

A-770 Room D, 10/17/2000 9:00 AM - 11:00 AM (PS)
Thermoregulatory Effects of the Nonimmobilizer 1,2-Dichlorohexafluorocyclobutane *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 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 ionic strength on Ca^{2+} and NADPH requirements of NOS were studied. Ionic strength significantly affects the EC_{50} of Ca^{2+} but the VAs are without effect.

A-773 Room D, 10/17/2000 9:00 AM - 11:00 AM (PS)
Xenon Increases Norepinephrinergergic Neuronal Activities in Rat Medial Preoptic Area and Posterior Hypothalamus: Comparison with Nitrous Oxide *Hitosbi Yoshida, MD; Tetsuya Kusbikata, MD; Takeshi Kubota, MD; Kazuyoshi Hirota, MD; Akitomo Matsuki, MD, Anesthesiology, University of Hiroasaki, Hiroasaki, 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 GAs *Qiong L. Zhou, PhD; Stuart A. Forman, MD-PbD, Dept. of Anesthesia and Critical Care, MGH, Boston, MA.* The α E262L mutation decreases nAChR sensitivity to inhibition by GAs.

A-775 Room D, 10/17/2000 2:00 PM - 4:00 PM (PS)
The Amnestic, But Not Anesthetic, Effect of Propofol is Prevented by Selective Lesions of the Basolateral Amygdala *M.T. Alkire, M.D.; A. Vazdarjanova, Ph.D.; H. Dickinson-Anson, Ph.D.; N. White, B.S.; L. Cabill, Ph.D., Anesthesiology, University of California, Irvine, CA, United States.* Multiple sites, multiple mechanisms of anesthesia: a site identified? Evidence the amygdala may mediate anesthetic-induced amnesia.

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 MacIver, MSc PhD, Anesthesia, 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 Hip-
ocampus *David P. Archer, MD; Naaznin Samanani, 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 Neuronal Networks *Claudia*
Benkowitz, MD; Petrus Tas, PhD; Frank Kobelt, PhD; Norbert Roeuer,
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 Akil, 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. Blunk, 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, PhD; Zhen Ming, PhD; 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.