Anesthesiology 2008; 109:1–2

Science and the Mission of ANESTHESIOLOGY

THIS issue introduces three changes and additions in ANESTHESIOLOGY: a reorganized Table of Contents, reprinting of a scientific statement from *Circulation*,[1]* and an article based on the 2007 American Society of Anesthesiologists (ASA) Plenary Lecture.[2] As noted on our masthead and homepage of the Journal Web site, our mission is "to advance the science and clinical practice of perioperative, critical care, and pain medicine through the promotion of seminal discovery." As such, we have removed the previous divisions in the Table of Contents, comprised of Clinical Investigations, Laboratory Investigations, Pain, and Economics, and replaced them with the three divisions of medical practice that define our specialty and are listed in our mission statement.

As the leading scientific journal in the specialty, ANESTHESIOLOGY strives to keep our readers informed of advances in our understanding of fundamental and clinical issues, including a review of publications outside the Journal and outside the specialty. Until now, this has been provided by Review Articles and Clinical Concepts and Commentary articles. As a first step to expand these offerings, we now reprint selected scientific statements of direct bearing to our specialty published in journals outside the specialty. From time to time, national organizations such as the American Diabetes Association, the American Heart Association, and the National Heart, Lung, and Blood Institute of the National Institutes of Health issue scientific position statements on a variety of public health–related topics that are controversial or require focused scientific effort to further elucidate the problem and to drive the development of novel solutions.

The American Heart Association recently published a scientific statement on Hyperglycemia and Acute Coronary Syndrome that describes the relation between hyperglycemia and marked increases in mortality in patients who are hospitalized with an acute myocardial infarction.[1] There is a growing awareness that hyperglycemia is an independent predictor of increased cardiovascular risk in medical and surgical patients. However, the mechanisms whereby hyperglycemia increases risk and the identification of effective strategies to mitigate risk remain unclear. In fact, the epidemic of diabetes and its perioperative implications were addressed at the recent ASA meeting during the Journal symposium on "Diabetes, Obesity, and the Metabolic Syndrome" and in several recent reviews.[3,4] The American Heart Association statement identifies specific areas in need of further investigation and offers recommendations for the diagnosis and management of hyperglycemia in critically ill patients. This information is reprinted in the current issue of the Journal* to inform the readership of the important strides, and the persisting knowledge gaps, in the controversy surrounding the management of blood glucose concentrations in patients at risk for myocardial ischemia and reperfusion injury. Expect to see other scientific statements from outside the specialty within the Journal, as well as those generated by expert panels within the specialty.

The ASA recognizes outstanding scientific contributors within our medical field with the Plenary Lecture at its annual meeting. This issue begins a new annual tradition with the publication of an article based on the 2007 ASA Plenary Lecture by Sten Lindahl, M.D., Ph.D. (Professor, Department of Anesthesiology and Intensive Care, Karolinska Hospital and Institute, Stockholm, Sweden), a longtime member of the Nobel Committee for the Prize in Medicine or Physiology and researcher and academic leader in anesthesiology.[2] He reviews the fascinating history of the switch from nonoxygenic to oxygenic life during evolution, the discovery of oxygen just a few centuries ago, areas of active research in and outside of our specialty related to oxygen, and new discoveries regarding a basis for hibernation. He tells these stories in a simple and engaging manner that can be easily understood by physicians and all scientifically educated individuals.

You may ask why such a general review appears between the covers of ANESTHESIOLOGY, since we focus on work in our own specialty. There are two reasons. First, although knowledge of the history of evolution of nonoxygenic and oxygenic life on Earth may not be important to our daily clinical care of patients, Professor Lindahl builds upon this knowledge base to explain ongoing research in anesthetic actions on pulmonary determinants of oxygenation, oxygen sensors, and metabolism and to explain novel approaches to organ preservation and suspended animation. Therefore, this arti-

◆ This Editorial View accompanies the following two articles: Lindahl SGE: Oxygen and life on Earth: An anesthesiologist's views on oxygen evolution, discovery, sensing, and utilization. ANESTHESIOLOGY 2008; 109:7–13; Deedwania P, Kosiborod M, Barrett E, Ceriello A, Isley W, Mazzone T, Raskin P: Hyperglycemia and acute coronary syndrome: A scientific statement from the American Heart Association Diabetes Committee of the Council on Nutrition, Physical Activity, and Metabolism. ANESTHESIOLOGY 2008; 109:14–24 (reproduced from *Circulation* 2008; 117:1610–9, with permission from the American Heart Association).

Accepted for publication March 25, 2008. The authors are not supported by, nor maintain any financial interest in, any commercial activity that may be associated with the topic of this article.

* See page 14 of this issue.

cle informs and guides us in understanding research in anesthesiology that is pointing the way to our future practice.

Second, although ANESTHESIOLOGY is clearly an international journal, this article reflects the close contact between this journal and the ASA and its research arm, the Foundation for Anesthesia Education and Research. Dr. Eisenach's predecessor, Michael Todd, M.D. (Professor and Chairman, Department of Anesthesia, The University of Iowa, Iowa City, Iowa), encouraged and prodded the ASA to inject more science into its annual meeting, including the Journal-sponsored symposium and this plenary lecture on science. I intend to further this effort with the addition of special sessions at the ASA Annual Meeting highlighting Foundation for Anesthesia Education and Research–funded research and the top scientific abstracts of the meeting. (Look for Journal-sponsored activities in the September issue.) Publication of an article based on the Plenary Lecture fits precisely in this effort.

So sit back and spend a few minutes letting a world-recognized leader in medicine entertain you with a fascinating scientific tale that forms the foundation for the future of our specialty!

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