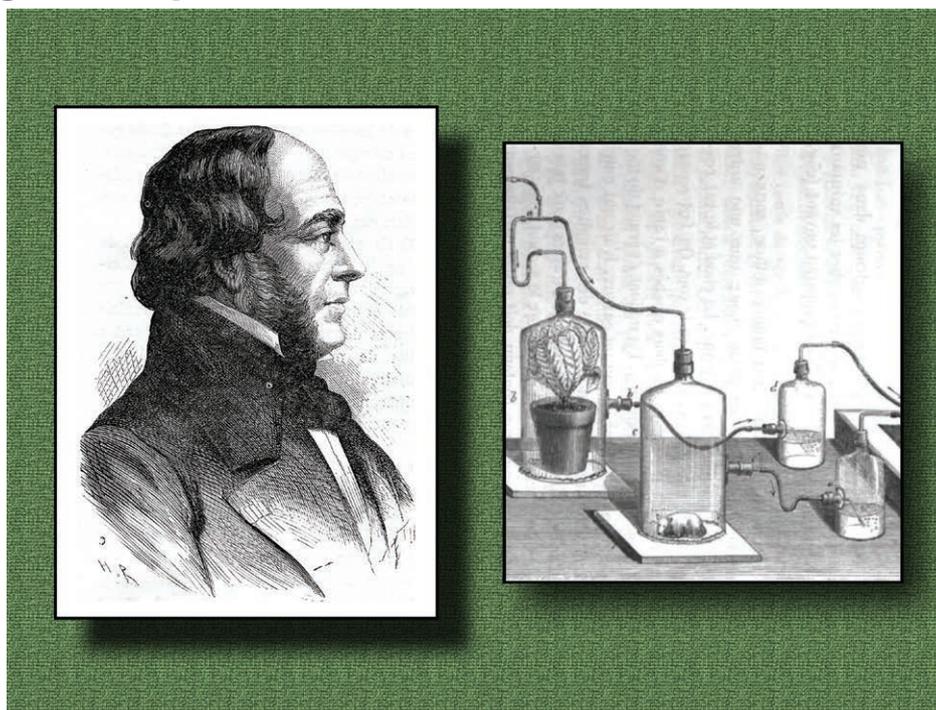


36. Kheterpal S, Shanks A, Tremper KK: Impact of a novel multiparameter decision support system on intraoperative processes of care and postoperative outcomes. *ANESTHESIOLOGY* 2018; 128:272–82
37. Sessler DI: Decision support alerts: Importance of validation. *ANESTHESIOLOGY* 2018; 128:241–3
38. Santosa KB, Wang CS, Hu HM, Brummett CM, Englesbe MJ, Waljee JF: Surgeon experience and opioid prescribing. *Am J Surg* 2020; 220: 823–7
39. American Society of Anesthesiologists Task Force on Acute Pain Management: Practice guidelines for acute pain management in the perioperative setting: An updated report by the American Society of Anesthesiologists Task Force on acute pain management. *ANESTHESIOLOGY* 2012; 116:248–73
40. Dowell D, Ragan KR, Jones CM, Baldwin GT, Chou R: CDC clinical practice guideline for prescribing opioids for pain – United States, 2022. *MMWR Recomm Rep* 2022; 71:1–95
41. Wellek S, Blettner M: On the proper use of the crossover design in clinical trials: Part 18 of a series on evaluation of scientific publications. *Dtsch Arztebl Int* 2012; 109:276–81

ANESTHESIOLOGY REFLECTIONS FROM THE WOOD LIBRARY-MUSEUM

Anesthesia as the Key to Life: Claude Bernard's Unifying Theory



For centuries, scientists and philosophers searched for universal truths to navigate the physical world and the vagaries of human existence. Surgical anesthesia was a miracle, and anesthetic agents, ever mysterious and powerful, grasped at the very core of life. In the 1960s, Edmond “Ted” Eger II and colleagues introduced the concept of MAC—a yardstick measure of potency used to compare various anesthetic agents in many model organisms. Research on anesthetic mechanisms accelerated, and since the MAC of most agents correlated with lipid solubility, scientists began to trace the origins of the quest for a unitary mechanism of anesthesia to the Meyer–Overton rule (1901). However, Claude Bernard (1813 to 1878, *left*), “father” of experimental medicine, had initiated the pursuit of a unifying theory of anesthetic action as early as 1875. Believing that all living organisms shared a colloidal “protoplasm” that harbored the essence of life, Bernard experimented on plant and mouse in parallel (*right*). Shortly before his death, he marveled at ether’s ability to anesthetize *Mimosa pudica*, a plant that moved to touch, and pronounced anesthetic susceptibility as the definition of life. He and contemporaries also saw that anesthetic agents opacified preparations of muscle and brain tissue and proposed a universal mechanism of anesthesia—the reversible coagulation of protoplasm. Given his scientific authority, Bernard’s unifying paradigm would shape research on anesthetic mechanisms for more than a century. (Perouansky M. *ANESTHESIOLOGY* 2012;117:465–74. Copyright © the American Society of Anesthesiologists’ Wood Library–Museum of Anesthesiology.)

Jane S. Moon, M.D., Department of Anesthesiology and Perioperative Medicine, University of California, Los Angeles, California, and Misha Perouansky, M.D., Department of Anesthesiology, University of Wisconsin–Madison, Madison, Wisconsin.