



17TH INTERNATIONAL SYMPOSIUM ON **THROMBOEMBOLISM**

15-16 OCTOBER 2010, THE QUEEN ELIZABETH II CONFERENCE CENTRE, LONDON, UK



Delegate Book

Front cover image: Lambeth Bridge and the Houses of Parliament, London.

Dear Colleagues,

The annual International Symposium on Thromboembolism (IST) presents clinicians with a unique opportunity to update themselves on the latest developments in thromboembolism.

Organised by the Thrombosis Research Institute, and now in its 17th year, the meeting is once again bringing together globally recognised leaders and experts from the rapidly developing field of thromboembolism. We are delighted to be in London for what promises to be a most informative and rewarding symposium.

As you will see from the enclosed programme, highlights of the meeting include a stimulating range of in-depth plenary sessions covering the challenges of venous thromboembolism, cancer-associated thrombosis and arterial disease, as well as interactive workshops and 'meet the expert' sessions. These popular sessions offer a unique opportunity to explore many topics ranging from women's health and thrombosis, to managing anticoagulants in special populations.

I hope that the excellent scientific programme and the remarkable historical surroundings here in Westminster will ensure that you enjoy your time with us in London.

With best wishes,



Lord Kakkar
Chairman



Providing excellence in research, education, and patient care, and internationally renowned for pioneering, multidisciplinary research, the Thrombosis Research Institute comprises 2 independent charitable foundations based in London, United Kingdom, and Bangalore, India. The Thrombosis Research Institutes are dedicated to the study of thrombosis and related disorders.

The 2 research establishments are united by their shared mission: To provide excellence in thrombosis research, education, and patient care, and to develop new strategies to prevent and treat thrombosis, thereby reducing health care costs and saving millions of lives.

The Thrombosis Research Institute, London, was established in 1989, with the backing of the then Prime Minister, Margaret Thatcher. It was created specifically to conduct research in cardiovascular disease (of the heart and blood vessels), a major cause of death and disability throughout the world.

This was followed in 2006 with the founding of the Thrombosis Research Institute in Bangalore, which was officially opened and dedicated to the nation by the then president of India, His Excellency Dr A P J Abdul Kalam. This second facility was set up to study the genetics of heart disease, particularly among the South Asian population, many of whom seem to have specific predisposing genetic characteristics, and to develop novel and affordable therapies for disease prevention and treatment.

The 2 institutions, whose combined research activities encompass drug discovery and basic scientific, clinical, and epidemiological studies, are primarily concerned with understanding the disease process, developing novel and affordable therapies, and identifying those most at risk at an early age.

In addition, the London Institute is heavily involved in promoting the adoption of evidence-based methods of prevention and treatment to ensure that knowledge from groundbreaking research quickly informs routine clinical practice and benefits patients as soon as possible.

For more information, please visit the Thrombosis Research Institute's website at **www.tri-london.ac.uk**.



Day One

Friday 15 October 2010

12.45 – 14.00 **Lunch** **Mountbatten Lounge**

14.00 – 14.05 **Welcome** **Mountbatten Room**

Lord Kakkar, UK
14.05 – 15.30 **Plenary Session I** **Mountbatten Room**

Venous Thromboembolism: New Decade, New Challenges?*Chairmen: V V Kakkar, UK, and M M Samama, France*

Medical patients – Understanding burden and opportunities
G Merli, USA

Managing established thromboembolism: What's different?
C Francis, USA

VTE in surgical patients – Changing paradigms
M Lassen, Denmark

15.30 – 16.00 **Coffee** **Mountbatten Lounge**

16.00 – 17.30 **Plenary Session II** **Mountbatten Room**

Arterial Thrombosis*Chairmen: Lord Kakkar, UK, and F Verheugt, The Netherlands*

Antiplatelet and anticoagulant therapy – Direction in 2010
A G G Turpie, Canada

Vessel wall inflammation, biomarkers and targeting therapy
F Verheugt, The Netherlands

Atrial fibrillation – How to improve clinical outcomes
J Eikelboom, Canada

Day Two

Saturday 16 October 2010

| 09.30 – 10.30 | Meet the Expert Sessions | Break-out Rooms |
|---------------------------------|--|----------------------|
| | 1. Novel antithrombotic agents <i>C Kessler, USA</i> | Henry Moore |
| | 2. Women's health and thrombosis <i>S Middeldorp, The Netherlands</i> | Shelley |
| | 3. Prevention of VTE in the elderly <i>S Haas, Germany</i> | Wesley |
| | 4. Managing anticoagulants in special populations <i>M Huisman, The Netherlands</i> | Rutherford |
| 10.30 – 10.45 | Coffee | Mountbatten Lounge |
| 10.45 – 11.45/ 12.00 – 13.00 | Workshops – The Challenging Patient | |
| | Delegates to attend 2 workshops and use the 15-minute break time to change rooms | |
| | 1. VTE Prevention <i>Chairmen: H Bounameaux, Switzerland, and M Lassen, Denmark</i> | Henry Moore |
| | i. The obese surgical patient <i>J Caprini, USA</i> | |
| | ii. Laparoscopic surgical patient <i>J Arcelus, Spain</i> | |
| | 2. Cancer and Thrombosis <i>Chairmen: C Francis, USA, and H Liebman, USA</i> | Shelley |
| | i. Incidental thrombosis should not be treated For: <i>A Falanga, Italy</i> Against: <i>F Rickles, USA</i> | |
| | ii. Prophylaxis against central venous catheter thrombosis is not warranted For: <i>M Levine, Canada</i> Against: <i>C Kessler, USA</i> | |
| | 3. VTE Treatment <i>Chairmen: S Haas, Germany, and V V Kakkar, UK</i> | Rutherford |
| | i. How long is long enough for secondary prevention? <i>P Prandoni, Italy</i> | |
| | ii. Do we need initial parenteral therapy? <i>C M Samama, France</i> | |
| | 4. Coronary Artery Disease <i>Chairmen: C Bode, Germany, and A G G Turpie, Canada</i> | Wesley |
| | i. Early prevention strategies: Are we doing enough? <i>K A A Fox, UK</i> | |
| | ii. Risk stratification: Are we improving? <i>F Verheugt, The Netherlands</i> | |
| 11.45 – 12.00 | Break | (in break-out rooms) |

13.00 – 14.00 **Lunch** **Mountbatten Lounge**

14.00 – 15.30 **Plenary Session III** **Mountbatten Room**

Thrombosis in the Cancer Patient

Chairmen: M Levine, Canada, and F Rickles, USA

Managing VTE in cancer

Lord Kakkar, UK

Cancer and thrombosis: The basic science

W Ruf, USA

Antithrombotics and survival: Is it still relevant?

H Liebman, USA

15.30 – 16.20 **Debate**

Chairman: Lord Kakkar, UK

**The future for thrombosis is implementation,
not more research!**

For: *H Bounameaux, Switzerland* **Against:** *A G G Turpie, Canada*

16.20 – 16.30 **Closing Remarks**

Lord Kakkar, UK

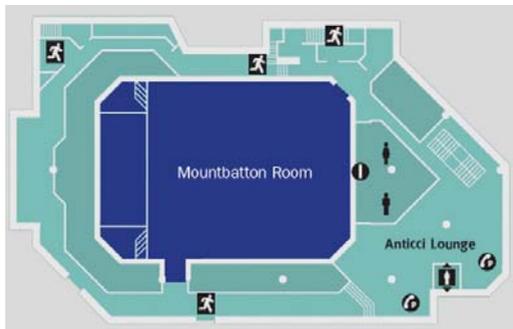
Level 4



Level 5



Level 6





Steering Committee

Steering Committee

Sylvia Haas

Technical University of Munich, Munich, Germany

Sylvia Haas, MD, is currently an emeritus professor of medicine and former director of the Haemostasis and Thrombosis Research Group at the Institute for Experimental Oncology and Therapy Research, Technical University of Munich, a position she held for almost 30 years. Professor Haas received her medical degree from the University of Freiburg and began her training in paediatric haematology and oncology at the Dr von Haunerschen Kinderspital, University of Munich. She continued her training in internal medicine at the Technical University of Munich and received full professorship after having established the Haemostasis and Thrombosis Research Group at the Institute for Experimental Surgery, now the Institute for Experimental Oncology and Therapy Research.



Professor Haas's scientific focus is on the development of new antithrombotic therapies, laboratory monitoring of anticoagulants, biomarkers, and tumour-associated thrombosis. She is involved in several clinical trials, in particular, trials in the prevention and treatment of arterial and venous thromboembolism. She is also in charge of various integrated teaching programmes.

Professor Haas is a member of several professional societies, including the International Society on Thrombosis and Haemostasis, the International Society of Angiology, the European Society for Surgical Research, and the German Societies of Surgery, Angiology, and Thrombosis and Haemostasis Research. She is a fellow of the Southern African Society of Thrombosis and Haemostasis and is a member of several editorial boards for peer-reviewed journals, including *International Angiology* and *Clinical and Applied Thrombosis/Hemostasis*.



Lord Kakkar

Barts and the London School of Medicine and Dentistry, Queen Mary University of London; University College London Partner Academic Health Sciences Partnership; and the Thrombosis Research Institute, all in London, United Kingdom

Professor the Lord Kakkar, MBBS, BSc, PhD, FRCS, is professor of surgical sciences and dean for external relations, Barts and the London School of Medicine and Dentistry, Queen Mary University of London; consultant surgeon, University College London Hospitals; chairman of the Clinical Quality Directorate, University College London Partner Academic Health Sciences Partnership; and director of the Thrombosis Research Institute.

Lord Kakkar completed his medical education at King's College Hospital Medical School at the University of London, earning his bachelor of medicine and bachelor of surgery degrees as well as his doctorate. He is a fellow of the Royal College of Surgeons of England.

Lord Kakkar's research interests include the prevention and treatment of venous and arterial thromboembolic disease and cancer-associated thrombosis. His awards include the Hunterian Professorship from the Royal College of Surgeons of England, 1996; the David Patey Prize, Surgical Research Society of Great Britain and Ireland, 1996; the Knoll William Harvey Prize, International Society on Thrombosis and Haemostasis, 1997; James IV Association of Surgeons Travelling Fellow, 2006; and the Wellcome Memorial Lecture, Royal Society of Medicine, 2009.

Professor the Lord Kakkar was created a life peer in 2010 and sits on the cross benches of the House of Lords.

Vijay Kakkar

*Thrombosis Research Institute, London, United Kingdom,
and Thrombosis Research Institute, Bangalore, India*

Vijay Kakkar, OBE, FRCS, FRCSE, (Hon) DSc, is emeritus professor at the University of London and founder-president of the Thrombosis Research Institute, London, and founder-chairman of the Thrombosis Research Institute, Bangalore.



Professor Kakkar graduated from Vikram University, Ujjain, India, in 1960, and qualified as fellow of the Royal College of Surgeons of Edinburgh and England in 1964.

Professor Kakkar has held a number of appointments at King's College, University of London, and has been the recipient of distinctions and awards, including a Hunterian Professorship from the Royal College of Surgeons of England, visiting professor of Harvard University, honourable fellowship of the Association of Surgeons of India, a lifetime achievement award from the Union of Angiology, an honorary doctor of science from Loyola University of Chicago, and in 2010, he was awarded an Order of the British Empire (OBE). He is a member of a number of professional societies and was a founding member of the British Society of Haemostasis and Thrombosis. His publications include more than 680 original articles, 6 books, and contributions to more 50 books.

In 1989, Professor Kakkar established the Thrombosis Research Institute as a national resource to provide a multidisciplinary environment dedicated to the study of thrombosis and related disorders.



Mark Levine

McMaster University, Hamilton, Ontario, Canada

Mark Levine is Chair and Professor in the Department of Oncology at McMaster University, Hamilton, Ontario, Canada. He holds the Buffett Taylor Chair in Breast Cancer Research at McMaster University. He is a past recipient of the O. Harold Warwick Prize (1999) from the National Cancer Institute of Canada. Dr Levine received his medical degree from McGill University, Montreal, Quebec, Canada, and completed his residency in internal medicine at McMaster University. He completed his training in haematology and oncology at Duke University Medical Center, Durham, North Carolina, USA. In addition, Dr Levine received a master's degree in clinical epidemiology and biostatistics from McMaster University.

In 1982, Dr Levine became a member of both the Faculty of Health Sciences at McMaster University, and a medical oncologist at the Hamilton Regional Cancer Center (now known as the Juravinski Cancer Center – Hamilton Health Sciences). He was CEO of the Cancer Centre between 1992 and 1999. Over the past 27 years he has been an active researcher in clinical trials and health services research. His focus is in the areas of breast cancer and venous thromboembolism. A number of the trials he has conducted have impacted on health care in both Canada and internationally. He helped establish the Ontario Clinical Oncology Group (OCOG) in 1982 and is now the Director. OCOG designs, coordinates and analyses multicentre trials in cancer. Dr Levine has over 230 publications in peer-reviewed journals and has brought much research funding to McMaster. He was Chairman of Health Canada's Steering Committee on Clinical Practice Guidelines for the Care and Treatment of Breast Cancer. Dr Levine was an Associate Editor of the *Journal of Clinical Oncology* for seven years and now is a Consultant Editor.



Faculty

Faculty

Juan I Arcelus

University of Granada Medical School, Hospital Universitario Virgen de las Nieves, Granada, Spain



Juan I Arcelus, MD, PhD, graduated in medicine from the University of Granada Medical School, Granada, Spain, in 1982, and obtained a PhD, specializing in thrombosis, from the same university in 1998. After completing his residency in general and gastrointestinal surgery at the University Hospital of Granada, Dr Arcelus served a research fellowship in the Department of Surgery at Northwestern University, Chicago, Illinois, USA, from 1989 to 1992. He was associate director of the Thrombosis and Hemostasis Group at Evanston Hospital, Evanston, Illinois, from 1990 to 1992, and actively participated in a number of studies conducted at Loyola University Medical Center in Maywood, Illinois.

Dr Arcelus became professor of surgery at the University of Granada Medical School in 2002 and practices as an attending staff member in the Department of Surgery of the Hospital Universitario Virgen de las Nieves, also in Granada. He acts as visiting professor to several hospitals and universities in Spain and abroad and has delivered over 150 lectures in several countries. His main research interests include the diagnosis, prevention, treatment, and follow-up of venous thromboembolism (VTE) in general- and orthopedic-surgery inpatients and outpatients.

Dr Arcelus has been a core group member of the INvestigators Against ThromboEmbolism (INATE) educational program since 2001 and maintains an active role in the INATE website (www.inate.org). For the past 7 years, he has been heavily involved in the Spanish Computerized Registry of Patients With Venous Thromboembolism (RIETE). He is also patron of the Spanish Foundation for the Study of Thromboembolism (FUENTE), and an active member of the International Surgical Thrombosis Forum and the European Task Force for Sharing Expertise in Thrombosis. He is the current coordinator of the Working Group on Thrombosis of the Spanish Surgical Association. A member of numerous

societies and the Royal Academy of Medicine in Granada, Dr Arcelus has presented more than 200 abstracts to international meetings, published numerous papers in international peer-reviewed journals, and has written several book chapters on subjects related to VTE.

Christoph Bode

University Hospital Freiburg, Freiburg, Germany

Christoph Bode, MD, FESC, FACC, FAHA, was born and raised in Cologne, Germany, where he also went to medical school and completed a postdoctoral fellowship at the Institute of Physiological Chemistry. Following a joint appointment at Massachusetts General Hospital and Harvard Medical School under the mentorship of Edgar Haber, MD, he joined the faculty of the University of Heidelberg, where he eventually became full professor. In 1999, he was appointed chairman of medicine at the University of Freiburg.



Professor Bode is an interventional cardiologist with a special interest in antithrombotic therapy in cardiovascular diseases. He has devoted much of his research to basic science and holds several patents in molecular targeting for diagnostic, therapeutic, or imaging purposes. He has published several hundred papers in peer-reviewed journals and has served on many editorial boards, including the *European Heart Journal*, *Circulation*, and *Basic Research in Cardiology*. Professor Bode has been awarded a number of special honours and his advice is widely sought by funding and government agencies.



Henri Bounameaux

University Hospitals of Geneva and Faculty of Medicine, Geneva, Switzerland

Henri Bounameaux, MD, is professor of medicine, director of the Division of Angiology and Haemostasis, and chairman of the Department of Medicine at the University Hospitals of Geneva, Switzerland. He graduated with an MD in Basle, Switzerland, in 1978, and was later board certified in internal medicine and vascular medicine.

Professor Bounameaux's research interests include all aspects of venous thromboembolism. He has authored more than 300 papers in peer-reviewed journals as well as 100 reviews, didactic papers, and book chapters. He acts as a reviewer for the most important publications in the fields of internal and vascular medicine.

Professor Bounameaux was a member of the Scientific and Standardization Committee of the International Society on Thrombosis and Haemostasis (ISTH) and is presently chairman of the ISTH Council.

He has received several awards, including the Karl Rohr Prize of the Swiss Society of Hematology (1991), the Swiss Angiology Prize (1991), the Theodor Naegeli International Thrombosis Award (1995), and an Investigator Recognition Award (2003) and a Distinguished Career Award (2009) from the International Society on Thrombosis and Haemostasis.

Joseph A Caprini

NorthShore University HealthSystem, Evanston, Illinois, USA, and the University of Chicago Pritzker School of Medicine, Chicago, Illinois, USA



Joseph A Caprini, MD, MS, FACS, RVT, is currently the Louis W. Biegler Professor of Surgery in the Division of Vascular Surgery at NorthShore University HealthSystem. He earned his BS in biology at Villanova University in Villanova, Pennsylvania, his MS at Northwestern University in Evanston, Illinois, and his MD at Hahnemann Medical College (now known as Drexel University College of Medicine) in Philadelphia, Pennsylvania. Dr Caprini completed his internship in medicine at Evanston Hospital (part of NorthShore University Health System) and his residency in general surgery as well as a fellowship in surgical hematology at Northwestern University Medical School (NUMS). He also served as professor of surgery at NUMS from 1996 to 2009. In addition, Dr Caprini held professorship at the Robert R. McCormick School of Engineering and Applied Science at Northwestern University from 1999 until 2009.

Dr Caprini has authored or coauthored more than 365 articles, book chapters, and abstracts. He has presented more than 1485 lectures and 90 exhibits and has developed and validated a risk assessment system that appears in 12 languages. Dr Caprini was president of the American Venous Forum from 2009 to 2010, a distinguished fellow of the Society for Vascular Surgery, and the first honorary fellow of the European Venous Forum.



John Eikelboom

McMaster University, Hamilton, Ontario, Canada

John Eikelboom, MBBS, is associate professor, Department of Medicine, McMaster University, and hematologist, Thrombosis Service, Hamilton General Hospital. He completed training in internal medicine and hematology in Perth, Australia, in 1998, and subsequently undertook a fellowship in thrombosis medicine and clinical epidemiology at McMaster University. In 2005, he assumed a Tier II Canada Research Chair in cardiovascular medicine from the Canadian Institutes of Health Research.

Dr Eikelboom is on the steering committee of multiple, large randomized trials in cardiovascular medicine, including a study (AVERROES) comparing apixaban with aspirin in approximately 5600 patients with atrial fibrillation who are ineligible for vitamin K antagonist (VKA) treatment or have not tolerated previous VKA treatment. His current research, supported by the Canadian Institutes of Health Research, the Heart and Stroke Foundation of Canada, and the National Health and Medical Research Council of Australia, focuses on the efficacy and safety of antithrombotic therapies, the prognostic importance of bleeding and transfusion, and the mechanisms of variable response to antiplatelet drugs.

Dr Eikelboom has authored more than 200 articles in peer-reviewed journals.

Anna Falanga

Ospedali Riuniti, Bergamo, Italy

Anna Falanga is chief of the Division of Immuno-hematology and Transfusion Medicine in the Department of Oncology-Hematology at Ospedali Riuniti and professor of hematology at the University of Milan-Bicocca.



Having received her medical degree and board certification in internal medicine at the University of Naples, Dr Falanga obtained her board certification in hematology at the University of Verona, both in Italy. Subsequently, she spent 3 years working as a postdoctoral fellow in the Mario Negri Institute in Milan, Italy, and an additional 2 years at the University of Colorado School of Medicine, Denver, Colorado, USA.

Dr Falanga's research interests include the study of the interactions of malignant cells with the hemostatic system, the role of antithrombotic agents in human cancer and experimental models, and the management of venous thromboembolism in cancer patients.

Dr Falanga became an elected member of the Scientific and Standardization Committee (SSC) of the International Society on Thrombosis and Haemostasis (ISTH) in 2002 and served as chair of the Subcommittee on Haemostasis and Malignancy from 2002 to 2006. She is currently chair of the ISTH SSC. Dr Falanga has an active role in many other professional societies, including serving as vice president of the Committee on Hemostasis of the American Society of Hematology and sitting on the board of the Council of the European Hematology Association.



Keith A A Fox

University of Edinburgh, Edinburgh, United Kingdom

Professor Keith A A Fox, MBChB, FRCP, FESC, FMedSci, is British Heart Foundation and Duke of Edinburgh Professor of Cardiology of the University of Edinburgh, and head of medical and radiological sciences and consultant cardiologist in the Royal Infirmary of Edinburgh.

He was a founding fellow of and is on the board of the European Society of Cardiology. In addition, he is president of the British Cardiovascular Society (2009 to 2012). Professor Fox gave the State-of-the-Art Lecture on Acute Coronary Syndromes at the American Heart Association as well as the 2009 Plenary Lecture at the European Society of Cardiology – American College of Cardiology Symposium, and a series of named lectures at national and international symposia.

Professor Fox's major research interest lies in the mechanisms and manifestations of acute coronary arterial disease; his work extends from underlying biological mechanisms to in vitro and in vivo studies and clinical trials. He is the author of more than 490 scientific papers.

Professor Fox is chairman of the RITA programme, co-chairman of ROCKET-AF, chair of the GRACE programme (the largest multinational study in acute coronary syndromes), and a lead investigator for studies on novel antithrombins.

He is an international associate editor of the *European Heart Journal* and a member of the editorial boards of a number of journals. His current areas of research include the inhibition of coronary thrombosis and the role of platelets and inflammation in acute coronary syndromes.

Charles Francis

*University of Rochester School of Medicine and Dentistry,
Rochester, New York, USA*



Charles Francis, MD, is professor of medicine and of Pathology and Laboratory Medicine at the University of Rochester. He obtained his MD degree from the University of Pittsburgh and was then an intern and resident in medicine at the University of North Carolina. He joined the University of Rochester as a fellow in haematology in 1976, and he has remained at that institution where he is the director of the Haemostasis and Thrombosis Programme.

Dr Francis has been the recipient of a Clinical Investigator Award from the National Heart, Lung and Blood Institute and an Established Investigator Award from the American Heart Association (AHA). He has served on numerous National Institutes of Health review and advisory committees. He is a past chairman of the Scientific and Standardization Committee of the International Society on Thrombosis and Haemostasis and programme chairman of the XVIIth International Congress on Haemostasis and Thrombosis. He currently serves as the editor in chief of *Thrombosis Research*.

Dr Francis has both clinical and laboratory research interests. His laboratory research has focused on the structure of fibrinogen and fibrin and mechanisms of fibrinolysis; his current work relates to the work of fibrinogen and fibrin in modulating the effects of FGF-2 on endothelial cells. His clinical research has been directed at the areas of venous thrombosis and new anticoagulants.



Menno V Huisman

*Leiden University Medical Center, Leiden,
The Netherlands*

Menno V Huisman, MD, PhD, is an associate professor in the Department of Medicine at Leiden University Medical Center. He received his medical degree from the University of Amsterdam, where he also obtained a PhD degree on the subject of 'Objective Diagnosis of Deep-Vein Thrombosis.' He completed his residency in internal medicine, followed by the completion of a 2-year fellowship in hematology, at the Academic Medical Center in Amsterdam. He is currently a registrar in vascular medicine at the Leiden University Medical Center.

Dr Huisman is also chairman of the Section of Vascular Medicine in the Department of Medicine at Leiden University Medical Center and chairman of the National Education Board of Vascular Medicine in the Netherlands.

Dr Huisman's main research interests are in clinical research, particularly in the areas of diagnosis and treatment of venous and arterial thromboembolism.

Craig M Kessler

Georgetown University Medical Center and the Lombardi Comprehensive Cancer Center, Washington, DC, USA

Craig M Kessler, MD, received his medical degree from the Tulane University School of Medicine in New Orleans, Louisiana, where he was a member of Alpha Omega Alpha Honor Society. He completed his residency in internal medicine at the Ochsner Foundation Hospital in Louisiana and his fellowship in hematology/oncology at the Johns Hopkins Hospital and University in Baltimore, Maryland.



Dr Kessler then became a full-time faculty member and attending physician in the Section of Special Hematology at the National Institutes of Health in Bethesda, Maryland. In 1982, he joined the Division of Hematology and Oncology at the George Washington University School of Medicine, where he became tenured professor of medicine and chief of the division. He is currently professor of medicine and pathology at the Georgetown University Medical Center and the Lombardi Comprehensive Cancer Center. In addition, Dr Kessler is director of the Division of Coagulation, director of cellular and therapeutic apheresis, director of the Hemophilia and Thrombophilia Comprehensive Treatment Center, and immediate past chief of the Division of Hematology/Oncology.

He is co-editor of *Haemophilia* and *Seminars in Thrombosis and Hemostasis*, and is chairman of the Medical and Scientific Advisory Council of the National Hemophilia Foundation. Dr Kessler has been awarded Mastership in the American College of Physicians and has published more than 175 peer reviewed articles and 4 books.



Michael Rud Lassen

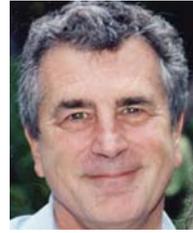
*Spine Clinic and Clinical Trial Unit, Hørsholm Hospital,
University of Copenhagen, Hørsholm, Denmark*

Michael Rud Lassen, MD, is chief of the Spine Clinic and Clinical Trial Unit at Hørsholm Hospital, University of Copenhagen. He graduated from the University of Copenhagen Medical School in 1982, specialized in orthopedic surgery in 1991, and has been with Hørsholm Hospital for the past 13 years, the last 8 in the position of chief.

Dr Lassen has been interested in the treatment and prevention of coagulation disorders for more than 25 years and has built a research institute at Hørsholm Hospital. He has published more than 90 papers in the area of coagulation. In addition, Dr Lassen has been active in the development of new anticoagulants from low-molecular-weight heparins to herudins and newer direct thrombin and factor Xa inhibitors. Dr Lassen is also interested in research on bone formation, bone healing, and different implants in the treatment of degenerative spine diseases.

Howard A Liebman

*University of Southern California Keck School of Medicine,
Los Angeles, California, USA*



Howard A Liebman is professor of medicine and pathology at the University of Southern California's (USC) Keck School of Medicine. He also serves as medical director of the Special Hemostasis Laboratory at USC's Norris Comprehensive Cancer Center and is interim chief of the Section of Hematology. Dr Liebman received his medical degree from USC in 1973. His postgraduate training included a residency in internal medicine and fellowships in medical oncology and hematology at Los Angeles County-USC Medical Center (1973 to 1980).

Dr Liebman then completed a research fellowship at Tufts University-New England Medical Center, Boston, Massachusetts, USA (1981 to 1984). Before returning to USC, he held faculty positions at Tufts University and Boston University.

Dr Liebman's research interests include clinical management and characterization of hemostatic and thrombotic disorders, management of autoimmune blood disorders, and clinical therapy of HIV and AIDS. He has authored or coauthored 85 peer-reviewed publications and 28 reviews and chapters.



Geno J Merli

Jefferson Medical College, Thomas Jefferson University Hospital, Philadelphia, Pennsylvania, USA

Geno J Merli, MD, FACP, is a board-certified specialist in internal medicine, co-director of the Jefferson Vascular Center, Thomas Jefferson University, and senior vice president and chief medical officer at Thomas Jefferson University Hospital. Dr Merli received his medical degree from Jefferson Medical College and completed his residency in rehabilitation medicine and internal medicine at Thomas Jefferson University Hospital.

Dr Merli is a nationally recognized expert in the areas of prophylaxis for and management of deep vein thrombosis (DVT) and pulmonary embolism (PE) as well as the area of medical consultation of surgical patients. His research interests have focused on prophylaxis for DVT/PE and the management of DVT in acute spinal cord injury, total joint replacement, trauma, and high-risk cancer patients.

Dr Merli is the current editor of *Hospital Practice* and serves on the editorial boards of the *Journal of Hospital Medicine and Hospitalist News*. He is also a reviewer for the *New England Journal of Medicine*, *Archives of Internal Medicine*, *Annals of Internal Medicine*, *Chest*, *JAMA*, *the Journal of Managed Care*, and the *Journal of Thrombosis and Thrombolysis*. He is co-editor, with Howard H Weitz, MD, of the book *Medical Management of the Surgical Patient*, and co-chairs the Jefferson-Mayo Clinic national course on the perioperative care of the surgical patient with medical problems. In addition, Drs Merli and Weitz present an innovative program, 'Consult Talk,' at the annual American College of Physicians meetings.

Dr Merli is a fellow of the American College of Physicians and Society of Hospital Medicine, a member of the American Venous Forum, the Society of Hospital Medicine, the Society of Vascular Medicine, and the International Society on Thrombosis and Haemostasis.

Saskia Middeldorp

Academic Medical Center, Amsterdam, The Netherlands

Saskia Middeldorp, MD, qualified as a medical doctor at the University of Amsterdam in 1992. She received her training in internal medicine at the Academic Medical Center in Amsterdam and obtained her board licence in 1999 (subspecialty, vascular medicine, 2002). She defended her thesis entitled 'Clinical and Laboratory Studies in Hereditary and Acquired Prothrombotic States,' in 2000.



Dr Middeldorp was associate professor of the Department of Vascular Medicine at the Academic Medical Center until December 2006 and co-director of the Dutch Cochrane Centre from 2003 to 2005. From December 2006 to July 2010, she was associate professor in the Departments of Clinical Epidemiology and Internal Medicine at the Leiden University Medical Center. She was project leader of the NEO Study, a large population-based cohort of obese individuals that aims to study the etiology of various conditions and diseases in obesity.

In July 2010, Dr Middeldorp returned to the Academic Medical Center, to become the co-chairman of the Department of Vascular Medicine. Her present research focuses on several aspects of hereditary and acquired thrombophilia, women's issues in thrombosis and haemostasis, and the clinical evaluation of new anticoagulants.

Dr Middeldorp held a research fellowship (2003-2007) and was Clinical Established Investigator (2008-2010) of the Netherlands Heart Foundation. She is a member of the advisory board of the *Journal of Thrombosis and Haemostasis*, is editor of the *Cochrane Collaborative Review Group on Peripheral Vascular Diseases*, and a member of the Scientific Advisory Boards of the Netherlands Heart Foundation and Dutch Thrombosis Foundation. She has co-authored more than 100 peer-reviewed papers and several book chapters, and reviews manuscripts for international scientific journals.



Paolo Prandoni

Institute of Medical Semeiotics, University of Padua, Padua, Italy

Paolo Prandoni, PhD, is professor of the Department of Medical and Surgical Sciences, Thromboembolism Unit, at the University of Padua. He trained at the University of Padua from 1971 to 1979 before moving to Holland, where he studied for his PhD at the University of Amsterdam in 1992.

Professor Prandoni's research and professional experiences encompass the epidemiology, diagnosis, and management of thromboembolism. Of particular interest to him are studies addressing cancer-associated venous thromboembolism (VTE).

His key achievements include the following: demonstration of the value of real-time compression ultrasonography for the diagnosis of deep vein thrombosis (DVT); confirmation of the risk for subsequent overt cancer in patients with idiopathic VTE; demonstration that low-molecular-weight heparins (LMWHs) are as effective and safe as unfractionated heparin in the treatment of DVT; demonstration that LMWHs allow the home treatment of DVT; description of the natural history of DVT, outlining the particularly high risk of recurrent thromboembolism in cancer patients; demonstration that both factor V Leiden and G20210A prothrombin variant are independent risk factors for recurrent VTE; demonstration that residual vein thrombosis is a predictive marker of recurrent thromboembolism; demonstration that cancer patients with venous thrombosis have a high risk of recurrent thromboembolism while on anticoagulation; demonstration of an association between atherosclerosis and venous thrombosis; and demonstration that chronic pulmonary thromboembolic hypertension following an episode of pulmonary embolism is more frequent than commonly thought.

Professor Prandoni has published more than 300 papers in peer-reviewed journals.

Frederick R Rickles

The George Washington University, Katzen Cancer Research Center, Medical Faculty Associates, Washington, DC, USA



Frederick R Rickles, MD, FACP, received his medical degree from the University of Illinois and completed his postgraduate training in internal medicine and hematology at the University of Rochester School of Medicine, Strong Memorial Hospital, Rochester, New York. He served in the US Army and was director of the Hemostasis and Thrombosis Research Laboratory at the Walter Reed Army Institute of Research from 1971 to 1974.

Dr Rickles then joined the faculty of the University of Connecticut School of Medicine in 1974, became a professor of medicine and laboratory medicine and served as chief of the Hematology-Oncology Division of the Department of Medicine from 1984 to 1993. He was awarded the Physicians Health Services/American Red Cross Chair in Transfusion Medicine by the University of Connecticut and also served as chief of hematology-oncology at the affiliated Veterans Administration Medical Center. In 1993, he became deputy chief, Division of Hematologic Diseases at the Centers for Disease Control and Prevention, professor of medicine and pediatrics at Emory University, and director of the Emory University Comprehensive Hemophilia and Thrombosis Center, all in Atlanta, Georgia.

In 1998, Dr Rickles became professor of medicine and associate vice president for health research at The George Washington University (GWU), a position he held until 2003, when he assumed the role as chief executive officer and executive director of the Federation of American Societies for Experimental Biology (FASEB), a position he held until 2006. He continues to serve on the faculty of the GWU as a professor of medicine, pediatrics and pharmacology and physiology, as an attending physician at the GWU Hospital and Children's National Medical Center, and as a practicing physician in the Medical Faculty Associates at GWU.

Dr Rickles is an editor of the book *Cancer and Thrombosis* and is the author of more than 120 papers in refereed journals, 15 book chapters, and 25 comprehensive reviews in his principle areas of interest: the molecular pathogenesis, epidemiology, and prevention and treatment of thrombosis in cancer. He is currently on the editorial boards of the *Journal of Thrombosis and Haemostasis*, *Blood Coagulation, Fibrinolysis*, and *Supportive Cancer Therapy*.

He serves on a number of committees of several societies and associations such as the American Society of Hematology, the American Cancer Society, the American Heart Association, and the International Society on Thrombosis and Haemostasis.

Dr Rickles' basic laboratory research focuses on the regulation of tissue factor gene expression and its role in tumor biology. His research group has published studies of the regulation of tumor angiogenesis by tissue factor and has designed novel therapeutic agents to inhibit thrombosis and angiogenesis in cancer.

Wolfram Ruf

The Scripps Research Institute, La Jolla, California, USA

Wolfram Ruf, MD, is professor in the Department of Immunology and Microbial Science at The Scripps Research Institute and Margaret Thatcher Professor of Biological Chemistry at the Thrombosis Research Institute in London. He received his MD degree from the University of Giessen in Giessen, Germany.



In 1988, Dr Ruf joined Scripps as a postdoctoral fellow and has continued his career there as a faculty member. His research program is focused on the tissue factor (TF)-initiated coagulation pathway in thrombosis, inflammation, angiogenesis, and tumor biology. In addition to an interest in the structural biology, regulatory mechanisms, and cell biology of the TF-initiation complex, his current research is focused on signaling roles of coagulation proteases, coreceptors, and protease-activated receptors in genetic mouse models and novel therapeutic approaches that target these pathways in cancer, thrombosis, and inflammatory disorders.



Charles-Marc Samama

Hôtel-Dieu University Hospital, Paris, France

Charles-Marc Samama, MD, PhD, FCCP, is board certified to practice anesthesiology and intensive care medicine. He holds a master's degree in hemostasis and thrombosis and his PhD dissertation was based on an experimental model of thrombosis in the pig. He is currently a professor in and chairman of the Department of Anaesthesiology and Intensive Care at the Hôtel-Dieu University Hospital in Paris, France. He also heads a laboratory in the INSERM 765 research unit and, for many years, has worked on the development of an experimental model of arterial thrombosis and bleeding in the rabbit.

Professor Samama is the past-president of the Scientific Committee of the French Society of Anaesthesiology and Intensive Care (SFAR). He was elected member of the European Society of Anaesthesiologists (ESA) Board of Directors and is also a member of the International Society on Thrombosis and Haemostasis (ISTH).

Professor Samama serves as a consultant or associate editor for a number of professional journals in anesthesiology, hemostasis, and drug safety, and has published more than 100 peer-reviewed articles and anesthesiology reviews. He directed the French Guidelines on Perioperative Venous Thromboembolism (VTE) Prophylaxis and coauthored the VTE prevention section of *Antithrombotic and Thrombolytic Therapy: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines (8th edition)* and has been selected to be a panelist for the 9th edition.

Meyer-Michel Samama

Hôtel-Dieu University Hospital, Paris, France

Meyer-Michel Samama, MD, is professor emeritus of haematology at Hôtel-Dieu University Hospital, where he was formerly chair of the Department of Haematology and scientific adviser and delegate director at Biomnis Laboratory. Professor Samama qualified as a pharmacist-pathologist, then as a medical doctor, and then as professor of haematology from the University of Paris VI School of Medicine. His study on venous thromboembolism prophylaxis in medical patients (MEDONOX study) was selected to be presented at the Presidential Symposium of the International Society on Thrombosis and Haemostasis in 1999 and is a very frequently quoted work since published in the *New England Journal of Medicine*. Professor Samama was elected corresponding member of the National Academy of Pharmacy in 2001. He has presented 3 lectures at the National Academy of Medicine.



Professor Samama's research interests centre on the haemostasis and pathogenesis of venous thrombosis. Current fields of focus include the diagnosis and treatment of hereditary thrombophilia and the pharmacology of antithrombotic drugs, including low-molecular-weight heparins, fondaparinux, and new antithrombotic agents. He has published more than 400 original articles and has co-edited a number of books on clinical thrombosis and hypercoagulable states.

Professor Samama received a Distinguished Career Award for his contributions to haemostasis from the International Society on Thrombosis and Haemostasis Forum. He also received awards from the International Society of Fibrinolysis and Thrombolysis and the Venous Thrombosis Forum for his work in the field.

He is a member of the editorial board of the *Journal of Thrombosis and Haemostasis* and a member of the American College of Chest Physicians (ACCP) Consensus Conference on Antithrombotic Therapy. He sits on the review board of several journals and is a member of many professional societies.



Alexander G G Turpie

*McMaster University and Hamilton Health Sciences,
Hamilton, Ontario, Canada*

Alexander G G Turpie, MD, is professor of medicine at McMaster University and an internist on the staff of Hamilton Health Sciences. He received his medical education from the University of Glasgow, Scotland. After completing residencies at the Glasgow Royal Infirmary and Stobhill General Hospital, where he was also a clinical research fellow, he served as a clinic lecturer for the University of East Africa Medical School in Nairobi, Kenya. After returning to the University of Glasgow for additional training in hemostasis and thrombosis, he was appointed MRC Fellow at McMaster University as well as being appointed to the full-time faculty in the Department of Medicine.

Professor Turpie's research interests include new antithrombotic drugs for the management of venous and arterial thrombosis, and anticoagulant therapy in patients with prosthetic heart valves. He has served on numerous professional and university-related committees and is a frequent lecturer at professional meetings worldwide.

Professor Turpie has authored more than 700 published articles, abstracts, book chapters, and books, and he has been a reviewer for many journals, including the *Annals of Internal Medicine*, *Circulation*, *The Lancet*, and the *New England Journal of Medicine*, in addition to serving on the editorial boards of *Vascular Medicine and Heart Drug*.

Freek W A Verheugt

University Hospital, Nijmegen, and Onze Lieve Vrouwe Gasthuis, Amsterdam, The Netherlands

Freek W A Verheugt, MD, FESC, FACC, FAHA, is professor of cardiology at the Heart-Lung Centre of the University Medical Centre of Nijmegen and chairman of the Department of Cardiology at Onze Lieve Vrouwe Gasthuis.



Professor Verheugt graduated from the University of Amsterdam in 1974 and wrote a thesis on platelet and granulocyte antigens and antibodies. He trained in cardiology at the Thoraxcenter of the Erasmus University in Rotterdam. Professor Verheugt has served as professor at the University of Colorado Health Sciences Center in Denver, Colorado, USA, and at the Free University in Amsterdam. He was president of the Netherlands Society of Cardiology from 1999 to 2001.

Professor Verheugt has published more 400 papers in peer-reviewed international journals, including the *New England Journal of Medicine*, *The Lancet*, *Circulation*, *Journal of the American College of Cardiology*, and *European Heart Journal*, of which he is an editorial board member. He is an editorial adviser of *The Lancet*, the *New England Journal of Medicine* and *Circulation*. Professor Verheugt has more than 14,000 citations. His main fields of scientific interest are pharmacological and interventional treatments of acute coronary syndromes and atrial fibrillation.





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