

**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** Abaron 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.; Ikblass 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 & Harefield 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 ET<sub>B</sub> Antagonist in Intact Rats** Qingzhong Hao, M.D.; Frank Zavisca, M.D., Ph.D.; Albert Hyman, M.D.; Howard Lipton, 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 ET<sub>B</sub> 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 Sugabara, MD; Kazubiko 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** Tadasbi 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.