

**A-371** Room C, 10/17/2000 9:00 AM - 11:00 AM (PS)  
**Propofol Reduces ICP during Craniotomy Compared to Isoflurane and Sevoflurane** Kurt D. Petersen, M.D.; Uffe Landsfeldt, M.D.; Georg E. Cold, Ph.D.; Claus B. Pedersen, M.D.; Peter Holst, M.D. Anesthesiology, Aarhus University Hospital, Aarhus, Denmark. Significantly lower ICP and higher CPP are seen during propofol anesthesia compared to isoflurane and sevoflurane anesthesia before and after hyperventilation.

**A-372** Room C, 10/17/2000 9:00 AM - 11:00 AM (PS)  
**Evaluation of Relationship between Cerebral and Retinal Blood Flow** Max J. Rist, MD; Stephan Mierdl, MD; Karin Friedrich, MD; Volker Lischke, MD, Centre of Anesthesiology, Goethe-University, Frankfurt (Main), Germany. Retinal blood flow measured by laser doppler correlates significantly with transcranial Doppler of the middle cerebral artery and cerebral perfusion pressure.

**A-373** Room C, 10/17/2000 9:00 AM - 11:00 AM (PS)  
**Selective Brain Cooling Decreases Cerebral Infarct Volume** A.E. Schwartz, MD; A.D. Finck, MD; E.S. Connolly, MD; J.G. Stone, MD; N.M. Edwards, MD, Anesthesiology, Mt Sinai Hosp & Columbia Univ, New York, NY, United States. After 1hr of cerebral ischemia, baboons were at 37°C or treated with selective cerebral cooling to 25°C. Controls had hemisphere infarction of 35.4(4.4)% vs 0.5(5)% for brain-cooled baboons.

**A-374** Room C, 10/17/2000 9:00 AM - 11:00 AM (PS)  
**Effect of Xenon on Carbondioxide Reactivity in Humans** Claudia K. Stapelfeldt, M.D.; Christoph P. Hahn, M.D.; Peter H. Tonner, M.D.; Jens Scholz, M.D.; Jochen Schulte am Esch, M.D., Dept. of Anaesthesiology, University Hospital Eppendorf, Hamburg, Germany. Carbon-dioxide (CO<sub>2</sub>) reactivity was determined in 34 anesthetized patients. CO<sub>2</sub> reactivity was preserved using xenon and not different to isoflurane.

**A-375** Room C, 10/17/2000 9:00 AM - 11:00 AM (PS)  
**Remifentanil Provides Hemodynamic Stability and Faster Awakening Time in Transsphenoidal Surgery** Concezione Tommasino, MD; Marco Gemma, MD; Silvano Cozzi, MD; Simona Narcisi, MD; Pietro Mortini, Anesthesia and Intensive Care, University of Milano, IRCCS San Raffaele Hospital, Milano, Italy. Better hemodynamics and faster awakening from anesthesia with remifentanil

**A-376** Room C, 10/17/2000 9:00 AM - 11:00 AM (PS)  
**Measured, Calculated and Effective Plasma Osmolality in Neurointensive Care Patients** Concezione Tommasino, MD; Marco Gemma, MD; Edy Prandi, MD; Marco Cerri, MD, Anesthesia and Intensive Care, University of Milano, IRCCS S Raffaele H, Milano, Italy. Effective serum osmolality, in patients with brain pathology, can be used as an index of relative dehydration or overhydration.

**A-377** Room C, 10/17/2000 9:00 AM - 11:00 AM (PS)  
**Cerebral Blood Flow Velocities during Xenon Anesthesia** Peter H. Tonner, MD; Claudia Stapelfeldt, MD; Christoph Hahn, MD; Jens Scholz, MD; Jochen Schulte am Esch, MD, Dept. of Anesthesiology, University Hospital Eppendorf, Hamburg, Germany. Cerebral blood flow velocities (CBFV) were determined in patients receiving either xenon or isoflurane. No differences in CBFV were found.

**A-378** Room C, 10/17/2000 9:00 AM - 11:00 AM (PS)  
**Cerebral Autoregulation in Healthy Children** Monica S. Vavilala, M.D.; Elizabeth Junger, M.D.; Colleen A. Douville, B.A.; David Newell, M.D.; Arthur M. Lam, M.D., Anesthesiology, Pediatrics, and Neurosurgery, Harborview Medical Center, Seattle, WA, United States. Using dynamic cerebral autoregulation testing, we have found that children have a lower autoregulatory index than adults.

**A-379** Room C, 10/17/2000 9:00 AM - 11:00 AM (PS)  
**The Antioxidant Potential of Propofol in Human Red Blood Cells** Shibai Zhang; Shanglong Yao, Anesthesiology, Union Hospital, Wuban, Hubei, China. G-6-PD, PFK and HK did not change during propofol anesthesia. G-6-PD activity increased significantly during enflurane anesthesia. The results indicate propofol can effectively scavenge free radicals at anesthetic concentration.

### Clinical Neuroscience: Monitoring Neurologic Function & Temperature

**A-380** Room 301, 10/16/2000 2:00 PM - 3:30 PM (PD)  
**Paradoxical Increase of EEG Bispectral Index (BIS) with Increasing Concentrations of Sevoflurane** Schneider Gerbard, MD; Naguib S.K. Naguib, MD; Hanel Frank, MD; Kochs F. Eberhard, MD, Anesthesiology, Klinikum rechts der Isar, TU Munchen, Munich, Germany. Stepwise increase (by 0.6%, maintenance 10 min.) of sevoflurane (starting at 1.0%) resulted in an increase of BIS in all patients.

**A-381** Room 301, 10/16/2000 2:00 PM - 3:30 PM (PD)  
**Categorization and Analysis of Pain and Activity Levels in Patients with Back Pain Using an Artificial Intelligence Technique** John J. Liszka-Hackzell, MD; David P. Martin, MD, PhD, Department of Anesthesiology, Mayo Clinic, Rochester, MN, United States. Neural networks were used to investigate the relationship between activity and pain, which may provide diagnostic and prognostic information.

**A-382** Room 301, 10/16/2000 2:00 PM - 3:30 PM (PD)  
**Misprediction of the Effect-Site Concentration during Rapid Induction of Propofol Sedation** Anthony G. Doufas, M.D.; Myriam Bakhsbandeh, M.D.; Ellie Lekou, M.D.; Robert Greif, M.D.; Daniel I. Sessler, M.D., Outcomes Research Institute and Anesthesiology, University of Louisville, Louisville, KY, United States. Predicted propofol effect-site concentrations differ with ramp speed, thus mispredicting effect-site.

**A-383** Room 301, 10/16/2000 2:00 PM - 3:30 PM (PD)  
**Ability of the Bispectral Index (BIS) To Predict Verbal Responsiveness In Patients Undergoing Intravenous Sedation** Donald Matheus, MD; Scott Greenwald, PhD; Sanjeev Kumar, MD; Aaron Kopman, MD; George Neuman, MD, Department of Anesthesiology, St. Vincent's Hospital, New York, NY, United States. The relationship between BIS and verbal responsiveness is preserved in sedated patients.

**A-384** Room 301, 10/16/2000 2:00 PM - 3:30 PM (PD)  
**Temperature Measurement during CPB** Wei-ping Cheng, M.D.; MariaRosa Marino, M.D.; Alexander Romagnoli, M.D.; David Walding, B.S.; Nancy Nussmeier, M.D., Cardiovascular Anesthesia, Texas Heart Institute, Houston, TX, United States. During CPB rewarming, jugular bulb temperature is underestimated by nasopharyngeal and esophageal (1-2°C) and particularly rectal and bladder (3-4°C) temperatures.