Brain, Blood and Iron:
Joint International Symposium on Neuroacanthocytosis and Neurodegeneration with Brain Iron Accumulation

October 1-2, 2010
Doubletree Hotel, Bethesda, MD

Organizers: Ruth Walker, MB, ChB, PhD & Susan Hayflick, MD

Sponsored by
National Institute of Neurological Disorders and Stroke
Office of Rare Diseases Research
National Institute of Child Health & Human Development

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The Movement Disorder Society
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NBIA Disorders Association

Program

Thursday, September 30th
7.00 Buffet dinner and welcome session

Friday, October 1st
9.00 Welcome and General Introduction Adrian Danek, MD, Neurologische Klinik, Ludwig Maximilans University, Munich, Germany

1: Observations from the clinic
9.10 The neuroacanthocytosis syndromes Ruth Walker, MB, ChB, PhD, Department of Neurology, James J. Peters VAMC, Bronx and Mount Sinai Medical School, New York, NY, USA
9.30 The neurodegeneration with brain iron accumulation syndromes Susan J. Hayflick, MD, Molecular and Medical Genetics, Oregon Health and Science University, Portland, OR, USA
9.50 Questions for and from basic science Rainer Prohaska, PhD, Max F. Perutz Laboratories, Medical University of Vienna, Vienna, Austria

10.10 Discussion
10.30 Break

2: The fate of red blood cells
10.50 Early erythropoiesis Mohandas Narla, DSc, Kimbal Research Institute, New York Blood Center, New York, NY, USA
11.10 Maturation of reticulocytes by autophagy Mondira Kundu, MD, PhD, St. Jude Children's Research Hospital, Memphis, TN, USA
11.30 Red cell aging Lucia de Franceschi, MD, PhD, Department of Clinical and Experimental Medicine, University of Verona, Verona, Italy
11.50 Determinants of red cell shape Lesley J. Bruce, PhD, Bristol Institute of Transfusion Services, Bristol, UK

12.10 Discussion
12.30 Lunch
3: Mitochondria, iron, and neurodegeneration
1.30 Mitochondria in cellular iron homeostasis Alex Sheftel, PhD, University of Marburg, Marburg, Germany
1.50 Mitochondrial defects in fumble fly and pantethine rescue Ody Sibon, PhD, Department of Radiation and Stress Cell Biology, University of Groningen, Groningen, The Netherlands
2.10 Mitochondrial ferritin in neurodegeneration Sonia Levi, PhD, Vita-Salute San Raffaele University, Milan, Italy
2.30 MIN and NBIA Tobias Haack, PhD, Ludwig Maximilians University, Munich, Germany
2.50 Discussion
3.15 Iron and neurodegeneration Tracey Rouault, MD, Section on Human Iron Metabolism Head, Molecular Medicine Program, NIH, Bethesda, MD, USA
4.15 Poster session
7:00 Dinner

Saturday, October 2nd
9.00 Cellular CoA defects, Grant A. Mitchell, MD, Service of Medical Genetics, Hôpital Sainte-Justine, Montreal, QC, Canada
9.45 Discussion
10.00 Break
4: Membrane trafficking and turnover (1) lipids and phospholipase
10.20 Mechanisms of membrane trafficking Kai Simons, MD, Max Planck Institute for Molecular Cell Biology and Genetics, Dresden, Germany
10.40 CoA metabolism and consequences of reduced CoA Suzanne Jackowski, PhD, Infectious Diseases, St. Jude Children's Research Hospital, Memphis, TN, USA
11.00 Role of PLA2s in neuronal mitochondrial lipid metabolism and membrane structure Paul T. Kotzbauer, MD, PhD, Molecular Biology and Pharmacology, George Washington School of Medicine, St. Louis, MO, USA
11.20 iPLA2 in synaptic vesicle trafficking Kevin L. Seburn, PhD, The Jackson Laboratory, Bar Harbor, ME, USA
11.40 Alteration of autophagy in the brain of the INAD animal model Alex Ma, PhD, Division of Experimental Diabetes and Aging, Mount Sinai School of Medicine, New York, NY, USA
12.00 Fatty acid metabolism in NBIA Michael Kruer, MD, Department of Pediatrics, Oregon Health and Science University, Portland, OR, USA
12.15 Discussion
12.30 Lunch
5: Membrane trafficking and turnover (2) VPS functions
1.20 Functions of the VPS family Antonio Velayos Baeza, PhD, Wellcome Centre for Human Genetics, University of Oxford, Oxford, UK
1.40 A direct requirement for Vps13p in TGN to late endosome trafficking in yeast Robert S. Fuller, PhD, Biological Chemistry, University of Michigan, Ann Arbor, USA
2.00 Zebrafish vacuolar protein sorting (Vps39) and endosome trafficking Ralf Dahm, PhD, Spanish National Cancer Research Centre, Madrid, Spain
2.20 Discussion
6: Autophagy in neurodegenerative disease
2.40 Autophagy and neurodegeneration Zhenyu Yue, PhD, Molecular & Cellular Neurobiology Laboratory, Department of Neurology and Neuroscience, Mount Sinai School of Medicine, New York, NY, USA
3.00 Multivesicular bodies in neurodegeneration Scott D. Emr, PhD, Weill Institute for Cell and Molecular Biology & Department of Molecular Biology and Genetics, Cornell University, Ithaca, NY
3.20 Formation and regulation of autophagosomes in health and disease Fulvio Reggiori, PhD, Cell Microscopy Center, Utrecht, The Netherlands
3.40 Discussion
4.00 Break

**4.15 Proteomics of neurodegeneration** Jing Zhang, MD, PhD, Department of Pathology, University of Washington School of Medicine, Seattle, WA, USA

7:00 Dinner

**5.00 Closing summary** Rainer Prohaska, PhD

**5.15 Discussion to develop a Research Strategic Plan for NBIA** Susan J. Hayflick, MD

**5.45 Discussion to develop a Research Strategic Plan for NA** Adrian Danek, MD

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The price of the two-day symposium including breakfast, lunch, breaks and dinner is $350. Accommodation at the Doubletree Hotel can also be arranged. Scholarships will be available for early career investigators on a competitive basis. NINDS, ORDR and NICHD researchers are welcome to stop by at any time during the symposium to hear topics of interest. Other interested participants may attend morning, afternoon or all day sessions on one or both days for a fee. Please contact glenn@naadvocacy.org