

Research: A Fundamental Pillar of Anesthesiology

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We at the Foundation for Anesthesia Education and Research (FAER) hope that you and your families are doing well. Like many of you, my colleagues and I have been consumed with caring for patients during the current pandemic, as anesthesiologists have done in pandemics and other emergencies before and will do in the future. In case you missed it, in April 2020, we made the cover of TIME magazine along with other essential frontline workers. Interestingly, this feature demonstrating one technical aspect of what we do brought to light the importance of anesthesiology. Not only in patient care, but also in research and education because we arrived with our technical expertise, as well as our scientifically guided patient care. This latter aspect stresses the importance of advocacy for anesthesia research, not only by researchers, but also by our numerous colleagues who are not directly involved in research who direct their practice by the evidence conveyed by research.

At some point, we will return to our new normal, whatever that may be. Although I cannot predict the future, I know this: essential workers need essential science. In addition, essential science needs advocacy and support by all of us. We all know that the total funding for research in anesthesiology is lower than what we see for many other specialties (asamonitor.pub/2Yo3OiE). For many, research grants provided by FAER have served a critical role because they can be the first attempt by junior faculty at any type of national funding opportunity. These grants are anesthesiology-specific and anesthesiologist-focused.

So, we reached out to several FAER supporters to get their thoughts on why they feel research is crucial to anesthesiology and the role FAER plays in said research. We are excited to now share with you what they had to say.

“Anesthesiology will only remain a vibrant and respected medical specialty if it is committed to a robust research portfolio that advances scientific knowledge and improves patient care. In fact, it is our commitment to cutting-edge research that differentiates anesthesiologists from other groups of clinical providers with overlapping skill sets. Furthermore, not only should we strive to enhance our own

field, we should aspire to broader contributions to medicine, science, and society. FAER embodies this spirit and is an essential catalyst for the careers of emerging clinician-researchers in the field of anesthesiology. Looking back on my own academic career of NIH-funded research over the past decade, it is clear that my FAER grant was the first spark that helped ignite my independent research program.”

George Mashour, MD, PhD: Former Member, FAER Board of Directors; Former Chair, FAER Grants Management Committee; FAER Grant Recipient, 2007; Robert B. Sweet Professor & Chair of Anesthesiology; Professor of Neurosurgery, Neuroscience, and Psychology, University of Michigan, Ann Arbor.

“The clinical specialty of anesthesiology is involved in the care of patients from all ages who suffer from diseases of every organ system. Thus, anesthesiologists provide comprehensive care for patients’ physiological perturbations in operating rooms, diagnostic facilities, intensive care units, and pain clinics. This broad spectrum of clinical care is reflected in the diverse portfolio of research performed by anesthesiologists. These research undertakings include basic science investigations into the function and pathophysiology of virtually every organ system, clinical research into the impact of clinical interventions on health outcomes, and population-based studies of the results of health care delivery paradigms. Therefore, the training and mentoring of these perioperative physician-scientists is a national priority for improving the medical care of patients undergoing surgical and diagnostic procedures suffering from acute and chronic pain, and suffering from severe multi-organ diseases in intensive care units. FAER is the leading organization for promoting the recruitment, training, and mentoring of physician-scientists within the clinical specialty of anesthesiology. My career was ignited by my first research award from FAER as I completed



my clinical training in an academic department brimming with scholarship and mentorship. This launch allowed me to continue a career in basic lung biology research that has been funded for over 25 years by the National Institutes of Health, which has elucidated novel targets for asthma therapy resulting in a clinical trial using a novel therapy. Most importantly, FAER has supported many aspiring physician-scientists that I have had the honor of mentoring, whose contributions to medical knowledge and patient care will far exceed my personal impact.”

Charles Emala, MS, MD: Member, FAER Board of Directors; FAER Grant Recipient, 1995; Henrik H. Bendixen Professor and Vice Chair for Research, Department of Anesthesiology, Columbia University, New York, New York.

“To me, research has always represented a vitally important means of strengthening the specialty and making the care we deliver safer and more effective. My involvement with FAER, initially as a grantee and now as a mentor to others, has transformed my ability to add value and impact public health through research. For example, the 45-center REGAIN trial, which grew out of work initially funded by a FAER Mentored Research Training Grant, will provide critical new information that will help hundreds of thousands of older surgical patients each year in the U.S. alone make better decisions about their anesthesia care. The opportunities that FAER provides to support research and education are absolutely critical to ensuring the successful growth and development of our specialty over time.”

Mark Neuman, MD, MSc: FAER Grant Recipient, 2011; Horatio C. Wood Associate Professor of Anesthesiology and Critical Care, University of Pennsylvania Perelman School of Medicine, Philadelphia.



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Member, FAER Board of Directors; Chair, FAER Grants Management Committee; FAER Grant Recipient, 1999; Associate Professor of Anesthesiology and Critical Care Medicine, Pediatrics and Pathology, Johns Hopkins University, Baltimore.

“The specialty of anesthesia continues to evolve as anesthesiologists stretch their critical role in the treatment of serious perioperative health issues for diverse patient populations in multiple arenas. It is crucial that the anesthesiology community continues to engage in research and that as a discipline we actively support the training and development of the next generations of anesthesiologist-scientists. The breadth of the field affords anesthesiologists the capacity to contribute enormously to basic, translational, and clinical research and to push forward discovery, knowledge, and care of patients in the operating room, non-OR anesthesia locations, intensive care units, and pain medicine clinics. In addition to the potential for anesthesiologist-scientists to make important medical discoveries, the potential to conduct research makes anesthesiology a particularly appealing specialty for talented and motivated medical students and MD-PhD students wanting to pursue careers as physician-scientists. FAER plays an integral role in supporting anesthesia research and the training and development of anesthesiologist-scientists who will use their unique perspectives to translate scientific discoveries into advances in human health.”

Judith Hellman, MD: ASA Excellence in Research Award Winner, 2019; William L. Young, MD Endowed Professor, Vice Chair for Research, Department of Anesthesia and Perioperative Care, University of California, San Francisco.



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