EASL International Bilirubin Workshop 2004, Trieste, Italy

The molecular basis of bilirubin neurotoxicity and encephalopathy.

Sponsored by EASL, CBM (Consorzio Biomedicina Molecolare), and CSF
AREA Science Park, Trieste, Italy

Venue: ***CBM, AREA Science Park, Padriciano-Basovizza, Trieste, Italy***

POSTER SESSION

1. **Relevance of oxidative stress in the pathways of neuronal damage by unconjugated bilirubin**. *MA Brito[a], A Fernandes[a], AS Falcão[a], RFM Silva[a], DA Butterfield[b], D Brites[a]*. Centro de Patogénese Molecular (UBMBE), Faculdade de Farmácia, University of Lisbon, Lisbon, Portugal; [b]Department of Chemistry, Center of Membrane Sciences and Sanders-Brown Center on Aging, University of Kentucky, Lexington, KY 40506, USA.
2. **Hypoxia-ischemia intensifies bilirubin-induced cell death and TNF-α release in cultured astrocytes**. *AS Falcão, A Fernandes, MA Brito, RFM Silva, D Brites*. Centro de Patogénese Molecular (UBMBE), Faculdade de Farmácia, University of Lisbon, Lisbon, Portugal.
3. **Astroglial response to bilirubin involves activation** of the TNF-α and NF-κB pathways. *A Fernandes, AS Falcão, C Gordo, MJ Gama, RFM Silva, MA Brito, D Brites*. Centro de Patogénese Molecular (UBMBE), Faculdade de Farmácia, University of Lisbon, Lisbon, Portugal.
4. **Unconjugated bilirubin enhances the release of pro-inflammatory cytokines and glutamate by rat microglia**. *C Gordo, A Fernandes, S Falcão, A Brito, RFM Silva, D Brites*. Centro de Patogénese Molecular (UBMBE), Faculdade de Farmácia, University of Lisbon, Lisbon, Portugal.
5. **Orlistat treatment decreases plasma bilirubin concentration in gunn rats by increasing turnover of bilirubin**. *Anja M. Hafkamp[1], Rick Havinga[1], Lorella Pascolo[2], and Henkjan J. Verkade[1]*. [1]Department of Pediatrics, University Hospital Groningen, Groningen, The Netherlands; [2]CSF and Department of Biochemistry, Biophysics and the Chemistry of Macromolecules, University of Trieste, Trieste, Italy.
6. **Neonatal bilirubin production-conjugation imbalance: effect of glucose-6-phosphate dehydrogenase deficiency and borderline prematurity**. *Michael Kaplan, MB ChB [1,2], Maurizio Muraca, MD [4], Hendrik J Vreman, PhD [6], Cathy Hammerman, MD [1,3], Maria Teresa Vilei, MD [4], Firmino F Rubaltelli, MD [5], David K Stevenson, MD [6]*. Department of Neonatology, Shaare Zedek Medical Center [1], Jerusalem, Faculty of Medicine of the Hebrew University [2], Jerusalem, Faculty of Health Sciences, Ben Gurion University of the Negev [3], Be'er Sheva, Israel; Department of Internal Medicine, University of Padua [4], Padua, Department of Neonatology, University of Florence [5], Florence, Italy; Division of Neonatal and Developmental Medicine, Department of Pediatrics, Stanford University Medical Center [6], Stanford, CA.
7. **Current use of phototherapy (PTX) and monitoring of total serum bilirubin in extremely low birth weight (ELBW) infants.** *B Morris, G McDavid, W Oh, D Stevenson, J Tyson, D Phelps, M O'Shea, R Higgins, K Poole, C. Grisby on behalf of the NICHD Neonatal Research Network*, USA

8. **Unconjugated bilirubin modulates the intestinal epithelial barrier function in a human-derived, *in vitro* model**. *Francesco Raimondi, Valeria Crivaro, Maria Vendemmia, Luigi Maiuri, Pasquale Santoro, Maria Tucci, Roberto Paludetto* . Division of Neonatology, Department of Pediatrics, Universita' "Federico II", Naples, Italy.

9. **Unconjugated bilirubin affects fecal protein loss and clinical presentation of food allergy in healthy term neonates. A pilot, clinical study**. *Francesco Raimondi, Gabriella Araimo, Giuseppe Di Bernardo, Valeria Crivaro, Letizia Capasso, *Roberto Berni Canani, Annalisa Passariello, Gianluca Terrin, Roberto Paludetto*. Division of Neonatology and *Pediatric Gastroenterology, Dept of Pediatrics, Università "Federico II" di Napoli, Naples, Italy.

10. **Direct evidence of bilirubin uptake into liver cells by Bilitranslocase**. *M. Terdoslavich[1], A.Cocolo[1], N.Medic[1], A.Margon[2], M.Franko[2],G.Decorti[3] and S.Passamonti[1]*. [1]Dipartimento di Biochimica, Biofisica e Chimica delle Macromolecole, Università di Trieste, Italy; [2]Laboratory for Environmental Research, Nova Gorica Polytechnic, Slovenia, [3]Dipartimento di Scienze Biomediche, Università di Trieste, Italy.

11. **Oral administration of zinc salts efficiently decreases serum bilirubin levels in hyperbilirubinemic rats**. *Libor Vítek, Lucie Muchová, Jaroslav Zelenka, Marie Zadinová[1], Jiří Malina[2]*. Institute of Clinical Biochemistry and Laboratory Diagnostics and 4th Department of Internal Medicine, [1]Institute of Medical Biophysics, 1st Medical Faculty, Charles University of Prague, [2]Department of Clinical Microbiology, Barrandov Outpatient Center, Prague, Czech Republic.

12. **Lipid peroxidation-generated carbon monoxide in mice: effect of vitamin e and metalloporphyrins.** *Hendrik J. Vreman, Ronald J. Wong, Ganesh M. Shankar, David K. Stevenson*. Department of Pediatrics, Stanford University School of Medicine, Stanford, CA, USA.

13. ***In vitro* efficacy measurements of led-based phototherapy devices compared to traditional light sources in a model system**. *Hendrik J. Vreman[1], Ronald J. Wong[1], Jamie R. Murdock[2], David K. Stevenson[1]*. [1]Department of Pediatrics, Stanford University School of Medicine, Stanford, CA, [2]Natus Medical, San Carlos, CA, USA.

14. **Bilirubin co-transports protons across membranes.** *Richard Wennberg[1], David Zakim[2], David Deamer[3].*Dept. of Pediatrics, U. of Washington1, Dept. of Medicine, Cornell University2, Dept. of Zoology, U. California, Davis3, USA.

15. **Effects of bilirubin on glutamate uptake by synaptomes, NMDA receptor binding in synaptic membranes, and glutamate receptors expressed in oocytes**. *Richard Wennberg[1], Essam Enan[2], Uhllrich Musshoff[3]*.Dept. of Pediatrics, U. of Washington1, Dept. of Environmental Toxicology, U. of California, Davis2, Dept. of Physiology, U. Muenster3, USA.

16. **Developmental Regulation of Heme Oxygenase Expression in the Mouse Brain.** *Ronald J. Wong, Hui Zhao, Aida Abate, Hendrik J. Vreman, Christopher H. Contag, David K. Stevenson***.** Dept. of Pediatrics, Stanford University School of Medicine, Stanford, CA