

# IFCC WorldLab **SEOUL 2022**

24<sup>th</sup> INTERNATIONAL CONGRESS OF  
CLINICAL CHEMISTRY AND LABORATORY MEDICINE

16<sup>th</sup> ASIA-PACIFIC CONGRESS  
OF CLINICAL BIOCHEMISTRY

June **26-30**, 2022  
Coex, Seoul, Korea









# IFCC WELCOME MESSAGE

Dear Friends and Colleagues,

It is my great pleasure to present this welcoming message to all national and international conference participants, corporate sponsors, exhibitors and IFCC officers from around the world. The IFCC WorldLab Congress presents a unique opportunity to bring together laboratory medicine experts and industry partners from all regions of the world to discuss the latest advances in clinical laboratory science and diagnostics technology. I would like to personally invite each one of you to attend the 2022 WorldLab Congress in the beautiful and vibrant city of Seoul. The conference is being held in the Asia-Pacific region which is witnessing the highest rates of economical and technological growth around the world in many areas including in vitro diagnostics. It's an exciting and fast evolving time for the field of clinical chemistry and laboratory medicine and this conference would be an excellent opportunity to present and discuss the latest advances in clinical laboratory diagnostics and meet colleagues from around the world. It is also a very opportune time to be holding this international forum to highlight the very important role of laboratory medicine in healthcare delivery including the global fight against public health threats such as the current coronavirus pandemic. What is becoming very clear during this crisis is that clinical laboratory operations have been critical in the global response to this unprecedented pandemic through rapid diagnosis of viral infection, serological monitoring of the affected populations, and biochemical monitoring of hospitalized patients with more severe COVID-19 induced complications. The WorldLab congress is an excellent opportunity to bring together experts in various fields of laboratory diagnostics to discuss the major advances in molecular, serological, biochemical, and hematological assessment of patients with coronavirus infection as well as other infectious diseases. Special sessions are being planned to discuss and highlight the critical and central role of the clinical laboratory in population screening and public health measures at national and international levels.

The IFCC organization is pleased to partner with the Korean Society of Clinical Chemistry and Asia-Pacific Federation of Clinical Biochemistry to hold this important international event, assembling laboratory scientists and IVD industry leaders from IFCC regional federations and member countries around the globe. I very much look forward to meeting many of you and discussing the opportunities and challenges for laboratory medicine over the coming decade. The future holds considerable promise for the field of laboratory diagnostics and its umbrella organizations such as IFCC. As IFCC continues to grow and expand its international reach, we remain committed to the key goal of advancing better healthcare worldwide through high quality laboratory diagnostics.

After two years of lockdowns and travel restrictions in almost all regions across the world, I am certain that most of you are very eager to get together again in an international forum. The 2022 WorldLab provides an excellent and timely opportunity to do just that. Looking forward to seeing many of you in Seoul, a city that not only has a very rich and ancient history and culture, it is also now ranked as an alpha world city with the world's 4th largest metropolitan economy!



**Khosrow Adeli** PhD, FCACB,  
DABCC, FAACC  
IFCC President (2020-2023)



# KSCC WELCOME MESSAGE

Dear Colleagues and Friends,

It is with great delight that we welcome you to the 24th International Congress of Clinical Chemistry and Laboratory Medicine & 16th Asia-Pacific Congress of Clinical Biochemistry at Coex, Seoul, Korea from June 26 to 30, 2022.

Also, we are pleased to announce that this Congress in Seoul will be held jointly with the 16th APFCB (Asia-Pacific Federation of Clinical Biochemistry) Congress in June 2022. The IFCC and APFCB have agreed that a joint conference would be more attractive and beneficial for both conference delegates and corporate sponsors and will ensure wider participation from laboratory professionals and industry partners across Asia-Pacific and around the world.

Since the first IFCC congress in 1954, the main goal of the conference has been the globalization of medical knowledge related to Clinical Chemistry and Laboratory Medicine through a well-structured system of continuing education. As originally planned, we do our best to provide you with the exciting and informative symposium program including plenary lectures, educational workshops, satellite meetings and poster sessions.

COVID-19 has faced many challenges, but the world is working together to overcome this global disaster. Always hoping that everything will get back on track like it used to be as soon as possible, we are confident that this Joint Congress 2022 will be a rewarding and unforgettable experience for all our participants attending from around the world.

We look forward to meeting you at the 24th IFCC WorldLab & 16th APFCB in June 2022.

Yours truly,



**Won-Ki Min** M.D., Ph.D.  
Congress President,  
IFCC WorldLab Seoul 2022



**Junghan Song** M.D., Ph.D.  
Congress Organizing  
Committee Chair  
IFCC WorldLab Seoul 2022



**Sail Chun** M.D., Ph.D.  
Scientific Programme  
Committee Chair,  
IFCC WorldLab Seoul 2022



**Jehoon Lee** M.D., Ph.D.  
President,  
Korean Society of Clinical  
Chemistry

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**Prof. Won-Ki Min**

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Hotel reservation:	<a href="mailto:twyoon@kaltour.com">twyoon@kaltour.com</a>
Mr Tae Woong Yoon (HANJIN TRAVEL)	

# IFCC AWARD

THE IFCC IS PLEASED TO ANNOUNCE THE WINNERS OF THE TEN 2020 IFCC DISTINGUISHED AWARDS.

The IFCC Distinguished Awards are bestowed to laboratory medicine professionals to recognize their outstanding achievements, publicize their exceptional research and contributions to medicine and healthcare, and encourage the overall advancement of clinical chemistry and laboratory medicine.

Prof. Nader RIFAI (United States)

IFCC-Howard Morris Distinguished Clinical Chemist Award, sponsored by Yashraj Biotechnology Ltd.

Dr Ghassan SHANNAN (Syria)

IFCC Henry Wishinsky Award for Distinguished International Services, sponsored by Siemens.

Dr Thomas ANNESLEY (United States)

IFCC Award for Distinguished Contributions in Education, sponsored by Abbott Diagnostics.

Dr Andrea FERREIRA-GONZALEZ (United States)

IFCC Award for Significant Contributions in Molecular Diagnostics, sponsored by Abbott Molecular.

Dr David B. SACKS (United States)

IFCC Distinguished Award for Laboratory Medicine and Patient Care, sponsored by Sekisui Diagnostics.

Dr Gary L. MYERS (United States)

IFCC-Robert Schaffer Award for Outstanding Achievements in the Development of Standards for Use in Laboratory Medicine, co-sponsored by NIST and CLSI.

Dr Fred S. APPLE (United States)

IFCC Distinguished Award for Contributions to Cardiovascular Diagnostics, sponsored by HyTest.

Dr Jean Baptiste WOILLARD (France)

FCC-Gérard Siest Young Scientist Award for Distinguished Contributions in Pharmacogenetics, sponsored by Biologie Prospective.

Dr Sandra QUIJANO (Colombia)

IFCC Distinguished Women Scientist Award For Contribution To In Vitro Diagnostics, sponsored by Yashraj Biotechnology Ltd.

Dr Livia S. EBERLIN (United States)

IFCC Young Investigator Award, sponsored by IFCC.



# WEEK AGENDA

## SUNDAY 26 JUNE

17:30-19:30  
19:30-21:30

OPENING CEREMONY  
WELCOME COCKTAIL

## MONDAY 27 JUNE

10:00-17:30

EXHIBITION OPEN

	AUDITORIUM	ROOM 103	ROOM 101	ROOM 102	ROOM 104	ROOM 105
09:00-11:00	SYM1	SYM2	SYM3	SYM4	SYM5	IFCC SYM1
11:00-11:45	BREAK					
11:45-12:30	PL 1					
12:30-13:00	POSTER / LUNCH					
13:00-14:00		LW 1 Roche	LW 2 Binding Site		LW4 Siemens	Korean Student Session
14:30-15:30	IFCC SYM 2 (15:00-17:00)	EDUW2 Roche 14.30-15.30	EDUW5 Snibe 14.30-15.30	EDUW8 Green Cross 14.30-15.30	EDUW11 Siemens 14.30-15.30	EDUW13 Beckman Coulter 14.30-15.30
16:00-17:00		EDUW3 Segeene 16.00-17.00		EDUW9 Green Cross 16.00-17.00	EDUW12 Arkray 15.30-16.30	EDUW14 Ortho Clinical D. (15:30-16:30)
17:30-18:30					SYM6 (16:30-18:30)	SYM7 (16:30-18:30)

## TUESDAY 28 JUNE

10:00-17:30

EXHIBITION OPEN

	AUDITORIUM	ROOM 103	ROOM 101	ROOM 102	ROOM 104	ROOM 105
09:00-11:00	SYM8	SYM9	SYM1	SYM11	SYM12	IFCC SYM3
11:00-11:45	BREAK					
11:45-12:30	PL 2					
12:30-13:00	POSTER / LUNCH					
13:00-14:00			LW 7 Abbott	LW 8 Green Cross	LW 9 Sysmex	Korean Student Session
14:30-15:30	IFCC SYM 4 (15:00-17:00)	EDUW16 Roche 14.30-15.30	EDUW19 Beckman Coulter 14.30-15.30	EDUW22 Siemens 14.30-15.30	EDUW25 Sebia 14.30-15.30	EDUW27 SCL Lab 14.30-15.30
16:00-17:00		EDUW17 Snibe 16.00-17.00	EDUW20 Bio-Rad 16.00-17.00	EDUW23 Sekisui 16.00-17.00	EDUW26 Thermo Fisher (15:30-16:30)	EDUW28 Hanlab (15:30-16:30)
17:30-18:30			EDUW21 Handok 17.30-18.30		SYM13 (16:30-18:30)	SYM14 (16:30-18:30)

# WEEK AGENDA

## WEDNESDAY 29 JUNE

10:00-17:30

EXHIBITION OPEN

	AUDITORIUM	ROOM 103	ROOM 101	ROOM 102	ROOM 104	ROOM 105
09:00-11:00	SYM15	SYM16	SYM17	SYM18	SYM19	SYM20
11:00-11:45	BREAK					
11:45-12:30	PL 3					
12:30-13:00	POSTER / LUNCH					
13:00-14:00			LW 12 Abbott 13.00-14.00		LW 14 Sysmex 13.00-14.00	
14:30-15:30	IFCC SYM 5 (15:00-17:00)	SYM 29 (14.30-16.30)	EDUW33 BD 14.30-15.30	SYM 31 (14.30-15.30)	SYM 30 (14.30-16.30)	SYM 32 (14.30-16.30)
16:00-17:00						
17:30-18:30					SYM21 (16:30-18:30)	SYM22 (16:30-18:30)

## THURSDAY 30 JUNE

	AUDITORIUM	ROOM 103	ROOM 101	ROOM 102	ROOM 104	ROOM 105
09:00-11:00	SYM23	SYM24	SYM25	SYM26	SYM27	SYM28
11:00-11:45	BREAK					
11:45-12:30	PL 4					
12:30-13:00	CLOSING CEREMONY					

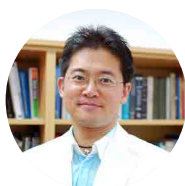
**PL** = PLENARY LECTURE  
**SYM** = SYMPOSIUM  
**EDUW** = EDUCATIONAL WORKSHOP  
 (SPONSORED BY INDUSTRY)  
**LW** = LUNCH WORKSHOP

**26 JUNE  
OPENING  
LECTURE**

## OPENING CEREMONY

17:30-19:30 Welcome addresses

OPENING LECTURE - AUDITORIUM  
**ALMIGHTY GOOGLE KNOWS  
EVERYTHING ABOUT YOU!**  
*Hawoong Jeong (Korea)*



**H. JEONG**  
(Korea)

Prof. Hawoong Jeong is currently professor of physics and director of BK21+ program at KAIST, Korea.

He got his Ph.D. in physics at Seoul National University, and his research area includes big-data, complex systems, statistical/computational physics and interdisciplinary science. He published about 100 research papers with more than 20,000 citations in diverse areas including physics, computer science, social science and biology.

He got several awards including KAIST best lecturer, KPS Yongbong prize, the Scientist of the month award.

He has also been selected as Young Scientist at 2012 Summer Davos World Econo Forum.

19:30

Welcome Cocktail



# DAY 1

## MONDAY 27 JUNE

09:00-11:00

### SYMPOSIUM 1 - AUDITORIUM

#### APPLICATIONS OF DATA SCIENCE TO THE IMPROVEMENT OF LABORATORY PRACTICE

Chairs: K. Lee (Korea), D. Holmes (Canada)

Artificial intelligence and pathology data

*T. Durant (USA)*

Real time patient QC - middleware requirements and model validation

*T. Badrick (Australia)*

Open source tools for quality monitoring and utilization management

*D. Holmes (Canada)*

Application of big data to routine laboratory tests in a large hospital network

*H. Kim (Korea)*



**T. BADRICK**  
(Australia)



**D. HOLMES**  
(Canada)



**H. KIM**  
(Korea)

### SYMPOSIUM 2 - ROOM 103

#### BEST LABORATORY PRACTICES FOR KIDNEY DISEASE

Chairs: T. Jeong (Korea), G. Jones (Australia)

Clinical utility of biomarkers for acute kidney Injury

*J. M. El-Khoury (USA)*

Diagnostic proteomic markers to detect kidney diseases

*T. Ozben (Turkey)*

The role of laboratory testing in detection and classification of chronic kidney disease

*T. D. Jeong (Korea)*

Estimating GFR – what's next?

*G. Jones (Australia)*



**J.M. EL-KHOURY**  
(USA)



**T. OZBEN**  
(Turkey)



**T.D. JEONG**  
(Korea)



**G. JONES**  
(Australia)

### SYMPOSIUM 3 - ROOM 101

#### VALUE ADDED LABORATORY MEDICINE OF POINT-OF-CARE TESTING (POCT)

Chairs: S. Cho (Korea), J.H. Nichols (USA)

Risk management and regulatory changes for POCT

*J. H. Nichols (USA)*

POCT for patients with infectious diseases in Africa

*R. Erasmus (South Africa)*

Open connectivity with POCT devices at home care setting

*K. Kotani (Japan)*

Issues in the practical implementation of POCT: overcoming challenges

*H.D. Park (Korea)*



**J. H. NICHOLS**  
(USA)



**R. ERASMUS**  
(South Africa)



**K. KOTANI**  
(Japan)



**H.D. PARK**  
(Korea)

### SYMPOSIUM 4 - ROOM 102

#### TO KNOW EACH OTHER IN MASS SPECTROMETRY

Chairs: H. Park (Korea), R. Fitzgerald (USA)

Mass spectrometry versus immunoassay: one side does not fit all

*K. Lee (Korea)*

Massively Multiplexed Single Cell Analysis to Predict and Control Pathobiology

*TBA*

An ACTH Mass Spectrometry Assay as an Arbiter of Clinically Discordant Immunoassay Results

*M. De Marco (Canada)*

Mass spectrometry and driving under the influence of marijuana presenter

*R. Fitzgerald (USA)*



**K. LEE**  
(Korea)



**M. DEMARCO**  
(Canada)



**R. FITZGERALD**  
(USA)

## SYMPOSIUM 5 - ROOM 104

**CURRENT STATUS OF ACCREDITATION ACTIVITIES IN LABORATORY MEDICINE: DO WE NEED IT TO BECOME OBLIGATORY?**

Chair: S. Kim (Korea), G. Jones (Australia)

Accreditation of medical laboratories – an ongoing work  
*T. Zima (Czech Republic)*

How accreditation has IMPROVED laboratory testing  
*M. Herrmann (Austria)*

External quality assurance-reducing between laboratory analytical variation  
*W. I. Lee (Korea)*

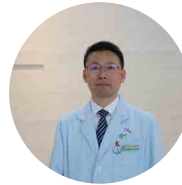
Big difference between, before and after accreditation  
*X. Huang (China)*



**M. HERMANN**  
 (Austria)



**W.I. LEE**  
 (Korea)



**X. HUANG**  
 (China)

## IFCC SYMPOSIUM 1 - ROOM 105

**A NEW ERA IN MEDICAL LABORATORY DIAGNOSTICS MANAGEMENT: APPLICATION OF ADVANCED MOBILE & WEB TECHNOLOGY**

Chair: Tahir Pillay (South Africa)

Role of technology in patient management and precision medicine  
*T. Pillay (South Africa)*

Mobile technology and management of instruments  
*R. Maunder Greaves (Australia)*

Using mobile technology to manage big data collections  
*K. Adeli (Canada)*

New developments in web technology to enable medical diagnostics lab management  
*E.L. Freggiaro (Argentina)*

11:00-11:45 COFFEE BREAK



# 27 JUNE PLENARY 1

11:45-12:30

PLENARY 1 - AUDITORIUM

**MAXIMIZING THE VALUE OF LABORATORY MEDICINE IN KOREA**

*Won-Ki Min (Korea)*



**W.K. MIN**  
(Korea)

Professor Won-Ki Min is the Congress President of IFCC Worldlab Seoul 2020. Currently he is a Professor of Laboratory Medicine at the University of Ulsan College of Medicine and works as a laboratory physician at Asan Medical Center, a large training hospital located in Seoul, Korea.

After getting his M.D. from the College of Medicine, Seoul National University, he received his PhD degree in Medical Science from Seoul National University and Master of Science degree from Sogang University, both in Seoul, Korea.

His main area of research is laboratory informatics and quality assurance in the field of laboratory medicine.

Professor Min has been recognized with many awards and was a board member of the Korean Medical Association as a director of information management.

Dr. Min has been actively serving in Korean academic societies: as chairperson of the Korean Society for Laboratory Medicine, chairperson of the Laboratory Medicine Foundation and chairperson and director of the Korean Institute of Genetic Testing Evaluation. He also served as the chairperson of the organizing committee for international meetings such as the 12th Asian-Pacific Congress of Clinical Biochemistry in 2010 and the 8th International Conference of Clinical Laboratory Automation in 2012.

Currently, he serves as the president of the Korean Association of External Quality Assessment Service (KEQAS).

**12:30-13:00** POSTER / LUNCH

**13:00-14:00** LUNCH WORKSHOPS

**14:30-18:30** EDUCATIONAL WORKSHOPS

**15:00-17:00**

## IFCC SYMPOSIUM 2 - AUDITORIUM

### USING BIG DATA FOR IMPROVING HEALTHCARE

*Chair: Rolf Hinzmann (Germany), Maurizio Ferrari (Italy)*

Aging and big data: a challenge for laboratory medicine

*M. Ferrari (Italy)*

The future of cancer care through Biologic Profiling and big data

*D. Cacchiarelli (Italy)*

Hype, hope and reality - How artificial intelligence algorithms are entering the healthcare system

*D. Sonntag (Germany)*

Big data in healthcare from a Diagnostic Company's perspective

*TBA*

**16:30-18:30**

## SYMPOSIUM 6 - ROOM 104

### STATE OF THE ART; PROFICIENCY TESTING

*Chair: S. Chun (Korea)*

UK NEQAS: building on 50 years of experience

*F. Mackenzie (UK)*

Introduction to the College of American Pathologists

*D. Alter (USA)*

Down under EQA

*T. Badrick (Australia)*

Korean Association of External Quality Assessment Service and Proficiency Testing

*S. Chun (Korea)*



**F. MACKENZIE**  
(UK)



**D. ALTER**  
(USA)



**T. BADRICK**  
(Australia)



**S. CHUN**  
(Korea)

## SYMPOSIUM 7 - ROOM 105

## ISSUES ON METHOD EVALUATION

Chair: M. Han (Korea)

Fundamentals of method evaluation: principles behind the practice

*M. D. Kellogg (USA)*

Performance evaluation and clinical communication after analytical system change for D-dimer

*W. Cui (China)*

Real-world clinical laboratory practices of method evaluation for clinical chemistry test items

*M. Han (Korea)*

Evaluating the performance of molecular diagnostic assays

*TBA*

**M.D. KELLOGG**  
(USA)



**W. CUI**  
(China)



**M. HAN**  
(Korea)





# DAY 2

## TUESDAY 28 JUNE

09:00-11:00

### SYMPOSIUM 8 - AUDITORIUM

#### APPLYING EVIDENCE-BASED GUIDELINES TO INCREASE CLINICAL EFFECTIVENESS IN LABORATORY MEDICINE

Chairs: J.W. Chung (Korea), S. Sandberg (Norway)

To what degree is laboratory medicine evidence based?

*A.R. Horvath (Australia)*

What is the evidence base for setting (concrete) analytical performance specifications?

*S. Sandberg (Norway)*

The laboratory and hypertension - adding value to the clinical guidelines

*S. Bhargava (India)*

Can patient outcomes be evaluated by laboratory tests?

*J. Lim (Korea)*



**A.R. HORVATH**  
(Australia)



**S. SANDBERG**  
(Norway)



**J. LIM**  
(Korea)

### SYMPOSIUM 9 - ROOM 103

#### IMPLEMENTATION OF PHARMACOGENOMICS IN THE CLINIC

Chairs: S.Y. Lee (Korea), M.W. Linder (USA)

PGx information in Clinical Guidelines

*R. van Schaik (the Netherlands)*

TDM and PGx: complementary tools for Precision Medicine

*S.Y. Lee (Korea)*

Reporting tools and interpretive services to facilitate PGx test utilization

*H. Hachad (USA)*

Multidisciplinary model to implement PGx

*M. Kanai (Japan)*



**R. VAN SCHAIK**  
(the Netherlands)



**S.Y. LEE**  
(Korea)



**M. KANAI**  
(Japan)

## SYMPOSIUM 10 - ROOM 101

**ETHICAL ISSUES IN LABORATORY MEDICINE**

Chairs: S. Chun (Korea), J. Lim (Korea)

Ethical issues in laboratory medicine

*TBA*

Ethical issues in emerging infections and the clinical laboratory

*S. Campbell (USA)*

Ethical issues in proficiency testing

*J. W. Chung (Korea)*

Ethical issues in clinical research

*S. Kim (Korea)***S. CAMPBELL**  
(USA)**J.W. CHUNG**  
(Korea)**S. KIM**  
(Korea)

## SYMPOSIUM 11 - ROOM 102

**FUTURE APPLICATION OF AUTOMATION IN CLINICAL LABORATORY**

Chairs: Y.W. Lee (Korea), M. Maekawa (Japan)

Considerations of valuable technologies for total laboratory automation

*Y. W. Lee (Korea)*

Application of automation in molecular diagnostics

*B. Regueiro (Spain)*

The arrival of a new era of clinical laboratories with fully automated LCMS systems

*D. Kawakami (Japan)*

Differentiation of hematological disorders using the scattergrams of Sysmex automated hematology analyzer XN series

*K. Han (Korea)***Y.W. LEE**  
(Korea)**B. REGUEIRO**  
(Spain)**D. KAWAKAMI**  
(Japan)**K. HAN**  
(Korea)

## SYMPOSIUM 12 - ROOM 104

**THE ROLE OF LABORATORY IN THE MANAGEMENT OF SEPSIS**

Chairs: M. Ji (Korea), R. Fitzgerald (USA)

Clinical guidelines for interpreting PCT results

*TBA*

Monitoring and improving clinical impact of PCT

*G. Seymann (USA)*

Application of heparin-binding protein as a biomarker of sepsis and infection

*M. Guan (P.R. China)*

Emerging biomarkers in sepsis

*M. Hur (Korea)***G. SEYMANN**  
(USA)**M. GUAN**  
(China)**M. HUR**  
(Korea)

## IFCC SYMPOSIUM 3 - ROOM 105

**THE FUTURE OF STANDARDIZATION IN LABORATORY MEDICINE: CHALLENGES AND OPPORTUNITIES**Chair: *Philippe Gillery*

Standardization and harmonization of biological measurements: successes, pitfalls and challenges

*P. Gillery (France)*

Importance of commutability for metrological traceability in standardization and harmonization

*G. Miller (USA)*

Challenges in test standardization: a manufacturer's perspective

*TBA*

Proteoform analysis to fulfill unmet clinical needs

*C. Cobbaert (the Netherlands)***P. GILLERY**  
(France)**G. MILLER**  
(USA)**C. COBBAERT**  
(the Netherlands)**11:00-11:45** COFFEE BREAK

# 28 JUNE PLENARY 2

11:45-12:30

PLENARY 2 - AUDITORIUM

**PHARMACOGENOMICS: FROM DISCOVERY TO CLINIC**

*Kathleen M. Giacomini (USA)*



**K.M. GIACOMINI**  
(USA)

Dr. Giacomini is a Professor in the Department of Bioengineering and Therapeutic Sciences at the University of California, San Francisco. She is currently Co-Principal Investigator of the NIH Pharmacogenomics Research Network Hub, and Co-Principal Investigator of the UCSF-Stanford Center of Excellence in Regulatory Sciences and Innovation (CERSI), a major center funded by the FDA with the goal of advancing scientific issues related to the safe and effective use of medical products. Dr. Giacomini is considered a leader in the field of membrane transporters, and in particular, she is widely recognized for her work on transporter genomics and pharmacogenomics. Dr. Giacomini has been recognized by many awards and is an elected member of the National Academy of Medicine. She is a recipient of an honorary doctoral degree from Uppsala University, and was awarded the North American Scientific Achievement Award from the International Society for the Study of Xenobiotics in 2017. Most recently in 2018, Dr. Giacomini was awarded the Volwiler Research Achievement Award and was recognized by her peers as one of the leading researchers in Pharmaceutical Sciences.

12:30-13:00 POSTER / LUNCH

13:00-14:00 LUNCH WORKSHOPS

14:30-18:30 EDUCATIONAL WORKSHOPS

15:00-17:00

#### IFCC SYMPOSIUM 4 - AUDITORIUM

#### EMERGING TECHNOLOGIES: NEW TRENDS AND CLINICAL APPLICATIONS

*Chair: S. Bernardini (Italy)*

Lipidomics translation

*M. Hersberger (Switzerland)*

Molecular diagnostics for guiding drug therapy: implementation of pharmacogenetics in clinical care

*R. van Schaik (the Netherlands)*

AI, machine learning and deep learning in laboratory medicine

*E. Caiani (Italy)*

Tumor Mutational Burden

*M. De Tayrac (France)*



**R. VAN SCHAIK**  
(the Netherlands)



16:30-18:30

#### SYMPOSIUM 13 - ROOM 104

### THE MICROBIOME: PRESENT AND FUTURE CHALLENGES IN LABORATORY MEDICINE

Chair: N. Ryoo (Korea)

Definition of a healthy microbiome and if disturbed – how to shape it back to normal

*L. Engstrand (Sweden)*

Microbiota bank utilization in clinical microbiology

*D. Yong (Korea)*

Using metabolomics as a tool: Mass spectrometry tools to reveal what microbes are doing for us and to us  
*TBA*

MALDI-TOF mass spectrometry for routine use in clinical microbiology

*N. Ryoo (Korea)*



**L. ENGSTRAND**  
(Sweden)



**D. YONG**  
(Korea)



**N. RYOO**  
(Korea)

#### SYMPOSIUM 14 - ROOM 105

### THERAPEUTIC DRUG MONITORING: TECHNICAL AND CLINICAL EXPERIENCE

Chairs: K. Lee (Korea), T. van Gelder (the Netherlands)

Analytical quality requirements in TDM

*M. Shipkova (Germany)*

TDM and pharmacogenetics: competitors or friends?

*T. van Gelder (the Netherlands)*

TDM consultation service and dosing software

*M. Ji (Korea)*

TDM for immunosuppressive drugs in auto-immune disease

*Y. Avihingsanon (Thailand)*



**M. SHIPKOVA**  
(Germany)



**T. VAN GELDER**  
(the Netherlands)



**M. JI**  
(Korea)



**Y. AVIHINGSANON**  
(Thailand)

# DAY 3

## WEDNESDAY 29 JUNE

09:00-11:00

### SYMPOSIUM 15 - AUDITORIUM

#### UTILIZATION MANAGEMENT OF LABORATORY TEST

Chairs: Y.M. Yun (Korea), D. Holmes (Canada)

Help me help you: Guidelines to elevate laboratory stewardship programs

*J. Dickerson (USA)*

Applying analytics to drive laboratory stewardship and improve care

*P.C. Mathias (USA)*

Harmonization of the quality indicator management in laboratory medicine

*TBA*

Experience of utilization management in the real-world / When should a test be repeated

*S. H. Song (Korea)*



**J. DICKERSON**  
(USA)



**P.C. MATHIAS**  
(USA)



**S. H. SONG**  
(Korea)

### SYMPOSIUM 16 - ROOM 103

#### CLINICAL APPLICATION OF HIGH SENSITIVITY CARDIAC TROPONIN ASSAYS

Chair S.G. Lee (Korea)

Biology and quality specification of troponin assays

*S. G. Lee (Korea)*

Utilization of hs troponins in the emergency room setting

*M. Than Nyunt (New Zealand)*

Novel uses of hs troponins (monitoring cardiac toxicity of chemotherapy, etc.)

*A. K. Saenger (USA)*

Standardization of hs-troponin I assays, where are we?

*F. S. Apple (USA)*



**S. G. LEE**  
(Korea)



**M. THAN**  
(New Zealand)



**A. K. SAEGER**  
(USA)



**F. S. APPLE**  
(USA)

## SYMPOSIUM 17 - ROOM 101

### TRACEABILITY IN THE LABORATORY MEDICINE – VITAL FOR CLINICAL VALUE

Chair: G. Jones (Australia)

Metrological traceability – what is it?

*R. Wielgosz (France)*

Traceability for laboratory medicine – the role of the JCTLM

*I. Young (UK)*

Traceability in action

*A. Kessler (Germany)*

Traceability in the routine laboratory

*G. Jones (Australia)*

Subsequent Decisions

*S. R. Park (Korea)*



**R. WIELGOSZ**  
(France)



**I. YOUNG**  
(UK)



**G. JONES**  
(Australia)

## SYMPOSIUM 18 - ROOM 102

### UPDATES ON LIQUID BIOPSY

Chairs: W. Lee (Korea), E. Lianidou (Greece)

CTC analysis: an overview of CTC isolation, detection and molecular characterization technologies

*E. Lianidou (Greece)*

Past, present and the future of circulating DNA in prenatal diagnosis

*A. Chan (Hong Kong, P.R. China)*

Current and future perspectives of liquid biopsies in genomics-driven oncology

*E. Heitzer (Austria)*

Liquid biopsy as a part of clinical laboratory practices: the status of external quality assessment (EQA) for liquid biopsy

*W. Lee (Korea)*



**E. LIANIDOU**  
(Greece)



**A. CHAN**  
(Hong Kong,  
P.R. China)



**E. HEITZER**  
(Austria)



**W. LEE**  
(Korea)

## APFCB SYMPOSIUM 19 - ROOM 104

**LABORATORY MONITORING OF COAGULATION**

Chair: J.Y. Han (Korea)

Misconceptions in routine coagulation testing

*S. Jang (Korea)*

Quality improvement in the hemostasis laboratory: role of external quality assessment

*TBA*

Common pitfalls in testing and interpretation of D-dimers

*E. Favaloro (Australia)*

Laboratory monitoring of coagulation disorders by clot waveform analysis

*M. Shima (Japan)***S. JANG**  
(Korea)**E. FAVALORO**  
(Australia)**M. SHIMA**  
(Japan)

## SYMPOSIUM 20 - ROOM 105

**HAEMOGLOBIN A1C ANALYSIS; CONTINUAL IMPROVEMENT**

Chairs: G. John (UK), C.W. Weykamp (The Netherlands)

The HbA1c story: the successful development of full metrological traceability in laboratory medicine

*G. John (UK)*

How good is HbA1c analysis? Latest country and manufacturer results from the IFCC international quality assessment trial, using sigmometrics as a monitor of performance

*C.W. Weykamp (the Netherlands)*

POCT for HbA1c: requirements for reliable clinical use

*J. Song (Korea)*

HbA1c analysis, what really affects the result and interpretation?

*E. English (UK)***G. JOHN**  
(UK)**C.W. WEYKAMP**  
(the Netherlands)**J. SONG**  
(Korea)**E. ENGLISH**  
(UK)**11:00-11:45** COFFEE BREAK

# 29 JUNE PLENARY 3

11:45-12:30

PLENARY 3 - AUDITORIUM  
**ADDING CLINICAL UTILITY TO THE LABORATORY  
REPORTS**

*Wytze P Oosterhuis (the Netherlands)*



**W.P. OOSTERHUIS**  
(the Netherlands)

Wytze Oosterhuis was born in Amsterdam, The Netherlands. He studied both physical chemistry and medicine, and ended his specialization in laboratory medicine in 1991. In 1994 he completed his thesis on applications of multivariate analysis in clinical chemistry and was registered as medical epidemiologist. He has been active for the IFCC, first in the Committee on Systematic Reviewing, chaired by Prof. Sverre Sandberg. Later this committee was renamed Committee on Evidence Based Laboratory Medicine (EBLM). This committee has prepared many publications and presented several courses. Within the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) he is member of the Working Group on Guidelines, a joint activity of both EFLM and European Union of Medical Specialists (UEMS). He is also chair of the EFLM Working Group on Patient Focused Laboratory Medicine. From 2014 until 2017 he chaired the EFLM Task and Finish group on Total Error. His scientific work centers on consultation, in general adding value to laboratory results. He works as a laboratory physician in Zuyderland Medical Center, a large training hospital located in Sittard and Heerlen, The Netherlands.



**12:30-13:00** POSTER / LUNCH

**13:00-14:00** LUNCH WORKSHOPS

**14:30-18:30** EDUCATIONAL WORKSHOPS

#### SYMPOSIUM 30 - ROOM 104

##### **PROTEIN ELECTROPHORESIS STANDARDIZATION**

Chair: R.A. Booth (Canada)

Canadian Society of Clinical Chemists Recommendations for Protein Electrophoresis Reporting

*R. A. Booth (Canada)*

CAP Recommendations: Initial Detection and Measurement of a Monoclonal Protein

*D. Keren (USA)*

Update on Recommendations for Standardised Reporting of Protein Electrophoresis in Australia and New Zealand

*P. Mollee (Australia)*

Experience of Transition from Narrative to Synoptic Reporting for Protein Electrophoresis and Immunofixation

*H.K. Kim (Korea)*

#### SYMPOSIUM 31 - ROOM 102

##### **PUBLICATION ETHICS & SCIENTIFIC WRITING: THE CLINICAL CHEMISTRY EXPERIENCE**

Overview of publication ethics

*TBA*

Scientific writing: helpful hints

*TBA*

#### SYMPOSIUM 32 - ROOM 105

##### **ESSENTIAL LEADERSHIP SKILLS: SHAPING FUTURE LEADERS FOR SUCCESS IN LABORATORY MANAGEMENT**

Chair: P. Sharma (India)

Leadership attributes and styles: Impact on relationships in the workplace

*E. W. Randell (Canada)*

The Leader versus the manager and building leadership through emotional intelligence

*P. Sharma (India)*

Developing an effective leadership style in laboratory team management

*S. Yenice (Turkey)*

Managing relationships and leading changes within the heterogeneous workplace

*A. A. Khine Wamono (South Africa)*

Conflict Resolution Process and Innovative Solutions to Complex Challenges

*M. Orth (Germany)*

**15:00-17:00**

## IFCC SYMPOSIUM 5 - AUDITORIUM

### ACHIEVING HEALTHCARE EXCELLENCE: THE UNIVANTS AWARDS 2019

*Chair: Maurizio Ferrari (Italy)*

The importance of our profession promoting the value of laboratory medicine

*D. Kinniburgh (Canada)*

The developing role of angiogenic markers in the laboratory assessment of pre-eclampsia

*T. James (UK)*

Intelligent Liver Function Testing (iLFT): A Cost-Effective Way to Increase Early Diagnosis of Liver Disease

*TBA*

Improved Diagnostic Pathway and Treatment for Hospitalized Patients with Acute Kidney Injury

*S. Elitok (Germany)*



**T. JAMES**  
(UK)



**S. ELITOK**  
(Germany)

**16:30-18:30**

## SYMPOSIUM 21 - ROOM 104

### THE STATE OF THE ART IN MYELOMA TESTING

*Chairs: H. Chae (Korea), P. Gillery (France)*

Should mass spectrometry replace electrophoresis and free light chain analysis?

*D. Murray (USA)*

Biomarkers of myeloma nephropathy: from MGUS to symptomatic myeloma

*TBA*

Harmonized quantification and reporting of monoclonal proteins

*J. H. Jacobs (The Netherlands)*

Protein electrophoresis interpretation and reporting

*H. Chae (Korea)*



**D. MURRAY**  
(USA)



**H. CHAE**  
(Korea)

## SYMPOSIUM 22 - ROOM 105

**CLINICAL DIABETES; IS IT TIME TO CHANGE PRACTICE?**

Chairs: J. Song (Korea), G. John (UK)

Type 2 diabetes; is Asia different from the West?

*L. Ji (P.R. China)*

Complimentary markers of glycaemic control: uses and limitations in clinical practice

*E. Kilpatrick (Qatar)*

Interpretation of HbA1c results, new targets and new uses. Is it time for change?

*S. Atkin (Qatar)*

Is bariatric surgery a cure for type 2 diabetes?

*C. Le Roux (Ireland)*

**L. JI**  
(P.R. China)



**E. KILPATRICK**  
(Qatar)



**S. ATKIN**  
(Qatar)



**C. LE ROUX**  
(Ireland)

# DAY 4

## THURSDAY 30 JUNE

09:00-11:00

### SYMPOSIUM 23 - AUDITORIUM

#### STANDARDIZATION AND HARMONIZATION OF CLINICAL LABORATORY RESULTS

Chairs: Y.M. Yun (Korea), H. Vesper (USA)

CDC clinical standardization programs for clinical laboratory results

*H. Vesper (USA)*

The International Consortium for Harmonization of Clinical Laboratory Results (ICHCLR) – a pathway to harmonization

*G. Myers (USA)*

Commutability issues in standardization and harmonization of clinical laboratory results

*G. Miller (USA)*

Programs for standardization and harmonization of clinical laboratory results in Korea

*Y. M. Yun (Korea)*



**H. VESPER**  
(USA)



**G. MYERS**  
(USA)



**G. MILLER**  
(USA)



**Y. M. YUN**  
(Korea)

### SYMPOSIUM 24 - ROOM 103

#### CLINICAL PATHOLOGISTS AS A CLINICAL CONSULTANT

Chairs: S. Chun (Korea), P. Gillery (France)

Clinical consultant in the field of clinical microbiology

*J. Lee (Korea)*

Clinical consultant in the field of genetics

*D. Payne (USA)*

Clinical consultant in the field of hematology

*M. G. Shin (Korea)*

Clinical consultant in the field of clinical chemistry

*S. Stankovic (Serbia)*



**J. LEE**  
(Korea)



**D. PAYNE**  
(USA)



**M. G. SHIN**  
(Korea)



**S. STANKOVIC**  
(Serbia)

## SYMPOSIUM 25 - ROOM 101

**WASPALM Symposium**

Chair: R. Verna (Italy)

The importance of Laboratory Medicine in modern health economics and health promotion

*L. Noguera Martins (Portugal)*

Autoimmune Hypertriglyceridemia

*M. Murakami (Japan)*

Intelligent verification criteria for routine urinalysis procedure

*W. Cui (P.R. China)*

The future of the Laboratory in Digital Health Era

*R. Verna (Italy)*

## SYMPOSIUM 26 - ROOM 102

**RISK MANAGEMENT FROM MANUFACTURING TO RESULT REPORTING**

Chairs: S. Kim (Korea), M. Plebani (Italy)

Risk management of the total testing process

*M. Plebani (Italy)*

Risk management and patient safety

*TBA*

Risk management in manufacturing phase

*TBA*

Risk management in clinical laboratories

*S. Kim (Korea)*

**M. PLEBANI**  
(Italy)



**S. KIM**  
(Korea)

## SYMPOSIUM 27 - ROOM 104

**ADVANCES IN NEXT GENERATION SEQUENCING**

Chairs: S.T. Lee (Korea), K. Baluchova (Slovakia)

Expanding application of next generation sequencing in clinical laboratory  
*J. Smetana (Czech Republic)*

Recent application and validation of bioinformatics pipelines in NGS  
*S. T. Lee (Korea)*

Guidelines, quality control and standardization of NGS testing  
*C. Endrullat (Germany)*

NGS-guided precision medicine: point of view from clinicians  
*V. Shotelersuk (Thailand)*



**S.T. LEE**  
 (Korea)



**C. ENDRULLAT**  
 (Germany)



**V. SHOTELERSUK**  
 (Thailand)

## APFCB SYMPOSIUM 28 - ROOM 105

**LIT Symposium**

Chair: R. Flatman (Australia)

The role of seamless informatics from LIS to Electronic Medical Records (EMR) to National Electronic Health Records (NEHR)  
*TBA*

Informatics Standards and Harmonisation – for critical results, automatic commenting, middleware, POC networking, telehealth resulting  
*R. Flatman (Australia)*

Laboratory Middleware Functionality and Automation Process Control  
*R. Pu (P.R. China)*

LIS requirements for laboratory management  
*J. H. Lee (Korea)*



# 30 JUNE PLENARY 4

11:45-12:30

APFCB PLENARY 4  
**NGS ANALYSIS OF GENETIC DISEASES**  
*Naomichi Matsumoto (Japan)*



**N. MATSUMOTO**  
(Japan)

Professor and Chair, Department of Human Genetics, Yokohama City University Graduate School of Medicine

• Educational Background:

Kyushu University School of Medicine, M.D., 1986

Graduate School of Medical Science, Nagasaki University School of Medicine, Ph.D., 1997

• Professional Experiences:

1986-1993 Obstetrician & Gynecologist at Kyshu University related hospitals

1993-1997 Graduate School of Nagasaki University, Department of Human Genetics

1997-1998 Post Doctoral Fellow at Department of Human Genetics, The University of Chicago

1998-2000.1 Research associate at Department of Human Genetics, The University of Chicago

2000-2003 Associate professor at Department of Human Genetics, Nagasaki University School of Medicine

2003-present Professor and Chair at Department of Human Genetics, Yokohama City University Graduate School of Medicine

• Honors and awards

2003 Japan Society of Human Genetics Award for Young Scientist

2011 Japan Society of Human Genetics Award

2019 A Prize for Science and Technology, Research Category, The Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology

• Professional Organizations

Member of Japan Society of Human Genetics (Councilor 2003-) (Director 2011-)

# CLOSING CEREMONY

## THURSDAY 30 JUNE

12:30-13:00 Congress President's Remark  
*Won-Ki Min (Korea)*

IFCC Remarks  
*Khosrow Adeli (Canada)*

APFCB Remarks  
*Endang Hoyaranda (Indonesia)*

Announcement Dubai 2024  
*Khosrow Adeli (Canada)*  
*Anwar Borai (Saudi Arabia)*



# REGISTRATION

## REGISTRATION FEES

All delegates must register for the congress.  
Registration fees (no VAT applied) are as follows:

### BEFORE MAY 1, 2022

Full Registration	€ 500,00
Young Registration & Technicians (from Korea)	€ 250,00
Day Registration	€ 150,00

### AFTER MAY 1 UNTIL JUNE 13, 2022

Full Registration	€ 650,00
Young Registration & Technicians (from Korea)	€ 325,00
Day Registration	€ 200,00

### ON-SITE AFTER 13 JUNE ONLY ON-SITE REGISTRATIONS WILL BE POSSIBLE

Full Registration	€ 750,00
Young Registration & Technicians (from Korea)	€ 375,00
Day Registration	€ 250,00

## REMITTANCE

Registration fees shall be paid by credit card or bank transfer through the on-line system available on the conference web site. On-site registrations may be paid only by credit card or cash. Cheques will not be accepted.

The organizing secretariat will send registration receipt upon receipt of payment, via e-mail.

Be sure your e-mail address is filled in correctly.

## CURRENCY

Registration fees and charges for all events related to the Worldlab Seoul 2022 Congress as well as hotel cost must be paid in euros.

## CANCELLATION AND REFUND

Cancellations must be sent in writing to [registrations@seoul2022.org](mailto:registrations@seoul2022.org). The amount equal to 80% of the fee paid will be refunded for cancellations received by 31 March 2022. Until 30 April, 2022 a refund of 50% of the fee will be granted. After 30 April 2022 no refunds will be issued. All refunds will be paid in euros after the congress.

## CANCELLATION OF THE CONGRESS

The congress secretariat reserves the right to cancel the congress, shift venue, or change dates without notice, in case of "force majeure". Neither MZ Events nor the Congress Organizing Committee shall be liable for any damage claims.

## LIABILITY AND INSURANCE

Registration fees do not include the insurance of participants against personal accidents, sickness and cancellations by any party, theft, loss or damage to personal possessions. Participants are advised to take out adequate personal insurance to cover travel, accommodation, cancellation and personal effects.

Registration can be submitted on-line only

## THE FULL REGISTRATION AND YOUNG REGISTRATION FEES INCLUDE:

1. entrance to plenary lectures, symposia, educational workshops, posters sessions and exhibition
2. possibility to submit abstracts
3. certificate of attendance
4. coffee and tea service during intermissions
5. Opening Ceremony and Welcome Cocktail (Sunday, 26 June 2022)
6. Closing Ceremony (Thursday, 30 June 2022)

## THE DAY REGISTRATION FEE INCLUDES, FOR THE DAY OF REGISTRATION ONLY:

1. entrance to plenary lectures, symposia, educational workshops, posters sessions and exhibition
2. certificate of attendance
3. coffee and tea service during intermissions

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