

FOREWORD

Dr Harjit Pal Bhattoa, Editor

This current issue of the EFLM New Corner summarizes the pleasant experiences of two EFLM bursary recipients, Steven De Keukeleire and Helin Tuukka, at the 4th Joint EFLM-UEMS Congress “Laboratory Medicine at the Clinical Interface” held in Warsaw, Poland.

MariaStella Graziani, Chair of the EFLM Communication Committee presents an update to the list of 2016 EFLM publications. The EFLM Education and Training Committee present’s a short summary of their activities. Daniel Rajdl, Chair of the EFLM WG Distance Education and e-Learning, introduces the upcoming webinars.

4th Joint EFLM-UEMS Congress “Laboratory Medicine at the Clinical Interface”: Reports from Bursary Recipients

Helin Tuukka, EFLM Bursary Recipient

First, I would like to express my sincere gratitude to the EFLM, giving me the opportunity to attend this congress.

Generally, the congress was well organized with a wide variety of topics. The magnificent opening lecture by Prof. Dennis Lo, deserves a special mention as well as the lively debate on vitamin D measurement (Pro: Roger Bouillon, Contra, Ian Young) and the practical and important EFLM-EAS consensus recommendation on non-fasting dyslipidemia testing, illustrated by Michel Langlois.

I presented two posters at the congress and received positive feedback. I had the honor to present one of them as part of a poster walk session.

Since my research field is coagulation, I was interested in the debate on

monitoring direct oral anticoagulants (DOAC), with Prof. Lotta Joutsu-Korhonen from Finland taking the pro-stance and Prof. Grzegorz Grześk from Poland taking the contra-stance.

Dr Joutsu-Korhonen started her presentation by comparing the DOAC with warfarin. The INR is used for warfarin regular monitoring due to the narrow therapeutic range. With the direct oral anticoagulants too, while routine coagulation monitoring is currently not recommended, there are a number of clinical situations where the monitoring is mandatory. In case of complications with DOAC treatment, which are numerous (treatment failure, trauma, emergency procedure, bleeding or overdose), it is critical to know the DOAC level. Coagulation screening tests PT and APTT are not suitable, but thrombin time and anti-Xa assays

should be used. Finally, there is a consensus that blood count, liver and renal function should always be monitored.

Prof. Grześk started his presentation on INR: since warfarin has a narrow therapeutic range and the monitoring is mandatory, we think that also DOAC need monitoring. However, the differences are numerous; the proper dose is usually prescribed without any laboratory tests and indeed, there is no recommendation regarding routine monitoring. When patients are asked what they expect to ensure safety, the most frequent response is presence of an antidote – i.e. they do not feel safe because of laboratory monitoring of drug effect. Furthermore, in the routine practice very few requests about DOAC are observed; in prof Grześk laboratory, in the year 2016 only two requests for dabigatran concentration have been received.

At the end of the debate, the chair suggested a consensus: patients should be always monitored to assess liver and renal function, with coagulation monitoring in selected cases, not routinely. Both speakers agreed on this. I’m quite partial in my assessment, since Lotta Joutsu-Korhonen is my supervisor, but I think that there are many arguments in favor of DOAC monitoring and that her thesis emerged as winner in this debate.

Steven De Keukeleire, EFLM Bursary Recipient

The 4th joint EFLM-UEMS Congress was held from the 21nd to 24nd of September 2016 in Warsaw, Poland. The conference was organized under the IFCC auspices, the honorary patronage of the Mayor of Warsaw, the Medical University of Warsaw and Collegium Medicum of the Nicolaus Copernicus University. The congress was attended by more than 450 scientists and physicians. The programme covered a large range of clinically important emerging topics in laboratory medicine focusing on the Clinical Interface between the laboratory and clinical practice. Hot topics about cardiovascular disease, diabetic kidney disease, therapeutic drug monitoring, pediatric laboratory medicine, auto immunology, biomarkers and molecular diagnostics were discussed.

One session was dedicated to “Trends in pediatric laboratory medicine” and included presentations about pediatric obesity, newborn screening,

pediatric reference intervals related to therapeutic drug monitoring (TDM) of antibiotics.

Childhood obesity is a worldwide problem that is difficult to manage. It often results in diabetes. There is a need for adequate laboratory assessment by measuring cholesterol (total cholesterol and LDL-levels), glucose (using Hb A1C concentrations), and liver parameters as well (transaminases). Growing evidence points to a role of the intestine in obesity.

Newborn screening (NBS) for lysosomal diseases (Fabry, Pompe, Gaucher, MPS type I) has gained interest due to the increasing number of therapeutic options. The analytical performances of the laboratory methods are essential to improve the clinical outcome. Despite the great improvement, concerns remain about the appropriateness of screening methods, the effectiveness of therapies and the overall costs involved.

To define pediatric reference intervals a great initiative was the CALIPER (Canadian Laboratory Initiative on Paediatric Reference Intervals) project resulting in a usable database with normal reference values for a wide range of biochemical markers between 0 and 18 years of age.

Another topic discussed was the antibiotic Meropenem usage in the neonatal population. There is a big need for adequate TDM in newborns. The biochemical stability of Meropenem in biological samples is crucial since the measurement is performed in specialised laboratories and there is the need for iced transportation and long term storage at -80°C.

The diversity of scientific topics, the excellent organization and social programme in Warsaw fully contributed to a successful 4th Joint EFLM-UEMS Congress. Young scientist were rewarded several grants by the EFLM to attend the congress. EFLM stimulates membership of young scientists offering a bursaries programme, and establishing educational projects in order to increase the interest in laboratory medicine throughout Europe.

Recognition of specialists in laboratory medicine remains an important issue. Individuals who practice with knowledge, skills and competence at an (inter)national level can make the difference. Based on this experience, joining the EFLM- community offers a multitude of possibilities.



4th EFLM-BD
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EFLM BURSARIES PROGRAMME

EFLM will promote a bursary programme for young scientists attending the EFLM-BD Conference 2017. The bursary will cover the cost of the travel, 2-night accommodation and a daily meal allowance for a maximum of Eur 750. In addition to this, the free conference registration will be granted. EFLM Bursary recipients will also receive a free on-line yearly subscription to the journal CCLM kindly offered by Walter de Gruyter.

Eligible candidates must come from an EFLM Member Society and meet the following criteria:

- » Young participants (≤35y at the date of the conference);
- » Having a poster abstract accepted as First Author

Applications must be submitted through the proper application form downloadable at <http://eflm.eu/index.php/EFLM-bursaries.html> and accompanied by the following documentation:

- 1) Copy of the ID or passport,
- 2) Document proving the membership to the EFLM National Society,
- 3) Notification of poster acceptance

Applications have to be sent to silvia.cattaneo@eflm.eu within **December 31, 2016**.

CONFERENCE AWARDS

The Conference Organizers are delighted to announce that two poster awards will be given during the conference: one by the decision of the Scientific Committee and the other voted by the audience. The award is the free registration for the next conference in 2019.

For more information about the conference: www.preanalytical-phase.org

EFLM Publications in 2016: An Update

by Maria Stella Graziani, Chair of the Communications Committee

Three more papers have been published by EFLM functional units since the last issue; please find below the list. The papers are freely downloadable at the dedicated page of the EFLM website (www.eflm.eu/index.php/eflm-publications.html)

Positions & Opinion Papers

- Barth JH, Misra S, Aakre KM, Langlois MR, Watine J, Twomey PJ et al. by the EFLM-UEMS joint WG on Guidelines. Why are clinical practice guidelines not followed? *Clin Chem Lab Med* 2016 DOI 10.1515/cclm-2015-0871

An interesting opinion paper that investigates the reasons why clinical practice guidelines are so poorly followed both by clinicians and by laboratory medicine. Few guidelines have

been written for laboratories and the ones that affect laboratories are inadequate: we need to change this culture and ensure that we are involved in both the arenas of diagnostic research and guideline writing.

Reviews & Surveys

- Cerioti F, Gligorovic Barhanovic N, Kostovska I, Karel Kotaska K, Perich Alsina MC, on behalf of the EFLM Working Group on Harmonisation of total testing process. Harmonisation of the laboratory testing process: need for a coordinated approach. *Clin Chem Lab Med* 2016 DOI 10.1515/cclm-2016-0244

A survey aimed to collect information on the harmonisation activities by the different national societies member of EFLM. The results of the survey indi-

cate that there are some harmonisation initiatives in place in Europe, but these initiatives are not coordinated. Considering that the analytical phase is already covered by specific projects, EFLM is focusing its harmonisation efforts on the pre- and post-analytical phases.

- Plebani M, O'Kane M, Vermeersch P, Cadamuro J, Oosterhuis W, Sciacovelli L on behalf of the EFLM Task Force on "Performance specifications for the extra-analytical phases" (TFG-PSEP). The use of extra-analytical phase quality indicators by clinical laboratories: the results of an international survey. *Clin Chem Lab Med* 2016 DOI 10.1515/cclm-2016-0770

The paper reports about the first initiative of the Task Force: a questionnaire administered to all National Soci-

eties of the Federation and other stakeholders aimed to understand the state-of-the-art on Quality Indicators (QIs). The data confirm the existence of the QI paradox as all responders were aware of the need to implement QIs and related performance criteria in their laboratories but the number and type of QIs monitored varied significantly. There is an important role for national societies and international federations to increase awareness in clinical laboratories and to encourage participation in initiatives to develop consensus on the QIs to be employed and the related performance criteria.

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News from the EFLM Education and Training Committee



At the head of the 4th Joint EFLM-UEMS Congress the members of the EFLM Education and Training Committee (C-ET) discussed different ongoing projects together with their Chair Ralf Lichthagen.

Recently the Task Finish Group Continuous Professional Development (TFG-CPD) started with Elizabeta Topic (chair) and additional 17 experts from the different EFLM member countries it work with. The main tasks of the group are on one hand the preparation of guidelines for the accreditation of CPD events and on the other hand the guidelines for certification of European Specialists in Laboratory Medicine. An action plan suggested from the chair was discussed, initial results are now expected at the end of this year. All members of the C-ET verified during the session that the generation of an EFLM CPD crediting system will be an important step especially for the whole group of non-medical laboratory specialists who often have no access to any kind of existing (e.g. national) crediting system.

The Working Group Congresses and Postgraduate Education (WG-CPE) presented under the chair Gustav Kovac different ongoing projects. Of main importance the group suggested the final development of an Educational and Training Exchange Program for laboratory professionals, which was exemplary initiated by the WG group member Evgenjia Homsak. The EFLM Executive Board just endorsed this project, the committee members emphasized that they await optimistically the project approval by the EFLM EB at the end of the year.

Daniel Rajdl, chair of the Working Group Distance Education (WG-DE), reported about his evaluation of the last webinars, which were successful events. Recordings of the sessions were, especially on YouTube, downloaded from interested persons all over the world. Actually the WG is looking forward the recording of selected sessions of the 4th EFLM-UEMS Congress to present it later for educational purposes.

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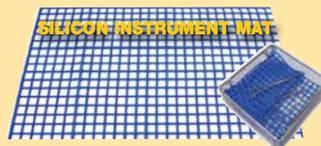
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Upcoming Webinars

Daniel Rajdl, Chair, EFLM WG Distance Education and e-Learning

Daniel Rajdl, Chair of the EFLM WG Distance Education and e-Learning reports about next webinars. EFLM is pleased to remind you that the attendance to the webinars is free of charge and that the recording of the lectures will be available later on at the EFLM web site for those unable to attend.

Biomarkers in Guiding Treatment of Heart Failure

Nov 17, 2016; 18:00 CET - Speaker: Alan S. Maisel; Moderator: Evgenija Homsak

About the speaker: Alan S. Maisel is Professor of Medicine at the University of California, San Diego (UCSD) and Director of the Coronary Care Unit and

Heart Failure Program at the VA San Diego Healthcare System in La Jolla, California. Prof Maisel is active on the faculty at UCSD where he won numerous teaching awards; he has just completed a ten-year stint as Associate Editor of the Journal of the American College Cardiology.

Prof Maisel is considered one of the globally recognized experts on cardiac biomarkers and has over 400 scientific publications. He has authored several ground-breaking manuscripts that have paved the way for development of diagnostic tools for patients with congestive heart failure. In particular, he was the leading investigator on studies that brought the use of BNP into clinical practice and was the lead investigator on seven multicentre biomarker trials.

Prof Maisel is actually working to delineate the clinical role of sST2 levels in clinical practice for guiding treatment.

Summary. Heart failure represents an important clinical problem and the accuracy of diagnosis by clinical means alone is often inadequate, especially in the early, asymptomatic stages of the disease. For these reasons, there is an increasing interest in the development of cardiovascular biomarkers useful for diagnosis, prognosis, follow-up of patients with heart failure and to possibly guide treatment as well. In this talk, three biomarkers will be examined: natriuretic peptides, high sensitivity troponins and sST2. Natriuretic peptides (NPs) (BNP and NTproBNP) are well recognized biomarkers for the diagnosis of heart failure and have been included in clinical guidelines. The limitations for their use include the wide variability of their concentration within subjects and the possible non-specific increase. Additionally, their clinical value is questionable in patients receiving Entresto (a drug that inhibits breakdown of NPs). High sensitivity troponins in the setting of acute heart failure (and maybe chronic) are a marker of subendocardial necrosis and may indicate a worse prognosis. It can be postulated that drugs like nitrates could be used in heart failure treatment more efficiently when levels of high sensitivity troponin are high. Finally, sST2 is a marker of fibrosis and is elevated in virtually all patients with heart failure. In the acute setting, it defines a subset of patients in need of advanced treatment to avoid re-hospitalization. In the chronic setting, titrating treatment to a sST2 level below 35 ng/ml appears to mitigate the risk, even if NPs are not decreasing. The data from "Entresto" clinical trial seem to suggest that sST2 levels are useful both to select patients eligible for the treatment with the drug and to dose it and for monitoring purposes as well.



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Save the Date. Next scheduled EFLM webinars:

Case report: Patient with shock and multiorgan failure

Dec 13, 2016; 18:00 CET

Speaker: Anna Merino

Reliable estimates of biological variation – the way forward

May 9, 2017; 18:00 CET

Speaker: Aasne Karine Aarsand