EXPERIMENTAL CIRCULATION

A-636 Room D, 10/16/2000 2:00 PM - 4:00 PM (PS)
Inhibition of Neutrophil-Endothelium Cascade May Contribute to Cardioprotection by Isoflurane *Guochang Hu, MD; Agnieszka Piotrowski, MD; M. Ramez Salem, MD; George J. Crystal, PhD, Anesthesiology, IL Masonic Med Ctr & Univ IL Col Med, Chicago, IL, United States.* Isoflurane inhibited production of superoxide by neutrophils, and protected coronary endothelium from neutrophil-induced injury.

A-637 Room D, 10/16/2000 2:00 PM - 4:00 PM (PS)
The Level Of PKA Stimulation Does Not Modulate the Sevoflurane Effect on Cardiac Sodium Current *Kurt M. Klippel, M.D.; Wai-Meng Kwok, Ph.D; Zeljko J. Bosnjak, Ph.D, Department of Anesthesiology, Medical College of Wisconsin, Milwaukee, WI, United States.* The depression of peak I_{Na} by sevoflurane is independent of the level of PKA activation.

A-638 Room D, 10/16/2000 2:00 PM - 4:00 PM (PS)
Intracellular Signal Transduction of Isoflurane Induced Mitochondrial Oxidation, Implications for Preconditioning *Shinji Kohro, M.D., Ph.D.; Quinn H. Hogan, M.D.; Yuri Nakae, M.D., Ph.D.; Zeljko J. Bosnjak, Ph.D., Anesthesiology, Medical College of Wisconsin, Milwaukee, WI, United States.* Isoflurane-induced flavoprotein oxidation depends on phospholipase C and tyrosine kinase, but not on IP_3.

A-639 Room D, 10/16/2000 2:00 PM - 4:00 PM (PS)
Propofol Attenuates β-Adrenoreceptor-Mediated Increases in L-type Ca^{2+} Current and cAMP Accumulation in Ventricular Myocytes *Hiromi Kurokawa, MD; Paul Murray, PhD; Derek Damron, PhD, Anesthesiology Research, Cleveland Clinic Foundation, Cleveland, OH, United States.* Propofol attenuates β-adrenergic signal transduction in cardiac myocytes upstream of adenylyl cyclase.

A-640 Room D, 10/16/2000 2:00 PM - 4:00 PM (PS)
Inhibition of Apoptosis Is Correlated with Decreased Lethality in Murine Endotoxic Shock *M. Meisner, MD; P. Deigner, MD; T. Birkern, MD; C. Weiss, MD; K. Reinhart, MD, Department of Anaesthesiology, Univ. of Jena, Jena, Germany.* In this study we investigated the effects of a recently synthesized inhibitor of acidic Sphingomyelinase on lethality and apoptosis in a murine endotoxic shock model.

A-641 Room D, 10/16/2000 2:00 PM - 4:00 PM (PS)
Blockade of Ischemic Preconditioning by Ketamine is Enantiomer Specific In Vivo *Jost Mullenheim, MD; Jan Frassdorf, MD; Benedikt Preckel, MD; Volker Thamer, MD; Wolfgang Schlack, MD, Physiology 1, Heinrich-Heine-University, Dusseldorf, Germany.* Ketamine but not S(+)-ketamine blocks ischemic preconditioning in vivo. Thus, the influence of ketamine is enantiomer specific.

A-642 Room D, 10/16/2000 2:00 PM - 4:00 PM (PS)
Mild Hypothermia Modulates the Effects of Isoproterenol on Cardiac Contraction and Ca^{2+} Transients *Yuri Nakae, MD, PhD; Satoshi Fujita, MD, PhD; Noriaki Kanaya, MD, PhD; Shigeyuki Yamada, MD; Akiyoshi Namiki, MD, PhD, Anesthesiology, Sapporo Medical University, Sapporo, Hokkaido, Japan.* Mild hypothermia enhances the effects of isoproterenol on cardiac contraction and Ca^{2+} transients.

A-643 Room D, 10/16/2000 2:00 PM - 4:00 PM (PS)
Isoproterenol Inhibits Oxygen Radical Stimulated Transcription of Genes Encoding the Inflammatory Cytokines Tumor Necrosis Factor Alpha (TNF), Interleukin-1 Beta (IL-1), and Interleukin-6 (IL-6) in the Rat Heart *Walter H. Newman, PhD; Zhongbiao Wang, MD, PhD; Jerry G. Webb, PhD; Manuel R. Castresana, MD, Anesthesiology, Mercer University School of Medicine, Macon, GA, United States*

A-644 Room D, 10/16/2000 2:00 PM - 4:00 PM (PS)
Cyclosporine Reduces Myocardial Infarction Size in a Rat Model *Claus Niemann, MD; Uwe Christians, MD,Ph.D.; Haydar Akbari, MD; Leslie Z. Benet, Ph.D.; Maythem Saeed, DVM, Ph.D., Anesthesia, Biopharm.Science, Radiology, University of California, San Francisco, San Francisco, CA, United States.* Our preliminary results demonstrate, that cyclosporine significantly reduces the area of infarct in vivo.

A-645 Room D, 10/16/2000 2:00 PM - 4:00 PM (PS)
Influences of Acute Normovolemic Hemodilution on Left Ventricular Systolic and Diastolic Function in Dogs *Junpei Nozaki, M.D.; Hiroshi Kitahata, M.D.; Katsuya Tanaka, M.D.; Akio Iseki, M.D.; Shuzo Oshita, M.D., Anesthesiology, Tokushima University School of Medicine, Tokushima, Japan.* Acute normovolemic hemodilution enhanced left ventricular systolic and diastolic function.

A-646 Room D, 10/16/2000 2:00 PM - 4:00 PM (PS)
Age-Related Propofol Effects on Myocardial Contraction and Intracellular Ca^{2+} Dynamics of Isolated Rat Hearts *Takeshi Oguchi, M.D.; Toshiaki Yamaguchi, M.D.; Satoshi Kashimoto, M.D.; Atsushi Furuya, M.D.; Kenichi Masui, M.D., Anesthesiology, Yamanashi Medical University, Nakakoma, Yamanashi, Japan.* Propofol caused age-related cardiac depression, which is not mediated by a decrease in [Ca2+]i.

A-647 Room D, 10/16/2000 2:00 PM - 4:00 PM (PS)
Inotropic and Electrophysiologic Effects of Azumolene Sodium in Ventricular Myocardium *In Vitro Wyun Kon Park, MD; Ki Jun Kim, MD, Anesthesiology, Yonsei University College of Medicine, Seoul, Korea.* The direct myocardial depressant action of azumolene seems to be caused partly by inhibition of calcium influx. SR calcium uptake may not be altered.

A-648 Room D, 10/16/2000 2:00 PM - 4:00 PM (PS)
A Computer Model of Cardiopulmonary Physiology: Research and Clinical Applications *Ying Sun, Ph.D.; Ernesto Goldman, M.D.; Yun-Hee Ko, M.S.; Angel R. Viola, M.D.; Ricardo J.M. Puy, M.D., Electrical & Computer Engineering, University of Rhode Island, Kingston, RI, United States.* The study demonstrated a computer model and system identification method to fit clinical hemodynamic data accurately (r=0.99).

A-649 Room D, 10/16/2000 2:00 PM - 4:00 PM (PS)
Interaction of MCI-154, a Calcium Sensitizer, and Isoflurane on Myocardial Contractility and Hemodynamics in Chronically Instrumented Dogs *Shunji Takahashi, M.D.; Sungsam Cho, M.D.; Shiro Tomiyasu, M.D.; Koji Sumikawa, M.D., Anesthesiology, Nagasaki Univ. School of Medicine, Nagasaki, Japan.* MCI-154 restores myocardial contractility and enhances coronary vasodilation during isoflurane.