

The 8th International Conference on Brain Monitoring and Neuroprotection in the Newborn



BRAIN & MONITORING NEUROPROTECTION IN THE NEWBORN

January 16-18, 2014

Sheraton Sand Key Resort in Clearwater Beach, Florida

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Sponsored by



CONFERENCE PURPOSE

The International Conference on Brain Monitoring and Neuroprotection in the Newborn is intended to bring the most current and important research in these fields to a forum where the results can be translated for use by clinicians. Brain monitoring, for the purposes of this conference, is defined as those methods used on a continuous or repetitive basis to assess brain function in the newborn such as continuous EEG or near-infrared spectroscopy (NIRS). Neuroprotection, for the purposes of this conference, is defined as therapeutic hypothermia as well as any adjunctive measures that may be utilized along with it.

While these definitions are somewhat restrictive and will be stretched from time to time to include subjects of compelling interest, we think it is important to maintain a focus on these two closely-related and clinically-evolving areas. Broader neonatal neurology topics are available elsewhere, and a broadening of our scope would inevitably lead to a dilution of our focus. The *raison d'être* of this meeting lies in the fact that neither researchers nor clinicians interested in learning the state of the art can find the whole of either field discussed consistently in any other place and to do so seems crucial to us at a time when both fields are growing rapidly in both the research and clinical arenas.

The conference is designed so that researchers and clinicians can derive a solid sense of the state of the art. In building bridges between research and clinical applications, it is vital that the foundations on either side of the bridge are clearly understood. This conference is intended to describe and strengthen those foundations, as well as provide an international bridge between them.

TARGET AUDIENCE

This activity is designed to meet the educational needs of neonatologists, neurophysiologists, pediatric neurologists, NICU nurses, neonatal nurse practitioners, and any other clinician or researcher interested in learning about the cutting-edge field of neonatal brain monitoring.

LEARNING OBJECTIVES

Upon completion of this CE activity, participants should be able to:

- **Describe** several mechanisms of brain injury in the newborn;
- **Identify** chemical and electrographic markers of brain injury in the newborn;
- **Discuss** normal and abnormal features of the neonatal EEG and aEEG;
- **Explain** strategies for neuroprotection in newborns and children;
- **Review** current strategies and controversies in therapeutic hypothermia for the newborn.

ACCREDITATION

Participants should claim only those credits that they actually spent in the educational activity.



Physicians: USF Health is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

USF Health designates this educational activity, including a maximum of 2 pre-conference workshops, for a maximum of **17 AMA PRA Category 1 Credits™**. Physicians should claim only credit commensurate with the extent of their participation in the activity.

Nurses: USF Health is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

A maximum of 17 contact hours may be earned by learners who successfully complete this continuing nursing education activity.

**Note: The main conference carries 14 CEUs; the preconference workshops carry up to 3 CEUs.*

FACULTY

Course Chair

Robert White, MD
Regional Newborn Program
Memorial Hospital, South Bend, IN

Planning Committee

Lena Hellstrom-Westas, MD, PhD
Professor of Perinatal Medicine
Department of Pediatrics
Uppsala University, Uppsala, Sweden

Linda de Vries, MD
Professor of Neonatal Neurology
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Mona Toet, MD, PhD
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Univ. of Colorado, Denver Anschutz Medical Campus
Director
Center for Family and Infant Interaction
NIDCAP, FIRST, FIFI, WONDERBabies
Aurora, Colorado
Zero to Three Academy of Fellows

Invited Faculty

Nicholas S. Abend, MD
Assistant Professor of Neurology and Pediatrics
Children's Hospital of Philadelphia
The University of Pennsylvania School of Medicine
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Kurt Albertine, PhD
Professor
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Stephen Back, MD, PhD
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Director, Neonatal-Perinatal Research Programs
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Clinical Scientist
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Hannah Glass, MDCM, MAS

Assistant Professor Neurology & Pediatrics
Co-Director, Neurological Intensive Care Nursery
Department of Neurology
University of California San Francisco
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Alistair Gunn, MBChB, PhD

Dept. Chair and Professor
Department of Physiology
School of Medical Sciences
University of Auckland, Auckland, New Zealand

John V. Hartline, MD, FAAP

Clinical Professor, Pediatrics
University of Wisconsin, Madison
Editor-in-Chief, NeoReviewsPlus©
American Academy of Pediatrics, Elk Grove, IL

Lena Hellstrom-Westas, MD, PhD

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Professor of Neonatology
Department of Neonatology
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Utrecht, The Netherlands

PROGRAM AGENDA

The agenda is a work in progress, and the information shown below may change.

Wednesday, January 15, 2014

Time	Session / Event
5:00 – 9:00 pm	Exhibitor set-up; poster board set-up

Thursday, January 16, 2014

Time	Session / Event
7:45 am	Registration Desk open
8:00 – 9:00 am	Continental Breakfast

5 Pre-Conference Workshops (separate registration)

Workshop A	Workshop B	Workshop C
8:30 – 10:00 am	8:30 – 10:00 am	8:30 – 10:00 am
aEEG for the New User (Jan Paisley, MD)	aEEG for the Experienced User (Mona Toet, MD, PhD; Lena Hellstrom-Westas, MD, PhD)	Monitoring Techniques for Guiding Treatment of Hypotension in High Risk Infants (Frank van Bel, MD, PhD; Petra Lemmers, MD, PhD; Thomas Alderliesten, MD)

10:00 am – 10:30 am: Break

Workshop D	Workshop E	Workshop C (con't)
10:30 – 12:00 pm	10:30 – 12:00 pm	10:30 – 12:00 pm
Neurocritical Care in the ICN (Hannah Glass, MDCM)	Interpreting the Raw EEG (Robert Clancy, MD; Ingmar Rosen, MD, PhD)	Monitoring Techniques for Guiding Treatment of Hypotension in High Risk Infants

12:00 pm – 1:15 pm: Lunch (on own; not provided)

Main Conference Begins

1:15 -1:20 pm	Welcome
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Brain Injury

1:20 – 2:05 pm	The Conundrum of Prenatal Infection: Good or Bad for the Brain? (Alistair Gunn, MBChB, PhD)
2:05 – 2:50 pm	Brain Injury in Preterm Infants Receiving Respiratory Support (Kurt Albertine, PhD)

2:50 – 3:15 PM: BREAK

3:15 – 4:00 pm	Pitfalls and Progression: Biomarker Discovery in Neonatal Hypoxic Ischemic Encephalopathy (Deirdre Murray, MD, PhD)
4:00 – 4:45 pm	Post-Hemorrhagic Ventricular Dilatation (Monika Olischar, MD; Linda de Vries, MD)

4:45 – 5:15 pm	Panel
Friday, January 17, 2014	
Time	Session / Event
7:30 – 5:00 pm	Registration desk open
7:30 – 8:30 am	Continental breakfast
<i>EEG</i>	
8:25 – 8:30 am	Welcome
8:30 – 9:20 am	Neuro-informatics (Mark Scher, MD)
9:20 – 10:05 am	Events in the Neonatal EEG: Key to Growth, Networking, and Monitoring (Sampsa Vanhatalo, MD, PhD)
10:05 – 10:30 AM: BREAK	
10:30 – 11:05 am	Clinical and Electrographic Events that Mimic Seizures (Robert Clancy, MD)
11:05 – 11:35 am	aEEG Algorithms for Seizures and HIE (Geraldine Boylan, PhD)
11:35 – 12:00 pm	Panel
12:00 – 1:30 PM: LUNCH (PROVIDED IN EXHIBIT HALL) & POSTER WALK	
1:30 – 2:15 pm	Brain Injury in the Preterm Infant: New Insights into the Potential for Regeneration and Repair (Stephen Back, MD, PhD)
2:15 – 2:45 pm	Prognostic Use of aEEG in Preterm Infants (Mona Toet, MD, PhD)
2:45 – 3:15 pm	Role of On-Site MRI in the NICU (Linda de Vries, MD)
3:15 – 3:45 PM: BREAK	
3:45 – 4:15 pm	<i>TBD</i>
4:15 – 5:00 pm	Abstracts
5:00 – 5:30 pm	Panel
Saturday, January 18, 2014	
Time	Session / Event
7:15 – 12:15 pm	Registration desk open
7:15 – 8:00 am	Continental breakfast
7:55 – 8:00 am	Welcome (Bob White, MD)
8:00 – 8:40 am	Seizure-related Neuroprotection Beyond the Neonatal Period (Nicholas Abend, MD)
8:40 – 10:00 am	HIE ARS session: ❖ Role of EEG and aEEG (Geraldine Boylan, PhD) ❖ New Horizons in Therapeutic Hypothermia (John Barks, MD) ❖ Audience directed questions (John Hartline, MD)
10:00 – 10:15 AM: BREAK	
10:15 – 11:00 am	The Effect of Conventional Therapies (pre/post natal medications) on the Brain (Alistair Gunn, MBChB, PhD)
11:00 – 11:45 am	<i>TBD</i>

11:45 – 12:15 pm	Audience directed questions (John Hartline, MD; Bob White, MD)
12:15 pm	Adjourn

WORKSHOP DESCRIPTIONS

Workshop A: **aEEG for the New User** (Jan Paisley, MD)

This workshop is designed for the clinician with less than a year's experience with aEEG, or those considering using aEEG technology. After the workshop, participants should be able to:

- ❖ Interpret aEEG background voltage and pattern.
- ❖ Discuss prognosis based on aEEG background voltage and pattern.
- ❖ Identify common artifacts found on aEEG
- ❖ Diagnose seizures using aEEG.

Workshop B: **aEEG for the Experienced User** (Mona Toet, MD, PhD; Lena Hellstrom-Westas, MD, PhD)

This workshop requires that participants have previous knowledge about basic aEEG/EEG principles, and experience (clinical and/or research) of aEEG/EEG monitoring. After the workshop, participants should be able to:

- ❖ Explain the scientific basis of neonatal aEEG/EEG monitoring.
- ❖ Apply aEEG/EEG monitoring and analyse recordings in high-risk infants in the NICU, including identification of artefacts.
- ❖ Discuss the efficacy of aEEG/EEG for early prediction of outcome and for identification of seizures.
- ❖ Discuss the clinical utility of recording other physiological trends together with aEEG/EEG, e.g., NIRS, blood pressure, oxygen saturation.
- ❖ Discuss how aEEG/EEG can be applied and analyzed for scientific purposes.

Workshop C: **Monitoring Techniques for Guiding Treatment of Hypotension in High Risk Infants** (Frank van Bel, MD, PhD; Petra Lemmers, MD, PhD; Thomas Alderliesten, MD)

In this pre-conference Workshop we aim to discuss with the audience the controversial issue of treatment of hypotension of prematurity with the emphasis on monitoring techniques of cerebral oxygenation, cerebral perfusion and cerebral function.

- Introduction in cerebral monitoring Techniques: Near infrared Spectroscopy (NIRS); Doppler Ultrasound and amplitude EEG.
- Treatment of hypotension of the (premature) newborn; A review
- Are current definitions of hypotension of prematurity reliable? An interactive discussion with the audience.
- Monitoring cerebral oxygenation (and perfusion) and (lack of) cerebral autoregulation in relation with "hypotension"
- Clinical examples: Cerebral hemodynamics/oxygenation and aEEG pattern during important pathologic conditions and neonatal surgery: an interactive discussion with the audience
- Conclusions

Workshop D: Neurocritical Care in the Intensive Care Nursery (Hannah Glass, MDCM)

This workshop will address ways to enhance brain focused care in the intensive care nursery through didactic teaching and case presentations. Topics will include infrastructure, the role of nursing, imaging, monitoring, guideline development, palliative care and follow-up. This workshop is suitable for neonatologists, neurologists, nurses and trainees at all levels.

Workshop E: Interpreting the Raw EEG (Robert Clancy, MD; Ingmar Rosen, MD, PhD)

Those who truly wish to understand the underpinnings of cerebral function monitoring such as amplitude integrated EEG would be wise to spend some time becoming familiar with conventional or “raw” EEG recordings. This workshop will review the development of the EEG background from premature through term infants, seen through the interpretive eyes of a classical electroencephalographer. Traditional EEG reading concepts such as continuity and discontinuity, voltage, symmetry, synchrony and specific named graphoelements will be shown. Finally, samples of neonatal EEG seizures will be displayed to convey the dynamic sense of their behavior unfolding in the immature brain.

FACULTY DISCLOSURE

USF Health adheres to the ACCME Standards regarding commercial support of continuing medical education. It is the policy of USF Health that the faculty and planning committee disclose real or apparent conflicts of interest relating to the topics of this educational activity, that relevant conflicts of interest are resolved, and also that speakers will disclose any unlabeled/unapproved use of drugs or devices during their presentation. Detailed disclosure will be made in the course syllabus.

REGISTRATION

ONLINE REGISTRATION IS FORTHCOMING. (Note: You may register online even if paying by check).

Registration Options	Early Bird (through 11/30/13)	Regular (Dec. 1 – Jan. 14)	On-site (Jan. 15-18)
Pre-Conference Workshops (each)	\$75	\$85	\$100
Main Conference	\$515	\$550	\$600
Single Day	\$225	\$250	\$275
Fellow, Resident, Full Time Student, or from country eligible for discounted fees☆	-\$115	-\$100	-\$85

☆ List of countries from which participants may be eligible for a discount is at end of document, after the registration form.

Click here for online registration: (link TBD)

Conference Registration Fee includes (per participant):

Pre-Conference Workshop Fee: Attendance at the workshop, continuing education credit as applicable, handouts applicable to the workshop and refreshment breaks. (Handouts may be paper or electronic.)

Main Conference Fee: Attendance at the conference, continuing education credit as applicable, syllabus, refreshment breaks, lunch (on Friday), and a poster walk. The syllabus will be electronic and available for download in advance.

CANCELLATION POLICY: Cancellation notification must be in writing (fax to 813-974-5172 or e-mail brose@health.usf.edu) and received by the close of business on **December 15, 2013**. A cancellation fee of \$50 for workshops and \$100 for main conference (total cancellation fee not to exceed \$150) will be assessed. Cancellations received after **December 15, 2013** will not receive a refund. No-shows will not receive a refund. However, substitutions are welcome. Please allow up to 3 weeks to receive the refund.

USF Health reserves the right to cancel this program due to unforeseen circumstances, in which case a full refund will be given to participants. USF Health will not be responsible for travel expenses incurred by the participant in the unlikely event that the program is cancelled.

LOCATION



Sheraton Sand Key
RESORT
CLEARWATER BEACH

1160 Gulf Boulevard
Clearwater Beach, FL 33767
727-595-1611
www.sheratonsandkey.com



The perfect escape! The Sheraton Sand Key Resort is a unique beach hotel on Clearwater Beach: One of America's top ranked hotels for hospitality, on one of America's top rated beaches. The resort offers 390 accommodating rooms and suites overlooking the Gulf of Mexico and the Intracoastal Waterway. Resort amenities abound! Golden Spoon and numerous specialty dining awards recognize Rusty's Bistro as the top restaurant on Clearwater Beach.

A limited number of rooms have been reserved for this meeting at a special rate of \$169 + applicable tax, currently at 12%. Rates are based on single/double occupancy. The deadline date to obtain the group rate is December 15, 2013. Don't delay making your hotel reservation.

Reservation Methods: *Call-in:* 1-727-595-1611 You must identify yourself as attending the "Brain Monitoring Conference" in order to receive the group prices *OR* *On-line:* <http://tinyurl.com/lodging-Brain2014>

Airport(s): Tampa International Airport (TPA) and St. Petersburg/Clearwater airport (PIE)

Ground Transportation: The two airports nearest the hotel are Tampa International Airport (TPA) and St. Petersburg/Clearwater airport (PIE). Both airports offer car rental and SuperShuttle. Reservations can be made at www.supershuttle.com or 1-800-282-6817. SuperShuttle from Tampa airport is approximately \$25 one way, or \$50 RT. Taxi fare from Tampa airport can exceed \$60. For more information on Tampa airport, visit www.tampaairport.com, and for information on the St. Petersburg/Clearwater airport, visit <http://www.fly2pie.com/>

Parking: Parking is complimentary at the hotel.

EQUAL OPPORTUNITY

Events, activities and facilities of the University of South Florida are available to all without regard to race, color, marital status, gender, sexual orientation, religion, national origin, disability, age, or Vietnam veteran status as provided by law and in accordance with the University's respect for personal dignity.

ACCOMMODATIONS FOR DISABILITIES

Please notify the USF CPD Office, 12901 Bruce B. Downs Blvd., MDC 46, Tampa, FL 33612, call 813-974-6158, or e-mail brose@health.usf.edu a minimum of ten (10) working days in advance of the event if a reasonable accommodation for a disability is needed.

CALL FOR ABSTRACTS (Deadline passed; late abstracts accepted for consideration for poster)

The 8th International Conference on Brain Monitoring and Neuroprotection in the Newborn is dedicated to providing a forum for the continuing education of professionals working to improve the neurological and developmental health outcomes of premature and sick newborns. This conference explores means to understand, monitor, protect and treat the developing brain of the premature and term neonate.

Material presented in the abstracts should be organized and presented according to accepted scientific style. All new investigational studies must include the hypothesis being tested, methods, results with applicable statistics, and discussion and/or implications regarding practice.

The conference committee invites you to submit an abstract for oral or poster presentation regarding, but not limited to, the following topics:

- Progression of, and influences on, fetal or neonatal brain development, both normal and abnormal
- Neuroprotection strategies in the neonate
- Continuous EEG monitoring – theory and applications
- Other forms of brain monitoring, such as NIRS, fMRI, biochemical, etc.
- Long-term outcome studies
- Seizures
- Withdrawal of care and other challenging decisions

Abstracts should include the following sections, as applicable.

1. Abstract Title
2. Authors' names, degree(s), and institution
3. Background and Purpose: problem statement or hypothesis as appropriate
4. Program, Materials, or Methodology
5. Impact or Results
6. Bibliography
7. Learner Objectives: 2-3

In the body of the email, please list the following:

1. Title of the abstract
2. Author's name, degree(s), credentials, position title
3. Name of institution
4. Author's (or Institution's if more applicable) address, city, state, zip
5. Country if outside the USA
6. Phone and Email address
7. IF the contact person is someone other than the author, please note that in the body of the email
8. Abstract preference: choices are a) oral only, b) poster only, c) either, or d) both oral and poster

Format: WORD, preference is Arial 12 pt, but font choice is optional.

Send abstract as an email attachment to Bobbi Rose at brose@health.usf.edu

Abstracts are due by August 23, 2013

(Late abstracts are welcome, but will be considered for poster presentation only.)

REGISTRATION FORM	
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The 8th International Conference on Brain Monitoring and Neuroprotection in the Newborn
January 16-18, 2014 – Sheraton Sand Key, Clearwater Beach, Florida

First Name:		MI:		Last Name:	
Degrees/Credentials:		Organization:			
Street Address:					
City/State/zip Country, if not USA				Birth date: (mm/dd)	
Daytime Phone:		Fax:		Cell:	
Email (required)				Gender: ☐ Male ☐ Female	
Do you want to appear on the participant list? ☐ Yes ☐ No				License No:	
Professional Profile:		☐ Physician ☐ Fellow ☐ Resident ☐ Nurse ☐ Other: _____ ☐ Full time student			
Burning question for faculty:					
REGISTRATION OPTIONS		EARLY BIRD (THROUGH 11/30/13)	REGULAR (DEC. 1 - JAN. 15)	ON-SITE (JAN. 15 – 18)	
Pre-Conference Workshops (each) ☐ A ☐ B ☐ C ☐ D ☐ E		\$75	\$85	\$100	
Main Conference		\$515	\$550	\$600	
Single Day: ☐ Thurs ☐ Friday ☐ Sat		\$225	\$250	\$275	
Discount: Fellow, Resident, FT student, or from country eligible for discount		-\$115	-\$100	-\$85	
Total:					
PAYMENT METHOD					
☐ Cash		☐ Check (payable to USF HPCC)		Total Amount: \$	
☐ Credit Card: ☐ AmEx ☐ MasterCard ☐ Visa ☐ Discover				Exp. date:	
Credit Card number:				CCV/Security code:	
Name on credit card:			Signature:		

Program number: CH 2014 396 1183

Return to one option below:

- A) USF HPCC, fax 813-224-7864; Phone 813-224-7860 or 800-852-5362
B) USF HPCC mail: USF HPCC / Attn: CH20143961183 / PO Box 628263 / Orlando, FL 32862-8263
C) Email to Bobbi Rose at brose@health.usf.edu
D) Online registration (link to be determined)

Countries – eligible for reduced registration fees

Argentina	Haiti	Philippines
Armenia	Herzegovina	Poland
Belize	Honduras	Romania
Bolivia	India	Russian Federation
Bosnia	Indonesia	Serbia
Brazil	Jamaica	South Africa
Bulgaria	Jordan	Thailand
Chile	Kazakhstan	Turkey
China	Kenya	Ukraine
Columbia	Korea	Uruguay
Costa Rica	Latvia	Venezuela
Croatia	Lebanon	
Czech Republic	Lithuania	Taiwan
Ecuador	Malaysia	
Egypt	Mexico	
El Salvador	Nicaragua	
Guatemala	Panama	
	Paraguay	
	Peru	

If you are from a developing country not on this list, contact Bobbi Rose at brose@health.usf.edu