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. 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 Bot-
ulinum Toxin A. Bill Sablin, MD; Georgia A. Morgan First, BS; Rand-
dall 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 Require-
ments of NOS. Thomas M. Tagliente, MD, PhD, Anesthesiology, Mt
Sinai School of Medicine, New York, NY, United States. The effects of
halothane, isoflurane and iononere strength on Ca\(^{2+}\) and NADPH require-
ments 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 Cerebral Activities in Rat
Medial Preoptic Area and Posterior Hypothalamus: Comparison
with Nitrous Oxide. Hitoshi Yoshida, MD; Tetsuya Kusuhikata, MD;
Takeshi Kubota, MD; Kazuyoshi Hirota, MD; Akito Iwata, MD,
Anesthesiology, University of Hiroaki, Hiroaki, Aomori-ken, Japan.
Xe increases ENE in the MPO and PHI, but N\(_2\)O 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 I. Zhou, PhD; Stuart A. For-
man, MD, PhD, Dept. of Anesthesia and Critical Care, MGH, Boston,
MA, USA. The aE262I 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 Pre-
vented by Selective Lesions of the Basolateral Amygdala. M. T.
Altare, MD, A. Vazdarjanova, Ph.D.; H. Dickinson-Anson, Ph.D.; N.
White, B.S.; L. Caball, B.D., Anesthesiology, University of California,
Irvine, CA, United States. Multiple sites, multiple mechanisms of an-
esthesia: a site identified? Evidence the amygdala may mediate anes-
thetic-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 Hor-
nung, MD; Sky Pittson, BS (MD); Frances A. Monroe, BA; M. Bruce
Maclver, MSc, PhD, Anesthesiology, Stanford University School of Medi-
cine, 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-
pocampus. David P. Archer, MD; Nazzim 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
Benkwitz, MD; Peter Thas, PhD; Frank Kohl, 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
NGS4 mRNA Levels in Rat Brain. Gavin B. Bishop, B.S.; Eileen J.
Curran; Stanley J. Watson; Huda Akl; Ph.D.; Howard B. Gutsen,
M.D., Anesthesiology, M.D, Anderson Cancer Center, Houston, TX,
United States. The current study demonstrates NGS4 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 Pentanyl Derivatives on
Nociceceptor Activation, Vasodilation, and Mast Cell Degranu-
lation 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 micro-
dialysis discerned between mast cell activation and unspecific vasodi-
lation by opioids.

A-781  Room D, 10/17/2000 2:00 PM - 4:00 PM  (PS)
Differential Sensitivity of GABA and NMDA Receptors to Isolu-
rate. Hugh C. Criswell, Ph.D; Zhen Ming, Ph.D; George R. Brewe, PhD;
Robert A. Mueller, MD, Anesthesiology, U.N.C., Chapel Hill, NC,
United States. Isolurane 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 isolurane during
recovery.

A-782  Room D, 10/17/2000 2:00 PM - 4:00 PM  (PS)
Is Opioid Tolerance a Unitary Phenomenon? Insights from Pro-
tecomics. Howard B. Gutsen, 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. Gutsen, MD, Anesthesiology, UT-MD And-
erson 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.