where We are Today | Nov 17, 2020
- Putting SARS-CoV-2 Testing into Practice: Overcoming the Day-to-Day Challenges of Laboratorians and Infectious Disease Clinicians | Nov 18, 2020
- On the Horizon of SARS-CoV-2 Testing: Improving Testing, Technologies, and Collaborations Across the Healthcare Team | Nov 23, 2020
- SARS-CoV-2 2021: A Panel Discussion on Impact of SARS-CoV-2 and Near-Future Considerations | Nov 24, 2020
- The Need for Speed: Strategies to assess the right QC for SARS-CoV-2 and Infectious Diseases Assays | Dec 03, 2020
- SPANISH-LANGUAGE WEBINAR: Intervalos de Referencia: Conceptos, interpretación y protocolos de verificación recomendados por CLSI EP28-A3c (Reference Intervals:

CERTIFICATE PROGRAMS

Laboratory Management Programs

- Practical Approaches to Quality Control in the Clinical Laboratory
- Clinical Laboratory Leadership and Management
- Basic Principles and Architecture of Laboratory Information Systems
- Statistical Methods for Clinical Laboratorians
- Laboratory Operational Management
- Regulatory Affairs for Laboratory Compliance

Laboratory Technology Programs

- Basic Concepts and Clinical Applications of Flow Cytometry
- Introductory Liquid Chromatography Mass Spectrometry for the Clinical Laboratory
- LC-MS/MS Troubleshooting for the Clinical Laboratory

Laboratory Testing Programs

- Fundamentals of Molecular Pathology
- Point-of-Care Specialist
- Principles of Clinical Toxicology

ONLINE COURSES

- AACC International CPOCT Online
- Quality Management Systems: A Course on Cultivating Quality and Addressing Common Challenges in the Laboratory

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 and federations 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> |
|---|-------------------------|--|
| 24 th VACB National Scientific Meeting i | 27-28/11/2020, Dong Hoi | Cardiology, Tumor markers, QA&QC, Diabetes, Molecular Biology, Immunology, Coronar Virus, Laboratory Management, Endocrinology |

EDUCATION

1. "Laboratory analysis in the Diagnosis and Therapeutic monitoring of Coronar virus Pneumonia" online course (8/2020)
2. "Laboratory management in the Quality Assurance and Quality Control in the Provinces" online course (9/2020)
3. "Improvement of the analysis for the diagnosis of Thyroid diseases" online course (10/2020)

REGIONAL RELATIONS

Good relations with the APFCB

INTERNATIONAL RELATIONS

Good relations with the IFCC

ADDITIONAL INFORMATION

Preparation for the National Congress of VACB in 2021



AFFILIATE MEMBER SOCIETIES



PHILIPPINES

PHILIPPINE COUNCIL FOR QUALITY ASSURANCE IN CLINICAL LABORATORIES (PCQACL)

NATIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Topic</i> |
|---|-------------------------|---|
| Virtual 17 th PCQACL Annual Convention | September 22 - 24, 2020 | "Growing Laboratory Quality in the Midst of Pandemic" |

The Philippine Council for Quality Assurance in Clinical Laboratories (PCQACL) has conducted its very first Virtual 17th Annual Convention with the team "**Growing Laboratory Quality in the Midst of Pandemic**" held last Sept 22-24, 2020 through an online platform of Docquity App. This event was well attended and participated by more than 2,000 delegates from the different clinical laboratories and medical institutions nationwide. An array of scientific lectures and panel discussions by renowned and distinguished Speakers are all very informative, timely, and relevant to this time of pandemic. They have really satisfied the gain in knowledge, learning and updates of our convention participants.

The 3- day virtual convention started on Sept. 22, 2020 with the Opening Ceremonies, followed by the pre-recorded scientific sessions covering the track on Human Resources Management with the following presented lecture and panel discussion topics:

- 1) The role of RITM in Test Validation and Research for COVID19
- 2) Panel Discussion 1: Current Issues in SARS-COV-2 Testing & Strategies to increase Surveillance Testing Volume
- 3) Safeguarding Mental Health for Laboratory Professionals, and
- 4) Manpower Management in the Time of COVID- 19 pandemic.

The second day of the convention on Sept. 23, 2020 was loaded with the following lecture and panel discussion topics covering the track on Quality:

- 1) Maintaining Quality in Adversity: ISO Perspective,
- 2) Panel Discussion 2: Laboratory Verification of COVID19 Tests: Philippine General Hospital Experience
- 3) Panel Discussion 3: Process Improvement for the Post-analytic Phase of Testing: Keeping up with the Demand of the Times.

Onward to the third day on Sept. 24, 2020 was the track on Molecular Diagnostics and Updates with the following lecture and panel discussion topics:

- 1) Panel Discussion 4: Strategies for "Mass Testing": Concept of RT-PCR pooling,
- 2) Antibody and Antigen Tests for SARS- COV-2: Facts versus Flaws, and
- 3) Troubleshooting RT-PCR testing for SARS-COV-2.

This last day of the convention was highlighted with the culminating activities of the 3-day convention and the Closing Ceremonies.

The PCQACL Continuing Education, Training & Research (CETR) Committee has successfully conducted such a virtual convention and made it possible via Docquity App online platform



through the technical assistance of our IT Provider (Progressive Productivity Solutions) on the technical issues, queries and concerns of the participants with the guidance and supervision of the PCQACL Committee on Information, Communication & Technology System (ICTS).

EDUCATION

The PCQACL Committee on Continuing Education, Training & Research has conducted the following Webinars last year 2020 :

Title: Webinar on Laboratory Empowerment Against Covid-19 (L.E.A.D)

Date: July 3-21, 2020

Lecture Topics:

- A. All about PCR Laboratory
 - 1. Points to consider in setting up Molecular Laboratory for Covid-19
Speaker: Dr. Gregorio B. Cortez, III
 - 2. Good Laboratory Practices when performing Molecular Assays
Speaker: Dr. Karina Michaela Tacujan
- B. Histopath and Blood Bank
 - 1. Biorisk Management in the Anatomic Pathology Laboratory amidst Covid-19
Speaker: Dr. Justine Alessandra Uy
 - 2. Laboratory Preparation for Convalescent Plasma Therapy
Speaker: Dr. Joaquin Antonio S. Patag

Title: Webinar on Addressing Current Global Challenges in Healthcare in collaboration with Sysmex Philippines, Inc.

Date: July 22, 2020

Lecture Topics:

- 1. Clinical Laboratory Challenges and Needs in the New Normal
Speaker: Dr. Jeffrey So
- 2. Building the Capabilities to drive integrative molecular diagnostics in the laboratory
Speaker: Dr. Jasper Andal

Title: Live Webinar on Specimen Packaging, Transport and Shipment in collaboration with

Docquity App

Date: September 2, 2020

Speaker: Ms. Mary Glazel Biocarles, RMT

Title: Webinar on Beyond Routines QC Metrics in collaboration with Sysmex Philippines, Inc.

Date: September 17, 2020

REGIONAL MEETINGS

| <i>Name of the meeting / Venue</i> | <i>Date</i> | <i>Society's contribution for the meeting</i> |
|--|-------------------|--|
| Amidst the challenging times of the COVID- 19 pandemic with the national and international travel restrictions for safety reasons, some of the members of the PCQACL Board of Trustees were still able to attend the following webinars conducted by the IFCC: | | |
| 1.) Advancing Internal and External Quality Assurance on a Global Scale | October 20, 2020 | Dr. Aileen Riego- Javier and Dr. Anacleta P. Valdez who are both PCQACL Board of Trustees have attended these two IFCC webinars. |
| 2.) Value and Impact of Laboratory Medicine in Patient Care: Developing the Evidence | November 25, 2020 | |

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)
Member of Clinical and Laboratory Standards Institute (CLSI)

INTERNATIONAL RELATIONS

PCQACL is an active member of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC)

The 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. However, it was so unfortunate that due to the COVID-19 pandemic, the IFCC Visiting Lecturer Program has been temporarily suspended. Hence, PCQACL was not able to invite the VLP Speakers.

PCQACL was a Member of Clinical and Laboratory Standards Institute (CLSI) which has given PCQACL the authority to be the distributor of their books and other documents in the Philippines, procuring of such in bulk and distributing them to facilitate their adoption and implementation by the clinical laboratories.

ADDITIONAL INFORMATION



PCQACL Officers and Board of Trustees, Standing Committees and Chairpersons for C.Y. 2020

Officers

| | |
|---------------------------|---|
| President: | Emil Bryan M. Garcia, MD, FPSP |
| Vice-President: | Sarah Jane L. Datay-Lim, MD, FPSP |
| Secretary: | Estela Marie C. Tanchoco, MD, FPSP, MBA |
| Treasurer: | Hasmin D.C. Miroy, RMT |
| Auditor: | Erlinda C. Pijuan, RMT |
| P.R.O.: | Anaclea P. Vadez, MD, FPSP |
| Assistant Secretary: | Laurie Anne M. Reyes, RMT |
| Assistant Treasurer: | Gerrick Joseph C. Dolor, RMT |
| Immediate Past President: | Godwin N. Hernaez, MD, MDM, FPSP, CESE |
| Founding President: | Tomas P. Maramba, Jr., MD, FPSP |

Trustees

Aileen Riego - Javier, MD, FPSP

Edna May Lasap-Go, MD, FPSP
 Januario D. Veloso, MD, FPSP
 Rodelio D. Lim, MD, FPSP
 Giselle Gay Bermejo, RMT

Standing Committees and Chairpersons

Committee on Membership: Estela Marie C. Tanchoco, MD, FPSP, MBA
 Committee on Continuing Education, Training & Research: Marissa A. Orillaza, MD, MSCE, FPSP
 Committee on Advocacy & International Relations: Elizabeth Y. Arcellana-Nuqui, MD, FPSP
 Committee on Information, Communication & Technology Systems: Gerrick Joseph C. Dolor, RMT
 Committee on Finance: Hasmin D.C. Miroy, RMT
 Committee on Publications & Public Relations: Anacleta P. Valdez, MD, FPSP
 Committee on Annual Convention: Paulo Enrico P. Belen, MD, DPSP
 Committee on By- Laws & Legislation: Atty. Shangrila Quezon
 Committee on Nominations & Elections: Aileen Riego-Javier, MD, FPSP
 Committee on Awards: Edna May Lasap-Go, MD, FPSP



ROMANIA

ORDER OF THE BIOCHEMISTS, BIOLOGISTS, CHEMISTS IN ROMANIAN HEALTH SYSTEM (OBBCSSR)

NATIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Topic</i> |
|--|--------------------|---|
| Annual OBBCSSR National General Assembly | September 19, 2020 | Election of national leading Bodies (National Council, National Executive Bureau) |
| Annual OBBCSSR Scientific Conference | November 7, 2020 | Cancelled due to CoVID-19 pandemic |
| First National Conference on Medical Laboratory Management | May 16, 2020 | Cancelled due to CoVID-19 pandemic – to be rescheduled in 2021 |

EDUCATION

In the context of COVID-19 pandemic OBBCSSR published online on the official website. during April - May 2020, 4 Guides for medical laboratory professionals:

- Practical, indicative Guide to laboratory testing for the new Coronavirus
- COVID-19 : False Negative – False Positive Result
- 15 Medical Analysis important in COVID-19
- Quality Management of Laboratory Diagnosis in COVID-19.

OBCCSR Guide no.3 was cited in the IFCC Information Guide on COVID-19 (Chapter1.General Information, Global Practice Guidelines/Handbooks), available at https://www.ifcc.org/media/478459/obbcssr-guide_no3_english-edition.pdf

REGIONAL MEETINGS

| <i>Name of the meeting</i> | <i>Date</i> | <i>Society's contribution for the meeting</i> |
|--|-------------|--|
| Joint XXVII BCLF/XIII BSCL Meeting, Sofia, Bulgaria, September 30 to October 3, 2020 | | Cancelled due to CoVID-19 Pandemic – to be rescheduled in 2021 |

REGIONAL RELATIONS

Participation as a guest at the annual meeting of the BCLF Board in October 2019, when OBBCSSR has applied BCLF Affiliate membership. Due to the COVID-19 pandemic, the annual BCLF Board meeting which had to be held in 2020 was rescheduled.

INTERNATIONAL RELATIONS

Since 2020 OBBCSSR is an IFCC and EFLM Affiliate Member. Many OBBCSSR members participated in the scientific events organized online by IFCC and EFLM during last year.

Participation as a guest at the annual meeting of the BCLF Board in October 2019, when OBBCSSR has applied BCLF Affiliate membership. Due to the COVID-19 pandemic, the annual BCLF Board meeting which had to be held in 2020 was rescheduled.

ADDITIONAL INFORMATION

During January – March 2020 scientific conferences CPD credited were organized in the OBBCSSR territorial branches in Romania, where there are University medical centers (Bucharest, Timisoara, Craiova, Brasov). In 2021 these next scientific events will be rescheduled depending on the COVID pandemic evolution





IFCC OFFICE

Via Carlo Farini 81
20159 Milan – ITALY
Tel: +39 02 66809912
e-mail: ifcc@ifcc.org
www.ifcc.org