

A-798 Room D, 10/17/2000 2:00 PM - 4:00 PM (PS)

Selective Destruction of Brainstem Noradrenergic Neurons Enhances Hypnotic Response to Dexmedetomidine *Shigehito Sawamura, Wade S. Kingery, M. Frances Davies, David J. Clark, Mervyn Maze, Anesthesiology, Stanford University, Stanford, CA.* The hypnotic response to dexmedetomidine was enhanced by selective destruction of brainstem noradrenergic neurons in rats.

A-799 Room D, 10/17/2000 2:00 PM - 4:00 PM (PS)

Developmental Control of Anesthetic Sensitivity in *C. elegans* *Margaret M. Sedensky, MD; Phil G. Morgan, MD, Anesthesiology, Case Western Res. Univ., Cleveland, OH, United States.* A stomatin-like protein (SLP) controls anesthetic sensitivity in *C. elegans* and is implicated in the formation of lipid rafts and stabilizing protein complexes.

A-800 Room D, 10/17/2000 2:00 PM - 4:00 PM (PS)

Pharmacological Properties and Peripheral Analgesic Effect of a κ -Selective Opioid TRK-820 and Its Quaternary Derivative, TAN-684, Which Minimally Crosses the Blood-Brain Barrier *H. Sekiyama, MD; T. Tanaka, PhD; K. Kawamura, PhD; J.G. Collins, PhD; H. Nagase, PhD, Dept Anes, Yale Univ Sch Med, CT, United States.* TAN-684 has lower affinity to κ -receptor and a lower partition coefficient than TRK-820.

A-801 Room D, 10/17/2000 2:00 PM - 4:00 PM (PS)

Thermal Hyperalgesia Induced by Peripheral Administration of Nociceptin/Orphanin FQ or U50,488H *H. Sekiyama, MD; J. Utsumi, VMD; S.G. Shimada, PhD; H. Nagase, PhD; J.G. Collins, PhD, Dept Anes, Yale Univ, CT, United States.* Peripheral nociceptin administration produced weak hyperalgesia in normal animals and peripheral U50,488H produced a greater degree of hyperalgesia in thermally injured animals

A-802 Room D, 10/17/2000 2:00 PM - 4:00 PM (PS)

Optical Imaging of Local Excitation Propagation in the Rat Trigeminal Caudalis Slices *Kenji Seo, Ph.D.; Naoshi Fujiwara, Ph.D.; Genji Someya, Ph.D., Dental Anesthesia, Niigata University Dental Hospital, Niigata, Niigata, Japan*

A-803 Room D, 10/17/2000 2:00 PM - 4:00 PM (PS)

Flumazenil Blocks the Increase in Sleep after Propofol Microinjection into the Medial Preoptic Area of the Rat *Avery Tung, M.D.; Bryan Bluhm, B.A.; Wallace Mendelson, M.D., Department of Anesthesia and Critical Care, University of Chicago, Chicago, IL, United States.* Hypothalamic injection of propofol increases sleep in rats. Flumazenil blocks this effect of propofol, but not its anesthetic effect

A-804 Room D, 10/17/2000 2:00 PM - 4:00 PM (PS)

Spinal GABA_A and Glycine Systems Cooperatively Mediate Halothane Depression of Spinal Dorsal Horn Neurons in Rats *M. Yamauchi, M.D.; H. Sekiyama, M.D.; S.G. Shimada, Ph.D.; J.G. Collins, Ph.D., Anesthesiology, Yale Univ. Sch. Med., New Haven, CT, United States.* Although GABA_A and glycine mediate halothane depression of spinal neurons, their actions are less than additive.

Experimental Neuroscience: Anesthetic Effects on Synapses & Ion Channels

A-805 Room 224-226, 10/18/2000 10:30 AM - 12:00 PM (PD)

Isoflurane Slows Exocytosis and Alters SNARE Protein Interactions *Hugh C. Hemmings, Jr, MD, PhD; Ratnakumari Lingamaneni, PhD; Timothy A. Ryan, PhD, Anesthesiology, Biochemistry & Pharmacology, Weill Medical College of Cornell University, New York, NY, United States.* Isoflurane inhibits synaptic vesicle exocytosis in cultured hippocampal neurons and alters SNARE protein interactions in synaptosomes.

A-806 Room 224-226, 10/18/2000 10:30 AM - 12:00 PM (PD)

Isoflurane Binds the Rat Synaptic Protein SNAP-25 at Clinical Concentrations *C. Michael Crowder, M.D., Ph.D.; Jason Berilgen, B.S., Anesthesiology and Molecular Biology/Pharmacology, Washington University School of Medicine, St. Louis, MO, United States.* Rat SNAP-25, a potential target of volatile anesthetics based on *C. elegans* genetics, bound isoflurane at clinical concentrations.

A-807 Room 224-226, 10/18/2000 10:30 AM - 12:00 PM (PD)

Enflurane Enhances Glycinergic Synaptic Transmission by Both Presynaptic and Postsynaptic Mechanisms in Rat Spinal Cord *Gong Cheng, MD; Joan J. Kendig, PhD, Anesthesia, Stanford University School of Medicine, Stanford, CA, United States.* Enflurane increases frequency and duration of glycinergic mIPSCs in spinal cord. Both pre- and postsynaptic enhancement of inhibition may contribute to MAC.

A-808 Room 224-226, 10/18/2000 10:30 AM - 12:00 PM (PD)

Nitrous Oxide Activates GABAergic Interneurons in the Dorsal Horn of the Spinal Cord in Fischer Rats *Toshikazu Hashimoto, MD; Mervyn Maze, MB, ChB, FRCP, FRC; Masabiko Fujinaga, MD, Magill Department of Anaesthetics, Chelsea and Westminster Campus, Imperial College of Science, Technology and Medicine, University of London, London, United Kingdom.* N₂O activates GABAergic neurons in the spinal cord.

A-809 Room 224-226, 10/18/2000 10:30 AM - 12:00 PM (PD)

Halothane Action at the GABA_A Receptor is Determined by Side Chain Volume at α 270 *Andrew Jenkins, PhD; Neil L. Harrison, PhD, Department of Anesthesiology, Weill Medical College of Cornell University, New York, NY, United States*

A-810 Room 224-226, 10/18/2000 10:30 AM - 12:00 PM (PD)

General Anesthetic Effects on the α ₁S270I Mutation in α ₁ β ₂ γ _{2L} GABA_A Receptors *Michaela Scheller, MD; Stuart A. Forman, MD-PhD, Dept. of Anesthesia and Critical Care, Mass. General Hospital, Boston, MA, United States.* Please refer to our abstract.