

Program

East Coast Nerve Net: 22nd Annual Meeting

April 5 and 6, 1996

Sponsored by the Grass Foundation and the Marine Biological Laboratory

Friday, April 5

- 2:00 Set up posters, Swope Center.
- 3:00 Posters and Refreshments, Swope Center
- 6:00 Dinner, Swope Center
- 8:00 Presentation to Mary Grass, Whitman Auditorium.
- 8:05 **Grass Foundation Lecture**, Whitman Auditorium
Cellular Dynamics of a Drosophila Clock Protein,
Dr. Kathleen Siwicki, Department of Biology, Swarthmore College

AFTER the LECTURE: POSTER SESSION and ANNUAL SOCIAL (Swope Center)

Saturday, April 6

Oral Presentations in Whitman Auditorium (*presenting author):

- 8:30 Molecular isolation and tissue-specific distribution of the *Manduca sexta* muscarinic acetylcholine receptor. Alice Wang* and Barry Trimmer, Tufts University.
- 8:45 The role of nitric oxide/cGMP pathway in the abdominal ganglia of *Manduca sexta*. Sanjive Qazi* and Barry Trimmer, Tufts University.
- 9:00 Identification and characterization of a novel tachykinin-related peptide from the crab, *Cancer borealis*. Andrew Christie*, Tomas Lundquist, Dick Nassel and Michael Nusbaum, University of Pennsylvania and Stockholm University.
- 9:15 Cloning and localization of a mysuppressin in the cockroach, *Diploptera punctata*. Megumi Fuse*, B. C. Donly, I. Orchard, S.S. Tobe, W.G. Bendena, University of Toronto.

- 9:30 Role of protein kinases in ubiquitin-mediated turnover of C/EBP during long-term facilitation in *Aplysia*. Naoki Yamamoto*, Ashok N. Hegde, Daniel G. Chain, Bo Liu-Marsh, Wanzheng Pei and James H. Schwartz, Columbia University.
- 9:45 Using enhancer traps to reveal structure and to block function of femoral chordotonal organs in *Drosophila*. Suman Reddy* and R. K. Murphey, University of Massachusetts.
- 10:00 BREAK
- 10:30 Neurotrophins modulate sympathetic connections to cardiac myocytes. Sybil T. Lockhart Brandeis University .
- 10:45 Decreased vesicle density in motor nerve terminals of sluggish fruit flies. Caitlin Hill, University of Toronto.
- 11:00 The neuromuscular transmitter in *Limulus*: Immunochemistry picks glutamate over aspartate. Susan Scott*, Lucie Lasovsky, and Daniel Gibson, Worcester Polytechnic Inistitute.
- 11:15 Adenosine decreases release at excitatory but not inhibitory synapses in rat visual cortex. Juan A. Varela* and Sacha B. Nelson, Brandeis University.
- 11:30 The morphology of C3, an identified motoneuron of the tentacle withdrawal reflex in *Helix aspersa*. Nishi Gill* and Ronald Chase, McGill University.
- 11:45 Neuronal competence of separate pathways controlling the tentacle withdrawal reflex of *Helix aspersa*. Steve Prescott* and Ronald Chase, McGill University.
- Noon LUNCH: Swope Center
- 1:00 Characterization of bursicon, the insect cuticle sclerotizing hormone. H. Willi Honegger, Vanderbilt University.
- 1:15 Motor pattern coordination via presynaptic inhibition of a modulatory projection neuron. Marlene Bartos* and Michael P. Nusbaum, University of Pennsylvania.
- 1:30 Sensory neuron activation of modulatory projection neurons. Dawn Blitz, University of Pennsylvania.

- 1:45 Inhibitory control of stomatogastric muscles by allatostatin. Juan Carlos Jorge-Rivera* and Eve Marder, Brandeis University.
- 2:00 Interactions of cerebral and buccal CPTs during different feeding-related behaviors in *Aplysia*. Ray Perrins* and Klaudiusz R Weiss, Mt. Sinai Medical Center.
- 2:15 BREAK (15 min)
- 2:30 The organization of complex natural behavior patterns in the rugged sea hare *Bursatella leachii*. Mark W. Miller, University of Puerto Rico.
- 2:45 Circuit breaking in drosophila: Intracellular recordings from a gap junction mutant. James R. Trimarchi* and Rodney K. Murphey, University of Massachusetts.
- 3:00 Heat shock reduces thermosensitivity of the locust flight system. Kelly Shoemaker*, Jack Gray, Hongjian Xu, and Mel Robertson, Queen's University
- 3:15 Evasive manoeuvres in flying locusts. Jeff W. Dawson*, Ken Dawson-Scully, and Mel Robertson, Queen's University.
- 3:30 Multimodal communication during courship in the field cricket, *Teleogryllus oceanicus*. Rohini Balakrishnan* and Gerald S. Pollack, McGill University.
- 3:45 Behavioral strategies underlying odor-mediated flight in moths: Lessons from simulation studies. Jim Belanger, University of Arizona.
- 4:00 BREAK (15 min.)
- 4:15 Fast startle responses of the adult african lungfish, *Protopterus annecteus*. Jason R. Meyers*, Elizabeth H. Copanas, and Steven J. Zottoli, Williams College.
- 4:30 Neuroethology of the escape response in the American lobster, over the molt cycle. Stuart Cromarty and Gabrielle Kass-Simon, Georgia State University and University of Rhode Island.
- 4:45 Salinity and temperature detection in estuarine lobsters: Behavioral and physiological evidence. Steve Jury*, Chris Dufort, and Winsor Watson, University of New Hampshire.

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- 5:00** **Studies of lobster chemo-orientation strategies with a small autonomous marine robot. Frank Grasso*, Jonathan Dale, and Jelle Atema, Boston University.**
- 5:15** **Limulus vision in its natural environment. Chris Passaglia*, Fred Dodge and Bob Barlow, Marine Biology Laboratory**
- 6:00** **REFRESHMENTS and POSTER SESSION**
- 7:00** **DINNER**
- 8:00** **POSTER SESSION**

The meeting is officially over Saturday evening. For those of you who reserved room and board for two days, breakfast and lunch will be available on Sunday in the Swope Center.

Posters (to be set up after 2 pm, Friday).

Sensory inhibition of proleg motor activity in *Manduca sexta* larvae. David J. Fickbohm,* Shana Landau and Barry A. Trimmer, Tufts University.

Reporter genes reveal the development of sensory axons in the pupal nervous system of *Drosophila*. Steve Coverin* and Suman Reddy, University of Massachusetts.

Diuretic peptide in *Rhodius prolixus*: An immunohistochemical study using a *Locusta* diuretic peptide antibody. Vicki TeBrugge*, Sharon Miksys, Ian Orchard, Geoff Coast, David Schooley, University of Toronto.

Neurons labelled with an antiserum against the period-gene product and control of circadian calling in *Teleogryllus commodus*. H. Willi Honegger, Vanderbilt University.

An inhibitory postsynaptic potential lasting several seconds in nucleus Hvc of adult Zebra Finches. David J. Perkel* and Marc F. Schmidt, University of Pennsylvania and California Institute of Technology

Developmental divergence of the sympathetic and enteric nervous systems. Jessica Marie Pisano, Brandeis University.

Synaptic decoding. Kamal Sen*, J. C. Jorge-Rivera, Eve Marder and L.F. Abbott, Brandeis University.

Glucose inhibits cultured neurosecretory cells in *Cancer borealis*. Regina Glowik* and Jorge Golowasch, University of Bonn.

Circadian rhythms of locomotion and ventilation in the horseshoe crab, *Limulus polyphemus*. Paul Bartell* and Winsor Watson, University of New Hampshire.

The role of proctolin in neurally evoked contractions in the locust oviducts. Konrad F. Noronha* and Angela B. Lange, University of Toronto.

The effects of polyamine toxins on crayfish synapses and axons. S. R. Kelly*, S. Jenkins, J. K. Atkinson, and A. J. Mercier, Brock University.

A mechanism to regulate sexual proclivity in the snail. Joris M. Koene* and R. Chase, McGill University

Physiology and anatomy of cricket auditory receptors. Kazuo Imaizumi* and Gerald Pollack, McGill University.

Analysis of agonistic encounters between gravid and non-gravid female lobsters. Joseph Mello*, M. Brown, S.J. Cromarty, and G. Kass-Simon, University of Rhode Island.

Morphological and physiological effects of formamide treatment on crustacean skeletal muscle. Conchita Zuazaga*, G. Ortiz, J. Moterrubio and P.M. Orkand, Institute of Neurobiology, San Juan, P.R.

The behavioral effects of DAG, arachidonic acid, and HpETE on *Hydra oligactis*. Shawn Flanagan*, W. Müller, and G. Kass-Simon.

Coordination of chemosensory orientation in the starfish *Asterias forbes*. Jonathan Dale*, Boston University.

Identification of aminergic neurotransmitters in locust salivary glands. Declan Ali* and Ian Orchard, University of Toronto.

The release of FMRFamide-related peptides from neurohaemal areas of the stick insect *Carausius morosus*. Sharon Miksys* and Ian Orchard, University of Toronto.

The influence of light on swimming and crawling in the nudibranch *Melibe leanina*. Eric Abrahamson* and Kaddee Lawrence, University of New Hampshire.

The Lobster Genome Project. Xiashe Chen* and Henning Schneider, Harvard Medical School.

Neuromuscular organization of the moth *Episterna*: Evolution of the tymbal. Kathleen Pendlebury*, James H. Fullard, University of Toronto, Erindale.

A computational model of the dynamic synaptic input to wind-sensitive cricket interneurons. Andrew Hill* and Rodney K. Murphey, University of Massachusetts.

Characterization of the serotonergic neurons in the first abdominal ganglion of crayfish. Linda J. Anderson* and Donald H. Edwards, Georgia State University.

Relationship of abdominal serotonergic neurons to the Lateral Giant escape command neurons in crayfish. Barbara E. Musolf*, Shih-Rung Yeh, and Donald H. Edwards, Georgia State University.

5-HT immunoreactivity and agonistic behavior in crayfish. Martha A. Arellano*, Shih-Rung Yeh, and Donald H. Edwards, Georgia State University.

20-Hydroxyecdysone has opposing effects on the neuromuscular junctions of the muscles mediating aggressive and escape behavior in the adult American lobster. S. I. Cromarty* and G. Kass-Simon, University of Rhode Island.