ASA ABSTRACTS
Anesthesiology V93, No 3A, Sep 2000

A-1341  Room G, 10/17/2000 2:00 PM - 4:00 PM (PS)
Interaction between Volatile Anesthetics and Hypoxia in Porcine Tracheal Smooth Muscle
Michiaki Yamakage, MD, PhD; Xiangdong Chen, MD; Naoki Tsujiguchi, MD; Yasuhiro Kamada, MD; Akiyoshi Namiki, MD, PhD. Anesthesiology, Sapporo Medical University School of Medicine, Sapporo, Hokkaido, Japan. Hypoxia inhibits airway smooth muscle contraction independently of intracellular Ca++.

A-1342  Room G, 10/17/2000 2:00 PM - 4:00 PM (PS)
Both PKA and PKG are Essential in Regulating Basal Ciliary Beat Frequency in Rat Tracheal Epithelial Cells
Xinbia Zhan, M.D., Ph.D.; Dechen Li, M.D.; Ph.D.; Roger A. Jobsis, M.D., Department of Anesthesiology, Union Affiliated Hospital of Tongji Medical University, Wuhan, Hubei, China. Inhibition of both PKA or PKG did not change CBF. Inhibition of both decreased CBF significantly.

Respiration: Airway / Pulmonary Vascular Smooth Muscle

A-1343  Room 309, 10/16/2000 2:00 PM - 3:30 PM (PD)
Mechanisms of Bronchoprotection by Propofol In Vivo: Effects of Preservative
Robert H. Brown, M.D., M.P.H.; Robert S. Greenberg, M.D.; Elizabeth M. Wagner, Ph.D., Anesthesiology and Critical Care Medicine, Johns Hopkins Medical Institutions, Baltimore, MD. Metabsulite (MBS) increases direct and neurally-mediated bronchoconstriction. Propofol without (MBS) decreased neurally-mediated bronchoconstriction.

A-1344  Room 309, 10/16/2000 2:00 PM - 3:30 PM (PD)
Intravenous Colforsin Daropate Prevents Thiamylal-Fentanyl-Induced Bronchoconstriction
Zen’ichi Wajima, MD, Ph.D; Tatsusuke Yoshihara, MD, Ph.D; Akira Ogura, MD, Ph.D; Kazuyuki Imanaga, MD; Tetsuo Inoue, MD, Ph.D. Dept. of Anesthesiology, Chiba Hokusou Hospital, Nippon Medical School, Inba, Chiba, Japan. After thiamylal and fentanyl, airway resistance unchanged by iv. colforsin daropate.

A-1345  Room 309, 10/16/2000 2:00 PM - 3:30 PM (PD)
Different Inhibitory Effects of Volatile Anesthetics on T- and L-type Calcium Channels in Airway Smooth Muscle
Michiaki Yamakage, MD, Ph.D; Xiangdong Chen, MD; Naoki Tsujiguchi, MD; Yasuhiro Kamada, MD; Akiyoshi Namiki, MD, PhD. Anesthesiology, Sapporo Medical University School of Medicine, Sapporo, Hokkaido, Japan. Volatile anesthetics have more inhibitory effects on T-type calcium channels.

A-1346  Room 309, 10/16/2000 2:00 PM - 3:30 PM (PD)
Effect of Hexanoxl on Calcium Sensitivity in Airway Smooth Muscle
Hayashi Yoshimoto, MD; Keith A. Jones, MD; William J. Perkins, MD; Shosuke Takabashi, MD; David O. Warner, MD, Department of Anesthesiology, Mayo Clinic and Foundation, Rochester, MN, United States. Hexanol inhibits agonist-induced Ca++ sensitization in permeabilized airway smooth muscle.

A-1347  Room 309, 10/16/2000 2:00 PM - 3:30 PM (PD)
Propofol Increases Myofilament Calcium Sensitivity Via Protein Kinase C Activation
Satoru Tanaka, MD; Izumi Kondo, MD; Derek Damron, Ph.D; Paul Murray, Ph.D. Anesthesiology Research, Cleveland Clinic Foundation, Cleveland, OH, United States. Propofol decreases [Ca++], but increases myofilament Ca++ sensitivity in pulmonary artery smooth muscle.

A-1348  Room 309, 10/16/2000 2:00 PM - 3:30 PM (PD)
Endothelin-1 Induces Sustained Contraction without Myosin Light Chain Phosphorylation in Porcine Pulmonary Artery Chie Saitohara, M.D., Ph.D.; Tetsuya Kai, M.D., Ph.D.; Shosuke Takabashi, M.D., Ph.D. Department of Anesthesiology, Kyushu University, Fukuoka, Japan. Ca++-insensitive contraction might be mediated by phosphorylation of the protein that is sensitive to H-7 and staurosporine.

A-1349  Room 309, 10/16/2000 2:00 PM - 3:30 PM (PD)
Selective Inhibition of the Triphasic HPV Response by Inhalational Anesthetics
Bryan E. Marshall, MD; Masami Ozaki, MD; James E. Baumgardner, MD Ph.D; Carol Marshall, Ph.D. Center for Anesthesia Research, University of Pennsylvania Health System, Philadelphia, PA, United States. These studies suggest that isoflurane and halothane inhibit the force sensitization mechanisms of HPV with the greatest potency.

A-1350  Room 309, 10/16/2000 2:00 PM - 3:30 PM (PD)
Endogenous Nitric Oxide Does Not Play a Significant Role in the Maintenance of Basal Pulmonary Microvascular Tone
Sanjay Bhatia, MB BS; Paul Murray, Ph.D; David DeFilly, Ph.D. Center for Anesthesiology Research, Cleveland Clinic Foundation, Cleveland, OH, United States. Nitric oxide does not regulate the baseline diameter of 40-140µm pulmonary arteries in vivo.

Respiration: Lung Injury / Cellular Physiology

A-1351  Room 224–226, 10/16/2000 3:30 PM - 5:00 PM (PD)
Human Airway Smooth Muscle Expresses mRNA Encoding Seven Subtypes of Adenyl Cyclase
Charles W. Emmala, M.D.; Dingbang Xu, Anesthesiology, Columbia University, New York, NY, United States. Messenger RNA encoding 7 of the 9 known subtypes of adenyl cyclase, the target protein of β-adrenoceptor bronchodilating agents, was identified by RT-PCR in human airway smooth muscle.

A-1352  Room 224–226, 10/16/2000 3:30 PM - 5:00 PM (PD)
Biochemical Mechanism for the Hydrogen Peroxide-Induced Inhibition of Calcium Sensitivity in Airway Smooth Muscle

A-1353  Room 224–226, 10/16/2000 3:30 PM - 5:00 PM (PD)
Nitric Oxide Production and Stimulation of Ciliary Motility in Rat Tracheal Ciliated Epithelial Cells
Gota Hiraishi, M.D.; Dechen Li, M.D., Ph.D.; Kazutaka Futaba, M.D.; Roger A. Jobsis, M.D. Department of Anesthesiology, Kyoto University Hospital, Kyoto, Japan. Nitric oxide production was detected and it was positively correlated with ciliary motility in cultured rat tracheal epithelial cells.

A-1354  Room 224–226, 10/16/2000 3:30 PM - 5:00 PM (PD)
Hypoxia Mediates Upregulation of ICAM-1 in Rat Alveolar Macrophages
Beatrice Beck-Schimmer, M.D.; Cavelh Madjpour, M.D.; Thomas Pasch, M.D.; Ralph C. Schimmer, M.D., Institutes of Anesthesiology and Physiology, University of Zurich, Zurich, Switzerland. Hypoxia upregulates ICAM-1 expression in alveolar macrophages time- and concentration-dependent.