- Goldberg AH, Phear WPC: Alterations in mechanical properties of heart muscle produced by halothane. J Pharmacol Exp Ther 162: 101-108, 1968
- Sugai N, Shimosato S, Etsten BE: Effect of halothane on force-velocity relations and dynamic stiffness of isolated heart muscle. ANESTHESIOLOGY 29:267-274, 1968
- Shimosato S, Sugai N, Etsten B: The effect of methoxyflurane on the inotropic state of myocardial muscle. ANESTHESIOLOGY 30: 506-512, 1969
- Shimosato S, Sugai N, Iwatsuki N, et al.: The effect of Ethrane on cardiac muscle mechanics. Anesthesiology 30:513-518, 1969
- Brown BR Jr, Crout JR: A comparative study of the effects of five general anesthetics on myocardial contractility: 2. Isotonic contractility and series elasticity. Anesthesiology submitted.
- Eger EI II, Saidman LJ, Brandstater B: Minimum alveolar anesthetic concentration: A standard of anesthetic potency. ANESTHESIOLOGY 26:756-763, 1965
- Blinks JR: Convenient apparatus for recording contractions of isolated heart muscle. J Appl Physiol 20:755-757, 1965
- Blinks JR: Field stimulation as a means of effecting the graded release of autonomic transmitters in isolated heart muscle. J Pharmacol Exp Ther 151:221-235, 1966
- Buccino RA, Sonnenblick EH, Spann JF Jr, et al.: Interactions between changes in the intensity and duration of the active state in the characterization of inotropic stimuli on heart muscle. Circ Res 21:857–867, 1967
- 11. Brown BR Jr, Crout JR: Observations on the mechanism of depression of myocardial con-

- tractility produced by anesthetics. ANES-THESIOLOGY submitted.
- Asher M, Frederickson EL: Halothane versus chloroform: The dose response using the isolated rabbit heart. Anesth Analg 41:429– 434, 1962
- Paradise RP, Bibbins F: Comparison of the effects of equieffective concentrations of anesthetics on the force of contraction of isolated perfused rat hearts: Correlation with the equieffective anesthetizing partial pressures. ANESTHESIOLOGY 31:349-355. 1969
- Price HL, Helrich M: The effect of cyclopropane, diethyl ether, nitrous oxide, thiopental, and hydrogen ion concentration on the myocardial function of the dog heart-lung preparation. J Pharmacol Exp Ther 115:206-216, 1955
- Klide AM, Penna M, Aviado DM: Stimulation of adrenergic beta receptors by halothane and its antagonism by two new drugs. Anesth Analg 48:58-65, 1969
- Ferguson J: The use of chemical potentials cs. indices of toxicity. Proc Roy Soc Biol 127: 387–404, 1939
- Eger EI II, Brandstater B, Saidman LJ, et al.: Equipotent alveolar anesthetic concentrations of methoxyflurane, halothane, diethyl ether, fluroxene, cyclopropane, xenon and nitrous oxide in the dog. ANESTHESIOLOGY 26:771– 777, 1965
- Eger EI II, Lundgren C, Miller SL, et al.: Anesthetic potencies of sulfur hexafluoride, carbon tetralluoride, chloroform, and Ethrane in dogs: Correlation with the hydrate and lipid theories of anesthetic action. ANES-THESIOLOGY 30:129-135, 1909.

Drugs

SOTALOL Methanesulfonanilide hydrochloride (Mead Johnson 1999), a beta blocker, was used in 20 patients with heart disease, eight of whom were in heart failure. Stroke index and left ventricular end-diastolic pressure were unaffected. Sotalol had no effect on the velocity of isotonic shortening (V_{max}) in dogs. It appears that sotalol lacks the negative inotropic effects of propranolol and pronethalol. (Brooks, H., and others: Sotalol-induced Beta Blockade in Cardiac Patients, Circulation 42: 09 (July) 1970.)

GLUCAGON The central and peripheral hemodynamic effects of glucagon were studied in 29 patients. Single intravenous doses of 2 or 5 mg increased myocardial contractility, cardac output, and cardiac performance, as well as lowering pulmonary arterial pressure and pulmonary vascular resistance. Systemic pressures increased and systemic resistance decreased. These results indicate the importance of further study of the value of glucagon as a positive inotropic agent in low-output heart failure. (Murtagh, J. G., and others: Haemodynamic Effects of Glucagon, Brit. Heart I. 32: 307 (Mau) 1970.)