ANESTHETIC ACTION & BIOCHEMISTRY

Anesthetic Action: Mechanisms of General Anesthesia - Channels & Transporters

A-139 Room 309, 10/18/2000 9:00 AM - 10:30 AM (PD)
A Soluble Substance in Intravenous Bags Inhibits Nicotinic Acetylcholine Receptors *Pamela Flood, M.D.; Kristen Coates, B.A., Anesthesiology, Columbia University, New York, NY, United States*

A-140 Room 309, 10/18/2000 9:00 AM - 10:30 AM (PD)
Effects of Isoflurane and Halothane on Human Neuronal N-type Calcium Channels *Igor M. Nikonorov, MS; Thomas J.J. Blanck, MD, PhD; Esperanza Recio-Pinto, PhD, Anesthesiology, The Hospital for Special Surgery, New York, NY, United States.* Halothane and Isoflurane inhibit N-type Ca^{2+} currents and the level of isoflurane inhibition correlates with the degree of G-protein activation.

A-141 Room 309, 10/18/2000 9:00 AM - 10:30 AM (PD)
The Diverse Actions of Volatile and Gaseous Anesthetics on Human-Cloned 5-HT_3 Receptors Expressed in *Xenopus* Oocytes *Takahiro Suzuki, M.D.; Hideki Koyama, B.S.; Masahiro Sugimoto, M.D.; Ichiro Uchida, M.D.,PhD.; Takashi Mashimo, M.D.,PhD., Anesth., Osaka Univ. Med. Sch., Suita, Osaka, Japan.* Iso potentiated but Sev, N_2O and Xe inhibited 5-HT_3 receptor function.

A-142 Room 309, 10/18/2000 9:00 AM - 10:30 AM (PD)
Both Sevoflurane and Propofol Affect $GABA_A$ Receptor Binding in Humans *Elina Salmi, BM; Kaike Kaisti, MD; Liisa Metsahonkala, MD; Kjell Nogren, PhD; Harry Scheinin, MD, Turku PET Centre, Turku University Hospital, Turku, Finland*

A-143 Room 309, 10/18/2000 9:00 AM - 10:30 AM (PD)
Halothane Acts on the Pore Domain of an Intermediate Conductance Ca^{2+}-Activated K^+ Channel *Tsunehisa Namba, M.D., Ph.D.; Mitsuko Ikeda, M.D.; Takahiro M. Ishii, M.D., Ph.D.; Kazuhiko Fukuda, M.D., Ph.D., Dept. of Anesthesia, Kyoto University Faculty of Medicine, Sakyo-ku, Kyoto, Japan.* Halothane inhibits IK but not SK. Chimeras between IK and SK implicated the pore domain as a site of action.

A-144 Room 309, 10/18/2000 9:00 AM - 10:30 AM (PD)
Sensitivity to Isoflurane Induced in Chimeric Muscarinic Receptors *Marcel E. Durieux, MD PhD; Ganesan L. Kamatchi, PhD, Anesthesiology, University of Virginia, Charlottesville, VA, United States.* m1 muscarinic receptors, normally unresponsive to isoflurane, are inhibited by the anesthetic when the 3rd intracellular loop is replaced by that of the m3 receptor

A-145 Room 309, 10/18/2000 9:00 AM - 10:30 AM (PD)
A Closer Look at Volatile Anesthetic Interaction with Ion Channel: One Femtosecond a Time *Pei Tang, Ph.D.; Igor Z. Zubrzycki, Ph.D.; Yan Xu, Ph.D., Anesthesiology/CCM and Pharmacology, University of Pittsburgh School of Medicine, Pittsburgh, PA,.* 1.6-ns MD simulations revealed intimate details of halothane interaction with a gramicidin A channel in a fully hydrated DMPC membrane.

A-146 Room 309, 10/18/2000 9:00 AM - 10:30 AM (PD)
Effects of Halothane and Sevoflurane on Sodium-Calcium Exchange in Cardiac Myocytes *Inanc Seckin, M.D.; Gary C. Sieck, Ph.D.; Y.S. Prakash, Ph.D., Anesthesiology, Mayo Clinic, Rochester, MN, United States.* This study found that clinically-relevant concentrations of halothane, and to a lesser extent sevoflurane, inhibit both influx and efflux mode of sodium-calciume exchange in cardiac myocytes.