

Program

International meeting on genetic syndromes of the Ras/MAPK pathway "Finding our way back to the bedside"

Date:
July 29-31, 2011

Location:
Westin O'Hare
Chicago, Illinois

Friday July 29th
8:00 - 10:00 pm

Dessert and Poster Session
(symposium attendees and advocacy/family groups)

Goals: To encourage collaboration, participants, including the families from the advocacy groups, are invited to the poster session. This forum is a unique opportunity for researchers and clinicians to interact with families affected by Ras/MAPK pathway syndromes in a non-clinical setting. In addition, it makes families aware of research, in which they may become involved. We are expecting about 300 people to attend the gathering.

Saturday July 30th

7:00 - 8:15 am

Breakfast

8:15 - 8:30 am

Welcoming Comments and Introduction – Bruce Gelb,
Amy Roberts and Lisa Schoyer

8:30 - 9:00 am

Keynote Presentation: Leslie Gordon, MD, PhD
Lessons Learned on the Path to Developing Treatment for Progeria

9:00 - 9:30 am

Advocates' Panel

The keynote address will be a presentation by Leslie Gordon, MD, PhD, a pediatrician who leads the Progeria Research Foundation, which has spearheaded research leading to clinical trials. The advocates' panel will feature all four groups and highlight living with a person affected with a Ras/MAPK pathway syndrome in a questions-and-answers format to promote communication between the families and the professionals.

9:30 - 10:50 am

Gene Discoveries- Recent and Future

Moderator: Ineke van der Burgt, MD

Goals: To present the most recent information about novel genes discovered to cause Ras/MAPK pathway disorders, including available information about the biochemical effects of the proteins and signal transduction, as well as a discussion about the use of next generation sequencing to drive current gene discovery efforts

9:30 - 9:50 am

CBL

Hélène Cavé, PhD

9:50 - 10:10 am

NRAS

Martin Zenker, MD

10:10 - 10:30 am

SHOC2

Marco Tartaglia, PhD

10:30 - 10:50 am

Exome and Genome Sequencing

Joep de Ligt, PhD

10:50 - 11:10 am

Break

11:10 - 12:30 pm

Advances in Clinical Care

Moderators: Karen Gripp, MD and Kate Rauen, MD, PhD

Goals: To present recent advances in clinical care, including those driven by molecular discoveries of the Ras/MAPK disorders. Efforts to develop evidence-based approaches and organized networks to support future clinical research will be emphasized. The final presentation describes ongoing studies about the effects of various Ras/MAPK mutations on neurocognitive development, a likely target for future therapeutic intervention

11:10 - 11:30 am

Genotype-Phenotype

Amy Roberts, MD

11:30 - 11:50 am

Epidemiological Features of Costello and CFC Syndromes

Yoko Aoki, MD, PhD

11:50 - 12:10 pm

Clinical Pathways: The Dysceme Experience

Bronwyn Kerr, MD

12:10 - 12:30 pm

Neurodevelopmental Profiles for RASopathies

Rene Pierpont, PhD

12:30 - 1:15 pm

Lunch Break

1:15 - 2:00 pm

Young Investigator Competition

Moderators: Amy Roberts, MD and Bruce D. Gelb, MD

Judges: Judith Allanson, MD, HeleneCave, PhD, and Leslie Gordon, MD, PhD.

Goals: To provide a forum for trainees to present their outstanding

research in order to encourage htier participation in this meeting as well as to present the most recent research information for our attendees.

2:00 - 3:20 pm

Ras Pathway Biology

Moderator: Marco Tartaglia, PhD

Goals: To present fundamental information about the biology of Ras/MAPK signal transduction as it relates to specific aspects of human biology that are perturbed in patients with disorders of this pathway. Emphasis will be on four aspects: circadian rhythm/sleep, cardiogenesis and cardiac muscle biology, hematopoeisis/cancer, and growth hormone signaling – that may represent targets for future targeted therapeutic interventions.

2:00 - 2:20 pm

Circadian Rhythm and Sleep

Amita Sehgal, PhD

2:20 - 2:40 pm

Skeletal Muscle Pathology in Costello and CFC syndromes

Katherine Rauen, MD, PhD

2:40 - 3:00 pm

Hematopoiesis and Cancer

Rebecca Chan, MD, PhD

3:00 - 3:20 pm

Growth Hormone Signaling

Jessica Schwartz, PhD

3:20 - 3:40 pm

Break

3:40 - 5:00 pm

Cell and Animal Models of Disease

Moderator: Benjamin G. Neel, MD, PhD and Marco Tartaglia, PhD

Goals: To discuss the elucidation the pathogenesis of critical aspects of the Ras/MAPK disorders from modeling in mice engineered to have relevant disease-causing point mutations as well as in induced pluripotent stem cells derived from patients with NS and LS. These presentations will include information about how these model systems might be used to obtain pre-clinical data needed to support clinical trials. The final speaker will discuss the use of fruit fly models of disease, including NS, for high throughput drug screening.

3:40 - 4:00 pm

Cardiac Defects in Ras Pathway Mouse Models

Benjamin G. Neel, MD, PhD

4:00 - 4:20 pm

LEOPARD Mouse Model: Phenotype and Rapamycin Therapy

Maria Kontaridis, PhD

4:20 - 4:40 pm

Neurodevelopment in Noonan Syndrome Mice

Alcino J. Silva, PhD

4:40 - 5:00 pm

Induced Pluripotent Stem Cells

Bruce D. Gelb, MD

5:00 - 5:20 pm

Drug Screening with Drosophila

Ross Cagan, PhD

6:30 - 8:00 pm

Banquet Dinner for symposium registrants

Sunday July 31st

7:00 - 8:00 am

Breakfast

8:00 - 9:20 am

Clinical Trials

Moderator: Leslie Gordon, MD, PhD and Martin Zenker, MD

Goals: Drugs that might be efficacious for the Ras/MAPK pathway disorders are at various stages- FDA- approved drugs such as statins are in clinical trials for NF1; novel drugs are being developed and tested for cancer; melatonin has been trialed successfully for sleep disturbances in children. Speakers will provide information about drug developmental pipelines and clinical trials. The final speaker will discuss a recent NS clinical trial directed at augmenting height, providing important lessons for all Ras/MAPK pathway disorders.

8:00 - 8:20 am

Statin Therapy for Neurofibromatosis
Type I

Maria T. Acosta, MD

8:20 - 8:40 am

Ras Pathway Inhibitors for NF1 and
Cancer

D. Wade Clapp, MD

8:40 - 9:00 am

Sleep Disturbance and Its Treatment in Children
with Rasopathies

Giacomo Della
Marca, Md, PhD

9:00 - 9:20 am

NSEuroNet and the Gendia Mutation Database

Martin Zenker, MD

9:20 - 9:50 am

Advocates Panel Discussion

9:50 - 10:00 am

Charging the Working Groups

10:00 - 10:15 am

Break

10:15 - 11:30 am

Working Group Meetings

A) Preclinical Consortium

(Leaders: Benjamin Neel, MD and Alcino Silva, PhD) Organize development and characterization of cell and animal models including pre-clinical drug testing

B) RASopathies Resource Network

(Leaders: Bruce D. Gelb, MD, Martin Zenker, MD and Lisa Schoyer) Facilitate collaborative gene discovery, genotype-phenotype assessments, mutation informatics

C) Clinical Network

(Leaders: Judith Allanson, MD and Kate Rauen, MD, PhD) Organize diagnostic criteria, best clinical practices, centers of excellence and natural history studies

D) Clinical Trials Consortium

(Leaders: Kenneth Attie, MD and Amy Roberts, MD) Determine the endpoints, candidate therapies, and mechanism of support for future clinical trials.

11:30– 12:30 pm

Reports from the Working Groups and Final Discussion