

- 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** Manabu Kakinobana, MD; Seiya Nakamura, MD; Yutaka Taira, MD; Martin Marsala, MD, *Anesthesiology, University of the Ryukyus, Nishibara, 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.; Tatsuaki Iwamoto, M.D.; Hiromichi Bito, M.D.; Takasumi Katoh, M.D.; Shigebito 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<sup>+</sup> Currents of Small Dorsal Root Ganglion Neurons** Hirochika Komai, Ph.D.; Thomas S. McDowell, M.D., Ph.D., *Anesthesiology, University of Wisconsin, Madison, WI, United States*. Local anesthetics block K<sup>+</sup> currents more potently in small vs. large sensory neurons. This may facilitate block of Na<sup>+</sup> currents in these cells.
- A-787** Room D, 10/17/2000 2:00 PM - 4:00 PM (PS)  
**Spontaneous Opioid Withdrawal Is Dose-Dependent** Lev Langerman, MD; Alexander Krendal, MD, PhD; Gilbert J. Grant, MD, *Anesthesia, 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 Ca<sup>2+</sup> 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  $\delta_2$  Opioid Receptor Reduces Ca<sup>2+</sup> Currents in Sensory Neurons** Thomas S. McDowell, M.D., Ph.D., *Anesthesiology, University of Wisconsin, Madison, WI, United States*. Ca<sup>2+</sup> channels in a population of sensory neurons are negatively coupled to  $\mu$ - and/or  $\delta_2$ -opioid receptors but not to  $\delta_1$ -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. Radke, 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 Nociceptive Activity Evoked in Thalamus Neurons of the Rat** Alexander Nemirousky, MD; Ilmar Jurna, Dr. Med., *Anesthesiology, USC, Los Angeles, CA, United States*. Pure (morphine) and partial (buprenorphine) agonists of  $\mu$ -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** Kobichi Nishikawa, MD, PhD; M. Bruce MacIver, MSc, PhD, *Anesthesia, Stanford University School of Medicine, Stanford, CA, United States*. Halothane increases GABA<sub>A</sub> 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  $\mu$ g/kg) induced an immediate pleasant state, but a delayed (24 hours) unpleasant one, independently of any nociceptive 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 Lebmann; Helene Jetsch, PhD; Fathem-Zohra Laalou; 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, Ph.D.; Gavin B. Bishop, B.S.; James M. Trzaskos, Ph.D.; Howard B. Gutstein, 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  $\mu$ -Opioid-Receptor Knockout Mice** Elise Y. Sarton, MD; Luc J. Teppema, PhD; Cees N. Olivier; Diederik J.F. Nieuwenhuijs, MD; Albert Daban, MD PhD, *Department of Anesthesiology, Leiden University Medical Center, Leiden, Netherlands*. The  $\mu$ -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 Enkephalinergic Mechanism in Mice** Shigebito Sawamura; Geeta Agasbe; Wade S. Kingery; 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.