The conference will consider the impact that the on-going digitalization of technologies and a digitalized society will have on the medical laboratory in future health care. We contend that such changes enable Digital Health that will be disruptive for Laboratory Medicine as we know it, because they will change our capabilities to compile, integrate and visualize complex diagnostic data as well as providing the opportunity for radical changes to diagnostic health strategies.

With the digital revolution spreading into every realm of modern medicine, we will experience a democratisation of health care, i.e. a comprehensive data usage not just being in the hands of health care professionals, but also in the patients’. Indeed, a central concept of digital health medicine is patient empowerment as demonstrated by key words like “electronic health record”, “patient access”, “health apps”, “wearable health tech” etc. In this rapidly changing health care environment, Laboratory Medicine must redefine its positions, not only acting in its classical role as provider of laboratory results, but also adopting new roles and responsibilities in the clinical dialogue.
Dear Participants,
as mayor of the city of Mannheim, I am pleased to welcome you to our famous Rosengarten congress centre here in Mannheim for the 2nd Strategic Conference of the European Society of Clinical Chemistry and Laboratory Medicine.

As many of you may know, Mannheim has a long tradition in Clinical Chemistry, beginning as early as 1910, when the Institute of Clinical Chemistry was first established at the Mannheim Community Hospital, the largest hospital in South-West Germany at this time. It is the third oldest Institute in Germany, which includes the University Chair for Clinical Chemistry of Heidelberg University and is a centrepiece of our University Hospital Mannheim until today. From the earliest days, important diagnostic companies like Boehringer Mannheim – now part of Roche Diagnostics – have fruitfully interacted with Laboratory Medicine in Mannheim, and important scientific contributions have resulted from these collaborations.

Since 2006, Mannheim hosts the annual congress of the German Society for Clinical Chemistry and Laboratory Medicine every other year, a format which has been very successful in providing an anchor point for these diagnostic conferences in our city.

Mannheim is well-known for its long-standing European Spirit, even since the establishment of its city statutes more than 400 years ago. Over the centuries, our city has been a metropolitan centre of many cultural, social and technical innovations. Not only the bicycle was invented here 200 years ago; also the first automobile was developed in Mannheim by Carl Benz and was taken to its first long distance journey by his wife Bertha around the South-Western part of Germany. Werner von Siemens presented the first electrical elevator here in Mannheim, to mention just a few examples.

And just recently, by the way, the city administration of Mannheim has received the Felix Burda Award 2018 for its innovative occupational health management.

Today, Mannheim has more than 300,000 inhabitants and continues to be a place of many nationalities. Mannheim is the centre of the Rhine-Neckar Metropolitan Region (MRN), one of the largest economical areas in Germany. The National Digital Agenda of 2014, issued by the German Federal Government, has proclaimed Mannheim and Ludwigshafen the national digital hub for Chemistry and Medicine in 2017. Close to the Medical University Campus, the city council strongly supports innovation in Medical Technology, emerging from scientific discourse here in Mannheim.

Given this context, it seems only logical that this 2nd Strategic Conference is being held here, entitled “The End of Laboratory Medicine as we know it? Handling disruption of Laboratory Medicine in Digital Health”.

I like to close again with welcoming you all, wishing you a successful congress with inspiring discussions, and I hope you have a very pleasant stay in our city.

Felicitas Kubala, Mayor of the city of Mannheim

_________________________

Dear Participants of the 2nd EFLM Strategic Conference,
Laboratory Medicine is a relatively young medical discipline with a high impact in direct patient care. In the recent decades tremendous advances in analytical techniques were observed, for instance: reliable enzymatic measurements, the introduction of immunoassays, PCR methods including latest achievements such as liquid profiling, and spectroscopic technologies like mass and nuclear magnetic resonance, which allows insights into the metabolom. However, the role of laboratory medicine is changing in the word of digital health. It will be one of the very important tasks for research and development, to implement and use the new digital features in the wide field of laboratory medicine, involving the clinical colleagues, the laboratories, the industry and last but not least our patients, and in addition: healthy people. In future, especially the prevention of diseases will be one of our rising topics and the digitalization will help us to improve laboratory medicine within this context to increase the benefits in prevention and patient care.

I’m glad that so many highly qualified scientists will discuss such relevant questions at the 2nd EFLM Strategic Conference in Mannheim and I will be happy to share these results in further meetings.

I wish you a very successful meeting, fruitful discussions and relevant findings.

Matthias Nauck, President DGKL

_________________________

Dear Colleagues and Friends,
It is my great pleasure to welcome you at the 2nd Strategic Conference of the European Federation of Clinical Chemistry and Laboratory Medicine here in Mannheim, where the German Society DGKL are also holding the national conferences every other year since 2006. The strategic conference series of the EFLM aims to address and discuss what we believe are long-reaching goals and developments in our field of profession in both health care and research. Following our first successful conference in 2014 in Milan, our focus will be on digital health and the impact it will have on Laboratory Medicine in the foreseeable future.

Digitalization has been a revolutionizing movement in manufacturing at first - termed “Industry 4.0” - and has since then moved into many areas in society including medicine. As the central provider of diagnostic health care information, the medical laboratory can expect to be widely affected by the new developments in data sciences and their impact on data integration and communication.

The increase in the number of measuring devices, their operation by non-professionals together with the use of health apps will enormously increase data volumes. As a consequence, a preventive and personalized health care and medicine will incorporate not only the patient, but the healthy individual enabling powerful learning health care systems and a democratisation of medical data. Presumably, laboratories will communicate not only with doctors, but also with patients, requiring Laboratory Medicine to develop new skills for interpreting and communicating results, and these need to be designed into professional education and training programs. Digital Medicine provides for some exciting time and challenges for medical laboratories, and this can only be met by reassessing our classical tasks as well as adopting new ones.

As you may see, the program of the conference tries to provide a first approximation of the key topics. I wish you a pleasant stay here in Mannheim, fruitful discussions and want to encourage your feedback and input.

Michael Neumaier, President EFLM
Session 1 - h. 9.00 - 12.00
DISRUPTIVE TECHNOLOGIES IN LABORATORY ANALYTICS

09.00 Welcome addresses
09.15 Introductory lecture: History of disruptions in Laboratory Medicine: what have we learned from predictions?
Larry Kricka (US)
10.00 How to identify disruption early on? – examples from IVD industry. A joint presentation format of the IVD-Industry partners
Matthias Essenpreis (Roche), Michael Meyer (Siemens), Frank Diehl (Sysmex)
10.45 Coffee break
11.00 “Small” means “gone” – moving analytics away from the lab to a chip and beyond
Albert van den Berg (NL)
11.30 Analytical Examples for disruption - cell-free nucleic acids in body fluids
Klaus Pantel (DE)
12.00 Lunch

Session 2 - h. 13.00 - 15.45
DISRUPTION THROUGH BIOMEDICAL INFORMATICS TECHNOLOGIES

13.00 Introductory lecture: Paradigm changes for diagnostics: using Big Data for prediction
Josep Roca (SP)
13.45 Architectures of present and future information technologies
Werner Eberhardt (SAP)
14.15 Digital networks for laboratory data and their potential in clinical decision support (visualization)
Thomas Ganslandt (DE)
14.45 Diagnostics 4.0: the medical laboratory in Digital Health
Michael Neumaier (DE)
15.15 Coffee break

Session 3 - h. 15.45 - 18.00
INTEGRATING LABORATORY AND CLINICAL DATA – A GAME FOR THE LAB?

15.45 Introductory lecture: Recent advances
Jonathan Kay (UK)
16.30 EU Cross-border health initiative - legal and regulatory issues
Petra Wilson (Health Connect partners)
17.00 What is happening to laboratory medicine in Denmark
Per Jørgensen (DK)
17.30 Is there a classical role for the lab in Digital Health?
Ferruccio Ceriotti (IT)
18.00 Closing remarks
**Session 4 - h. 8.30-10.45**
**INTERPRETATION AND COMMUNICATION OF TEST RESULTS: THE STAKEHOLDER’S PERSPECTIVES**

08.30 Introductory lecture: How you communicate complex information to the patient? 
Holly Witteman (CN)

09.15 Adding clinical utility to the lab report – automation of interpretative comments
Wytze Oosterhuis (NL)

09.45 The view of a patient on understanding results
Patricia Wikie (patient)

10.15 The view of a general practitioner on free access for patients to their results
Richard Fitton (doctor)

10.45 Coffee break

**Session 5 - h. 11.15-13.30**
**PATIENT EMPOWERMENT AND THE LABORATORY**

11.15 Introductory lecture: What relationship should a Patient have with a Specialist in Laboratory Medicine? [communication; context; availability; responsibility] 
Ian Watson (UK)

12.00 Reliability of Internet data and Smartphone apps for Laboratory Medicine
Snežana Jovičić (SRB)

12.30 Example – Benefits of patient’s involvement in their investigation
Paul van der Boog (doctor); Bert Kremer (patient)

13.00 Teaching the pony new tricks: competencies for Specialists in Laboratory Medicine to meet the challenges of disruptive innovation
Gilbert Wieringa (UK)

13.30 Lunch

**Session 6 - h. 14.30-15.30**
**PANEL DISCUSSION: DETERMINING OUTCOMES AND THE WAY TO GET THERE**