



# NAVAt

## 2017 Faculty



Dear Colleagues,

It is a pleasure to announce the faculty and program for the 2017 NAVAt meeting. We have been able to invite the absolute experts in the area of pharmacokinetics/pharmacodynamics of potent inhaled anesthetics and associated topics. Please consult our website [www.NAVAt.org](http://www.NAVAt.org) for details. Join us at NAVAt V, Saturday September 30, in the OLV hospital, Aalst, Belgium.

*Andre De Wolf, Philip Peyton, Michel Struys, and Jan Hendrickx again organize NAVAt – NAVAt V. After having been declared a lustrum meeting by Geert Vandenbroucke, chair of the OLV department of Anesthesiology, CCM, and Pain Medicine, Aalst, Belgium, the 4 NAVAt Musketeers decided they too should celebrate - by not lecturing this year. This year, that honor will exclusively be bestowed upon world class experts, with the 4 NAVAt Musketeers take their place as chair or co-chair during the sessions.*

### The NAVAt group

**Jan FA Hendrickx, MD, Ph.D.**  
Staff Anesthesiologist  
Dept. of Anesthesiology/CCM  
OLV Hospital  
Aalst, Belgium  
Alumnus Consultant Assistant Professor  
Stanford University  
Stanford CA, USA

**Peyton Philip, M.D., Ph.D.**  
Associate Professor  
Dept. of Anaesthesia and Dept. of Surgery  
Austin Hospital & University of Melbourne  
Melbourne, Australia

**Andre M De Wolf, M.D.**  
Professor  
Dept. of Anesthesiology  
Feinberg School of Medicine  
Northwestern University  
Chicago, IL, USA

**Michel Struys, M.D., Ph.D.**  
Professor and Chair  
Dept. of Anesthesiology  
University of Groningen  
University Medical Center of Groningen  
Groningen, The Netherlands  
Professor of Anesthesia  
Ghent University, Belgium

European Society of Anaesthesiology **ESA**



SBAR



SARB

**siZ**

BELGIAN SOCIETY OF INTENSIVE CARE MEDICINE



This year's keynote speaker is **Michael Pinsky**, Professor of Critical Care Medicine with secondary appointments in Cardiovascular Diseases, Clinical & Translational Science, Anesthesiology, and Bioengineering at the University of Pittsburgh, Pennsylvania, USA. He has published >230 peer-reviewed papers, >210 chapters, and 24 books. His CV is a book in and by itself. He is Editor-in-Chief of eMedicine's Critical Care Medicine and is on numerous editorial boards and international programs. He received numerous awards from prestigious universities. He is a member of the ACGME Review Board for Pulmonary & CCM. His research interests are heart-lung interactions, cardiovascular insufficiency, hemodynamic monitoring, sepsis, mechanical ventilation, and health services research and quality of life after critical illness. He will use his superb lecture skills to give his lecture, **"Applied cardiovascular physiology in theatre: Measuring the cardiovascular effects of propofol anesthesia"**.



**Berthold Bein** is Professor of Anesthesiology and Intensive Care Medicine and chair of the Department of Anesthesiology and Intensive Care Medicine at the Asklepios Hospital St. Georg in Hamburg, Germany. He is honorary lecturer for the Asklepios Medical School and has special expertise in the fields of cardiothoracic, vascular and trauma anesthesia and emergency medicine. His scientific interests are prevention of perioperative hypothermia, evaluating monitoring devices, cardiovascular drugs, anesthetic preconditioning, and patient blood management. Dr. Bein has published over 325 peer reviewed manuscripts and book chapters. At NAVAt V, he will address the following question: **"Responding to fluid responsiveness in the OR: do we have to?"**



**Michael Avram** received his B.S. in Chemistry from Michigan State University and his Ph.D. in Pharmacology from Loyola University of Chicago. He joined the faculty of the Department of Anesthesiology at Northwestern University Feinberg School of Medicine, where he is a tenured Associate Professor of Anesthesiology and Director of the Mary Beth Donnelley Clinical Pharmacology Core Facility. He is a diplomat of the American Board of Clinical Pharmacology, an Executive Editor of Anesthesiology, and a member of the Editorial Board of Clinical Pharmacology & Therapeutics. He has published > 130 peer-reviewed papers. He developed PK models that describe the early kinetics of rapidly acting IV administered drugs. These models help describe interindividual variability in response to these agents, which often have low clinical margins of safety. We are looking forward to his lecture **"Front-end kinetics: the first two min after injecting propofol"**.



**Gerhard Schneider** is Professor and Chair of the Department of Anaesthesiology at the Technische Universität München. He is past chairman of the ESA Scientific Subcommittee on Neurosciences. His research focuses on mechanisms of anesthesia-induced unconsciousness, detection, prevention and treatment of awareness, recall, and their sequels, and monitoring of anesthetic effects on the brain. Prof. Schneider will tell us how we should navigate towards an appropriate depth of anesthesia: **"The Future of depth of anesthesia monitoring: from probabilistic to mechanism-based monitoring"**.



**Andrew Kofke** is Professor of Anesthesiology and Critical Care at the Hospital of the University of Pennsylvania, Department of Anesthesiology and Critical Care, Perelman School of Medicine (2001) and Professor of Neurology, Department of Neurology, Perelman School of Medicine (2014). He is past president of the Society for Neuroscience in Anesthesiology and Critical Care. He has published > 100 manuscripts, books, and book chapters. He studied Medicine at the University of Pittsburgh. During his residency and fellowship at the Massachusetts General Hospital, Boston, 1979-1983, he wrote the chapter "Closed circuit anesthesia" in "Clinical Anesthesia Procedures of the Massachusetts General Hospital", 3rd Edition. His work has included neurotoxicity of opioids and more recently of inhaled agents. His NAVAt lecture will focus on the latter: **"Neurotoxicity of inhaled agents after prolonged administration."**



**Robert Pearce** is Professor and R.M. Waters Distinguished Chair of Anesthesiology, University of Wisconsin, Madison, Wisconsin, USA. He has been a member of the Scientific Advisory Board of the Association of University Anesthesiologists, Associate Editor of Anesthesiology, and a member of the Committee on Research of the ASA. Research in the Pearce laboratory is focused on the mechanisms by which general anesthetics alter brain function. They are particularly interested in understanding how modulation of GABA receptors impairs memory – a fundamental endpoint of anesthesia. They utilize expressed recombinant receptors and hippocampal brain slices to investigate the roles of specific subunit combinations and cell types in the control of learning and memory. In a sense, the Pearce lab is also working on the ultimate closed circuit administration method, intravenous sevoflurane, which he will tell us all about in his lecture **“As closed as it gets: intravenous sevoflurane”**.



**Joseph Fisher** is Professor at the Department of Anesthesia and Pain Management, Toronto General Hospital. His group has developed several innovative approaches regarding the delivery of inhaled agents. He has supervised approximately 25 graduate students; has authored or co-authored about 145 peer-reviewed publications; has 30 issued patents, with about a dozen patents pending. At NAVAt II (2014), he introduced us to the concept of isocapnic hyperventilation. At this NAVAt V lustrum edition, Prof. Fisher will explain us the technical aspects of a novel system that allows one to deliver inhaled agents with any ventilator and that makes agent usage largely independent of fresh gas flow by combining an in-circle vaporizer with an agent reflector. Details to be heard at his lecture **“The RIVAL™”**, digital in-line vaporizer plus anesthetic shield: maximum control and maximum efficiency of anesthetic delivery.



**F. Javier Belda** is Professor of Anesthesiology, Department of Surgery, University of Valencia. He is the head of the Department of Anesthesia and Critical Care of University Clinic Hospital, University of Valencia in Spain. He has published extensively (> 100 PubMed cited references) on various aspects of ventilation. He will share with us his clinical experience with the use of inhaled agents in the ICU using an ICU ventilator turned anesthesia ventilator in his lecture **“Automated low flow sedation”**.



**Andres Meiser** is Senior Doctor in the Department of Anaesthesiology, Intensive Care Medicine and Pain Medicine, Saarland University, University Medical Centre, Homburg/Saar, Germany. He has considerable experience with the use of the ANACONDA™ system to deliver inhaled agents in the ICU, which he described in several peer reviewed manuscripts. We look forward to learn from him about the technical aspects of **the ANACONDA™ system** used to deliver inhaled agent outside the operating room.



**Hagen Bomberg** is a resident in the Department of Anaesthesiology, Intensive Care Medicine and Pain Medicine, Saarland University, University Medical Centre, Homburg/Saar, Germany. As the first author of the initial reports on the MIRUS™ system, he will share with us his hands-on experience with **the MIRUS™ system**. The system can be used to deliver isoflurane, sevoflurane, and desflurane with any ventilator.





**Andre De Wolf** is Professor at the Department of Anesthesiology at Northwestern University, Chicago, IL, USA. He is one of the world's experts on anesthesia for liver transplantation, and while working at University Pittsburgh Medical Center from 1981 until 1996, closely collaborated with Thomas Starzl, the surgeon who invented liver transplantation. He developed a secondary interest in pharmacokinetics and pharmacodynamics of inhaled anesthetics, which started to lead a second life in and by itself after meeting Jan Hendrickx when he started a residency at the University of Pittsburgh in 1992. Two speakers at the fifth NAVAt meeting, Michael Pinsky and Andrew Kofke, were his teachers and colleagues in Pittsburgh.



**Jan Hendrickx** is a member of the Department of Anesthesiology in Aalst, Belgium, and an alumnus of the Department of Anesthesiology of Pittsburgh and of Stanford, CA, USA. He has a life-long interest in the quantitative aspects of low flow and closed circuit anesthesia. He is the immediate past chair of the ESA subcommittee on Equipment, Monitoring and Ultrasound, member of the ESA N<sub>2</sub>O task force, and member of the ESA Patient Safety and Quality committee. Andre and Jan's joint research ended up bringing them into contact with Philip Peyton and Michel Struys. He looks forward to continue to learn from his attendings at NAVAt V.



**Philip Peyton** is Associate Professor at Austin Hospital, Melbourne. He was a member of the ENIGMA I and II (Evaluation of Nitrous oxide In the Gas Mixture for Anaesthesia) trial group that confirmed the safety of N<sub>2</sub>O. He is a world-expert on how ventilation/perfusion mismatching affects anesthetic gas exchange. All three of them (Andre, Jan, Michel, and Philip) have lectured extensively during the first 4 NAVAt meetings.



**Michel Struys** is Professor and Chair at the Department of Anesthesiology, University of Groningen and University Medical Center Groningen and is affiliated as Professor of Anesthesia at the Ghent University, Belgium. His research group is one of the world leading groups in anesthetic pharmacology, including PK/PD modeling, drug interaction research and drug administration systems such as TCI and closed-loop. He is an editor of the British Journal of Anaesthesia, senior editor of Anesthesia and Analgesia, and a former associated editor of Anesthesiology. He is a Past President of the International Society of Anesthetic Pharmacology, past member of the Committee on Pharmacology of the ESA, and board member of EuroSIVA. He has been a speaker at NAVAt and will chair at NAVAt V.



**Joseph Orr** is research associate professor at the University of Utah, Department of Anesthesiology. He has over 20 years experience as an expert in respiratory and anesthesia instrumentation with an emphasis on studies, measurement and analysis of physiologic O<sub>2</sub> consumption and CO<sub>2</sub> production. He is a past president of the STA, the Society of Technology in Anesthesia. He has authored 26 peer-reviewed publications and currently holds 42 US patents and has multiple patents pending. Dr. Orr holds a Ph.D. in bioengineering from the University of Utah and a master of engineering management degree from Brigham Young University. He holds a position as co-founder and CEO of KORR™ Medical and as president, founder of Dynasthetics LLC.



**Patrick Wouters** is Professor and Chair of the Department of Anesthesia and Perioperative Medicine and Professor of Clinical Physiology at Ghent University, Belgium. He has published extensively on right ventricular function. He has chaired the ESA Scientific Subcommittee on Clinical and Experimental Circulation and the Subcommittee of the European Association of Cardiothoracic Anaesthesiologists on Echocardiography. He will share some of his expertise as chair at NAVAt V.



**Geert Vandenbroucke**, Chair of the Department of Anesthesiology, CCM, and Pain Medicine at the OLV hospital, has been unrelenting in his support for NAVAt and will be hosting NAVAt for the 5<sup>th</sup> time.



**Jan Verbeke** will co-chair NAVAt V. He graduated from Ghent University, Belgium, and is board certified in Anesthesiology and CCM. He was actively involved in the development of CCM in Belgium. He is director of the OLV CCM department. He is a former member of the Belgian Accreditation Board of Anesthesiology and CCM. He is secretary of the Belgian Professional Society of Physician-Specialists in CCM. He has a special interest in ventilator and nutritional aspects of CCM.



**Koen De Decker** graduated from Antwerp University, Belgium, and is board certified in Anesthesiology and CCM. He is co-director of the OLV CCM department. He is member of the Belgian CCM accreditation council, member of the scientific committee of the Belgian Society of Intensive Care Medicine (SIZ), and director of the OLV CCM residency program. He has a special interest in cardiovascular anesthesia and intensive care medicine, with special emphasis on the management of end-stage heart disease (mechanical support, heart transplantation). He will co-chair NAVAt V.