Experimental Circulation: Vascular Biology / Systemic & Regional Circulation

A-594 Room D, 10/16/2000 9:00 AM - 11:00 AM (PS)
Effects of Four Inhaled Anesthetics on Intracellular Calcium Stores of Vascular Smooth Muscle in Small Mesenteric Arteries *Takashi Akata, MD; Mikio Nakashima, MD; Kaoru Izumi, MD, Faculty of Medicine, Kyushu University, Fukuoka, Japan.* Halothane, enflurane, isoflurane, and sevoflurane have differential effects on intracellular Ca^{2+} stores of vascular smooth muscle.

A-595 Room D, 10/16/2000 9:00 AM - 11:00 AM (PS)
Effects of Ketamine on Vascular Smooth Muscle of Rat Mesenteric Arteries *Takashi Akata, MD; Kaoru Izumi, MD; Mikio Nakashima, MD, Faculty of Medicine, Kyushu University, Fukuoka, Japan.* The direct vasodilator action of ketamine appears to involve both reduction of $[Ca^{2+}]i$ in vascular smooth muscle and inhibition of the myofilament Ca^{2+} sensitivity.

A-596 Room D, 10/16/2000 9:00 AM - 11:00 AM (PS)
Time to Peak Hemodynamic Effects Increases with Increasing Intravenous Methamphetamine Doses in Rats *Harendra Arora, MD; Michael Owens, PhD; Brooks Gentry, MD, Department of Anesthesiology, University of Arkansas for Medical Sciences, Little Rock, AR, United States.* IV methamphetamine causes dose-dependent increases in magnitude, duration and time to peak hemodynamic effects in freely moving rats.

A-597 Room D, 10/16/2000 9:00 AM - 11:00 AM (PS)
Effects of Incremental Doses of Dopamine, Norepinephrine and Fluids on Hepatic Blood Flow in PEEP-Treated Pigs *Aharon Avramovich, MD; Lucio Glantz, MD; Iury Elman, MD; Dmitry Azarov; Leonid A. Eidelman, MD, Anesthesiology, Sackler School of Medicine, Tel Aviv Univ. Rabin Medical Center, Beilinson Campus, Petach Tikva, Israel.* Only fluid restored hepatic blood flow to the pre-PEEP level.

A-598 Room D, 10/16/2000 9:00 AM - 11:00 AM (PS)
Organ Dysfunction and mRNA Cytokine Levels after Cardiopulmonary Bypass in Neonatal Pigs *Vibeke Brix-Christensen, MD; Christian Vestergaard, MD; Else Tonnesen, DMSc, Anaesthesiology, Aarhus, Denmark.* IL-10 mRNA was significantly down regulated 4 h post-CPB in the lungs from CPB-pigs compared to lungs of sham pigs ($p=0.04$). This was accompanied by cardiac and hemodynamic deterioration .

A-599 Room D, 10/16/2000 9:00 AM - 11:00 AM (PS)
Analysis of Responses to Defibrotide in the Feline Pulmonary Vascular Bed *Bracken J. De Witt, M.D., Ph.D.; Alan D. Kaye, M.D., Ph.D.; Ikhlass N. Ibrahim, D.V.M.; Roland Hofbauer, Ph.D.; Bobby D. Nossaman, M.D., Anesthesiology, Johns Hopkins University, Baltimore, MD,.* Defibrotides' action is mediated through COX, not through NO or K^+_{ATP} channels in the feline pulmonary circulation.

A-600 Room D, 10/16/2000 9:00 AM - 11:00 AM (PS)
Heparin Influences Human Vascular Tissue Responses Involving the cGMP Pathway *Janos Gal, MD; David Royston, FRCA; Bernhard J.C.J. Riedel, FCA, Anesthesiology, Royal Brompton & Harefeild NHS Trust, London, United Kingdom.* Heparin reduces intracellular cGMP accumulation. This may be related to inhibition of NO and thus have important implications in the pathogenesis of endothelial dysfunction.

A-601 Room D, 10/16/2000 9:00 AM - 11:00 AM (PS)
IRL2500, A Selective ETb Antagonist in Intact Rats *Qingzhong Hao, M.D; Frank Zavisca, M.D.,Ph.D; Albert Hyman, M.D; Howard Lippton, M.D; Randall Cork, M.D.,Ph.D, Anesthesiology, LSU Health Sciences Center, Shreveport, LA, United States.* Using a new rat model, we show that ET-1, IRL1620 and ET-3 dilate the pulmonary vascular bed. This effect is blocked by IRL2500, an ETb antagonist.

A-602 Room D, 10/16/2000 9:00 AM - 11:00 AM (PS)
Effects of Inhaled Nitric Oxide (iNO) on Platelet-Leucocyte Interactions in Healthy Volunteers *Axel Herr, MD; Sylvia Kirsch; Johann Motsch, PhD, MD; Eike Martin, PhD, MD; Andre Gries, MD, Anesthesiology, University of Heidelberg, Heidelberg, Germany.* Platelet-leucocyte conjugates (PLC) were determined before and 120 min after inhalation of 0-50 ppm NO in volunteers. NO >5 ppm increased PLC.

A-603 Room D, 10/16/2000 9:00 AM - 11:00 AM (PS)
Cardiopulmonary Bypass Suppressed Human Platelet Function by Suppressed Inositol-Triphosphate Formation *Hideo Hirakata, MD; Masami Sugahara, MD; Kazuhiko Fukuda, MD, Anesthesia, Kyoto University Hospital, Kyoto, Japan.* Cardiopulmonary bypass suppressed platelet aggregation, Ca^{2+} increase and IP_3 formation but not TXA_2 receptor binding.

A-604 Room D, 10/16/2000 9:00 AM - 11:00 AM (PS)
The Action of Isoflurane on Vascular Smooth Muscle of Isolated Mesenteric Arteries *Kaoru Izumi, MD.; Takashi Akata, MD.; Shosuke Takahashi, MD., Faculty of Medicine, Kyushu University, Fukuoka, Japan.* The action of isoflurane on NE response consists of endothelium-dependent vasoconstricting and endothelium-independent vasodilating components in rat mesenteric arteries.

A-605 Room D, 10/16/2000 9:00 AM - 11:00 AM (PS)
Rho-Kinase Plays a Key Role for VSM Contraction in Human Arteries *Tadashi Kandabashi, MD; Hiroaki Shimokawa, MD, PhD; Shosuke Takahashi, MD, PhD, Anesthesiology&Critical Care Medicine, Kyushu Univ., Fukuoka, Japan.* We tested the involvement of Rho-kinase in serotonin-induced contractions of human arteries. Tension & western blot analyses indicate Rho-kinase plays a key role for the contractions.

A-606 Room D, 10/16/2000 9:00 AM - 11:00 AM (PS)
Attenuated Vasorelaxing Activity to the Nitric Oxide-Independent Soluble Guanylate Cyclase Activator YC-1 in eNOS Deficient Mouse Aorta *Dechun Li, M.D., Ph.D.; Dan E. Berkowitz, M.D.; Zhiping Mo, M.D.; Roger A. Johns, M.D., Anesthesiology and Critical Care Medicine, Johns Hopkins University School of Medicine, Baltimore, MD, United States.* Low sGC activity results in hypertension in eNOS-/- mouse.

A-607 Room D, 10/16/2000 9:00 AM - 11:00 AM (PS)
ODQ, a Soluble Guanylate Cyclase Inhibitor, Attenuates Proliferating Cell Nuclear Antigen Labeling in Hypoxia-Induced Pulmonary Hypertension in the Rat *Dechun Li, M.D., Ph.D.; Roger A. Johns, M.D., Anesthesiology and Critical Care Medicine, Johns Hopkins University School of Medicine, Baltimore, MD,.* sGC inhibition reduces vascular remodeling in hypoxia-induced pulmonary hypertension.