



SGP Council 2013-2014

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2014 Symposium Organizers

Miriam B. Goodman
Stanford

Emily Liman
University of Southern California

Important Meeting Site Information

Registration: Meeting registration takes place on the first floor of the Swope Center from 2:00 to 10:00 p.m. on Tuesday, September 2. Check-in is at the main desk in Swope Lobby (opposite the door) and your registration packets are at the first table on your left. If you arrive during the night, instructions are posted at Swope Center on how to contact the watchman who will have your room key.

Mail/Messages: Private phones are available in nearly all guest rooms. Messages can be left at 508-548-3705 24 hours a day and are available for pickup at the front desk of Swope Center (phones in rooms do not have voice mail). Packages and mail should be addressed to **your name**, *Society of General Physiologists, Marine Biological Laboratory, 7 MBL Street, Woods Hole, MA 02543-1015*.

Library Usage: The MBL Library has a world-renowned collection, and visitors are welcome at all times. The Library is staffed Monday through Friday, 8:00 a.m. to 5:00 p.m. After-hours access is provided via your MBL ID card.

Internet Access: MBL has wireless internet service throughout its campus. To use the system simply browse for wireless networks on any wireless enabled device and select "MBL-Guest". Open a web browser and you will be automatically redirected to a login page. Enter the login credentials: user name = mblguest, password = mblguest. In addition, there are 6 terminals from which you can check your email or do a web search in Swope Center. For other computer activity, the Computer Room is located in the MBL Library, Lillie 204.

Poster Instructions: Poster boards are located on the second floor of Swope Center. Posters may be up to **5 feet high and 3.5 feet wide (portrait-style)**. Thumbtacks are provided. Poster numbers and titles are listed in the abstracts section of this program. Posters may be displayed after 8:00 a.m. on Wednesday, and may stay up until Friday evening.

MBL's Security System: The MBL has a security system in all buildings. Every participant is issued an MBL ID card (proximity card) at registration. This card, to be kept with you at all times, will provide 24-hour access to the Lillie Library and Swope, the dormitory building. Many buildings, including the dormitories, have automatically locking doors. Although Swope will be open until 10 p.m., other buildings will always be locked and you will need your proximity card to gain access. If you should have any questions, both MBL and SGP personnel will be available to answer them during the course of the meeting.

Parking: If you drive to Woods Hole, remember that *parking is by permit only*. You must obtain a parking permit at the registration desk and **park ONLY at the Bar Neck parking lot**. Directions will be given to you at the registration desk. Do NOT park in any of the other MBL lots or on the street—**ticketing and towing are considered a local recreation**.

Meals: Conference meals are included in your registration, even if you are staying offsite. All meals are served in **Swope Dining Hall** overlooking Eel Pond. There are three meals a day starting with Dinner on day of arrival and ending with Lunch on the day of departure. There will be Breakfast and a bag lunch on the last day.

Dining Services from Sodexo serves creative menus with local and fresh ingredients. **There are selections for those with dietary restrictions including gluten-free, vegetarian, vegan, and nut- or sugar-free desserts.** The food stations include a salad bar, two fresh soups daily, hot entrees, deli, chef's station and freshly prepared desserts. The Chef will assist guests with the daily options.

N.B. The dining hall will stop serving lunch at 1:30 p.m., although the room will remain open for another half hour. So get through the line by 1:30, please.

Lectures: Will be held in the **Speck Auditorium**, Rowe Building (across from the Lillie Building on MBL Street). **Coffee breaks** will be set up in the foyer outside of the auditorium, with more mingling and seating space just outside. Timing is tight, so it's important to be on time for lectures and to return quickly from the 20-minute breaks.

Mixers: All mixers will be held in the **Meigs Room** on the second floor of Swope just beyond the top of the stairs, adjoining the poster display area.

68th Annual Meeting and Symposium of the Society of General Physiologists

Marine Biological Laboratory, Woods Hole, Massachusetts

September 2–6, 2014

SENSORY TRANSDUCTION

Organized by Miriam B. Goodman and Emily Liman

SCHEDULE OF EVENTS

Tuesday, September 2

2:00 – 10:00 **Registration and Room Assignments (Swope Center, 1st Floor)**

5:30 – 7:00 **Buffet Dinner (all meals in Swope Center, Dining Room)**

7:15 – 7:30 **Opening Remarks (Rowe Auditorium)**
Conference Organizers
Robert Dirksen, President (Society of General Physiologists)

Session I: FRIENDS OF PHYSIOLOGY LECTURE I

7:30 – 8:30 **Linda Buck**, Fred Hutchinson Cancer Research Institute
Deconstructing Smell

8:30 – 8:45 **Flash Poster Session A**

9:00 – 11:00 **Mixer (Swope Center, Meigs Room)**

Wednesday, September 3

7:00 – 8:00 **Breakfast (Swope Center, Dining Room)**

Session II: ELEMENTS OF TRANSDUCTION

8:00 – 8:40 **Yuh-Nung Jan**, University of California, San Francisco
Force-gated ion channels required for touch sensation in flies

8:40 – 9:20 **Ellen Lumpkin**, Columbia University
Mechanosensory transduction in a mammalian touch receptor

9:20 – 10:00 **Ardem Patapoutian**, HHMI/Scripps
Role of Piezo ion channels in mechanotransduction

10:00 – 10:20 **Break**

10:20 – 10:40 Short talk 1: **Jianguo Gu**, University of Cincinnati College of Medicine
Mechanisms underlying the transduction and encoding of tactile stimuli in merkel discs of mammals

10:40 – 11:20 **Diana Bautista**, University of California, Berkeley
Molecular and cellular mechanisms of chronic itch

11:20 – 12:00 **Craig Montell**, University of California, Santa Barbara
Polymodal sensing through rhodopsins and TRP channels

12:00 – 12:20 Short talk 2: **Elena Oancea**, Brown University
Ultraviolet light detection in human skin via a novel phototransduction pathway

12:30 – 2:00 **Lunch (Swope Center, Dining Room)**

3:00 – 4:30 **Poster Session - Authors at Posters, Group A**
for discussion with attendees and judging for the poster competition (for those who applied to compete)

5:00 – 6:30 **Dinner (Swope Center, Dining Room)**

Session III: EVOLUTION AND SENSORY ETHOLOGY

6:30 – 7:10 **Elena Gracheva**, Yale University
Temperature adaptations to unique lifestyle in mammalian hibernators

7:10 – 7:50 **Paul Garrity**, Brandeis University
Thermal and chemical sensation in Drosophila: Common origins of diverse detectors

- 7:50 – 8:30 **Enrico Nasi**, National University of Colombia
Melanopsin-mediated light-detection: Lessons from early chordates and lower vertebrates
- 8:30 – 8:50 Short talk 3: **Jonathan Pierce-Shimomura**, UT Austin
Magneto-sensitive neurons mediate geomagnetic orientation in Caenorhabditis elegans
- 9:00 – 11:00 **Mixer (Swope Center, Meigs Room)**

Thursday, September 4

- 7:00 – 8:00 **Breakfast (Swope Center, Dining Room)**

Session IV: PHYSICAL STRUCTURES IN SENSORY TRANSDUCTION

- 8:00 – 8:40 **King-Wai Yau**, Johns Hopkins University
Melanopsin signaling in the eye
- 8:40 – 9:20 **U. Benjamin Kaupp**, CAESAR, Bonn, Germany
Supramolecular organization of rhodopsin in the disk membrane
- 9:20 – 10:00 **Roger Hardie**, Cambridge University
Phototransduction in microvillar photoreceptors of Drosophila
- 10:00 – 10:20 **Break**
- 10:20 – 11:00 **Miriam B. Goodman**, Stanford University
Non-linear mechanics of somatosensory transduction in C. elegans
- 11:00 – 11:40 **David P. Corey**, Harvard University
Structure and mechanics of cadherins in the transduction complex of inner-ear hair cells
- 11:40 – 12:20 **Ulrich Mueller**, Scripps
Molecular complexity in the mechanotransduction machinery of cochlear hair cells
- 12:30 – 2:00 **Lunch**
- Afternoon free: Harbor cruises in local waters 2:30 – 4:30**
No charge. Sign-up sheet at registration table.
- 5:00 – 6:30 **Dinner**

Session V: ADAPTATION AND GAIN CONTROL

- 6:30 – 7:10 **Marie Burns**, University of California, Davis
Timing is everything: Regulation of vertebrate phototransduction and consequences for vision
- 7:10 – 7:50 **Anthony Ricci**, Stanford University
Cochlear hair cell adaptation, new roles for calcium
- 7:50 – 8:30 **Piali Sengupta**, Brandeis University
Feeling the heat: Mechanisms of long-term thermosensory adaptation in C. elegans
- 8:30 – 8:50 Short talk 4: **Michael Do**, Harvard University
Integrative signaling by ganglion-cell photoreceptors
- 8:50 – 9:05 **Flash poster session B**
- 9:00 – 11:00 **Mixer**

Friday, September 5

- 7:00 – 8:00 **Breakfast**

Session VI: SIGNALING SENSATION

- 8:00 – 8:40 **Steve Roper**, University of Miami
Chemosensory transduction in taste bud: Beyond receptors
- 8:40 – 9:20 **Sue Kinnamon**, University of Colorado, Denver
Afferent signaling in taste buds: ATP and beyond
- 9:20 – 10:00 **Kevin Foskett**, University of Pennsylvania
How taste cells lacking synapses mediate neurotransmission
- 10:00 – 10:20 **Break**
- 10:20 – 11:00 **Emily Liman**, University of Southern California
Proton channels in taste transduction
- 11:00 – 11:40 **Robert Fettiplace**, University of Wisconsin-Madison
The hair-cell transduction channel complex
- 11:40 – 12:20 **Jeff Holt**, Harvard University
The role of TMC proteins in hair cell transduction

12:20 – 12:40 **Cranefield Awardee: David Posson**, Weill Cornell Medical College
Molecular interactions involved in proton-dependent gating in KcsA potassium channels

12:40 – 2:00 **Lunch**

2:00 – 3:30 **Authors at posters, session B**

Session VII: LINKING SENSATION TO BEHAVIOR

3:40 – 4:00 Short talk 5: **Richard Kramer**, University of California at Berkeley
Re-inventing phototransduction with an ion channel photoswitch that restores visual function to blind mice

4:00 – 4:40 **Ron Yu**, Stowers Institute
Transmitting pheromone information by the mouse vomeronasal organ

4:40 – 5:20 **Robert Datta**, Harvard University
Deep phenotyping: New methods for characterizing odor-driven behaviors

Session VIII: CLOSING REMARKS AND FRIENDS OF PHYSIOLOGY LECTURE II

5:20 – 5:30 **Closing Remarks, Meeting Organizers**

FRIENDS OF PHYSIOLOGY LECTURE II

5:30 – 6:30 **Marty Chalfie**, Columbia University
Mechanosensory transduction and its modification in C. elegans

6:30 – 7:00 **Cocktails (Meigs Room)**

7:00 – 8:30 **Lobster Dinner/Clambake & Awards Ceremony**

9:00 – 11:00 **Mixer (Meigs Room)**

Saturday, September 6

7:00 – 8:30 **Breakfast**

10:00 **Checkout deadline.** Participants may pick up a box lunch after checkout.