



Getting From Intracellular Organelles to Cell Adhesion: An Attack Plan For Acantholytic Disorder Research

Organizing Committee:

Robert Harmon, Ph.D. (Northwestern University)
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Alain Hovnanian, M.D., Ph.D. (University of Paris)

Schedule: 2-6:30PM, Tuesday May 14th

Session Focus:

In the two decades since geneticists identified mutant ATP2A2 (SERCA2) and ATP2C1 (hSPCA1) calcium pumps as the cause of DD and HHD, underlying molecular pathways leading to the well-recognized intercellular adhesion and barrier defects are still uncertain. This session will review our current understanding of the role of aberrant calcium dynamics, endoplasmic reticulum/Golgi stress, metabolic abnormalities, differentiation signaling defects and mis-regulation of contractile cytoskeletal elements in disease pathomechanisms, and integrate them with future research strategies and therapeutic paradigms. We also aim to strengthen the interaction between those studying cutaneous calcium regulation with those making progress on similar processes in the fields of neurology, cardiology, aging and metabolic diseases.

Learning Objectives:

Attendees and participants will acquire the following: 1) an understanding of the genetic and potentially physical interactions of intracellular organelle components with cell adhesion structures; 2) an introduction to the role cellular stress induced by calcium handling abnormalities plays in acantholytic diseases, 3) an overview of what strategies researchers are developing to improve disease modeling and 4) expert perspectives on how to propel the basic science towards development and deployment of new therapeutic options.

Tentative Program

2-2:40 PM Session I: Introduction and Plenary Lecture (Pioneering Genetics of DD/HHD)

Robert Harmon, Ph.D. (Northwestern University)
Alain Hovnanian, M.D., Ph.D. (University of Paris, INSERM)

2:40-4:10 Session II: Calcium Homeostasis and ER Stress

Rajini Rao, Ph.D. (Johns Hopkins)
Keith Choate, M.D., Ph.D. (Yale)
Jakob Wikstrom, M.D., Ph.D. (Karolinska Inst)
David Kelsell, Ph.D. (Blizzard Inst, London)

4:10-4:30PM BREAK

4:30-6PM Session III: Organelle Architecture and Signaling in DD and HH

William Prinz, Ph.D. (UT Southwestern)
Andrew Kowalczyk, Ph.D. (Penn State)
Theodora Mauro, M.D. (UCSF)
Cory Simpson, M.D., Ph.D. (Univ of Washington)

6-6:30PM Panel Discussion: Translational Outlook

Leader: Cory Simpson, M.D., Ph.D.
Russell Dahl (CEO, Neurodon), Ph.D.
Edel O'Toole, M.B., Ph.D.
Roni Dodiuk-Gad, M.D.
Amy Paller, M.D.
Keith Choate, M.D., Ph.D.