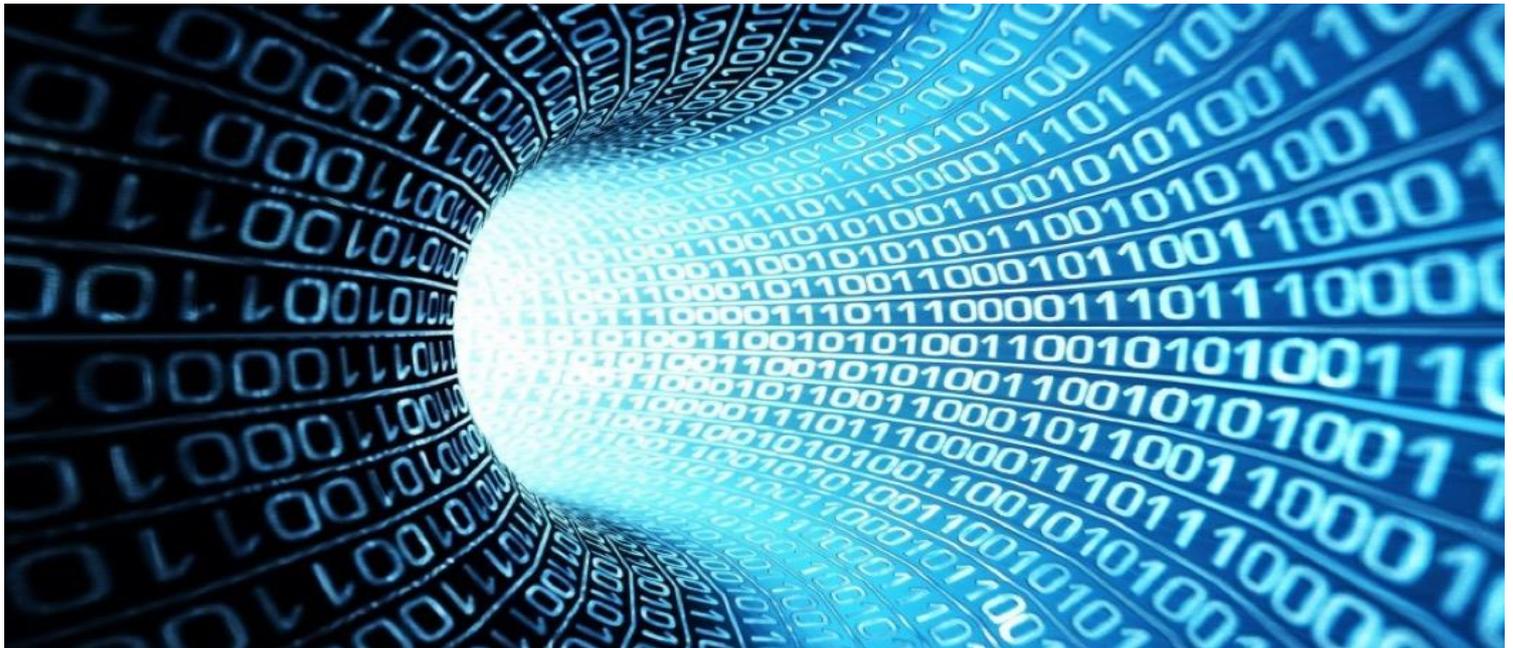




# NAVAAt

## 2018 FACULTY



Dear Colleagues,

It is a pleasure to announce the faculty for the 2018 NAVAt meeting. Come and explore with the world's experts in their respective fields how to NAVigate to your Anesthesia targets. This international meeting focuses on pharmacokinetics and pharmacodynamics of potent inhaled anesthetics, anesthesia workstations (with a focus on low flow anesthesia), and anesthetic depth monitoring. Looking forward to seeing you all in Aalst on Saturday September 22, 2018 !

### The NAVAt group

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

**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 in Anesthesia  
Ghent University, Belgium

**Peyton Philip, M.D., Ph.D.**  
Professor  
Anaesthesia, Perioperative and Pain Medicine Unit  
Medical School, University of Melbourne  
Melbourne, Australia  
Chair, Australian and New Zealand College  
of Anaesthetists Clinical Trials Network

**Patrick Wouters, M.D., Ph.D.**  
Professor and Chair  
Dept. of Anesthesia and Perioperative Medicine  
Professor  
Clinical Physiology  
Ghent University, Belgium





It is a true pleasure to have NAVAt VI opened by **Harry Lemmens** with his lecture “**Anesthetic drug choice and dosing in the obese patient**”. Harry Lemmens is Professor at the Department of Anesthesiology, Perioperative and Pain Medicine at Stanford University Medical Center, California, USA. He studied medicine at the Rijksuniversiteit, Utrecht, The Netherlands (1991) and completed his anesthesiology residency at Leiden University (1986), The Netherlands. His interest in describing the pharmacokinetics and pharmacodynamics of alfentanil led him to work together with Donald Stanski (chair 1992-1997). He has published extensively in the field of clinical pharmacology, with a special focus on obese patients. He is director of the Advanced Clinical Anesthesia Training fellowship program, and runs the daily OR schedule.



“He is spoiling us” describes Professor **Göran Hedenstierna’s** kind willingness to participate at NAVAt for the third time! He works at the Department of Clinical Physiology at Uppsala University, Sweden (senior prof since 2008). He is \*the\* authority on atelectasis and gas exchange during anesthesia, authoring Miller’s Anesthesia chapter on “Respiratory Physiology and Pathophysiology”. He established an animal research laboratory with Ph.D. students and visiting scientists from approximately 20 countries - a PubMed search (April 2016) with his name yields more than 460 references and counting. We look forward to having him explain how his scientific work can help us twist the knobs of our anesthesia workstation so we can make a difference in the obese patient’s outcome. This year, he will focus on “**How to ventilate and oxygenate the obese surgical patient ?**”. He was in attendance when MAC met MIGET, having a virtual dinner with Ted Eger, Larry Saidman, Bob Stoelting, and Peter Wagner. Having Professor Hedenstierna share his expertise and research - for the third time ! - helps define NAVAt what it is.



**Roderic G. Eckenhoff**, currently Austin Lamont Professor of Anesthesia at the University of Pennsylvania (Philadelphia, PA, USA), originally aspired to be a marine biologist. Instead, after graduating from Northwestern University Medical School (1978), he elected to join the ranks in hyperbaric medicine at the Naval Submarine Medical Research Laboratory in Groton, CT. Aiming to continue in this area, but in a more academic setting, he returned to civilian life as an anesthesia resident at the University of Pennsylvania, in large part because of the renowned Institute for Environmental Medicine at Penn. But the ability to more definitively answer questions persuaded Professor Eckenhoff to pursue basic science training in the Andrew Somlyo lab at Penn, where he accidentally discovered an approach to measure subcellular concentrations of anesthetics. This launched him in an entirely new direction, ultimately discovering anesthetic photolabeling, and adapting a series of traditionally biophysical approaches to the study of anesthetic mechanisms. Receiving his first NIH grant in 1991, he assembled an interdisciplinary group to study anesthetic mechanisms. We look forward to his lecture: “**Where and how inhaled anesthetics work**”. Suisse cheese, anyone?



**Julian M. Goldman** completed his anesthesiology residency and research fellowship in medical device informatics at the University of Colorado. He departed as Associate Professor to work as an executive of a medical device company, but returned to academia in 2002, joining Harvard Medical School and the Department of Anesthesia, Critical Care, and Pain Medicine at Massachusetts General Hospital. He served on the National Science Foundation’s Computer & Information Science & Engineering Advisory Committee, was a Visiting Scholar in the FDA Medical Device Fellowship Program, and was a member of the Center of Disease Control’s Board of Scientific Counselors for the National Center for Public Health Informatics. He serves in leadership positions in several healthcare standardization and innovation organizations, is a Distinguished Lecturer of IEEE EMBS (the world’s largest international society of biomedical engineers), and has received numerous prestigious awards, including ASA awards for advanced technology that improves patient safety. NAVAt asks him: “**Can my anesthesia workstation be hacked?**”.



Prior to joining Dalhousie University (Halifax, Canada) in 2007, Professor **Michael Schmidt** was a cardiac anesthesiologist and leader of the Neuroprotect Research Group at the University of Ulm (Germany), which included the study of several aspects of xenon as an anesthetic. He holds appointments in the Department of Anesthesia, Pain Management & Perioperative Medicine, the Department of Physiology and Biophysics, and the School of Biomedical Engineering. His research interests include post-operative neuro-cognitive decline and the development of organ-protective strategies. It is tempting to speculate that his experience with low flow anesthesia to administer xenon and his “exposure” to oxygenators during cardiac anesthesia may have blended into a radical, new design of a type of CO<sub>2</sub> absorber that might ultimately eliminate Ca(OH)<sub>2</sub> granules as a CO<sub>2</sub> absorbent: “**No more CO<sub>2</sub> absorber canister changes !! From CPB oxygenator to everlasting CO<sub>2</sub> absorber**”.



**Ross Kennedy** is Clinical Associate Professor at the University of Otago in Christchurch, New Zealand. Out of his interest in low flow and closed circuit anesthesia, he developed his own predictive display of the relationship between fresh gas flows, vaporizer settings, end-expired and effect site partial pressures of inhaled anesthetics, a pharmacokinetic/pharmacodynamic visual display “avant-la-lettre”. His interest in the Navigator was the next logical step, which he addressed at NAVAt II. But he has also been studying patterns in fresh gas flow usage upon introduction of new low flow devices, and has looked into means to encourage anesthesia providers to sustain the use of low fresh gas flows. He will explain “**What \*you\* can learn from your anesthesia machine**” using modern data management tools.



Having taken a break last year, the NAVAt group is sending three of its five musketeers on stage again. Professor **Philip Peyton** (Anaesthesia, Perioperative and Pain Medicine Unit, University of Melbourne, Australia) is a world-expert on how ventilation/perfusion mismatching affects anesthetic gas exchange. He is chair of the Australian and New Zealand College of Anaesthetists Clinical Trials Network, Paul Myles' multi-institutional research group, that conducted ENIGMA I and II (Evaluation of N<sub>2</sub>O In the Gas Mixture for Anaesthesia) which confirmed the safety of N<sub>2</sub>O. Slightly shifting gears this year, yet building upon NAVAt V's lectures by Michael Pinsky and Berthold Bein, we will get a firsthand account of the results of the RELIEF study, "A large, definitive clinical trial evaluating perioperative fluid replacement in major abdominal surgery" [sic] that examined whether a restrictive regimen may lead to better outcomes (**Restrictive versus liberal fluid therapy in major abdominal surgery**). "**A dry argument. Restrictive versus liberal fluids in abdominal surgery (RELIEF)**". Will RELIEF relieve us from the fluid controversy?



**Andre De Wolf** is Professor at the Department of Anesthesiology at Northwestern University, Feinberg School of Medicine, Chicago, IL, USA, and with Jan Hendrickx, the founding father of NAVAt. He is one of the world's experts on hemodynamics during 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. This year, he will present "**Rational emergence after inhalational anesthesia**".



**Jan Hendrickx** is a member of the Dept. of Anesthesiology in Aalst, Belgium, and an alumnus of the Dept. 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 a past chair of the ESA subcommittee on Equipment, Monitoring and Ultrasound, and current member of the ESA Patient Safety and Quality Committee and the APSF Committee on Technology. When, in the operating room, he asks: "Why do you not use a lower fresh gas flow", a frequent reply he gets, is: "To have a little reserve!" or "For safety!". When asking "reserve for what?", or "What safety issue are we talking about?", faces turn south and voices moot. **What exactly happens if the fresh gas flow is too low? How to use a closed circuit with a fresh gas flow below uptake? Workstation responses when fresh gas flows are lower than patient uptake: Kill Bill III?**



**Michel Struys** is Professor and Chair at the Department of Anesthesiology, University of Groningen and University Medical Center Groningen, The Netherlands, and affiliated as Professor in Anesthesia to the Ghent University, Belgium. His research group is one of the world leading groups in anesthetic pharmacology, including pharmacokinetic/pharmacodynamic modelling, 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 co-chair at NAVAt VI.



**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. The area of his expertise, his personal enthusiasm and support for the NAVAt meetings, the enthusiastic attendance of his department, and the many historical ties on a personal and academic level prompted us to invite him as the fifth member of the NAVAt group. We look forward to have him chair at NAVAt VI and participate in the future.



**Annelies Moerman** is Professor at the Department of Anesthesia and Perioperative Medicine at Ghent University, Belgium. Her research has focused on near-infrared spectroscopy, culminating in her 2013 PhD thesis "Clinical application of near-infrared spectroscopy in perioperative assessment of cerebral and peripheral tissue oxygenation" (Ghent University, Belgium). She is associate editor of the European Journal of Anaesthesia and of the Acta Anaesthesiologica Belgica. We look forward to having her chair NAVAt VI.



**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 6<sup>th</sup> time.