A-770 Room D, 10/17/2000 9:00 AM - 11:00 AM (PS)  
Thermoregulatory Effects of the Nonimmobilizer 1,2-Dichloro-hexafluorocyclobutane. James M. Sonner, MD; Anya J. Mauer, 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 Botulinum 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 Thomas M. Tagliente, MD,PhD, Anesthesiology, Mt Sinai School of Medicine, New York, NY, United States. The effects of halothane, isoflurane and iontophoretic strength on Ca2+ and NADPH requirements of NOS were studied. Iontophoretic 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 Norepinephrinergic Neuronal Activities in Rat Medial Preoptic Area and Posterior Hypothalamus: Comparison with Nitrous Oxide Hitoshi Yoshida, MD; Tetsuya Kusakata, MD; Takeshi Kubota, MD; Kazuyoshi Hirata, MD; Akitomo Matsuki, MD, Anesthesiology, University of Hirosaki, Hirosaki, Aomori-ken, 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 GaIs Qiong I. Zhou, Ph.D; Stuart A. Forman, MD,PhD, Dept. of Anesthesia and Critical Care, MGH, Boston, MA, United States. The aE262I mutation decreases nAChR sensitivity to inhibition by GAs.

A-775 Room D, 10/17/2000 2:00 PM - 4:00 PM (PS)  

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; Britta Hornung, MD; Sky Pittson, BS (MD); Frances A. Monroe, BA; M. Bruce MacIntyre, MS, PhD, Anesthesiology, Stanford University School of Medicine, Stanford, CA, United States. Loss of recall occurs at less than 0.4 MAC in humans, 0.36 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; Naaznin Samanami, BSc; Sheldon H. Roth, 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 Neural Networks Claudia Benkwitz, MD; Petrus Tus, PhD; Frank Kobelt, PhD; Norbert Roewer, 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, B.S.; Eileen J. Curran; Stanley J. Watson; Huda Akl, 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 Noceceptor 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 vasodilation 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. Criswell, Ph.D; Zhen Ming, Ph.D; George R. Breese, PhD; 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 1/30 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.