

2007 Society for Pediatric Research



Research Conference • The Woodlands, TX • October 17-19, 2007

Interplays Between Early Nutrition, GI Microbial Ecology, the Immune System and Subsequent Health?

The SPR Research Conference (SPR-RC) is designed to encourage inter-disciplinary exchange among pediatric investigators. The objective of this initiative is to facilitate the development of focus groups within the pediatric research community that transcend institutional or geographic boundaries, thereby being consistent with the NIH Roadmap. The SPR-RC is intended to be a small, theme-based research meeting in which new scientific advances, investigator interactions, and network development are the “work product”.

Deadlines

General Conference Attendee Applications:
September 6, 2007

Young Investigator Travel Award Applications:
July 16, 2007

About this Conference

There are critical developmental periods (fetal, preterm neonatal, normal neonatal, infancy, childhood, adolescence) during which perturbations in diet (too little, too much) of selected or global nutrients can produce life long effects as well as short term changes in growth, development and resistance to disease. The gastrointestinal microbial environment interacting with luminal nutrients and the innate and adaptive immune systems is increasingly being recognized as playing a major role in subsequent health that can span generations through mechanisms such as epigenetics, which remain poorly understood. Autoimmune diseases, allergies, behavioral problems, neurodevelopment, obesity, type 2 diabetes and cardiovascular disorders have all been related to perturbations in early nutrition and/or perturbations in the intestinal microbial environment. This research conference will link emerging basic science to the bedside in a manner that will be highly relevant to both the pediatric research community and clinicians and stimulate new avenues of research that will translate to prevention and treatment of some of the disorders linked to aberrations in early nutrition, the intestinal microbial environment and the immune systems.

Supported by
educational grants from:

- International Pediatric Research Foundation
- Juvenile Diabetes Foundation
- March of Dimes Birth Defects Foundation
- Mead Johnson Nutritionals
- Pediatric Research Foundation
- Society for Pediatric Research

Conference Information and Application



Society for Pediatric Research Research Conference

The Conference Theme

The research theme spans all areas of pediatrics including surgery, critical care and basic sciences including microbiology, genetics, biochemistry and immunology. The sub-themes that will be addressed in the 5 sessions are of scientific relevance, have major public health implications and all have high potential for translation to clinical care.

Wednesday, October 17

1:00pm-4:30pm

Early Nutritional Interventions, Interaction of the Intestinal Microenvironment With Innate and Adaptive Immunity That Relate to Later Pediatric Illnesses.

Chair: W. Allan Walker, Massachusetts General Hospital, Charlestown, MA

The emphasis is how the microbial environment of the intestinal tract interacts with nutrients during vulnerable developmental periods and how this environment relates to diseases that extend beyond the gastrointestinal tract and childhood.

1:00 Overview of Microecology of the Gastrointestinal Tract

Justin L. Sonnenburg, Washington University School of Medicine, St. Louis, MO

1:30 Innate and Adaptive Immunity of the Developing Gastrointestinal Tract

W. Allan Walker, Massachusetts General Hospital, Charlestown, MA

2:00 Epithelial Microbial Interactions; Intercellular Mechanisms

Andrew S. Neish, Emory University School of Medicine, Charlestown, MA

2:30 Coffee Break

3:00 Intestinal Microbial-Mucosa Interactions and Intestinal Disease

Philip Sherman, Hospital for Sick Children, Toronto, Ontario Canada

3:30 Relation of Intestinal Microflora to Allergies and Atopy

Erica Isolauri, University of Turku and Turku University Central Hospital, Turku, Finland

4:00 Panel Discussion

5:30pm-6:30pm

Poster Session & Welcome Reception

7:00pm-8:30pm

Dinner

Thursday, October 18

8:00am-11:15am

Mechanisms of How Early Postnatal Nutrition Relate to Major Subsequent Diseases and Public Health Problems Such as Obesity, Type 2 Diabetes and Cardiovascular Health: Studies in Animals and Humans

Chair: William Hay, Jr., University of Colorado Health Science Center, Denver, CO

The emphasis is on the mechanisms of how early nutritional (primarily postnatal) perturbations will affect subsequent health that can span for more than just the lifetime of the individual, but for generations to come.

8:00 Overview of the Problem, Questions We are asking and that should be asked

William Hay, Jr., University of Colorado Health Sciences Center, Denver, CO

8:30 Nutritional Manipulation Throughout Life in Animal Models

Suzanne Ozanne, University of Cambridge, Addenbrooke's Hospital, Cambridge, United Kingdom

9:00 Postnatal Carbohydrate Manipulation in Infant Rats

Mulchand Patel, School of Medicine and Biomedical Sciences, SUNY, Buffalo, NY

9:30 Coffee Break

9:45 Molecular Mechanisms/ Biotechniques Used to Evaluate Epigenetic Mechanisms

Robert Lane, University of Utah School of Medicine, Salt Lake City, UT

10:15 Fetal/Postnatal Over - and Undernutrition - Mechanisms behind the Phenotype.

Sherin Devaskar, UCLA School of Medicine, Los Angeles, CA

10:45 Panel Discussion

1:00pm-4:15pm

Postnatal Nutrition and Childhood Diseases and Behavioral Disorders

Chair: Desmond Schatz, University of Florida, Gainesville, FL

There will be in depth discussions of mechanisms of how early nutrition relates to various childhood conditions such as type 1 diabetes, allergies, atopy, inflammatory bowel disease and autism. The relationship of the hygiene hypothesis to these conditions has been of tremendous interest to the pediatric research community.

1:00 Type 1 Diabetes, Diet and the Intestine

Outi Vaarala, University of Linkoping, Linkoping, Sweden

1:30 Dietary Interventions and Type 1 Diabetes

Desmond Schatz, University of Florida, Gainesville, FL & Mark A. Atkinson, University of Florida, Gainesville, FL

2:00 Coffee Break

2:15 Early Diet, Hygiene, Autoimmune Disease And Allergy

Jean Francois Bach, Hospital Necker, Paris, France

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Thursday, October 18 continued

- 2:45 Maternal - Infant Interactions, Intestinal Barrier, and Intestinal Sensitization**
Mary H. Perdue, McMaster University, Hamilton, Ontario Canada
- 3:15 Panel Discussion**

5:00pm-6:30pm

Dinner

7:00pm-9:30pm

Special Considerations For Nutrition Of The Critically Ill Neonate & Older Child. Now That We Know How To Save Them With Critical Care, How Do We Salvage Their Full Potential? How Do We Prevent Nutrition (Or Lack Of Nutrition) Related Morbidities...?

Chair: Patti Thureen, University of Colorado Health Sciences Center, Denver, CO

The short and long term implications of providing appropriate quantity and quality of nutrients and the route used (enteral vs. parenteral) to provide nutrients to infants during critical illness will be addressed. Emphasis will be on the mechanisms by which nutrient deprivation during vulnerable periods in critically ill children can affect not only short-term growth, but long term metabolic, endocrine, and developmental functions.

- 7:00 GI Tract Developmental Issues: How Much Can We Expect To Use It During Critical Illness**
Josef Neu, University of Florida, Gainesville, FL
- 7:30 Issues with Intravenous Nutrition**
Patti Thureen, University of Colorado Health Sciences Center, Denver, CO
- 8:00 Issues with Nutrition of the Surgical Patient**
Henri Ford, University of Southern California Keck School of Medicine, Los Angeles, CA
- 8:30 Nutrients, Hormones and the Gastrointestinal Tract**
Doug G. Burrin, Baylor College of Medicine, Houston, TX
- 9:00 Panel Discussion**

Friday, October 19

8:00am-12:00pm

Postnatal Nutrition, Neurodevelopment and Neuroendocrine Programming

Chair: Michael Georgieff, University of Minnesota School of Medicine, Minneapolis, MN

The emphasis will be on mechanisms of how nutrient composition during highly vulnerable periods during infancy and childhood can affect neurodevelopment. Much emphasis has recently been placed on the lipid composition of early nutrition, and this will be addressed here on a mechanistic level. In addition, the mechanisms of the effects of several other nutrients on neurodevelopment and neuroregulatory mechanisms will be discussed.

- 8:00 Overviews of Early Nutrient Composition and Neurodevelopment**
Steven Zeisel, School of Public Health and School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC
- 8:30 Essential Fatty Acids**
Sheila Innis, University of British Columbia, Vancouver, British Columbia
- 9:30 Coffee Break**
- 9:45 Nutrient Interactions With Developing Brain Regions And Processes**
Michael Georgieff, University of Minnesota School of Medicine, Minneapolis, MN
- 10:15 Nutrients and Neurodevelopment: International Perspectives**
Ricardo Uauy, University of Chile, Santiago, Chile
- 10:45 Early Origins of Obesity: Programming the Appetite Regulatory System**
Caroline McMillen, School of Molecular and Biomedical Sciences, University of Adelaide, Adelaide, Australia
- 11:15 Panel Discussion**
- 11:45 Wrap-up: Where Do We Go From Here?**



For information contact:
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The Woodlands, TX 77381



General Instructions

60 total participant applications will be accepted. 20 slots will be provided via Young Investigator Travel Awards and 40 slots will be filled by other scientists who fulfill the criteria as outlined in the application. 20 additional slots are filled by of speakers and sessions chairs

The Organizing/Steering Committee will select the participants based on the responses outlined in the attached application. The selection will be afforded to those individuals who are most able to provide expertise related to the themes of the conference. The Organizing/Steering Committee will also attempt to select a diverse group of investigators from both the US and abroad.

Young Investigator Travel Awards

The Young Investigator Travel Award requires a separate application process and each award includes economy air transportation, registration, hotel room-2 nights, and meals). 20 travel awards will be selected (10 domestic and 10 international). Applicants must complete a separate application. The deadline for applications for the Young Investigator Travel Awards is July 16, 2007.

Conference Fees (Payment of fees is due upon acceptance of application)

Fee Includes:

On-Site accommodations (Includes registration, single hotel room-2 nights, and meals at The Woodlands Executive Conference Center).

Single Occupancy: (1 paid registrant per room)	\$775.00
Double Occupancy with Roommate: (2 registered conference attendees sharing one room)	\$600.00 per registrant
Double Occupancy with Guest: (2 people sharing one room. The other person sharing the room is an <i>accompanying</i> person of the conference participant. The guest is not entitled to attend the scientific sessions, group meals only).	\$1100.00
Continuing Medical Education Credits (Fee must be paid at the time the CME form is submitted at the conference.	\$50.00

Each conferee agrees to abide by the following regulations if accepted

<ul style="list-style-type: none"> • Lectures and discussions may not be recorded. • Slide material may not be photographed. • Conference papers and discussions may not be used without expressed, written consent from the contributor. • SPR Research Conferences may not be cited as references in publications. • Guests are not permitted to attend lectures and discussions. 	<p>In order to maintain the intimate scientific interaction among the participants attending the conference, children under the age of 12 are not permitted.</p> <p>If this becomes a barrier to your participation, you are to contact the Conference Organizer.</p>
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General Conference Application

Personal Information

Please print or type clearly

Name: _____

Degree/Title: Ph.D. M.D. M.D./Ph.D. DVM PharmD Mr. Ms. Mrs. Miss

Home Address: _____

City: _____ State: _____ Zip: _____

Institution: _____ Department: _____

Address: _____ City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

Race/Ethnicity (required for statistical purposes only):

Alaskan Native Pacific Islander (Polynesia/Micronesia) Black/African American Hispanic
 Chicano Latino Native American (Tribal Affiliation) _____ Other (specify) _____

Are you a member of the Society for Pediatric Research? Yes No

Citizenship: U.S. Citizen Permanent Resident of U.S.A. Other _____

What do you hope to gain by attending this meeting? (use additional pages if necessary) _____

Would you like to present a poster? Yes No If "YES", complete the attached abstract form. Return them both to the Society for Pediatric Research Research Conference Office with your application.

Your packet **must** include

- Your application
- An abstract (see form-300 words maximum; if a poster presentation is checked above)
- A brief CV

Deadline for General Conference Applications is Monday, September 6, 2007
(Electronic applications will be accepted. Send to debbiea@aps-spr.org)

Payment in Full Due Upon Acceptance of Application.



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Young Investigator Information & Instructions

Submission Deadline: **July 16, 2007**

A total of 20 awards will be provided to young investigator trainees (10 international & 10 U.S. based). Each award includes the following: 2 nights lodging, meals, registration fees, ground transfer to the conference center.

Each award provides On-Site accommodations (Includes economy air transportation, registration, hotel room-2 nights, and meals).

Applications will be judged by the Co-organizers of the conference.

Young Investigator Awardees will be required to present a poster on Wednesday evening, October 17.

To be considered for the scholarship, you will need:

- An abstract (see form-300 words maximum)
- A nomination from SPR member, Department Chair or equivalent. The letter should include information about how the applicant might contribute and be able to benefit from the conference and should include a statement about specific interests of the candidate and why the candidate might benefit from participating in this conference.
- A brief CV

A complete packet includes an application, abstract, nomination letter and abstract and must be submitted at the same time.



Young Investigator Application

Please print or type clearly

Name: _____

Degree/Title: Ph.D. M.D. M.D./Ph.D. DVM PharmD Mr. Ms. Mrs. Miss

Home Address: _____

City: _____ State: _____ Zip: _____

Institution: _____ Department: _____

Address: _____ City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

Race/Ethnicity (required for statistical purposes only):

Alaskan Native Pacific Islander (Polynesia/Micronesia) Black/African American Hispanic
 Chicano Latino Native American (Tribal Affiliation) _____ Other (specify) _____

Eligibility Category: Postdoctoral Fellow Graduate Student Other _____

Citizenship: U.S. Citizen Permanent Resident of U.S.A. Other _____

What do you hope to gain by attending this meeting? (use additional pages if necessary) _____

Name of Nominator: _____

(Please Submit Letter)

Your packet **must** include

- Your application
- An abstract (see form-300 words maximum)
- A nomination from SPR member, Department Chair or equivalent. The letter should include information about how the applicant might contribute and be able to benefit from the conference and should include a statement about specific interests of the candidate and why the candidate might benefit from participating in this conference.
- A brief CV

Deadline for Applications is Monday, July 16, 2007
(Electronic applications will be accepted. Send to debbiea@aps-spr.org)



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Young Investigator Abstract Form

(and others interested in presenting a poster)

Mailing address of present authoring (please provide full name rather than initials)

Abstract Title:

Author(s):

Affiliation(s):