

**Exciting Biologies: Biology of Shape**  
**The Ra Hotel, Barcelona, Spain**  
**October 26th-28th, 2007**

**Thursday, October 26th**

- 4:00 PM Opening Remarks  
Emilie Marcus (Cell Press),  
Ken Chien (Cardiovascular Research Center at MGH) and  
Juna Carlos Izpisua Belmonte (Center for Regenerative Medicine, Barcelona)
- 4:15 PM Keynote address (Introduction by Deborah Sweet)  
Mark Krasnow, Stanford University  
*Systems Biology of Lung Morphogenesis*
- Session I The Basics of Shape  
Session Moderators: Valerie Weaver and Connie Lee
- 5:15 PM Tom Rapoport, Harvard Medical School  
*A Novel Class of Membrane Proteins Shapes the Tubular Endoplasmic Reticulum*
- 5:55 PM Short talk: Ruth Kroschewski, ETH Zurich  
*A Scaffold on the Move: IQGAP1 Actively Governing Cell Shape*
- 6:15 PM Matthew Welch, UC Berkeley  
*Coordinating Actin, Microtubules, and Organelle Shape*
- 6:55 PM General Discussion
- 7:15 PM Cocktails
- 7:45 PM Dinner

**Friday, October 27th**

7:30 AM Breakfast

Session II How are Cellular Shapes Formed?  
Session Moderators: Suzanne Eaton and Michael Sheetz

9:00 AM Janet Shaw, University of Utah  
*Membrane Remodeling Machineries: Lessons from the Mitochondrion*

9:40 AM James Nelson, Stanford University  
*Control of Cell Shape during Adhesion and Compaction*

10:20 AM Coffee

10:50 AM Amy Maddox, Ludwig Institute for Cancer Research (UCSD)  
*Anillin and Septins Break Symmetry in the Actomyosin Cytoskeleton during Cytokinesis*

11:10 AM Anne Ridley, Ludwig Institute for Cancer Research (UK)  
*Regulation of Cell Shape by Rho GTPases*

11:50 AM Christine Jacobs-Wagner, Yale University  
*Shaping a Bacterial Cell*

12:30 PM General Discussion

1:00 PM Lunch

2:00 PM Poster session

Session III How does Cellular Behavior Modify Shape? (The Ra Room)  
Session Moderators: Ken Chien and Janet Shaw

3:30 PM Peter Carmeliet, University of Leuven  
*Molecular Basis and Therapeutic Implications of the Neuro-Vascular Link*

4:10 PM Liqun Luo, Stanford University  
*Axon Pruning*

4:50 PM Short talk: Zachary Pincus, Stanford University  
*Three Mechanical Parameters are Sufficient to Determine Cell Shape in Motile Keratocytes*

5:10 PM Break

5:40 PM Valerie Weaver, University of Pennsylvania  
*Forcing Shape and Survival in the Third Dimension*

6:20 PM Iswar Hariharan, UC Berkeley  
*Imaginal Disc Growth - The Shape of Things to Come*

7:00 PM General Discussion

7:15 PM Break

8:00 PM Cocktails

8:30 PM Dinner

### **Saturday, October 28th**

7:30 Breakfast

Session IV How are Patterning Signals Translated into Shape? (The Ra Room)  
Session Moderators: Juan Carlos Izpisua Belmonte and Liqun Luo

9:00 AM Suzanne Eaton, Max Planck Institute of Molecular Cell Biology and Genetics  
*Mechanisms Controlling Epithelial Cell Packing Geometry*

9:40 AM Antonio Garcia-Bellido, University de Autonoma Madrid  
*Size and Shape in Drosophila Morphogenesis*

10:20 AM Break

10:50 AM Short Talk: Tadashi Uemura, Kyoto University  
*How to Connect Tissue Asymmetry to Cell Polarity Via Polarized Transport in the Plane*

- 11:10 AM Chris Kintner, Salk Institute  
*Shape and Function of Ciliated Epithelia*
- 11:50 AM Eric Wieschaus, Princeton University  
*Shaping Gradients and Cellular Responses in the Drosophila Embryo*
- 12:30 PM General Discussion
- 1:00 PM Lunch
- 2:00 PM Poster Session
- Session V How does Shape Influence Function?  
Session Moderators: Tom Rapoport and Anne Ridley
- 4:00 PM Andrew McMahon, Harvard University  
*Structure-Function Relationships in Building the Mammalian Kidney*
- 4:40 PM Juan Carlos Izpisua Belmonte, Salk Institute/Centre de Medicina Regenerativa de Barcelona  
*Translation of Cellular Cues into Organ Asymmetries*
- 5:20 PM Short talk: Jennifer Zallen, Sloan Kettering Institute  
*Polarized Cell Behavior and Tissue Organization*
- 5:40 PM Break
- 6:10 PM Michael Sheetz, Columbia University  
*Force Sensing and Shape Determination Through Substrate Stretching and Phosphotyrosine Dynamics*
- 6:50 PM Chris Walsh, Harvard Medical School  
*Genes that Control Shape and Size of the Human Cerebral Cortex*
- 7:30 PM General Discussion
- 7:45 PM Closing Remarks
- 8:00 PM Cocktails

8:30 PM Dinner

**Sunday, October 29th**

7:30 AM Breakfast