A-770 Room D, 10/17/2000 9:00 AM - 11:00 AM (PS) Thermo regul atory Effects of the Nonimmobilizer 1,2-Dichloro hexafluorocyclobutane James M. Sonner, MD; Anya J. Maurer, BS; Daniel I. Sessler, MD; Edmond I. Eger, II, MD, Anesthesiology and Perioperative Care, University of California, San Francisco, San Francisco, CA, United States. Unlike isoflurane, a nonimmobilizer has minimal effects on thermoregulation in rats.

A-771 Room D, 10/17/2000 9:00 AM - 11:00 AM (PS) Treatment of Chronic Low Back Pain by Local Injection of Botulimum Toxin A Bill Subin, MD; Georgia A. Morgan First, BS; Randall C. Cork, MD, PhD, Anesthesiology, LSU Health Sciences Center, Shreveport, LA, United States. Comparison between untreated and BTA-treated chronic low back pain demonstrates that BTA appears to reduce muscle spasm and relieve pain.

A-772 Room D, 10/17/2000 9:00 AM - 11:00 AM (PS) Volatile Anesthetic Effects on Calcium and NADPH Requirements of NOS Ibos Mas Tagliante, MD, PhD, Anesthesiology, Mt Sinai School of Medicine, New York, NY, United States. The effects of halothane, isoflurane and isoflurane on calcium and NADPH requirements of NOs were studied. Ionic strength significantly affects the EC50 of Ca2+ but the VAs are without effect.

A-773 Room D, 10/17/2000 9:00 AM - 11:00 AM (PS) Xenon Increases Noradrenergic Neural Activities in Rat Mediastinopreal Area and Posterior Hypothalamus: Comparison with Nitrous Oxide Hitoshi Yoshida, MD; Tetusaku Kashiwabara, MD; Takeshi Kubota, MD; Kazuyoshi Hirota, MD; Akito Matsuki, MD, Anesthesiology, University of Hiroaki, Hiroaki, Aomori, Japan. Xe increases ENE in the MPO and PH, but N2O does only in the MPO.

A-774 Room D, 10/17/2000 9:00 AM - 11:00 AM (PS) Mutation of an Anesthetic-Photolabeled Residue in the nAChR Pore Alters Sensitivity to GAs Qiong L. Zhou, Ph.D; Stuart A. Forman, MD,PhD, Dept. of Anesthetics and Critical Care, MGH, Boston, MA, USA. The a6262l mutation decreases nAChR sensitivity to inhibition by GAs.


A-776 Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) Low Concentrations of Isoflurane Block Long Term Potentiation of Hippocampal Neuron Synapses Rodney J. Anderson; Brita Hornung, MD; Sky Pittson, BS (MD); Frances A. Monroe, BA; M. Bruce Maclver, MSc, PhD, Anesthesiology, Stanford University School of Medicine, Stanford, CA, United States. Loss of recall occurs at less than 0.4 MAC in humans, 0.6 MAC was needed to block synaptic LTP found in the present study.

A-777 Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) Pentobarbital Enhances Synaptic Transmission in Rat Hippocampus David P. Archer, MD; Naznin Sumanathan, BSc; Sheldon H. Roh, PhD, Department of Anesthesiology, University of Calgary, Calgary, Canada. Very low concentrations of pentobarbital(1-5 μM) produce persistent enhancement of synaptic transmission by mechanisms involving GABA_A receptors and bicarbonate ion.

A-778 Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) Volatile Anesthetics Dose-Dependently Disrupt Spontaneous Ca2+-Oscillations in Hippocampal Neuronal Networks Claudia Benkwitz, MD; Petrus Tas, PhD; Frank Kobelt, PhD; Norbert Roevers, MD, Dept. of Anesthesiology, University of Wuerzburg, Wuerzburg, Germany. Disruption of calcium-oscillations in neuronal networks might reflect a common mechanism of anesthetic action.

A-779 Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) Chronic Administration of Opioids and Psychostimulants Alter RGS4 mRNA Levels in Rat Brain Gavin B. Bishop, BS; Eileen J. Carran; Stanley J. Watson; Huda Aekl, Ph.D.; Howard B. Gutstein, M.D., Anesthesiology, M.D. Anderson Cancer Center, Houston, TX, United States. The current study demonstrates RGS4 mRNA is altered by chronic treatment of opioids and psychostimulants.

A-780 Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) Effects of Morphine, Meperidine, and Fentanyl Derivatives on Nociceptor Activation, Vasodilation, and Mast Cell Degranulation in Human Skin James A. Blank, MD; Wolfgang Koppert, MD; Susanne Zeck, MD; Reinhard Sittl, MD; Martin Schmelz, MD, Dept. of Anesthesiology, Univ. Erlangen, Erlangen, Germany. Dermal microdialysis discerned between mast cell activation and unspecific vasodilatation by opioids.

A-781 Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) Differential Sensitivity of GABA and NMDA Receptors to Isoflurane Hugh E. Crisswell, Ph.D; Zhen Ming, Ph.D; George R. Breese, Ph.D; Robert A. Mueller, MD, Anesthesiology, U.N.C., Chapel Hill, NC, United States. Isoflurane enhanced GABA currents in neurons with no effect below 1/4 MAC and inhibited NMDA currents as low as 1/10 MAC. NMDA antagonism may mediate side effects of isoflurane during recovery.

A-782 Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) Is Opioid Tolerance a Unitary Phenomenon? Insights from Proteomics Howard B. Gutstein, MD; Heju Zhang, BS, Anesthesiology, UT-MD Anderson Cancer Center, Houston, TX, United States. The time course of changes in protein expression caused by chronic opioid administration are not uniform for all cell types.

A-783 Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) Opioid Withdrawal Activates ERK in N2A Neuroblastoma Cells: A Potential Role for ERK Signaling in Opioid Dependence and Withdrawal Howard B. Gutstein, MD, Anesthesiology, UT-MD Anderson Cancer Center, Houston, TX, United States. Regulation of the ERK signaling system may play a role in the development of dependence on opioids and the associated opioid withdrawal syndrome.