

**SYMPOSIUM ATP1A3 IN DISEASE**  
**FROM GENE MUTATIONS TO NEW TREATMENTS**

**Brussels, Belgium, 10 - 11 December 2012**

## Organizers

European Network for Research on Alternating Hemiplegia & Duke University

## Program Committee

Chairs: David Goldstein, Duke University, United States  
Tsveta Schyngs, ENRAH, Belgium

Alexis	Arzimanoglou	University Hospitals of Lyon, France
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Brian	Neville	University College London, United Kingdom
Poul	Nissen	Aarhus University, Denmark
Laurie	Ozelius	Mount Sinai School of Medicine, NY, United States
Bente	Vilsen	Aarhus University, Denmark
Arn	v/d Maagdenberg	Leiden University Medical Centre, the Netherlands

## Registration

To participate in the Symposium, please, complete the [Participant registration Form](#).

Deadline for registration is 1<sup>st</sup> December 2012.

## Venue

Basil & Co Brussels Louise Seminar, Avenue Louise 156, 1050, Brussels ,  
Belgium

[Venue Map](#).

## PROGRAM

### Monday, December 10th, 2012

#### Opening Session

*Chairs: Tsveta Schyns and David Goldstein*

#### 10:00 Registration Opens

10:30-10:45	Welcome	<i>Tsveta Schyns</i>
10:45-10:55	Family Foundations involvement for AHC international research	<i>Dominique Poncelin</i>
11:55-11:05	The parents perspective	<i>Sigurður Hólmur Jóhannesson</i>
11:05 -11:35	Genetics of rare disease, application of NGS in clinical care	<i>David Goldstein</i>

#### Introduction to Alternating Hemiplegia of Childhood

*Chair: Brian Neville*

11:35-11:55	Overview of AHC	<i>Mohamad Mikati</i>
15:55-12:10	Is AHC a progressive disease?	<i>Brian Neville</i>
12:10-12:20	Discussion	

12:20-13:00 Lunch

#### AHC Genetics

*Chair: Giovanni Neri*

13:00-13:15	ATP1A3 and AHC: The Nature Genetics research group	<i>Erin Heinzen</i>
13:15-13:30	Identifying the gene associated with AHC: the Lancet Neurology research group	<i>Hendrik Rosewich</i>
13:30-13:45	ATP1A3 mutations in sporadic cases from the I.B.AHC Biobank and Clinical Registry	<i>Fiorella Gurrieri</i>
13:45-14:00	ATP1A3 mutations in sporadic and familial AHC cases from the Utah registry	<i>Sandra P. Reyna</i>
14:00-14:15	Identification of ATP1A3 mutations by exome sequencing as the cause of AHC in Japanese patients	<i>Atsushi Ishii</i>
14:15-14:30	Phenotypic analysis of AHC patients with ATP1A3 mutations: Preliminary results.	<i>Eleni Panagiotakaki</i>
14:30-14:45	Identifying fields for future clinical research in AHC	<i>Alexis Arzimanoglou</i>

### Roundtable Discussion Clinical genetic correlations and search for new genes for AHC

*Moderators : Arn V.D. Maagdenberg and Alexis Arzimanoglou*

14:45-15:45

- Key challenges
- Directions moving forward
- Collaborative groupings
- Active support and collaboration to researchers in the field of AHC and related diseases - *Filippo Franchini*

15:45- 16:00

Break/Refreshments

### Rapid-Onset Dystonia-Parkinsonism

*Chair: Mohamad Mikati*

16:00-16:20	AHC versus Rapid-Onset Dystonia-Parkinsonism: allelic disorders and a phenotypic spectrum	<i>Knut Brockmann</i>
16:20-16:40	Expanded RDP phenotype: motor and non-motor features	<i>Allison Brashear</i>
16:40-17:00	Dystonia phenotype, circuitry, and, physiology	<i>Mark Edwards</i>
17:00-17:20	Cerebellar dysfunction in RDP	<i>Kamran Khodakhah</i>
17:20-17:40	Imaging in Dystonia in general	<i>Kristina Simonyan</i>
17:40-18:00	The genetics of Dystonia	<i>Laurie J. Ozelius</i>
18:00-19:00	Discussion and Refreshments	

19:00-22:00

**Dinner**

**Dinner talk**  
From genetics to therapy:  
The story of neonatal diabetes

*Frances Ashcroft*

## Tuesday December 11th, 2012

### Functional Studies of the Na/K ATPase – Structure/Function

*Chair: David Goldstein*

9:00-9:20	Genes and transgenic models in migraine: Lessons for AHC?	<i>Arn V.D. Maagdenberg</i>
9:20-9:40	Structure, function, and biological roles of Na, K-ATPase isoforms in excitable tissues	<i>Kathy Sweadner</i>
9:40-10:00	Insights to disease mechanisms from structural studies of Na <sup>+</sup> , K <sup>+</sup> -ATPase and related ion pumps	<i>Poul Nissen</i>
10:00-10:20	Functional consequences of alpha-3 Na, K-ATPase mutations at the molecular and cellular levels	<i>Bente Vilsen</i>
10:20-10:40	Cell biological and mutational studies of Na, K-ATPase, insect cell expression system	<i>Jan Koenderink</i>
11:40-11:00	Functional and proteomic studies in platelets from AHC patients reveals a lysosomal granule defect	<i>Michela Di Michele</i>
11:00-11:20	Coffee and refreshments	

### Functional Studies of the Na/K ATPase .Electro Physiology & in vivo work

*Chair: Sophie Nicole*

11:20-11:40	Electrophysiological studies in oocytes of disease mutations in atp1a2 and 3.	<i>Thomas Friedrich</i>
11:40-12:00	Electrophysiological studies in oocytes of Na, K-ATPase mechanisms	<i>Hanne Poulsen</i>
12:00-12:20	Electrophysiology of Na, K-ATPase	<i>David Gadsby</i>

12:20-13:30	Lunch break
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13:30-13:50	A Mouse Model for ATP1A3-related Alternating Hemiplegia of Childhood	<i>Steven Clapcote</i>
13:50-14:10	Increased Susceptibility to Cortical Spreading Depression in the Mouse Model of Familial Hemiplegic Migraine Type 2	<i>Giorgio Casari</i>
14:10-14:30	Zebrafish and mouse models of atp1a2 and atp1a3	<i>Karin Lykke-Hartmann</i>
14:30-14:50	Mania-like behaviour induced by genetic dysfunction of the neuron-specific Na <sup>+</sup> ,K <sup>+</sup> -ATPase $\alpha 3$ sodium pump	<i>Greer S. Kirshenbaum</i>

### Roundtable Discussion Functional Biology of ATP1A3 and ATP1A3 Mutations

*Moderators : Poul Nissen and Bente Vilsen*

14:50-15:30	<ul style="list-style-type: none"> <li>• Key challenges</li> <li>• Directions moving forward</li> <li>• Collaborative groupings</li> </ul>
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### Roundtable Discussion Collaborations and Funding

*Moderators: Tsveta Schyngs and David Goldstein*

15:30-16:20	<ul style="list-style-type: none"> <li>• Key challenges</li> <li>• Directions moving forward</li> <li>• Collaborative groupings</li> <li>• Outcomes of the Symposium</li> </ul>
16:20-16:30	Closing message from the AHC Community - <i>Jeff Wuchich</i>
16:30	End of the meeting

## Speakers and Chairs

### **Alexis Arzimanoglou**

Associated Professor of Neurology and  
Child Neurology, University Children's  
Hospital of Lyon, France

### **Frances Ashcroft**

The Royal Society GlaxoSmithKline  
Research Professor  
University Laboratory of Physiology  
Oxford and Fellow of Trinity College,  
Oxford University, United Kingdom

### **Allison Brashear**

Professor and Chair of Neurology  
Wake Forest University School of  
Medicine, United States

### **Knut Brockmann**

Professor of Paediatrics and Child  
Neurology, Georg August University  
Göttingen, Germany

### **Giorgio Casari**

Neurogenomics Unit  
Center for Genomics & Bioinformatics  
San Raffaele University School of  
Medicine, Italy

### **Steven Clapcote**

Lecturer in Pharmacology,  
University of Leeds  
United Kingdom

### **Mark Edwards**

Senior Lecturer, University College  
London, Institute of Neurology, London  
United Kingdom

### **Filippo Franchini**

I.B.AHC Project Manager  
Board of Advisors of A.I.S.EA  
Italy

### **Thomas Friedrich**

Professor, Institute of Chemistry  
Technical University of Berlin  
Germany

### **David Gadsby**

Professor Laboratory of Cardiac and  
Membrane Physiology  
Rockefeller University, United States

### **David B. Goldstein**

Professor & Director Center for Human  
Genome Variation  
Duke University  
United States

### **Fiorella Gurrieri**

Institute of Medical Genetics  
Università Cattolica del Sacro Cuore  
Rome, Italy

### **Erin Heinzen**

Assistant Research Professor Center for  
Human Genome Variation  
Duke University  
United States

### **Atsushi Ishii**

Department of Pediatrics  
School of Medicine, Fukuoka University  
Japan

### **Sigurður Hólmur Jóhannesson**

President of AHC Iceland  
Board member of ENRAH  
Iceland

### **Kamran Khodakhah**

Professor Dominick P. Purpura  
Department of Neuroscience  
Albert Einstein College of Medicine  
United States

***Greer S. Kirshenbaum***

Postdoctoral Research Scientist  
University of Columbia  
Canada

***Jan Koenderink***

Associate Professor  
Nijmegen Centre for Molecular Life  
Sciences  
The Netherlands

***Michela Di Michele***

PostDoc  
Katolieke Universiteit Leuven  
Belgium

***Karin Lykke-Hartmann***

Associate Professor  
Department of Biomedicine  
Aarhus University, Denmark

***Mohamad Mikati***

Professor of Paediatrics & Neurobiology  
Duke University  
United States

***Giovanni Neri***

Professor of Medical Genetics & Director  
of the Institute of Medical Genetics  
Università Cattolica del S Cuore  
Rome, Italy

***Brian Neville***

Emeritus Professor of Childhood Epilepsy  
UCL Institute of Child Health  
United Kingdom

***Sophie Nicole***

Institut du cerveau et de la moëlle épinière  
INSERM UMR 975, Université Paris 6  
Pierre et Marie Curie, France

***Poul Nissen***

Professor  
Department of Molecular Biology and  
Genetics, Aarhus University  
Denmark

***Laurie J. Ozelius***

Associate Professor Genetics and  
Genomic Sciences & Neurology  
Mount Sinai Hospital, United States

***Eleni Panagiotakaki***

Hôpital Femme Mere Enfant  
Hospices Civils de Lyon  
France

***Dominique Poncelin***

President of Association Française de  
l'Hémiplégie Alternante, AFHA France

***Hanne Poulsen***

Department of Molecular Biology and  
Genetics, Aarhus University, Denmark

***Sandra P. Reyna***

Assistant Professor  
Paediatric Motor Disorders Research  
Program, University of Utah School of  
Medicine, United States

***Hendrik Rosewich***

Department of Paediatrics and Adolescent  
Medicine, Georg August University  
Göttingen, Germany

***Tsveta Schyns-Liharska***

Consultant Research Management  
Founder and Board Member of ENRAH  
Brussels, Belgium

***Kristina Simonyan***

Assistant Professor Neurology &  
Otolaryngology  
Mount Sinai Hospital  
United States

***Kathy Sweadner***

Associate Professor Molecular  
Neurophysiology, Massachusetts General  
Hospital, United States

***Arn Van den Maagdenberg***

Professor of Genetics  
Leiden University Medical Centre  
The Netherlands

***Bente Vilsen***

Professor  
Department of Biomedicine  
Aarhus University, Denmark

***Jeff Wuchich***

President of the AHC Foundation,  
United States

## **PARTICIPANT REGISTRATION FORM**

**Symposium ATP1A3 in disease**  
**10 - 11 December 2012, Basil & Co Brussels Louise, Belgium**

**Please, use CAPITAL LETTERS or TYPE and return this form latest 1 December 2012 to:**  
ENRAH Brussels Office,  
Email : [ts@enrah.net](mailto:ts@enrah.net) Tel. +32 2 325 86 94

### **Registration Details**

☐ Mr. ☐ Ms. ☐ Dr. ☐ Prof.

Family Name: ----- First Name: -----

Position: ----- Department: -----

Organisation/Company: -----

Address: -----

Zip code: ----- Town: ----- Country: -----

Phone: ----- Email: -----

☐ Specific diet requirements (vegetarian, allergies ...): -----

### **Registration Fee**

*The registration fee covers the Symposium brochure, coffee breaks and lunches, and dinner on Monday 10 December*

- |   |          |
|---|----------|
| <input type="checkbox"/> Standard                   | € 500.00 |
| <input type="checkbox"/> Reduced Registration Fee * | € 300.00 |

\* For Health professionals and non-profit organisations registered before 10 November 2012

### **Method of Payment:**

Bank transfer to:

ENRAH, Bank: Easybank AG, Quellenstraße 51-55, A-1100 Vienna, Austria

IBAN: AT511420020010398003 BIC: EASYATW1.

**Billing Information** (if different from above):  
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### **Cancellation Policy**

*All cancellations must be in writing. Cancellations received before 1 December 2012 are subject to a charge of 25% of the registration fees for reservation costs. After 1 December 2012 full payment will be requested and refunds will not be provided. Transfer of the registration to other persons is at no extra cost.*

### **Privacy**

*By filling out the registration form, the participant gives consent that ENRAH can process the data provided within the framework of the Symposium This includes, all handling needed for the applicant's participation at the event and for the drafting of a list of participants which will be distributed at the Symposium.*

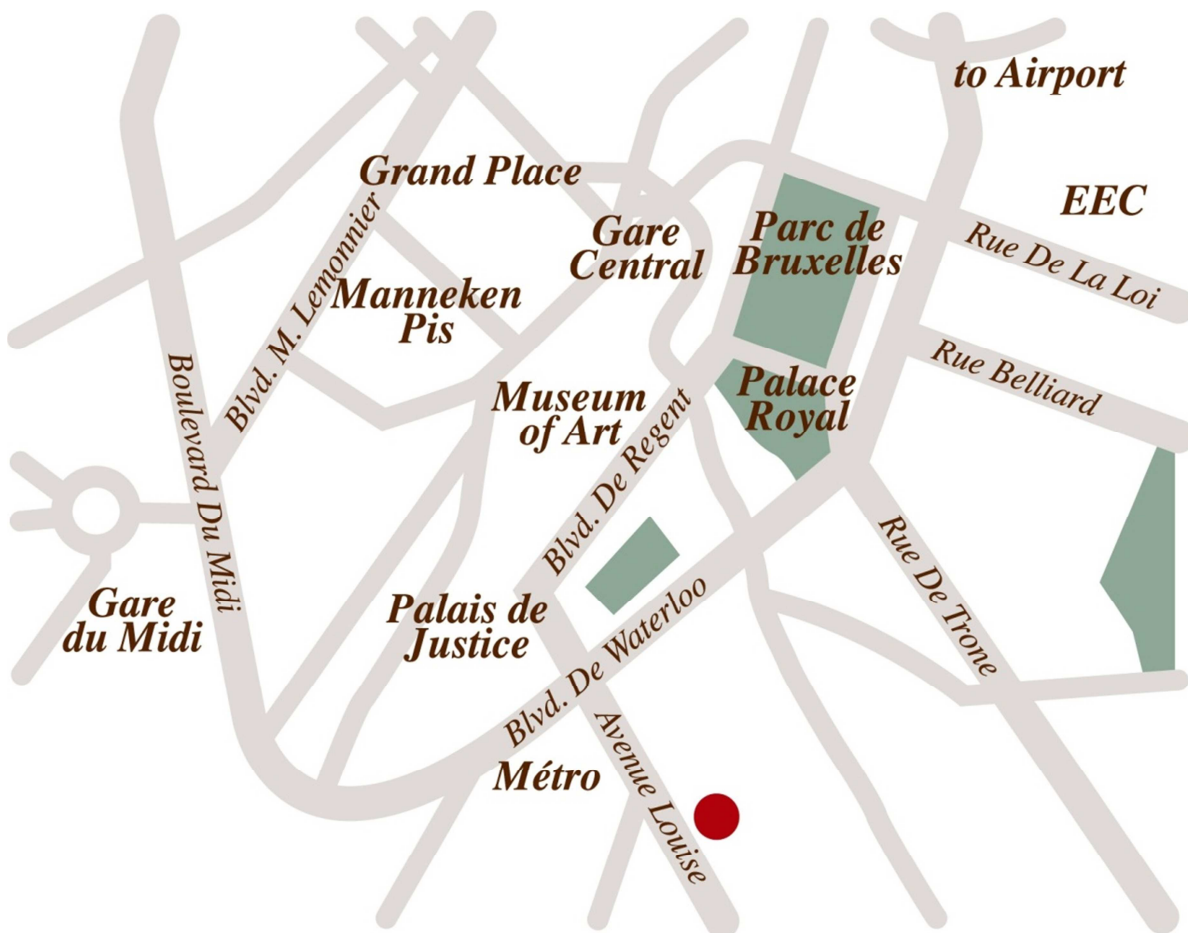
### **Important**

*Written confirmation will be sent after the payment has been received. If you have not received your confirmation within five working days, please contact the ENRAH office.*

## VENUE MAP

Basil & Co Brussels Louise, Avenue Louise 156, 1050 Brussels

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	<p><b>AHC Vereniging Nederland</b> <b>Dutch Association for Alternating Hemiplegia</b> <a href="http://www.ahckids.nl">www.ahckids.nl</a></p>
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