A-714  Room F, 10/16/2000 9:00 AM - 11:00 AM (PS)
Estrogen Decreases Experimental Ischemic Injury in a Genetic Model of Type 1 Diabetes Mellitus Thomas K. Young, M.D.; Patricia D. Hurn, Ph.D.; Richard J. Traystman, Ph.D.; Frederick E. Sieber, M.D., Anesthesiology/Critical Care Medicine, Johns Hopkins Medical Institutions, Baltimore, MD, United States. Type 1 diabetes increases stroke damage in rats; gender-linked; estradiol protects diabetic males.

A-715  Room F, 10/16/2000 9:00 AM - 11:00 AM (PS)
Lidocaine Attenuates Hypoxic Changes of Electrophysiology, Biochemistry, and Morphology in Rat Hippocampal CA1 Pyramidal Cells Jun Wang, M.D.; Kathleen M. Raley-Susman, Ph.D.; Rebecca Newmann; James E. Cottrell, M.D.; Ira S. Kass, Ph.D., Anesthesiology, SUNY Health Science Center, Brooklyn, NY, United States. Lidocaine(10,100μM) improved morphology & physiology; 100 improved Ca & protein synthesis.

A-716  Room E, 10/16/2000 2:00 PM - 4:00 PM (PS)
Intravenous Mannitol Dilates Cerebral Arteries by Activation of K<sub>ap</sub> Channels Johnny E. Brian, MD; Paula Ludwig; Michael M. Todd, MD, Dept. of Anesthesia, University of Iowa Hospitals and Clinics, Iowa City, IA, United States. Intravenous infusion of mannitol dilated cerebral arteries in vivo by activation of K<sub>ap</sub> channels.

A-717  Room E, 10/16/2000 2:00 PM - 4:00 PM (PS)
Effects of Inhibition of Neuronal Nitric Oxide Synthase on NMDA-Induced Changes in Cerebral Blood Flow and O<sub>2</sub> Consumption Oak Za Obi, M.D.; Xia Liu, M.D.; Harvey R. Weiss, Ph.D., Department of Anesthesia, UMDNJ-Robert Wood Johnson Medical School, New Brunswick, NJ, United States. Pretreatment with 7-NI attenuated NMDA-induced changes in cerebral blood flow and O<sub>2</sub> consumption.

A-718  Room E, 10/16/2000 2:00 PM - 4:00 PM (PS)
Effect of Isoflurane on [3H]Glutamate Transport into Gliona Cell Culture and Rat Brain Synaptosomes Essam A. El-Maghrabi, M.D.; Diana O. Miller, M.D.; Ahmed M. Elhawary, Ph.D.; Roderic G. Eckenboff, M.D.; Mobyee Eldefrawi, Ph.D., Anesthesiology, University of Maryland School of Medicine, Baltimore, MD, United States. Isoflurane at clinically relevant concentrations, enhanced 3H-Glu uptake into C6 gloma and synaptosomes.

A-719  Room E, 10/16/2000 2:00 PM - 4:00 PM (PS)
Effect of Dexmedetomidine on Brain Neurotransmitter-Concentration during Cerebral Ischemia in the Rat Kristin Engeland, M.D.; Christian Werner, M.D.; Oliver Mollenberg, M.D.; Hilleke Rosenbrock, Ph.D.; Elberhard Kochs, M.D., Klinik fur Anaesthesiologien, Technische Universitat, Munich, Germany. Dexmedetomidine has no influence on ischemic increase of cerebral neurotransmitters.

A-720  Room E, 10/16/2000 2:00 PM - 4:00 PM (PS)
Propofol Dilates Rat Intracerebral Arteries by Inhibition of Voltage-Dependent Ca<sup>2+</sup> Channels Yasubiko Furuyama, MD, Ph.D.; Yoichiak Kondo, MD, Ph.D.; Shoko Kawauguchi, MD, Mammor Mohrakami, MD; Masato Kato, MD, Dept. of Anesthesiology, Toboku Univ. Sch. of Med., Sendai, Japan. Propofol significantly attenuated the voltage-dependent vasoconstricting effect by high concentration K<sup>+</sup>.

A-721  Room E, 10/16/2000 2:00 PM - 4:00 PM (PS)
Cerebral Vascularization Simulation: Arc ICP - B Waves Witnesses of Autoregulation? Guillaume Guadere, MD; Frederic Cerve- nansky, Ph.D; Valerie Claytens, MD; Jean E. Bazin, MD, Ph.D, Jean J. Lemaire, MD, Ph.D, Department of Anesthesia, CHR; Clermont-Ferrand, France. Demonstration with a computer model that slow cyclic variations could be a direct witness of arterial capacity for autoregulation.

A-722  Room E, 10/16/2000 2:00 PM - 4:00 PM (PS)
Brain Antioxidant Capacity in Transient Focal Ischemia in Rats Lucio Giantz, MD; Abaron Ayravonich, MD; Esther Sobambo, Ph.D; Dmitry Azarov; Leonid A. Eidelman, MD, Anesthesiology, Sacker School of Medicine, Tel Aviv Univ. Rabin Medical Center, Beilinson Campus, Petach Tikva, Israel. The endogenous antioxidant levels decrease during brain ischemia and gradually increase at reperfusion.

A-723  Room E, 10/16/2000 2:00 PM - 4:00 PM (PS)
Non-Viral mRNA and DNA Gene Delivery to Rat Brain for Transient, Peri-Operative Gene Expression James G. Hecker, Ph.D, MD; Van R. Irion, Anesthesiology, University of California-Davis, Davis, CA, United States. We demonstrate non-viral delivery and expression of Hsp70 and reporter enzymes in vitro and in vivo in rat brain. Transient gene expression in the CNS is proposed for neuro-protection.

A-724  Room E, 10/16/2000 2:00 PM - 4:00 PM (PS)
Brain Oxygenation Response to CO2 in Dogs William E. Hoffman, PhD; Guy Edelman, MD, Anesthesiology, Univ Illinois, Chicago, IL, United States. Brain tissue oxygen was measured during low, normal and high PaCO2 in 1.5% or 3% isoflurane or propofol anesthetized dogs. Oxygen decreased during hypocapnia with all anesthetics and increased with hypercapnia only during 1.5% isoflurane and propofol.

A-725  Room E, 10/16/2000 2:00 PM - 4:00 PM (PS)
Comparative Neurotoxicity of Intrathecal Mepcridine and Lido- caine in the Rat Shouichiro Ibusuki, M.D., Ph.D; Jun Huan Chou, M.D., Ph.D; Zexu Fang, M.D.; Andrew Bollan, M.D.; Kenneth Drasner, M.D., Anesthesia and Perioperative Care, University of California, San Francisco, CA, United States. The neurotoxicity of intrathecally administered mepcridine exceeded that of intrathecally administered lidocaine.

A-726  Room E, 10/16/2000 2:00 PM - 4:00 PM (PS)
Cortical Spreading Depression Induced Preconditioning Decreases Neuronal Apoptosis in Rats Subjected to Focal Ischemia Joseph R. Kinbror, MD; Gus Atikins, MD; Masabiko Kawauguchi, MD; John C. Drummond, MD; Piyush M. Patel, MD, Anesthesiology, University of California, San Diego, San Diego, CA, United States. Spreading depression induced pre-conditioning decreased neuronal apoptosis in rats after focal ischemia.

A-727  Room E, 10/16/2000 2:00 PM - 4:00 PM (PS)
Effects of Mild Hypothermia on Cardiac Autonomic Nerve Endings Function Hiroshi Kitagawa, MD; Tsuyoshi Akiyama, MD; Toji Yamazaki, MD, Anesthesia, Nagahama City Hospital, Nagahama, Shiga, Japan.