2017 IFCC Distinguished Awards

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On behalf of IFCC I have pleasure and pride in introducing the IFCC Awards recipients for 2017. All eight of these Awards recognise outstanding achievement in clinical chemistry and laboratory medicine in clinical, scientific and/or educational endeavours. Each of the Award recipients was selected by an independent panel of experts after open advertisement. Many high quality nominations were received and so those selected from this process may truly be considered as worthy winners deserving of our congratulations. IFCC is grateful to the many listed sponsors who have contributed generously to enable us to give appropriate recognition to the outstanding achievements of these Awards recipients.

Maurizio Ferrari
(President of IFCC)
2017 IFCC Awards Programme

The IFCC presents eight distinguished awards to scientists and clinicians working in clinical chemistry and laboratory medicine or related disciplines. These triennial awards are the highest honours bestowed by our federation on colleagues worldwide in recognition of their outstanding achievements, to publicize their exceptional research and other contributions that have improved patient care, and to stimulate and encourage other scientists to accelerate their efforts in advancing clinical chemistry and laboratory medicine. The sponsors of these awards have made it possible for IFCC to honour these extraordinary colleagues; their support illustrates the commitment and partnership between our profession and the industry for the growth and advancement of Clinical Chemistry and Laboratory Medicine internationally.

IFCC Awards

Awards presented by the IFCC include:

1. IFCC Distinguished Clinical Chemist Award
2. IFCC-Henry Wishinsky Award for Distinguished International Services
3. IFCC Award for Distinguished Contributions in Education
4. IFCC Award for Significant Contributions in Molecular Diagnostics
5. IFCC Distinguished Award for Laboratory Medicine and Patient Care
6. IFCC-Robert Shaffer Award for Outstanding Achievements in the Development of Standards for Use in Laboratory Medicine
7. IFCC Distinguished Award for Contributions to Cardiovascular Diagnostics
8. IFCC Young Investigator Award

Conferment is held at the triennial International Congress of Clinical Chemistry and Laboratory Medicine.

IFCC Awards Committee

Prof. H. Morris Chair (AU)
M. Jouma (SY)
L. Kricka (US)
L. Lai (MY)
V. Steenkamp (ZA)
G. Sypniewska (PL)

Professor Dennis Lo discovered in 1997 the presence of cell-free fetal DNA in the plasma of pregnant women. Over the past two decades, he has elucidated the key biological characteristics of circulating nucleic acids in maternal plasma and has established many of the key concepts for their diagnostic use. He was the first to measure the concentrations of circulating fetal DNA at different stages of gestation and demonstrated its very rapid clearance following parturition. He also showed that in addition to cell-free fetal DNA, fetal RNA could also be detected in maternal plasma. Diagnostically, Professor Lo demonstrated that paternally-inherited fetal DNA sequences that were absent in the pregnant mother’s genome could be readily detected in maternal plasma. He demonstrated the clinical applications of this concept in the prenatal testing of fetal sex, RhD genotype and gene mutations such as those causing beta-thalassemia. He also developed multiple methods by which fetal Down syndrome and other aneuploidies could be detected non-invasively from maternal plasma, including those based on DNA methylation, plasma RNA, digital PCR and massively parallel sequencing. The latter method has now become a globally adopted method for non-invasive prenatal testing (NIPT) of a variety of fetal chromosomal aneuploidies. Since the launch of NIPT for fetal aneuploidies in late 2011, the technology is available in over 90 countries and millions of pregnant women have benefited from this technology this year. In 2010, Professor Lo was also the first to demonstrate non-invasive prenatal fetal whole genome sequencing from maternal plasma. In addition to prenatal testing, Professor Lo has also pioneered other diagnostic applications of circulating nucleic acids. For example, his group showed that quantitative detection of plasma Epstein-Barr virus (EBV) DNA is a powerful approach for detecting, monitoring, prognosticating and screening nasopharyngeal carcinoma (NPC). This work has established virtually all of the key characteristics and applications of cell-free tumor-derived DNA for the liquid biopsy of cancer. In another field, Professor Lo was the first to demonstrate that a transplanted organ would release donor-derived DNA into the

IFCC Distinguished Clinical Chemist Award

Sponsor: IFCC
Presented to: Professor Yuk-Ming Dennis Lo, SBS MA DM DPhil BM BCh FRCP (Lond. & Edin.) FRCPath FRS

The IFCC is pleased and honoured to announce that Professor Dennis Lo has been selected to receive the 2017 IFCC Distinguished Clinical Chemist Award. This award recognizes an individual who has made outstanding contributions to the science of Clinical Chemistry and Laboratory Medicine, or the application of Clinical Chemistry to the understanding or the solution of medical problems.
plasma of a transplantation recipient. This discovery has since been developed into a novel method for monitoring post-transplantation rejection.

In summary, Professor Lo is the key driving force pushing forward the emerging field of circulating nucleic acids over the last 20 years. This technology has created a new paradigm with applications in many branches of laboratory medicine. In recognition of his contributions, Professor Lo was elected as a Fellow of the Royal Society and as a Foreign Associate of the US National Academy of Sciences. He received the King Faisal Prize in Medicine in 2014, was the named recipient of the AACC Wallace H. Coulter Lectureship in 2015 and was awarded the Future Science Prize in Life Sciences in 2016.

**IFCC Henry Wishinsky Award for Distinguished International Services**

**Sponsor:** Siemens Healthineers  
**Presented to:** Doctor Jocelyn M. Hicks, PhD, DSc, FRCPath

IFCC is pleased and honoured to announce that Professor Jocelyn Hicks, PhD, DSc, FRCPath will receive the 2017 Henry Wishinsky Award for Distinguished International Service. This award honours an individual who has made unique contributions to the promotion and understanding of Clinical Chemistry and Laboratory Medicine throughout the world.

Professor Hicks has provided international leadership in our discipline for several decades and has devoted her career to our profession particularly through international education programs for developing countries. Professor Hicks worked for 30 years at the Children’s National Medical Center (CNMC), in Washington, DC, USA. She has held many leadership positions at CNMC including President of the Medical Faculty Associates, membership on the Leadership Council, membership on the Hospital’s Board of Directors, a Board Member of the Hospital’s Foundation – the fund-raising arm of the hospital, and Chair of the Departments of Pathology & Laboratory Medicine and the Chair of the Center for Complex Diseases.

Professor Hicks is a Past President of the American Association for Clinical Chemistry (AACC), and she has served on its Board of Directors. Within the AACC, Dr Hicks founded the Van Slyke Society that is devoted to education and research, as well as providing funds for young clinical chemists to attend national meetings. She received 3 of AACC’s National Awards.

She was the founder and Past-President (2 terms) of the International Association of Pediatric Laboratory Medicine (IALPM).

Professor Hicks was Chair of the IFCC Publications Division and worked with Professor Donald Young to introduce the IFCC Website and the IFCC Journal. She was a Board Member and Treasurer of IFCC, and President from 2006-2008, being the only woman President in 65 years of the IFCC’s existence.

She helped expand the visiting Lectureship Programs through raising funds from Abbott Diagnostics and developed travel scholarships both personally and through funding provided by Roche Diagnostics. In addition, she helped develop the Ortho/Clinical Diagnostic Special Conferences and the Siemens Distant Learning program.

She has provided key leadership for the founding of the African Federation of Clinical Chemistry (AFCC) and attended the inaugural Congress in Nigeria in 2009. She also championed changes to the format of the IFCC General Conference to include participation of the National
and Corporate Representatives as well as the Past-Presidents of the IFCC.

She has presented lectures in forty-seven countries and has visited each of IFCC Regional Federations. She is very well known as an outstanding lecturer and has received honorary memberships of National Societies in 19 countries.

Worthy of special merit is her work on behalf of developing countries as an IFCC leader and lecturer, fundraiser and most importantly as a mentor who has hosted many individuals from developing countries at her home institution. Dr Hicks has truly been an “ambassador to the world”: she has not just contributed to the promotion of Clinical Chemistry and Laboratory Medicine; she has brought an understanding of the field to a world community in unique ways.

Dr Hicks obtained a BSc. (Honours) in Physiology and MSc. in Biochemistry from the University of London (UK) and a PhD in Physiology and Biophysics from Georgetown University Medical School (US). In 2010, she received a Doctor Science Honoris Causa Degree from the University of London. She has over 90 peer-reviewed publications, and many books including the Neonate, Point-of-Care Testing and the Directory of Rare Analyses. She also has served as editor of many journals. Her academic and administrative interests included paediatric reference values, point-of-care testing and strategic and business planning. In recent years she has spent two years as Chief Operating Officer at the In Vitro Fertilization Center in Fairfax, Virginia and now travels the world with her fiancé, Michael.

IFCC Award for Distinguished Contributions in Education
Sponsor: Abbott Diagnostics
Presented to: Professor Nader Rifai, PhD

IFCC is pleased and honoured to announce that Professor Nader Rifai, PhD has been selected to receive the 2017 IFCC Award for Distinguished Contributions in Education. This award honours an individual who has made extraordinary contributions in establishing and developing educational materials for our discipline to improve training and educational programs worldwide or in a region.

Nader Rifai is Professor of Pathology at Harvard Medical School, the Louis Joseph Gay-Lussac Chair in Laboratory Medicine, and the Director of Clinical Chemistry at Boston Children’s Hospital. Dr Rifai received his PhD in Pathology from the Medical College of Virginia and post-doctoral training in clinical chemistry from the University in North Carolina in Chapel Hill. For more than two decades, Dr Rifai’s research focused on biomarkers of cardiovascular disease. He published extensively in that field (h-index 106; ~60,000 citations) and co-edited several books including Handbook of Lipoprotein Testing and C-Reactive Protein & Cardiovascular Disease. More recently, his interest has shifted to the dissemination of scientific and medical information.

In the past decade, he has been the Editor-in-Chief of Clinical Chemistry (Impact Factor 8). In addition to enhancing the scientific stature of the journal, he built a solid educational program with multiple features including Clinical Case Studies (1.7 M downloads), Journal Club (> 1M downloads), and podcasts (1.5 M downloads). In addition, he launched a program called Reaching Out to the World in which articles from the Journal are made available to scientific societies for translation and dissemination to their members. >2000 translated articles to one of 15 languages have been done. The >650 articles translated to Chinese, for example, reach >210,000 laboratory scientists in that country. The articles translated to Chinese were compiled in a journal published by the Chinese Medical Association under the name Overseas Laboratory Medicine. In March 2017, the Chinese version of Clinical Chemistry was launched.

In 2011, Dr Rifai founded the Clinical Chemistry Trainee Council, a cloud-based, multi-lingual, and free of charge educational program for trainees and mentors in laboratory medicine (www.traineecouncil.org) that has been endorsed by >30 national and international laboratory medicine organizations. At the present time, the program is available in 7 languages and used by ~11,000 registrants from 153 countries. Over 140 international faculty members participated
Dr Rifai was a Senior Editor of the Tietz Textbook of Clinical Chemistry and Molecular Diagnostics, 6th edition and introduced the concept of a Platform, of which the Textbook is only a component. The product is primarily cloud-based and contains a wealth of information beside the actual Textbook including atlases, clinical cases, question bank, podcasts, biochemical calculations, and animation films. Over 200 leaders in laboratory medicine from 18 countries have participated in the creation of this product. Dr Rifai is now preparing the 8th edition of the Tietz Fundamentals of Clinical Chemistry and Molecular Diagnostics with an expected release date of September 2018.

In 2014, Dr Rifai embarked on what is now considered the most ambitious cloud-based program in medical education in the world using the concept of adaptive learning. This initiative is a collaboration between NEJM Group (the publisher of the New England Journal of Medicine), AACC, and Area9, a global leader in education technology. When completed, it will contain ~120 courses in all disciplines of laboratory medicine including Clinical Chemistry, Hematology/Coagulation, Molecular Diagnostics, Microbiology, and Transfusion Medicine; it will become the de facto backbone of all residency and fellowship training programs in laboratory medicine and the main source of continuing medical education. 75 faculty members from North America, Europe, and Australia are currently involved. This product has been launched in February 2017 under the name NEJM Knowledge+/AACC Learning Lab for Laboratory Medicine.

Dr Rifai is the recipient of several scientific awards and has been active in several national and international professional societies serving on the Boards of Directors of the American Board of Clinical Chemistry, the National Academy of Clinical Biochemistry, and the AACC.

IFCC Award for Significant Contributions to Molecular Diagnostics
Sponsor: Abbott Diagnostics
Presented to: Associate Professor Susan Branford, PhD

Professor Susan Branford completed her PhD in Biomedical Science in 2005 at the University of South Australia. She is the Head of the Leukaemia Laboratory in the Department of Genetic and Molecular Pathology at the Centre for Cancer Biology, SA Pathology, holds affiliate positions at the University of South Australia and the University of Adelaide and is a Fellow of the Royal College of Pathologists of Australasia (RCPA) Faculty of Science. She has special expertise in molecular monitoring of disease response and the prediction of drug resistance for patients with chronic myeloid leukaemia. As such she is a major contributor to international collaborative initiatives to establish guidelines and recommendations for producing reliable molecular data for patients with this malignancy, and has appointments on international advisory boards. Working with international collaborators she determined desirable performance criteria for consistent interpretation of molecular data on a new international reporting scale. The procedures were adopted internationally, are considered the gold standard and have been incorporated into international clinical practice guidelines to optimise patient outcomes. Her laboratory is an International Reference Laboratory that has responsibility for the standardisation of molecular methods globally.

Dr Branford is a National Health and Medical Research Council of Australia Senior Research Fellow where her main research is focussed on understanding the factors that predict response to tyrosine kinase inhibitor therapy and the mechanisms of drug resistance and disease progression in patients with chronic myeloid leukaemia. Her team has made a number of significant original observations that have influenced patient management. Dr Branford’s contribution to the improvement of clinical practise was recognised in 2016 by the Award from the International CML Foundation, which was the culmination of fundamental findings with a strong translational focus that have significantly impacted and improved the management of many patients with CML.
IFCC Distinguished Award for Laboratory Medicine and Patient Care

Sponsor: Sekisui Diagnostics
Presented to: Professor Eleftherios P. Diamandis, MD, PhD

IFCC is pleased and honoured to announce that Professor Eleftherios P. Diamandis, MD, PhD, will receive the IFCC Distinguished Award for Laboratory Medicine and Patient Care. This award recognizes an individual who has made unique contributions in laboratory medicine that have improved patient care and had a worldwide impact in clinical medicine.

Dr Diamandis currently serves as Division Head of Clinical Biochemistry at Mount Sinai Hospital and Biochemist-in-Chief at the University Health Network and is Professor & Head, Clinical Biochemistry, Department of Laboratory Medicine and Pathobiology, University of Toronto, Ontario, Canada. His research activities evolve around discovery and validation of cancer biomarkers, proteomics, mass spectrometry and translational research.

Dr Diamandis received his B.Sc. in Chemistry, Ph.D. in Analytical Chemistry and M.D. from the University of Athens, Greece and a Diploma in Clinical Biochemistry from the University of Toronto, Canada. He is a Certified Clinical Chemist by the Canadian Academy of Clinical Biochemistry and the American Board of Clinical Chemistry.

Dr Diamandis is a Member of 45 Journal Advisory Scientific and Editorial Boards, including The Journal of Biological Chemistry, Cancer Research, Molecular Cancer Research, Journal of Clinical Oncology, Clinical Chemistry and Journal of Proteome Research. He has received numerous awards from both national and international organizations. These include: American Association for Clinical Chemistry Award for Outstanding Scientific Achievements by a Young Investigator (1985); Annual Research Excellence Award of the Canadian Society of Clinical Chemists (1995); Excellence in Teaching Award, Department of Clinical Biochemistry, University of Toronto (1997); Distinguished Scientist Award, Clinical Ligand Assay Society (CLAS) (1999); American Association for Clinical Chemistry Award for Outstanding Contributions to Clinical Chemistry in a Selected Area of Research (1999); Van Slyke Award, the New York Metro Section of the American Association for Clinical Chemistry (1999); Distinguished Scientist Award, National Academy of Clinical Biochemistry (NACB) (2000); Miriam Reiner Award from the Capital Section of the American Association for Clinical Chemistry (2001); Abbott Award from the International Society for Oncodevelopmental Biology and Medicine (ISOBM) (2002); Annual Education Excellence Award of the Canadian Society of Clinical Chemists (2003); Frey-Werle Commemorative Gold Medal from the Frey-Werle Foundation (2007); The Morton K. Schwartz Award for Significant Contributions in Cancer Research Diagnostics from the American Association for Clinical Chemistry (AACC) (2007); Outstanding Contributions to Clinical Biochemistry Award from the Ontario Society of Clinical Chemists (OSCC) (2008); The International Federation of Clinical Chemistry and Laboratory Medicine (IFCC)/Abbott Award for Significant Contributions to Molecular Diagnostics (2009); Excellence in Biomedical Research Nemitsas Prize in Medical Sciences, Takis and Louki Nemitsas Foundation (2010); Senior Sustained Excellence in Graduate Teaching Award, Faulty of Medicine, University of Toronto (2013) and the Carl Joliff Award for Lifetime Achievement in Clinical and Diagnostic Immunology (2014). Dr Diamandis is highlighted for his citation record in: The Provincial Government of Ontario document entitled “Ontario’s Innovation Agenda” (2010), [www.ontario.ca/innovation; page 11]. He has more than 50,000 lifetime citation and an H-index of 111.

Other major distinctions of Dr Diamandis include his election as Corresponding Member of the Academy of Athens, Greece (2005), Member of the Royal Society of Canada (2008), Fellow of the American Association for the Advancement of Science (2011) and Fellow of the Canadian Academy of Health of the Sciences (2012). He has published 133 review papers, over 600 research papers and co-authored 4 books and 42 book chapters. He is the inventor of 28 issued and 26 pending patents and supervised 22 MSc. and 35 PhD. theses.

The research interests of Dr Diamandis are as follows:
1. Kallikrein Biology and Pathophysiology
2. Proteomics
3. Tumor Markers
4. Mechanisms of Carcinogenesis and Metastatic Progression
5. Translational Research
6. Cancer Therapeutics
7. Male Infertility
8. Pathobiology and Biomarkers of Autoimmune Diseases
9. Neurodegeneration
IFCC - Robert Schaffer Award for Outstanding Achievements in the Development of Standards for Use in Laboratory Medicine

**Sponsors:** National Institute of Standards and Technology (NIST), Clinical and Laboratory Standards Institute (CLSI)

**Presented to:** Professor Matthias M. Müller, MD, PhD

IFCC is pleased and honored to announce that Professor Matthias M. Müller, PhD, has been selected to receive the IFCC Robert Schaffer Award for Outstanding Achievements in the Development of Standards for Use in Laboratory Medicine. This award is named after Robert Schaffer, an organic chemist at the NIST who dedicated his career to the development of reference methods and materials for use in the clinical laboratory. It honors an individual who has made unique contributions to the advancement of reference methods and/or reference materials for laboratory medicine to facilitate improved quality of clinical diagnostics and therapies, which would in turn lead to reduced costs and improved patient care.

Matthias M. Müller is Professor of Medical Chemistry at the University of Vienna, Austria and Director Emeritus of the Institute of Laboratory Diagnostics at the Kaiser Franz Josef Hospital and the Preyer Children’s Hospital. He received his MD degree at the University of Vienna. He was trained in Laboratory Medicine and in Transfusion Medicine. He held senior positions in Laboratory Medicine and Clinical Biochemistry at the University of Vienna. After his retirement he joined the Austrian company Future Lab which runs diagnostic laboratories in 7 European Countries. Recently he moved to Lifebrain Holding, Vienna, Austria, as Chief Medical Officer. In this position he is involved in setting up diagnostic laboratories in Italy. Lifebrain operates at present around 160 diagnostic labs.

Professor Müller’s major research interests were related to purine metabolism and clinical and applied biochemistry. In early studies he investigated properties of various enzymes, purine transport, uptake and regulation in erythrocytes, lymphocytes, leukemic cells, skeletal muscle, myocardial and in endothelial cells under ischemic and reperfusion conditions taking oxidative stress into consideration. Further studies were related to laboratory diagnosis in transplantation medicine and to the rational use of tumor markers. His institute was also part of a European research project for the establishing services for inborn errors in purine and pyrimidine metabolism. He has published together with his collaborators app. 300 scientific papers, he is author and co-author in more than 250 abstracts, and editor and co-editor in 7 books and proceedings. He served in the editorial boards of the following journals: Clinical Chemistry, Clinical Biochemistry, Clinica Chimica Acta, Adv. in Clinical Pathology, Accreditation and Quality Assurance.

Professor Müller served in various professional organizations: he was on the board as Secretary, Treasurer, Vice-President and President of the Austrian Society of Clinical Chemistry. In addition he served as General Secretary of the Austrian Society of Quality Assurance and Standardization (ÖQUASTA) (1981-1992). He was responsible for the establishment and operation of the Austrian proficiency testing programme covering the whole area of clinical diagnostics: Clinical Chemistry, Hematology, Coagulation, Blood grouping, and Serology. Since 2005 he has been President of the ÖQUASTA. Within IFCC Professor Müller was Secretary of the Executive Board (1985 - 1987) and from 1988 - 1996 a member of the Scientific Division (Vice-Chairman, Chairman). He negotiated and signed the collaboration agreement between CLSI (formerly NCCLS) and IFCC. During his terms several projects on certified Reference Materials and Reference Methods were conducted. e.g. HbA1c, lipoproteins, enzymes. He succeeded to establish a working-collaboration with the European Institute of Reference Measurements and Materials (IRM). Since 1997 he served as Vice President, and two periods as President of the IFCC. In these positions he established and managed the Professional Scientific Exchange Programme for young scientists, a scholarship for individual training. He was initiating together with others the establishment of the Joint Committee of Traceability in Laboratory Medicine (JCTLM) in collaboration with BIPM and ILAC. He chaired the JCTLM for 5 years. The JCTLM data base exhibits primary reference materials and reference methods useful for the IVD industry to establish traceability of their routine tests.
Dr. Jack H. Ladenson, PhD has been selected to receive the 2017 IFCC Distinguished Award for Contributions to Cardiovascular Diagnostics. This award honours an individual who has undertaken remarkable scientific work with cardiac markers or immunodiagnostic applications to improve cardiac disease diagnosis. It is be presented for the first time on occasion of the WorldLab Congress – Durban, South Africa.

Dr. Rojeet Shrestha, MT, M.Sc., PhD has been selected to receive the 2017 IFCC Young Investigator Award. This award recognizes and encourages the academic and professional development of a young investigator (under 40 years of age) who has demonstrated exceptional scientific achievements in Clinical Chemistry and Laboratory Medicine early in his/her career.
College and Teaching Hospital, Kathmandu University, Jana Maitri Hospital, Nobel College, Valley College of Health Sciences, and Yeti College of Health Sciences, Kathmandu Nepal. He has supervised research work of 5 university students of laboratory medicine and been the examiner of a graduate student.

Currently, Dr Shrestha is a co-investigator of the Japan Triglyceride Deposit Cardiomyovasculopathy (TGCV) project funded by Japan Agency for Medical Research and Development (AMED) studying the prognostic utility of medium-chain triglycerides and fatty acids in disease. He is an associate fellow of US National Academy of Clinical Biochemistry (NACB). He has been recognized with several prestigious awards including the National Academy of Clinical Biochemistry’s distinguished abstract award (2013), Japanese Society of Clinical Chemistry (JSCC)’s Best Paper Award (2015), American Association for Clinical Chemistry (AACC) Division Award for Excellence in Research (2015), and Asia-Pacific Federation for Clinical Biochemistry (APFCB)’s Young Scientist Award (2016). He has also been awarded international travel grants awarded by AACC twice (2010 and 2016), Young Scientist Investigator Travel Award by the Korean Society for Laboratory Medicine (KSLM), APFCB, and the Korean Association for the Study of the Liver (KASL). He served as Treasurer (2007-09) and Secretary (2010-12) of Nepal Association for Medical Laboratory Sciences (NAMLS). Currently, he is a secretary of Lipoproteins and Vascular Disease Division (LVDD) of AACC and member of the IFCC Committee for Internet & eLearning. He is serving as the Social Media Coordinator of IFCC since May 2017.