

Safe and Effective Devices for Neonatal Intensive Care
February 12-13, 2009

Draft Agenda

Thursday, February 12, 2009

8:15 a.m. Welcome and Introductions
Duane Alexander, M.D. (tentative)

Session A: Cardiopulmonary Devices and Instruments
Moderator: David Stevenson, M.D.

8:20 a.m. Workshop Objectives
Tonse Raju, M.D.

8:30 a.m. Newer Methods of Neonatal Ventilatory Care
Eduardo Bancalari, M.D.

9:00 a.m. Technological Innovations for Optimizing Neonatal Pulmonary Care
Martin Keszler, M.D.

9:30 a.m. Discussion

10:00 a.m. Cardiac Output Measurements in the Newborn: Methods and Challenges
Istvan Seri, M.D.

10:30 a.m. Non-Invasive Cardiac Output Measurements: Engineering Perspective
Thomas Heldt, Ph.D.

11:00 a.m. Doppler Technique for CO Measurements in Infants and Children
David Sahn, M.D., Ph.D.

11:30 p.m. Discussion and On-Site Lunch

Session B: Cerebrovascular Issues
Moderator: Tonse Raju, M.D.

12:30 p.m. Near Infrared Spectroscopy: Promises and Pitfalls
Warren Grundfest, Ph.D.

1:00 p.m. Investigating Cerebral Autoregulation
Adre Duplessis, M.D.

1:30 p.m. Optical Imaging: Structure and Functions of the Developing Brain
David Benaron, M.D.

2:00 p.m. Discussion

Session C: Metabolic Monitoring
Moderator: Rose Higgins, M.D.

3:00 p.m. Sensor Technology Overview: Engineering Perspective
David Benaron, M.D.

3:30 p.m. Clinical Issues in Metabolic Monitoring
Martin Keszler, M.D.

4:00 p.m. Integrating Glucose Sensor Technology with Insulin Therapy
Garry Steil, M.D.

4:30 p.m. General Discussion
Research possibilities and limitations of non-invasive, or minimally invasive, monitoring of metabolomics

5:30 p.m. Adjourn

Friday, February 13, 2009

Session D: Neonatal Infections
Moderator: David Stevenson, M.D.

8:30 a.m. Clinical Spectrum of Neonatal Sepsis
Richard Polin, M.D.

9:00 a.m. Sub-classification and Diagnostic Issues in Sepsis
Hector Wong, M.D.

9:30 a.m. Biomimetic Microsystems for Sepsis Therapy and Other Bioinspired Medical Devices
Donald Ingber, M.D., Ph.D.

10:00 a.m. Discussion

10:30 a.m. Microfluidic Models and Sepsis
Shuichi Takayama, Ph.D.

11:00 a.m. Rapid Diagnosis of Sepsis
Rohit Karnik, Ph.D.

11:30 a.m. Silver-Coated ETT and Ventilator-associated Pneumonia
Bekele Afessa, M.D.

12:00 p.m. Discussion and On-site Lunch

1:00 p.m. NIH Pediatric Devices Program
Steven Hirschfield, M.D., Ph.D.

1:30 p.m. Challenges for Developing Pediatric Devices: Food and Drug Administration (FDA)
Perspective
Jean Cooper, Ph.D.

2:00 p.m. Discussion

2:30 p.m. Adjourn