Chapter 1
Organization, Structure and Function of IFCC
1.1. INTRODUCTION

The International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) is a worldwide, non-political organization for clinical chemistry and laboratory medicine. As such, it has a range of roles that include (1) global standard setting in collaboration with other international organizations, (2) supporting its members through scientific and educational endeavour, and (3) providing a series of congresses, conferences and focused meetings in order for laboratory medicine specialists to meet and present original findings and best practice.

The IFCC relies very heavily on volunteers to run the organization and to undertake its range of activities and programmes. Those volunteers are constantly changing and so a reference document is required to assist people who want to learn more about IFCC and its operation. That reference document is this IFCC Handbook.

The production of the hard copy version of the IFCC Handbook occurs once every three years to coincide with the term of each Executive Board. However, the detail in the IFCC Handbook is constantly being updated at the beginning of every year and the most up to date version is always available from the IFCC website (www.ifcc.org).

The Handbook puts in one place all the information about the function and operation of IFCC. This includes the organization of IFCC and its aims and strategic objectives over the three year life of the Executive Board. Also, it includes details of IFCC programmes and projects. The Handbook lists, in logical order, IFCC Regional Organizations, Divisions, Committees and Working Groups. The Full Members, Corporate Members and Affiliate Members are also included. Contact names and addresses are included for the many people who work with and for IFCC. Finally the necessary Statutes and Rules of the IFCC are published in the Handbook.

We thank the many individuals responsible for preparing this useful document.

Graham H Beastall
President

Sergio Bernardini
Secretary
1.2. ORGANIZATION OF IFCC

The IFCC contains three Membership categories.
- Full Members that are recognised and established national societies of clinical chemistry and laboratory medicine.
- Corporate Members, that are individual companies, corporate entities or research establishments concerned with the field of clinical laboratory practice.
- Affiliate Members, that are allied international or national societies or groupings interested in the science and practice of laboratory medicine.

The organisational structure of IFCC is illustrated in the Figure 1. The governing body is the Council that consists of one Representative appointed by each Full Member (voting), Affiliate Member, and Corporate Member. It convenes at the triennial International Congress of Clinical Chemistry and Laboratory Medicine. Between Council meetings, the business of IFCC is conducted by the Executive Board that is elected by the Council. Any important questions that arise between Council meetings, such as the admission of new Full Members to the Federation, approval of recommendations, and changes or amendments of statutes are decided by mail ballot of the Full Member Representatives voting on behalf of their societies.

Membership of IFCC is accorded to National Societies of Clinical Chemistry and/or Laboratory Medicine, each of which pays dues related to the number of members in its society. A National Society applying for Full Membership of IFCC must show that it is recognised as the main society responsible for clinical chemistry and/or laboratory medicine in that country, and satisfy the Executive Board that its statutes and by-laws are in accordance with the principles of the Federation.

The Executive Board comprises the President, Vice-President, Past President, Secretary, and Treasurer and three Members plus an individual representing Corporate Members. The Executive Board normally meets three times a year; the Chairs of the IFCC Divisions attend at least one meeting per year.

The IFCC carries out much of its business through its Divisions and Committees. There are currently three Divisions, each of which has an Executive that reports directly to the Executive Board.
- Scientific Division
- Education and Management Division
- Communications and Publications Division

The Committee for Congresses and Conferences also reports directly to the Executive Board.

Every three years, the Executive Board appoints two further committees, namely, the Nominations Committee to prepare a slate of candidates for elections for the next Executive Board, and the Awards Committee to select the recipients of the IFCC awards. The Executive Board may also appoint Special Project Committees and Task Forces.

Much of the work of the Divisions is delegated to Committees, which report to the Division Executive. These Committees have broad responsibility areas and tend to function for several years. Members of the Division Executives, together with the Chairs of the Committees reporting to Divisions, are appointed by the Executive Board; Ordinary members of Committees reporting to Divisions are appointed by the Division Executives. Divisions may also appoint Working Groups to work on defined projects or to do less formalised work. Working Groups are dissolved when their specific projects are completed, although their work may lead to the establishment of Committees or other activities funded by IFCC.
Doctor Graham Beastall (BSc, PhD, CSci, EurClinChem, FRCPath, FRCPath, CBE), currently serves as professional adviser on laboratory medicine for the Department of Health in the UK. Immediately prior to becoming IFCC President he was the Clinical Lead for the multi-site network Department of Clinical Biochemistry in North Glasgow, Scotland, United Kingdom (UK).

He received his BSc and PhD degrees from the University of Liverpool in the late 1960s. After postdoctoral study he moved to Glasgow in 1972 as a University lecturer and became an employee in the National Health Service (NHS) as the rapid expansion of clinical chemistry practice required experienced leaders. He has specialized in biochemical endocrinology and in 1979 he formed and led the Scottish specialist endocrine laboratory based at Glasgow Royal Infirmary.

Doctor Beastall gained Mastership and then Fellowship of the Royal College of Pathologists (FRCPath), the highest professional postgraduate qualification in laboratory medicine in the UK. His breadth of experience enabled him to become Consultant Clinical Scientist and then Clinical Lead for the largest department of clinical chemistry in the UK. In this role he developed an active interest in evidence-based medicine and in the policy of adding value to the role of clinical laboratories.

He is a registered Clinical Scientist with the Health Professions Council and a Chartered Scientist (CSci) with the UK Science Council. He is also a European Specialist in Clinical Chemistry and Laboratory Medicine (EurClinChem). In addition, he has held honorary positions with the University of Glasgow and has taught clinical chemistry to both medical and science students and supervised several postgraduate students. He has co-authored more than 170 peer-reviewed original publications; a number of books, chapters and review articles and has given more than 100 invited lectures and served on the editorial board of a number of journals.

Doctor Beastall has held a number of professional representative roles in the UK including Chairman, President and Past President of the Association for Clinical Biochemistry (ACB). He was the first non-medical Vice President of the Royal College of Pathologists (RCPath) and has chaired the clinical chemistry steering committee for the UK National External Quality Assurance Schemes (UK NEQAS). He has been a board member and longstanding assessor for Clinical Pathology Accreditation (UK) Ltd (CPA), which accredits laboratories to ISO 15189 standards.

At the international level Doctor Beastall has served as the Secretary of the European Communities Confederation of Clinical Chemistry and Laboratory Medicine (EC4) for several years during its formative stage. He also has served Chair of the IFCC Congress and Conference Division and was Secretary of the organising committee for the 16th International Congress of Clinical Chemistry and Laboratory Medicine held in London in 1996. In 2005, he chaired the organising committee for EuroMedLab 2005, which was held in his home city of Glasgow. Doctor Beastall has received a number of honours including the ACB Foundation Award and the EC4 Distinguished Officer Award. He also received the 2005 FESCC European Distinguished Clinical Chemist Award and became an Honorary Fellow of the Royal College of Physicians (FRCP). In 2007, he became a Commander of the Order of the British Empire (CBE) for his services to medical science in the UK and received his award from the Queen at Buckingham Palace. In 2009 he became an Honorary Member of the ACB.

Graham is married to Judith, a retired schoolteacher. They have two grown sons. He has been involved in Scouting for more than 50 years and continues to work with children from one of the deprived areas of Glasgow. His other interests include gardening, hill walking and a passion for Liverpool Football Club.
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Professor Howard Morris (PhD, FAACB, FFSc(RCPA)) holds a joint appointment as Professor of Medical Science in the School of Pharmacy and Medical Sciences, University of South Australia and a Chief Medical Scientist in Chemical Pathology at SA Pathology, Adelaide Australia. Between 2003 and 2008 he was the Secretary of the Scientific Division of the IFCC and has served as a member of the IFCC Task Force on the Global Campaign on Diabetes Mellitus (2003-2008), Task Force on International Clinical Liaison (2009-2011) and International Scientific Committee XXIst International Congress of Clinical Chemistry and Laboratory Medicine, Berlin Germany, 2011 (2007-2011). Within the Asia Pacific Federation of Clinical Biochemistry (APFCB) he served as Chair, Scientific Committee (2002-2004) and Chair, Scientific Organising Committee, Member Organising Committee for 10th Asian Pacific Congress of Clinical Biochemistry (2002-2005). He was the Australasian Association of Clinical Biochemists (AACB) representative to the Councils of the IFCC and APFCB (1998-2004), served on AACB Council (1998-2002) and Editor of the Clinical Biochemist Reviews (1994-2002). He was awarded an AACB Outstanding Service Medallion (2003) and the W. Roman Travelling Lectureship (2004).

Dr Morris currently serves as a Clinical Scientist for the Chemical Pathology Directorate, SA Pathology providing clinical advice and comments in the discipline. He had 24 years experience working in diagnostic clinical biochemistry in the field of immunoassay and endocrinology between 1976 and 2000 during which he managed a major clinical endocrinology laboratory for the Institute of Medical and Veterinary Science (IMVS, Adelaide) providing services for the Royal Adelaide Hospital (RAH) and the state of South Australia. In 1997/98, the laboratory reported some 245,000 patient results. Between 2003 and 2009 he was the Director of the Hanson Institute, the research arm of the IMVS and RAH. In 2009 the Hanson Institute administered infrastructure to support the research of some 300 staff and 100 postgraduate students who generated external grants amounting to approximately $AUD 30 million annually.

Dr Morris leads an active research team that has received over $7 million in competitive research grants and has published 242 refereed publications, reviews and book chapters. His research interest includes the pathophysiology of metabolic bone disease and the effects of hormones including vitamin D funded by the National Health and Medical Research Council and Australian Research Council, the major competitive funding bodies in Australia. His latest work has identified the basis for vitamin D requirement to reduce the risk of fractures amongst the elderly. He was invited to present the Louis Avioli Memorial Lecture at the 2009 Annual Scientific Meeting of the American Society for Bone and Mineral Research on this topic. He is also Deputy Chair of a South Australian Department of Health Working Party on Osteoporosis and Fracture Prevention.

Professor Jocelyn M. B. Hicks, PhD, DSc., FRCPath is Executive Director Emeritus at Children's National Medical Centre and Professor Emeritus of Paediatrics and Pathology at The George Washington University School of Medicine in Washington, DC, USA. Most recently Dr. Hicks was the Chief Operating Officer of the Genetics and Fairfax Identity Divisions of The Genetics and IVF Institute in Fairfax, Virginia. Prior to that, she was Chair of Laboratory Medicine and Pathology and Executive Director of the Centre for Complex Diseases at the Children's National Medical Centre (CNMC), Washington, DC. While at CNMC Dr. Hicks held many leadership positions, including President of the Medical Faculty Associates, membership on the Leadership Council, membership on the Hospital’s Board of Directors, and was a Board member of the Children’s Hospital Foundation, the fund-raising arm of the hospital. She currently does volunteer work in a local hospice.

Dr. Hicks obtained a BSc. (Honours) in Physiology and her 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 served as editor of many journals. Her academic and administrative interests include paediatric reference values, point-of-care testing and strategic and business planning.

Dr. Hicks is a Past President of the American Association for Clinical Chemistry (AACC) and 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.

Dr. Hicks is the founder and Past-President (two terms) of the International Association of Paediatric Laboratory Medicine. Dr. Hicks was Chair of the Publications Division of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC), and introduced the IFCC Website and the IFCC Journal, together with Professor Donald S. Young. Dr. Hicks was the Treasurer and a Board member of the IFCC from 2003-5, and President from 2006-8.

Dr. Hicks’ many honours include honorary memberships in the Association of Clinical Biochemists (UK), the Israel Society of Clinical Biochemistry, the Portuguese Association of Clinical Pathology, the Egyptian Society of Laboratory Medicine, the Egyptian Society of Clinical Chemistry, the Tunisian Society of Clinical Biology, the Croatian Society of Medical Biochemists, the French Society of Clinical Biology, and the Spanish Society of...
Clinical Biochemistry and Molecular Pathology. Dr. Hicks has received three of the AACC’s national awards, and is frequently invited to speak both nationally and internationally.

As Past-President of IFCC she supports strongly the current strategic plan. Prof. Hicks continues her support of several major programmes, especially those to help Developing Countries, the Federations and National and Corporate Representatives. These included greatly expanding the Abbott/IFCC Visiting Lecture Programme, adding the Roche/IFCC Travel Scholarships, the IFCC/Ortho Clinical Diagnostics Special Conferences and the Siemens Distance Learning Programme.

She founded the African Federation of Clinical Chemistry (AFCC) and attended the inaugural Congress in Nigeria in 2009 and the second Congress in Kenya in 2011.

She changed the format of the General Conference to include actively the National and Corporate Representatives, as well as the Past Presidents. She continues her work with developing countries and Corporations under the leadership of the President, Dr. Graham Beastall.

Her personal interests include cooking, playing bridge, travelling and exercising.

Professor Sergio Bernardini (MD, PhD), is a full professor of Clinical Biochemistry and Clinical Molecular Biology at the Department of Internal Medicine of The University of Rome Tor Vergata, and the head physician of the Clinical Molecular Biology Unit at the Tor Vergata University Hospital.

He received his degree in Medicine in 1986 and the PhD in Paediatric Sciences in 1995. He has specialized in Paediatrics (1990) and in Clinical Chemistry and Biochemistry (1998).

Professor Bernardini serves as the president of the undergraduate course in “Diagnostic laboratory techniques in the medical field” and, as a clinical laboratory research consultant with Bambino Gesu’ Children’s Hospital in Rome.

He is a member of (1) the Italian Society of Clinical Biochemistry (SiBioC), (2) the SiBioC Committee of Clinical Molecular Biology, (3) the Italian Society of Biochemistry (SiB) and (4) the Italian Society of Allergology and Immunology (SIAIC). His international activities include membership of the Editorial Advisory Board of The Encyclopedia of Life Sciences.

As a professor he has several teaching responsibilities including a Bachelor’s course in diagnostic laboratory techniques in the medical field, degree courses in medicine, medical biotechnologies, movement sciences and postgraduate courses in Clinical Biochemistry, Gastroenterology, Neurology, Medical Genetics, Allergology and Immunology, and Paediatrics.

Professor Bernardini’s research interests are diverse in nature and have included work in paediatric endocrinology with particular interest in growth hormone and insulin like growth factors and their binding proteins. He has also worked on apoptotic pathways in oncology, in particular neuroblastoma, as well as on glutathione transferases, a family of enzymes involved in cell detoxification and in the control of the programmed cell death. Also, he has collaborated in the application of molecular biology and proteomic methods and techniques in research applied to neurodegenerative diseases, oncology and pharmacogenetics. Since 2009 he has collaborated in the application of molecular biology and biochemical methods to monitoring of sport training and performance.

Sergio is married to Elisabetta since 1998 and has a son, Andrew 21 years old, and a daughter Marta aged 19. His personal interests include football, theatre and travelling.
Doctor Bernard Gouget (PhD), is assistant Professor at the University Hospital in Paris Descartes. He also is a Counsellor for public health at the Fédération Hospitalière de France where he is responsible for monitoring national programmes involving the growing challenges facing public hospitals and the health and safety of the patient. He also has served as a Project Manager for pharmaceutical and medical expertise. Dr. Gouget has also served as a member of the steering committee in charge of the French reform of the medical laboratories and an expert in medical biology for the European Union at the Ministry of health level, and as a member of the COFRAC-WG charged with writing the Rules of Accreditation for medical laboratories.

Other positions include serving as Mission Coordinator at the Medical Policy Directorate, Manager of Laboratory Projects at the National Centre for Hospital Expertise (CNEH), as Deputy Director of the clinical laboratory at general hospitals, and Section Head of the emergency laboratory at the Necker Children University Hospital in Paris.

Academically, Dr. Gouget has received a Diploma and a Doctorate in Pharmacy from the University of Paris V, a Master in Human Biology from the University of Paris I, a DEA in Science from the University of Paris XII, a DEA in Health economy and a thesis in Public Health. He was nominated to the list of approved hospitals directors in 1995. His professional and research interests include organ physiology in intensive care, the adaptation of health care services to required standards of patient care, nosocomial infections, chronic diseases, biomedicine and ethics, patient safety, pandemics, bioterrorism and illnesses related to unhealthy lifestyles.

Dr. Gouget has been active in National, Regional, and International organizations including serving as a representative of SFBC-EFLM and as a member of the FESCC scientific advisory committee. He is currently the chair of the EFLM Working Group on Communication, e-Newsletter and Distance Learning. He has been active in the IFCC serving as a member of the Publications Division, Chair of the IFCC Communications and Publications Division (CPD), and as an associate member of the Working Group on Biosensors and Blood Gases (POCT). Currently, he serves as the acting Deputy General Secretary at the International Francophone Federation of Clinical Biology and Laboratory Medicine created by the French speaking and Euro-Mediterranean countries to reinforce the international network of laboratory scientists within IFCC.

Dr. Gouget has published widely and has edited or co-edited a number of publications including the Proceedings of Journées de Biologie Clinique-Institut Pasteur, a SFBC monograph on Instrumentation for Clinical Biochemistry, a special issue on Nanotechnologies in the Revue Européenne de Biotechnologies Medicales (IRBM), and a number of IFCC monographs. He has served on the Editorial Board of a number of French journals and magazines in the field of laboratory medicine. Currently, he is a member of the editorial Board of Lab Medica International. He has lectured at a number of National, Regional, and International meetings, conferences, and congresses and has served on a number of international scientific advisory boards. In 2001, he was awarded with the AACC International travel fellowship award.
Doctor Thomas Brinkmann joined Unilabs in 2011 as corporate Chief Medical Officer, based in Geneva, Switzerland.

Dr. Brinkmann graduated from the University of Bielefeld, Germany, and holds a PhD in Biochemistry from the same university. In 1991/92 he worked at the Pasteur Institute, Paris, France, and from 1992-2003 as senior assistant at the Institute of Laboratory and Transfusion Medicine of the Heart and Diabetes Centre Nordrhein-Westfalen in Bad Oeynhausen, a university hospital of the Ruhr-University Bochum, Germany. In this position he was senior assistant of the medical laboratory. He has experience in clinical chemistry, immunodiagnostics, haematology, immunohaematology, microbiology, serology, blood banking and molecular biology.

He qualified as Clinical Chemist and since 1999 he has been registered as European Clinical Chemist (EurClinChem). Since 2001 he is associate professor for clinical biochemistry at the Medical Faculty of the Ruhr-University of Bochum, Germany.

In 2003 Dr. Brinkmann continued his career in the industrial sector and joined Beckman Coulter's European headquarters in Nyon, Switzerland as head of the EMEAI Scientific Group. In this position, he directed a team of physicians and scientists in Europe, Middle East, Africa and India for scientific marketing, commercial support and lobbying.

Dr. Brinkmann has actively collaborated with many IFCC Committees and Working Groups and he served as the Corporate Representative on the IFCC Executive Board from 2009-2011.

With his experience in research and routine diagnostics in laboratory medicine, in scientific marketing of a global diagnostic company and in a commercial diagnostic organisation he will continue to serve for the next three years as a link between IFCC and Diagnostic Industry.

Professor Larry J. Kricka (DPhil, FACC, CSci, CChem, FRSC, FRCPath) is Professor of Pathology and Laboratory Medicine at the University of Pennsylvania and Director of the General Chemistry Laboratory, and Director of the Critical Care Laboratory at the University of Pennsylvania Medical Center, Philadelphia, PA, USA. He received BA (1968) and DPhil (1971) degrees from the University of York, UK and joined the Clinical Chemistry Department (Wolfson Research Laboratories) at Birmingham University, Birmingham, UK in 1973 where he became Reader in Clinical Chemistry (1987). In 1981 he was a Medical Research Council Traveling Fellow, at the University of California at San Diego, San Diego, CA and in 2002 was Distinguished Visiting Scholar at Christ's College, Cambridge, UK.

Prof. Kricka has been an active member of the American Association for Clinical Chemistry (AACC) since 1987, and has served as a member of its Board of Directors (1997-1999) and was President of the AACC in 2001. He has also been active in AACC educational activities and was Chair of the Oak Ridge Conference (1994-1996), and Vice Chair of the 2008 and the 2012 AACC Annual Meeting Organizing Committee. Also, he is an Honorary member of the Association for Clinical Biochemistry (UK). From 1997-1999, Prof. Kricka was a member of the IFCC Committee on Advanced Technology and subsequently, Chair of the IFCC Working Group on Microtechnology (1999). In the 1980s he served as a consultant to the WHO and the British Council. He is currently President of the International Society forBioluminescence and Chemiluminescence.

Prof. Kricka has been active in scientific publishing and is Editor-in-chief of Luminescence, a member of the editorial board of Clinical Chemistry, Lab-on-a-chip, Biomarkers in Medicine, SciAlert, Journal of Medical Sciences, Analytical Biochemistry, and past Editor of the Journal of Immunoassay.

Research interests include (1) analytical applications of bioluminescence and chemiluminescence, (2) DNA probe assays, (3) analytical microchips for genetic and other types of testing, (4) analytical applications of nanotechnology, (5) analytical interferences caused by heterophile antibodies and (6) direct to consumer testing.

Dr Kricka holds 38 U.S. patents; and is the author/co-author of over 550 publications including 23 books. He has received a number of awards and honors including the Society of Analytical Chemistry Silver Medal (Royal Society of Chemistry) (1981), Prince of Wales Award for Innovation and Production (1989), Queens Award for Technological Achievement (1990), Rank Prize for Opto-Electronics (1991), the AACC Award for Outstanding Contributions to Clinical Chemistry in a Selected Area of Research (1998), and the AACC Ullman Award (2006).

His personal interests include weight lifting, alliterative verse, and gastronomy.
Professor Vanessa Steenkamp (PhD) obtained her MSc in Biochemistry at the University of Pretoria in 1991. Her first staff position was at the South African Institute for Medical Research, now the National Health Laboratory Services in the Department of Endocrinology. Later, she was appointed Lecturer in the Department of Chemical Pathology, University of the Witwatersrand and obtained her PhD in Clinical Toxicology. She returned to the University of Pretoria as Senior Lecturer in the Department of Urology and five years later transferred to the Department of Pharmacology, where she is currently Associate Professor and Head of the Phytopharmacology Unit. Her research interest and publications have been in the area of traditional herbal remedies and their effect on patients, as well as the development of methods for the detection of these active compounds in biological fluids. In addition, she is involved in pre-clinical testing of traditional herbal remedies which includes the isolation of active compounds and development of new drugs.

Throughout her career she has been active in promoting professional activities, especially with regards to developing country needs. She was the Treasurer of the South African Association of Clinical Biochemistry (SAACB) from 2001 to 2005, where after she served as President until 2010. Nationally she also holds board positions as Vice-President of the Toxicology Society of South Africa (TOXSA), Secretary-General of the South African Society for Basic and Clinical Pharmacology (SASBCP) and Treasurer of the Federation of the South African Societies of Pathology (FSASP). Internationally her activities include serving as Director of Education on the Council of the International Association of Therapeutic Drug Monitoring and Clinical Toxicology (IATDMCT), and participation in the Clinical Toxicology Committee and Standards of Laboratory Practice Committee in this Association.

Prof. Steenkamp started her association with the IFCC as country representative for South Africa during 2005 to 2011. She served on the Committee for Congresses & Conferences (C-CC) for the term 2009–2011. She was first elected President of the African Federation of Clinical Chemistry (AFCC), a regional Federation of the IFCC, at its inauguration in October 2009 and was re-elected in October 2011, to serve until 2013.

Prof. Steenkamp has written more than 60 publications and serves on the editorial board of four journals related to Toxicology and Ethnopharmacology. She acts as invited reviewer for several journals and has lectured worldwide at congresses and international forums. In 2010 she was awarded with the IATDMCT traveling lectureship. She has and continues to serve as organizing member and on the scientific advisory boards of national and international congresses.

She is the mother of four boys and the manager of a provincial chess team. Her personal interests include gardening, nature and reading.
Ulisses Tuma, (M.D.) is Director of Laboratory Moderno Ltda, Goiania, Brazil. He is a Past-President and Past-Secretary of the Brazilian Society of Clinical Analyses (SBAC) and has served as Chair of the Organizing Committee of a number of Brazilian Congresses of Clinical Analyses. He has been very active in a number of other professional organizations serving as a member of the Brazilian Council of Pharmacists-Biochemists and as a member of the executive board of the Association of Superior School of War - State of Goiás-Brazil. Dr. Tuma has also served as the President of Regional SBAC for the state of Goiás-Brazil.

Academically, Dr. Tuma graduated with a degree in Pharmacy-Biochemistry- Federal University of State of Goiás-Brazil. His titles include Specialist in Clinical Analyses by Brazilian Society for Clinical Analyses (SBAC). He has received post graduate training in Cytology from the Federal University of State of Goiás-Brazil and in Politics and Strategies from the University of the State state of Goiás-Brazil.

1.4. CLINICAL CHEMISTRY AND LABORATORY MEDICINE: ROLE IN HEALTHCARE

Clinical Chemistry and Laboratory Medicine is the application of chemical, molecular and cellular concepts and techniques to the understanding and the evaluation of human health and disease.

At the core of the discipline is the provision of results of measurements and observations, together with interpretation and informed clinical advice relevant to:

- The maintenance of health
- The cause of disease
- The diagnosis of disease
- Predicting and monitoring the response to therapy
- Follow up investigations

The discipline is committed to deepening the understanding of health and disease through fundamental and applied research. The use of chemical techniques to examine biological fluids may be traced back more than 300 years. However, it is only in the past 100 years that reliable quantitative assays have become established for constituents in blood and urine. It was in the late 1940s that the first scientific societies and the first journals bearing the title Clinical Chemistry were established. The International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) was established in 1955.

In the past 60 years there has been a rapid expansion in Clinical Chemistry and also in other disciplines of Laboratory Medicine including Haematology, Transfusion Medicine, Immunology, Medical Microbiology and Clinical Genetics. These disciplines often use similar technology and may be used in combination to assist the investigation and management of patients. As a result the term Laboratory Medicine is becoming more widely adopted, although its exact definition varies between countries. In recognition of this development the Federation changed its name in 1996 to the International Federation of Clinical Chemistry and Laboratory Medicine, although it maintained the abbreviation IFCC. Today it is widely accepted that approximately 70% of clinical decisions in healthcare are informed by Laboratory Medicine.

Advances in Clinical Chemistry and Laboratory Medicine have occurred as a result of improved knowledge and understanding of the pure sciences (mathematics, physics, chemistry); related medical sciences (biochemistry, physiology, genetics, cellular and molecular biology); and technology (instrumentation, automation, information technology, nanotechnology). As a result modern medical laboratories incorporate sophisticated equipment and methodologies. High throughput analytical platforms capable of performing tens of thousands of tests per day sit alongside state of the art mass spectrometers, cell counters and micro-array systems. Consequently, modern medical laboratories require highly trained and skilled medical practitioners, scientists and technologists, including specialists in analysis, clinical application, information management, proteomics and bioinformatics.

Furthermore, the advances in technology have enabled increasing amounts of Clinical Chemistry and Laboratory Medicine to be delivered outside medical laboratories, closer to the patient. Point of care testing now occurs in hospital wards, clinics, doctor's offices, community pharmacies, places of work and in the home.Whilst point of care testing is designed for use by non-specialists considerable education and support is required to ensure high quality results and an understanding of their clinical significance.

The diversification of Clinical Chemistry and Laboratory Medicine has created a natural and positive partnership between Laboratory Medicine specialists in clinical laboratories and in the in-vitro diagnostics industry. Typically original science in research laboratories leads companies to develop new diagnostic products that are translated into service and validated in medical laboratories.
In the modern era of Clinical Chemistry and Laboratory Medicine results are not enough. The quality of results has to be assured. Quality assurance is an all embracing agenda that includes:

- Internal quality control
- External quality assessment
- Quality management and laboratory accreditation
- International method standardization to the highest level of traceability
- Harmonization of nomenclature, properties and units

Quality results are still not the finished product because they need to be converted into knowledge that is then used to shorten patient pathways and lead to improved patient outcomes. Knowledge management includes:

- The application of evidence-based medicine
- The development of practice based clinical guidelines
- Participation in multidisciplinary teams
- Translational research
- The development of personalized medicine
- Promoting the contribution of Clinical Chemistry and Laboratory Medicine to healthcare

As the leading worldwide professional organization for Clinical Chemistry and Laboratory Medicine IFCC has a responsibility to be at the front end of international scientific and clinical development whilst providing education and management support to its members to improve the quality of their service and to convert that quality into transferable and clinically valuable knowledge. The following paragraphs on the IFCC Mission, Strategic Plan and Strategic Objectives explain how IFCC discharges that responsibility.

1.5. MISSION STATEMENT AND AIMS OF IFCC

Mission statement

Our mission is to be the leading organization in the field of Clinical Chemistry and Laboratory Medicine worldwide.

Aims of IFCC

“Through leadership and innovation in science and education we will strive to enhance the scientific level and the quality of diagnosis and therapy for patients throughout the world. We will build on the professionalism of our members to provide quality services to patients. We will aim to communicate effectively with our members, other healthcare providers and the public to ensure knowledge of our excellent scientific and educational achievements. We will focus always on scientific standards, publications, education and communications. We will communicate effectively through a variety of electronic media. We will hold outstanding congresses and conferences to bring the efforts of IFCC to the global community”.

The specific aims of IFCC are:

- To complement and enhance the activities of its members
- To transcend the boundaries of a single nation or a single corporation, or a geographical, cultural or linguistic group of nations in developing the field of Clinical Chemistry and Laboratory Medicine
- To provide a forum for standardisation, in the broadest sense, at a high level
- To disseminate information on “best practice” at various levels of technology and of economic development
- To promote a vision of Clinical Chemistry and Laboratory Medicine that extends beyond traditional narrow perceptions of the field.

IFCC achieves these aims by:

- Publishing information and guidelines relating to the education of clinical chemists and laboratory physicians
- Defining principles and publishing recommendations for the standardisation of analytical procedures and for the interpretation of analytical results
- Promoting meetings of clinical chemists and laboratory scientists through congresses, symposia and workshops in Clinical Chemistry and Laboratory Medicine, and by encouraging dialogues with clinicians on matters of common interest.

IFCC has a major responsibility for co-ordinating the development of Clinical Chemistry and Laboratory Medicine on an international basis. In fulfilling this responsibility, it co-operates with many other international, regional and national organisations, particularly in the fields of education and standardisation.

IFCC also assists and encourages the creation and organisation of national societies of Clinical Chemistry and Laboratory Medicine in countries where these do not yet exist, and establishes and maintains contact with individual clinical scientists in parts of the world where there is no professional body specifically concerned with Clinical Chemistry and Laboratory Medicine.

IFCC is a non-political organisation that believes in high ethical standards, equal opportunities and freedom of movement for scientists and doctors around the nations of the world.
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1.6. OVERALL STRATEGIC PLAN FOR IFCC

The original IFCC strategic plan was conceived and refined during the period 1990-1994 by the Executive Board and reviewed by National Societies and Corporate Member. This strategic plan was subsequently developed by successive Executive Boards. The ongoing strategic plan is intended to achieve a number of principal objectives, with the priorities and tactical implementation being guided by the IFCC Membership. These internal and external changes are all intended to maintain IFCC as a valid and credible resource of expertise for the improvement of patient care through laboratory medicine.

Principal objectives of the strategic plan:
- To improve and maintain the multidisciplinary and international leadership of IFCC in standardisation activities.
- To ensure that its standardisation and research activities are more oriented towards the patient and towards the health of the individual.
- To ensure consistency between its activities and the stated expectations of the IFCC members, recognising the needs of both developed and developing countries.
- To develop and maintain IFCC communications, to promote publications and products from IFCC, including publications and reference materials, and to set up joint promotion activities with international organisations such as WHO, WASPaLM, IUPAC, IRMM, CLSI and others.
- To establish collaborations, joint meetings and projects with international organisations having interest in the field of Laboratory Medicine such as IUPAC, ISTH, IATDM, IRMM, CLSI.
- To promote IFCC through international and regional congresses.
- To promote Members’ activities.
- To encourage professional development of individuals in National Societies and the recruitment of new members and experts to IFCC operating units.
- To develop and maintain Public Relations.

Each new IFCC Executive Board revisits and interprets these principal objectives so that they are fresh and relevant to current issues, challenges and opportunities. The result is a series of specific strategic objectives for the three year period of an Executive Board.

1.7. STRATEGIC OBJECTIVES 2012-2014

The Executive Board for 2012-2014 has identified and agreed the following strategic objectives for its term of office. They are in accord with the overall IFCC strategic plan and the principal objectives outlined in Section 1.6. They are intended to be in addition to the ongoing work of Division Executives.

Introduction

This document has been developed from a gathering of ideas session (brainstorming) held at the Executive Board (EB) meeting held in February 2012. It represents the thoughts of EB on its future priorities for the next three years. The document concentrates on EB priorities and it is intended to complement the planning and action of IFCC Divisions, Committees and Working Groups. Some of the identified priorities overlap with the work of Divisions and dialogue is required to agree a co-ordinated approach.

The document identifies 26 strategic actions which have been classified into the following four broad areas:
A. Supporting our membership
B. Broadening our horizons
C. Improving the quality of laboratory medicine
D. Improving the effectiveness of IFCC

Each strategic action has been assigned a timescale over the period March 2012 – December 2014. Each strategic action has also been assigned a member of EB who will lead that particular initiative.

Progress with and review of the strategic development plan will be an integral part of all future EB meetings during 2012-2014. It is intended that the plan may be modified in the light of changing circumstances.
### Area A: Supporting our Membership

<table>
<thead>
<tr>
<th>Number</th>
<th>Strategic Objective</th>
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| 1      | a) Introduce electronic voting for elections to the Executive Board  
         b) Conduct a ‘mock election’ to let Members gain experience of electronic voting |
| 2      | Introduce the support mechanisms to maximise the potential of Survey Monkey |
| 3      | a) Conduct three surveys of Members opinion each year, one of which should relate to identifying the ways in which IFCC can best support its members.  
         b) Evaluate results and implement actions |
| 4      | a) Develop new support materials and web-based tools to demonstrate the benefits of IFCC membership to developing countries  
         b) Use and evaluate effectiveness of new support materials |
| 5      | a) Identify ways to improve the two-way communication between IFCC and Members  
         b) Implement and evaluate methods to improve communication with Members |
| 6      | Establish and promote a register of expertise amongst individuals in IFCC that may be of value to Members, especially in developing countries |
| 7      | Facilitate the development, production and promotion of at least three new projects in distance learning that will be of benefit to Members |
| 8      | Develop and promote materials to assist Members to promote the contribution of laboratory medicine to healthcare in their country |
| 9      | Organise at least one opportunity each year for the Executive Board to meet with the Presidents of each of the IFCC Regional Federations to identify opportunities for collaboration |
| 10     | a) Improve communication with COLABIOCLI and with Members in Latin America  
         b) Support at least one major new project in the Region  
         c) Conclude a formal agreement between IFCC and COLABIOCLI |

### Area B: Broadening Our Horizons

<table>
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<th>Number</th>
<th>Strategic Objective</th>
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| 11     | a) Agree a change in Statutes that will open up Full Membership of IFCC  
         b) Agree and present a strategy to demonstrate benefits of expanded Full Membership  
         c) Present the new Statutes to Council for voting |
| 12     | a) Develop a strategy and new materials for expanding Corporate Membership of IFCC, to include the private and academic sectors, and health informatics companies  
         b) Undertake targeted campaigns to expand Corporate Membership |
| 13     | Identify, resource, prepare and deliver one new project each year in areas of laboratory medicine other than clinical chemistry |
| 14     | a) Develop a plan to increase collaboration between IFCC and international clinical organisations  
         b) Establish at least one new collaboration each year with an international clinical organisation |
| 15     | a) Agree a work programme for the new Task Force on the Impact of Laboratory Medicine on Clinical Management and Outcomes (TF-ICO)  
         b) Identify and support at least one new project each year for TF-ICO |
| 16     | a) Agree a work programme for the new Task Force on Point of Care Testing (TF-POCT)  
         b) Identify and support at least one new project each year for TF-POCT |
| 17     | a) Ensure succession planning in the Task Force for Young Scientists (TF-YS)  
         b) Develop and deliver a plan to encourage more involvement of Young Scientists in their national societies and in IFCC activities |

### Area C: Improving the Quality of Laboratory Medicine

<table>
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<tr>
<th>Number</th>
<th>Strategic Objective</th>
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| 18     | a) Collaborate with other organizations to develop a route to laboratory accreditation for developing countries  
         b) Apply the resource material at least once per year and evaluate its effectiveness |
| 19     | Position the IFCC in relation to the future organisation and delivery of the AACC-led method harmonisation project |
| 20     | Establish at least one new project with WASPaLM that aims to improve the quality of laboratory medicine through global harmonisation |
| 21     | Establish at least one new project with ILAC that aims to improve the application of quality management and laboratory accreditation |
| 22     | a) Strengthen links and collaboration with WHO  
         b) Develop a project that summarises and promotes the value of laboratory medicine in the elderly and in chronic disease - in line with the WHO priority area |

### Area D: Improving the Effectiveness of IFCC

<table>
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<tr>
<th>Number</th>
<th>Strategic Objective</th>
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<tr>
<td>23</td>
<td>Review IFCC finances and identify opportunities to improve financial performance. Identify opportunities for at least one new income stream</td>
</tr>
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</table>
| 24     | a) Compare (i.e. "benchmark") the structure, organisation and performance of IFCC against other established Federations that are active in science and/or medicine  
         b) Prepare and implement a report on how the benchmarking information gained from other Federations can help to improve the efficiency of IFCC |
| 25     | a) Agree a process for auditing the performance of IFCC in meeting the needs of Members and in representing the interests of global clinical chemistry and laboratory medicine  
         b) Audit to the performance of IFCC against targets and suggest actions for the next Strategic Plan |
| 26     | a) Undertake and publish an horizon scanning project to assess how laboratory medicine will be organised and delivered in 2020 and beyond  
         b) Make recommendations for IFCC in order to help it position itself in the changing world of laboratory medicine |
1.8. A BRIEF HISTORY OF THE IFCC

1.8.1. Introduction

In 1952, Professor E J King of the Royal Postgraduate Medical School in London suggested that the then emerging national societies of clinical chemistry should organise into an international body under the auspices of the International Union of Pure and Applied Chemistry (IUPAC). This was accomplished on July 24, 1952, at the Second International Congress of Biochemistry in Paris, by the formation of the International Association of Clinical Biochemists. A year later, in Stockholm, it was resolved to change the name to the International Federation of Clinical Chemistry and Laboratory Medicine, and this was formally adopted at the next meeting which took place in 1955 in Brussels.

The initial objectives of the Federation were to “advance knowledge and promote the interests of biochemistry in its clinical (medical) aspects”. In the early years, IFCC was closely associated with the IUPAC Commission (later Section) of Clinical Chemistry, and initially, the Committee of IFCC comprised the members of the IUPAC Commission. It was recognised, however that the IFCC should become independent, but would retain its contacts with IUPAC through affiliation as an Associate Member. This was accomplished in 1967, when the two organisations were formally separated.

With time, the organisational structure of IFCC developed so that its efforts in science, education, and publishing, as well as its financial affairs, and congress activities were dealt with by Divisions or Committees and, where appropriate, supported by other Committees and groups responsible for specific tasks. IFCC is now a Federation of 86 Full Member national societies of Clinical Chemistry and Laboratory Medicine and 9 Affiliate Members, representing about 45,000 individual clinical chemists, laboratory scientists, and laboratory physicians and 46 Corporate Members covering the major analytical and clinical laboratory developments. In 2002 John Lines and Jacques Heeren published “IFCC Celebrating 50 Years”. This book is a more comprehensive history of the Federation and is available from the IFCC office.

1.8.2. IFCC Presidents

The history of IFCC must include reference to the eminent clinical chemists who have served as President and guided its development. Professor E J King conceived the idea of the Federation, brought it into being, and guided it through its early years to become the group to which all national societies of Clinical Chemistry could look for guidance. He and his wife created a vacuum which Professor Monroe Freeman ably filled for three years. He was followed by Professor J E Courtis until 1967, during which time the statutes and bylaws, upon which the whole working of IFCC is based, were created. During the seven to eight years of the presidency of Professor Martin Rubin, IFCC became accepted as a major international organisation and was recognised as a non-governmental organisation in official relations with the World Health Organisation (WHO). It became a member of the Council of the International Organisations of Medical Sciences and established its own regular Newsletter, developed education programmes in South America; formed Expert Panels became authoritative groups in their own fields, and established constructive relationships with industry.

In 1976, Dr Jörg Frei was elected President after an eight year period as Secretary. Dr Rene Dybkaer followed him in 1979 after six years as Vice-President. During these years the collaboration with industry was formalised by creation of Corporate Membership, IFCC Archives were established, Congress Guidelines were formulated, an IFCC Travelling Lectureship implemented, a major educational programme conducted in Thailand, and the IFCC Distinguished International Services Award established in addition to the earlier Distinguished Clinical Chemist Award. As a new concept, a General Conference of IFCC Officers, Divisions and Committees, together with Associate Members, was launched in Denmark in 1982. Finally, a Task Force prepared new Articles for the Federation which were approved by Council in 1984. Dr Donald Young became President in 1985, after a three year term as Vice-President. During his six years as President, Dr Young reorganised the committee structure of the IFCC. The previous Expert Panels were redefined as Committees and an integrated structure was formed to allow better communications and delegation of responsibility and activity. Dr Young initiated a further review and modification of the IFCC Statutes which was completed in 1993. During Dr Young’s tenure IFCC initiated the publication of its own journal - Journal of the International Federation of Clinical Chemistry and Laboratory Medicine. An effort interpretation of clinical chemistry to include other areas of laboratory medicine was developed. Formal associations were initiated with clinical chemistry organisations in Latin America and the Asian and Pacific region. Professor G. Siest, who was President from 1991 to 1996, worked with the Board and Members to develop a Strategic Plan which would guide the organisation into the 21st Century. This involved the identification of six key Strategic issues, relating to: Scientific Credibility, Linkage of Clinical Chemistry to Improved Patient Care, Communication, Promotion of IFCC Products and Services, People and Succession, and Finance. New agreements with the European region (FESCC) and the Latin American Region (COLABIOCLI) were signed. The strategic plan was endorsed by the IFCC Council in 1996. From 1997-99 the President was Professor Matthew McQueen who was previously a member of the Scientific Committee from 1982-87, Treasurer from 1989-90 and Vice President 1991-94. During his term the Executive Board translated the Strategic Plan into specific actions. These included increasing scientific activity in the areas of standarisation and reference materials and improved scientific co-operation with other international laboratory professional organisations. The Education and Management Division expanded its role in the pre-analytical and post-analysis fields, while the Communication and Publications Division meet the challenges of electronic publication. One highlight was the very important name change to the International Federation of Clinical Chemistry and Laboratory Medicine, highlighting the clinical relevance and importance of our profession. The Statutes of the Federation were modified to implement “term limits” for members of the Executive Board. Representatives from the Corporate members were formally included in the structure of each Division. This Executive Board successfully concluded discussions with the World Association of Societies of Pathology and Laboratory Medicine producing a joint policy statement on “Principles of Clinical Laboratory Accreditation”. This clearly stated that the Laboratory could be directed by Scientists or Physicians, with the appropriate initial qualifications and specialized post-graduate professional education and training in clinical laboratory work. Prof. Mathias M. Müller served as President for the period 2000 - 2005, having previously served the Federation as Secretary, Vice-President, and Vice-Chair and Chair of the Scientific Division. Under his guidance the Federation continued to stress high quality scientific endeavour as the backbone of the Federation. Since 2000, the Executive Board emphasized the interdisciplinary character of our discipline and has focused on clinically relevant topics. In this context, the establishment of reference systems for glycated haemoglobin and enzyme activity measurements as well as a global campaign for monitoring growing complex of IFCC projects, the requirement for an intellectual property policy became evident. This has been developed. A working relationship with the National Committee for Clinical Laboratory Standards/NCCCLS (now known as the Clinical and Laboratory Standards Institute/CLSI) was formalised and joint NCCCLS/IFCC projects started. Standardisation on high metrological levels has always been a major undertaking and has contributed to the credibility of IFCC. As a consequence of this policy, collaboration with the Bureau
International des Poids et Mesures (BIPM), the National Institute of Standards and Technology (NIST), the Institute of Reference Materials and Measurements (IRMM), European, American and Japanese IVD Associations, and the International Laboratory Accreditation Cooperation (ILAC) is being established for the implementation of traceability in Laboratory Medicine. New awards for significant contributions in molecular diagnostics, in education and in patient care were created. With the opening of the IFCC Office in Milan the IFCC Web site was restructured becoming the main communication vehicle between the Federation and the membership.

Professor Jocelyn Hicks served as President from 2005 to 2008. She also served the Federation as Chair of the Publications Division and as Treasurer. She continued to encourage the scientific excellence for which IFCC is justifiably proud. She assembled a group of clinicians from the key diabetes bodies to develop a consensus statement regarding the use of the new standard for glycated haemoglobin. As President she worked to enhance the quality of laboratory testing worldwide with the able assistance of the Education and Management Division. Under her direction the Communications and Publications Division took public relations and communications to a new level. They, for example, published a PR brochure in many languages. She considered assistance to the lesser developed country Members to be paramount, as it is the patient who benefits. Under her leadership the Visiting Lecturer Programme was greatly expanded with the substantial grant from Abbott Laboratories. Travel scholarships to attend major IFCC Congresses were introduced with a generous grant from Roche Diagnostics GmbH.

These were awarded on a competitive basis to young scientists from developing countries. Siemens Healthcare Solutions assisted us greatly with starting a distance e-learning programme for all members, but with emphasis on topics to assist those in developing countries. A new conference that links the clinician with the clinical laboratory was started with the substantial grant from Ortho Clinical Diagnostics. The first of these was held in Birmingham in the UK in 2008. The topic was on Cardiac Biomarkers. Two new awards were introduced, one in Laboratory Medicine and Patient Care sponsored by Ortho Clinical Diagnostics and one on outstanding contributions to Standardisation sponsored by The National Institute on Standards and Technology and the Clinical Laboratory Standards Institute.

Professor Hicks developed a new programme for National and Corporate Representatives to be involved actively in the General Conference in 2008. This Conference was organized with the assistance of The Congress and Conference Committee, the Turkish Association and the IFCC Office. A successful International Congress of Clinical Chemistry and Laboratory Medicine was held in Brazil in 2008 with the assistance of the Brazilian Association. The number of full Members grew from 72 to 83 during this period. Professor Hicks visited many of our Member countries. The number of Corporate Members also increased despite many mergers. All of these activities were made possible with the assistance of the Executive Board, the Divisons, the Committees, working Groups and the IFCC office.

Dr Graham Beastall was elected as President for 2009-2011. He is based in Glasgow (UK) and is the former Clinical Lead for a large multi-site network Department of Clinical Biochemistry. He has been Chairman and President of the Association of Clinical Biochemistry and Vice President of the Royal College of Pathologists. With the recognition that -70% of clinical decisions are influenced by Laboratory Medicine Dr Beastall believes that the time is right for IFCC to be more visible and more active in the clinical area. ‘Adding Value to Laboratory Medicine’ will be the strap line during his Presidency. Dr Beastall will also seek to engender greater connectivity with and involvement of IFCC members in promoting the contribution of Laboratory Medicine to healthcare at local, national and international level.

The number of Full members increased to 86 during Dr. Beastall’s term. The number of Corporate Members grew to 46 during this period. Dr. Beastall organized a General Conference in Corfu, Greece on April 2010 with the Executive Board. The program included interactive sessions with the Divisions, Committees, Working Groups and Special Task Forces. Unfortunately the Corfu General Conference was greatly affected by the Icelandic ash cloud which prevented many participants from reaching Corfu.

1.8.3. IFCC Office

As the scope of the Federation’s activities has expanded, so has the requirement for the exchange of information and the documentation of the various activities which were taking place. As with most other professional groups, the initial secretarial functions were provided by the individual officers and scientists within the Federation. A considerable debt is owed to these individuals and their employing organisations. However, it was obvious to the Executive Board that for the Federation to continue its development, a Secretariat was required. The Federation was fortunate originally to be supported by Radiometer A/S of Copenhagen, which agreed to provide office space and secretarial support. This facility was generously placed at the disposal of the Executive Board and became known in 1983 as the IFCC Technical Secretariat. During this period, the Federation was fortunate in obtaining the services of Mrs Maj-Britt Petersen, who provided invaluable support, in particular for the Scientific Division. In order to facilitate the appropriate distribution of documents, the Technical Secretariat also kept a master file of names and addresses of all those who play a part in the Federation's affairs. During 1988-1990 the Executive Board devoted considerable effort to determining the role and structure of a central office. In 1990 a new Technical Secretariat was established in Nancy, France with the assistance of Prof Gerard Siest. The opening of this office was a major event for the IFCC as for the first time the IFCC employed its own staff. The Technical Secretariat was transferred into the hands of Mrs Chantal Thirion and remained in Nancy until 2001. In 2001, with additional professional and administrative services needed, the Office was transferred to Milan, Italy where it shares resources with a major Professional Conference Organiser.

1.8.4. External Links

The IFCC has maintained its relations with WHO and transferred its International Medical Laboratory Information System to WHO. In addition, it has expanded its support of regional organisations and regular regional congresses that are held in Europe, in the Arab Region, in the Asian and Pacific Region, in Latin American Region and in Africa. IFCC has signed Memorandum of Understanding with EFLM and APFCB. The IFCC has accepted the ICSU Principles of free circulation of scientists and has assured the attendance of visiting scientist at all meetings. The interests of IFCC continue to expand. It has addressed the policy of patenting key products for analytical methods, and continues to work collaboratively with many international organisations to sponsor major educational programmes in Mexico and Argentina. The IFCC is also working with a number of other International Organisations such as IRMM, NIST, CLSI and BIPM in developing new standards and in the area of standardisation of methods. The IFCC continues to be very influential in defining and reviewing appropriate terminology in Laboratory Medicine and other fields of chemistry. In addition, the management structure of the Federation has been re-organized continuously to enable it to respond effectively to contemporary issues.

IFCC has signed Memorandum of Understanding agreements with ILAC and WaSPALM to formalize and improve collaboration.
### 1.8.5. Membership of IFCC Executive Boards

#### President
- **EJ. King (UK)** 1952 - 1960
- **ME. Freeman (US)** 1960 - 1963
- **JE. Courtois (FR)** 1963 - 1967
- **M. Rubin (US)** 1967 - 1975
- **J. Frei (CH)** 1976 - 1978
- **R. Dybkaer (DK)** 1979 - 1984
- **DS. Young (US)** 1985 - 1990
- **G. Siest (FR)** 1991 - 1996
- **ME. Freeman (US)** 1997 - 1999
- **MM. Müller (AT)** 2000 - 2005
- **JMB. Hicks (US)** 2006 - 2008
- **GH. Beastall (UK)** 2009 - 2014

#### Vice President
- **E. Werle (DE)** 1966 - 1972
- **R. Dybkaer (DK)** 1972 - 1978
- **RG. Edwards (AU)** 1979 - 1981
- **DS. Young (US)** 1982 - 1984
- **A. Kallner (SE)** 1985 - 1990
- **CA. Burtis (US)** 1997 - 1999
- **V. Palicka (CZ)** 2006 - 2008
- **H. Morris (AU)** 2012 - 2014

#### Secretary
- **IDP. Wootton (UK)** 1952 - 1958
- **ME. Freeman (US)** 1959 - 1960
- **B. Josephson (SE)** 1960 - 1963
- **MC. Sanz (CH)** 1963 - 1967
- **J. Frei (CH)** 1967 - 1975
- **PMG. Broughton (UK)** 1976 - 1978
- **A. Kallner (SE)** 1979 - 1981
- **JG. Hill (CA)** 1982 - 1984
- **L. Hartmann (FR)** 1966 - 1972
- **PMG. Broughton (UK)** 1972 - 1975
- **RG. Edwards (AU)** 1976 - 1978
- **JG. Hill (CA)** 1979 - 1981
- **A. Kallner (SE)** 1982 - 1984
- **ML. Castillo de Sanchez (MX)** 1985 - 1987

#### Treasurer
- **L. Hartmann (FR)** 1966 - 1972
- **PMG. Broughton (UK)** 1972 - 1975
- **RG. Edwards (AU)** 1976 - 1978
- **JG. Hill (CA)** 1979 - 1981
- **A. Kallner (SE)** 1982 - 1984
- **ML. Castillo de Sanchez (MX)** 1985 - 1987
- **DS. Young (US)** 1982 - 1984
- **H. Morris (AU)** 2012 - 2014

#### Assistant Secretary
- **G. Siest (FR)** 1972 - 1975
- **A. Kallner (SE)** 1976 - 1978

#### Members of Executive Board
- **A. Sobel (US)** 1952 - 1954
- **P. Fleury (FR)** 1952 - 1954
- **B. Josephson (SE)** 1952 - 1960
- **MC. Verschure (NL)** 1954 - 1959
- **NM. Sperry (US)** 1955 - 1960
- **A. Kallner (SE)** 1976 - 1978
- **PMG. Broughton (UK)** 1979 - 1981
- **JG. Hill (CA)** 1982 - 1984
- **MM. Müller (AT)** 1985 - 1987
- **R. Vihko (FI)** 1988 - 1990
- **P. Garcia Webb (AU)** 1991 - 1993
- **O. Zinder (IL)** 1991 - 1994
- **P. Mocarelli (IT)** 1994 - 1999
- **BM. Hicks (US)** 2006 - 2008
- **GH. Beastall (UK)** 2009 - 2014
- **G. Shannan (SY)** 2006 - 2011

### Until 1967 the Titular Members of the Commission on Clinical Chemistry of IUPAC also functioned as the Executive Board of IFCC.