ASA ABSTRACTS

A-784  Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) Intrathecal Mu and Delta, but Not Kappa Agonists, Can Induce Spastic Paraplegia after Non-Injurious Interval of Spinal Cord Ischemia in Rats Muneo Kikutbouda, MD; Seiya Nakamura, MD; Yuuka Tairo, MD; Martin Marsala, MD, Anesthesiology, University of the Ryukyus, Nishihara, Okinawa, Japan. Intrathecal mu and delta agonists induced spasticity after short lasting spinal ischemia.

A-785  Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) Effect of Nitric Oxide Synthase Inhibitor, 7-Nitro Indazole on the Loss of Righting Reflex during Sevoflurane Anesthesia in Rats Shunji Kobayashi, M.D.; Tatsuki Iwamoto, M.D.; Hiroichi Bitto, M.D.; Takasumi Katoh, M.D.; Shigeibito Sato, M.D., Department of Anesthesiology and Intensive Care, Hamamatsu University School of Medicine, Hamamatsu, Shizuoka, Japan. Administration of 7-nitroindazole reduced ED50.

A-786  Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) Local Anesthetics Preferentially Inhibit Sustained K⁺ Currents of Small Dorsal Root Ganglion Neurons Hiroshika Komai, M.D.; Thomas S. McDowell, M.D., Ph.D., Anesthesiology, University of Wisconsin, Madison, WI, United States. Local anesthetics block K⁺ currents more potently in small vs. large sensory neurons. This may facilitate block of Na⁺ currents in these cells.

A-787  Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) Spontaneous Opioid Withdrawal Is Dose-Dependent Lee Lange- man, MD; Alexander Krendel, MD, Ph.D.; Gilbert J. Grant, MD, Anesthesiology, NYU Med Center, New York, NY, United States. We revised the theory that the induced opioid withdrawal intensity is dose-dependent, while the spontaneous opiate withdrawal intensity (SOWI), is not. In contrast to the current concept, we found that SOWI is dose-dependent.

A-788  Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) Opioid Inhibition of Calcium Currents Elicited by Action Potential Waveform Thomas S. McDowell, M.D., Ph.D., Anesthesiology, University of Wisconsin, Madison, WI, United States. Opioid inhibition of total Ca²⁺ entry is similar whether elicited by a typical square wave voltage pulse or an action potential waveform, but is less voltage dependent during the action potential waveform.

A-789  Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) Activation of the Δ₉ Opioid Receptor Reduces Ca²⁺ Currents in Sensory Neurons Thomas S. McDowell, M.D., Ph.D., Anesthesiology, University of Wisconsin, Madison, WI, United States. Ca²⁺ currents in a population of sensory neurons are negatively coupled to μ- and/or Δ₉-opioid receptors but not to δ₁-opioid receptors.

A-790  Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) Effects of Nonimmobilizers on Immobility in C. elegans Phil G. Morgan, MD; Gregory W. Rudde, BA; Margaret M. Sedensky, MD, Anesthesiology, Case Western Reserve Univ., Cleveland, OH, United States. In C. elegans nonimmobilizers have effects antagonistic to volatile anesthetics. The data indicate that the antagonistic effects require specific gene products.

A-791  Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) Mutual Antagonism of Buprenorphine and Morphine as Evidenced in the Noceptive Activity Evoked in Thalamic Neurons of the Rat Alexander Nemirovsky, MD; Ilmar Jarna, Dr. Med., Anesthesiology, USC, Los Angeles, CA, United States. Buprenorphine and partial (buprenorphine) agonists of μ-opioid receptors interacted in an antagonistic manner while producing depression of thalamic neurons in rats.

A-792  Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) Membrane and Synaptic Actions of Halothane on Rat Hippocampal Pyramidal Neurons and Inhibitory Interneurons Koji Nishikawa, MD, PhD; Bruce Maclever, MSc, PhD, Anesthesiology, Stanford University School of Medicine, Stanford, CA, United States. Halothane increases GABA_A receptor-mediated synaptic transmission between hippocampal interneurons and depresses excitatory transmission.

A-793  Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) Time-Dependent Effect of Fentanyl on Affective States as Assessed by Place Conditioning in Rats Laure Pain, MD; Guy Simonnet, PhD, Philippe Oberling, MD, PhD, GRERCA, Service d Anesthésie et U405 INSERM, CHU Hautepierre, Strasbourg, France. Fentanyl (4X60 µg/kg) induced an immediate pleasant state, but a delayed (24 hours) unpleasant one, independently of any noiceptive stimulus.

A-794  Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) Implication of Forebrain Cholinergic Neurotransmission in Propofol Induced Sedation Laure Pain, MD; Olivia Lehmann; Helene Jetsch, PhD; Fatihem-Zaoula Lalou; Jean-Cristophe Cassel, PhD, GRERCA, Service d Anesthésie et U405 INSERM, CHU Hautepierre, Strasbourg, France. The sedative potency of propofol is reduced by about 50% in rats with alteration of brain cholinergic function.

A-795  Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) ERK Inhibition Reduces Opioid Tolerance in Rats Phillip P. Pearson, PhD; Gavin R. Bishop, B.S.; James M. Trzaskos, Ph.D.; Howard G. Gusstein, M.D., Anesthesiology, UT-MD Anderson Cancer Center, Houston, TX, United States. ERK inhibition reduces opioid-induced tolerance in rats.

A-796  Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) The Influence of Morphine on Thermogenesis and Ventilatory Control in μ-Opioid-Receptor Knockout Mice Ilse Y. Sarton, MD; Luc J. Teppema, PhD; Cees N. Olievier; Diedereil J.F. Nieuwenhuijs, MD; Albert Dubin, MD, Ph.D, Department of Anesthesiology, Leiden University Medical Center, Leiden, Netherlands. The μ-opioid-receptor is the primary molecular target of all respiratory actions of morphine.

A-797  Room D, 10/17/2000 2:00 PM - 4:00 PM (PS) Nitrous Oxide-Induced Antinociception and Noradrenergic Activation Are Not Mediated by Enkephalineric Mechanism in Mice Shigebito Sawamura; Geeta Agashe; Wade S. Kinergy; M. Frances Davies; Mervyn Maze, Anesthesiology, Stanford University, Stanford, CA, United States. Antinociception and brainstem noradrenergic activation by N2O were preserved in preproenkephalin-deficient mice.