

- 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 Norepinephrine Neuronal Activities in Rat Medial Preoptic Area and Posterior Hypothalamus: Comparison with Nitrous Oxide** Hitoshi Yoshida, MD; Tetsuya Kusbikata, MD; Takeshi Kubota, MD; Kazuyoshi Hirota, MD; Akitomo Matsuki, MD, *Anesthesiology, University of Hirosaki, Hirosaki, Aomori-ken, Japan.* Xe increases ENE in the MPO and PH, but  $N_2O$  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-PhD, *Dept. of Anesthesia and Critical Care, MGH, Boston, MA.* The  $\alpha E262L$  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 Hippocampus** 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  $\mu M$ ) 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  $Ca^{2+}$ -Oscillations in Hippocampal Neuronal Networks** Claudia Benkowitz, MD; Petrus Tas, 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 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.