Carol A. Hirshman, M.D., Editor

The History of Anesthesia. Third International Symposium: Proceedings. Edited by B. Raymond Fink, Lucien E. Morris, and C. R. Stephen. Park Ridge, Wood Library-Museum of Anesthesiology, 1993. Pages: 467. Price: \$70.00 Softbound, \$80.00 Leather-bound.

All men who are interested in public affairs, but especially those who desire to influence such affairs, must concern themselves with two intellectual activities: History, without which one cannot understand mankind or one's own times and people: Literature, which is the expression of conscious and reasoning mankind.1

In this enlightened, scientific age, the value of the individual often is ignored or downplayed in the clamoring of the many and the powerful. It is a pleasure to read of so many individual personalities who, strong or weak, correct or in error, in medicine or totally unrelated fields, have made such significant contributions to the practice of anesthesia. This book is the culmination of an international symposium held in Atlanta, Georgia, on the sesquicentennial of Crawford W. Long's first anesthetic administration. It attracted scholars and historians, educators and students, from all over the world. Speaking as one who was there, the sheer number of papers presented made attendance at all the lectures an impossibility.

Agonizing choices had to be made. What a delight to have them all before me to pick and choose at leisure. Who was Otto Keppeler? What psychic experience did Sir Humphrey Davy have in Slovenia? What was Denis Browne's Top Hat? What happened to Winston Churchill while under anesthesia? What was military anesthesia like during the Civil War or during Desert Storm? One can't help but marvel at the ingenuity of those who developed equipment and methods for the safe delivery of anesthesia, most of which are taken for granted by today's practitioners. Particularly noteworthy are the biographies on R. Douglas Sanders and Juan Marin.

The editors have done an excellent job dividing the topics into apparatus, agents and techniques, biographies, military, and general. There also is a complete index of topics and authors. The presentations that were on videotape are summarized, by necessity. There is something here for everyone, regardless of geographic location, area of interest, or field of endeavor. This book should be in the library of every department of anesthesia, and residents and staff should be encouraged in its perusal. It combines history and literature in a stimulating and often amusing manner. The outstanding careers of so many of the contributors would seem to confirm the proposition that a prerequisite for a leadership position is a concern with these two intellectual activities. The softbound edition is especially pleasing with its pictures of Crawford W. Long in youth and in age and the map of Georgia on the spine.

> Margaret M. Libonati, M.D. 7277 Bausch Road New Tripoli, Pennsylvania 18066

## Reference

eference

1. Belloc H: On the Place of Gilbert Chesterton in English Letters was York, Sheed and Ward, 1940, pp 45–46 New York, Sheed and Ward, 1940, pp 45-46

The Biology of Nitric Oxide: Physiological and Clinical Aspects. By S. Moncada, M. A. Marletta, J. B. Hibbs, Jr., and E. A. Higgs, London, Portland Press, 1992. Pages: 397. Price \$138.68.

In 1980, R. F. Furchgott and J. V. Zawadski demonstrated tha relaxation to acetylcholine in the rabbit aorta depended on the pres ence of an intact endothelium. Furchgott hypothesized that acetyl choline stimulated release of an endothelium-derived relaxing (EDRF), which caused relaxation of the vascular smooth muscle EDRF was shown to have an extremely short half-life, to be potentiated by scavengers of oxygen-derived free radicals, and to exert its action via stimulation of guanylate cyclase and a rise in cyclic guanosing monophosphate in the smooth muscle cell. In 1987, Moncada and coworkers published conclusive evidence that EDRF was nitric oxide Ignarro and colleagues confirmed this work later that year. It is now widely accepted that the properties of EDRF are identical to thos of nitric oxide and that the latter accounts for the observed endo thelium-dependent phenomena. Since then, nitric oxide has been shown to play a vital role in several organ systems. The Biology of Nitric Oxide: Physiological and Clinical Aspects contains the Prox ceedings of the 2nd International Meeting on the Biology of Nitri& Oxide, held in London in 1991. The abstracts presented here describe a vast array of topics in current nitric oxide research.

The abstracts are divided into three main sections. The first, "Care diovascular Effects," is by far the largest section, reflecting the enor mous contribution of endothelium-derived nitric oxide to the control of both the systemic and the pulmonary circulation. Many abstracts in this section deal simply with the demonstration of nitric oxide release and action in various blood vessels and a variety of species The conclusion to be drawn from these data is that nitric oxide is ubiquitous in the circulation, not only in the large arteries but also in the resistance vessels. These data suggest that the endotheliur can exert moment-to-moment control over the underlying smooth muscle via release of the short-acting agent nitric oxide. That nitric oxide fulfills this role is demonstrated in several abstracts describing the effect of inhibition of nitric oxide synthesis or damage to the endothelium in vivo. For example, oral ingestion of inhibitors of nitric oxide synthesis causes hypertension in rats. Nitric oxide production is important in the coronary circulation also, and it is ironic to note that glyceryl trinitrate, used for more than 100 yr to relieve angina, finally has been shown to act via the generation of nitric oxide. Some abstracts describe novel donors of nitric oxide, such as nitrosimines, and iron-containing nitrosyl compounds. Presumably, these agents will have therapeutic use in the future.

Nitric oxide is a double-edged sword, however. In septic shock,