PROGRAM
27th ANNUAL EAST COAST NERVE NET

April 6-8, 2001
Sponsored by the Grass Foundation and the Marine Biological Laboratory

Friday, April 6

5:30 Cocktails and Dinner at the Swope Center
8:00 Plenary Session, Whitman Auditorium:

Grass Foundation Lecture

Dr. Brian Smith
Associate Professor of Biology
Ohio State University

Assembling an Odor Image.

Saturday, April 7

Presentations
Sesssion 1: STG

8:45 Everything you always wanted to know about the STG.
Scott L. Hooper. Ohio University

9:00 Slow it for a pull, speed it for a push.
Akira Mamiya, Yair Manor, Farzan Nadim. Rutgers-The State University of New Jersey

9:15 Plasticity of inhibitory synapses in a model pyloric network.
Kurt Thoroughman, Cristina Soto-Trevino, Eve Marder, L. F. Abbott. Brandeis University

9:30 Functional compartmentalization of cotransmitter actions.
Wolfgang Stein, Shari Hertzberg, Debbie Wood, Mike Nusbaum. Abt. Neurobiologie, University of Ulm, Germany

9:45 Long-lasting circuit modulation by a mechanosensory pathway.
Mark Beenhakker, Mike Nusbaum. University of Pennsylvania

10:00 A role for feedback control of projection neuron activity.
Debra Wood, Michael Nusbaum. University of Pennsylvania

10:15 Modulation of the pyloric rhythm in the lobster *Homarus americanus*.
Vatsala Thirumalai, Eve Marder. Volen Center for Complex Systems

10:30 Break

Session 2: Neuromuscular physiology/motor systems

11:00 A novel preparation for examining *Drosophila* motor pattern generation demonstrates a role for cysteine string proteins (CSPs) at central synapses.
Jeff W. Barclay, Harold L. Atwood, R. Meldrum Robertson. Queen's University.

11:15 Prior anoxia induces thermotolerance in the locust flight system.
Bernhard Wu, J.K. Lee, V.K. Walker, R.M. Robertson. Queen's University

11:30 Changes in synaptic delay during facilitated transmitter release.
Jen-Wei Lin, Andrey Vyshedskiy, Tariq Allana. Biology, Boston University

11:45 Temperature sensitive modulation of neuromuscular function by serotonin.
Mary Kate Worden, Jonna Hamilton. Dept.of Neuroscience, University of Virginia

12:00 Playing both ends against the middle: the innervation of muscles in the horseshoe crab*, Limulus polyphemus*.
Swetha Reddy, Lucie Lasovsky, Daniel Gibson. Worcester Polytechnic Institute

12:15 Lunch

Session 3: Behavior/organismal physiology

2:00 Dye coupling within the crayfish lateral giant escape circuit.
Brian L Antonsen, Jens Herberholz, Donald H Edwards. Georgia State University

2:15 A lateral excitatory network among coupled sensory afferents in the terminal ganglion of the crayfish.
Jens Herberholz, Brian L. Antonsen, Donald H. Edwards. Georgia State University.

2:30 Interactions between neuromodulatory systems in the lobster.
Alo Basu, Edward Kravitz. Harvard Medical School, Dep. of Neurobiology

2:45 Fighting flies - a model system for the study of aggression.
Nina Bowens, Edward Kravitz. Harvard Medical School, Dep. of Neurobiology

3:00 Pheromones and courtship: what do males remember?
Kathleen Siwicki and Jean-Francois Ferveur. Biology Dept. Swarthmore College PA and CNRS, Universite de Bourgogne, Dijon, France

3:15 Break

Session 4: Development

3:45 Serotonin, nitric oxide and neuronal proliferation in the olfactory pathway of the lobster.
Jeanne Benton, Barb Beltz. Wellesley College

4:00 Circadian regulation of neurogenesis in the olfactory pathway of lobsters.
Leslie Bagay, Jeanne Benton, Jeremy Sullivan, Barb Beltz. Wellesley College

4:15 Neuromodulatory complement of the pericardial organs in the embryonic lobster, *Homarus americanus*.
Stefan Pulver, Eve Marder. Brandeis University

5:00 POSTER SESSION

6:00 Cocktails

7:00 Dinner

8:00 Poster Session continues and PARTY

Sunday, April 8

Sesssion 5: Signal transduction

9:30 Using RNA interference to study the subunit composition of nicotinic receptors in *Manduca sexta.*
Anke Vermehren, Sanjive Qazi, Barry Trimmer. Tufts University

9:45 The role of NO-dependent cGMP production in identified neurons in the CNS of *Manduca sexta.*
Ricardo M. Zayas, Barry A. Trimmer. Tufts University

10:00 Neurotransmitter detection by novel imaging sensor.
Jonathon Issberner, Barry Trimmer. Tufts University

10:15 Break

10:45 Telling time: using slow conductances to construct interval sensitive neurons.
Einat Buchman and Scott L. Hooper. Ohio University

11:00 Role of transmitter-receptor interactions in growth cone guidance of cultured *Lymnaea* neurons.
Gaynor E. Spencer, Ken Lukowiak, Naweed Syed. Brock University, St. Catharines, Ontario

11:15 Identification and characterization of the feeding circuit activating peptides (FCAPs), a novel neuropeptide family of *Aplysia.*
Ferdinand Sven Vilim, L. Li, S.S. Rubakhin, V. Alexeeva, N.C. Dembrow, O. Dowling, J. Jing, J.V. Sweedler, K.R. Weiss. Mount Sinai School of Medicine

POSTERS

The characterization of the *Locusta migratoria* SchistoFLRFamide transcript.
Sharon R. Hill, William G. Bendena, Ian Orchard .

Differential localisation of frequenin at crayfish nerve terminals.
M.R. Bajec, H.L. Atwood. University of Toronto

Hypodermal receptors and control of stiffness in hermit crab abdomen.
William Chapple. University of Connecticut

Serotonin neuromodulatory actions on pectoral fin movements in zebrafish.
Daniel Vollenweider, Free N. Doecks, Henning Schneider. William Paterson University

Cloning of zebrafish serotonin receptors.
Luke Fritzky, Nicholas J. Opalenik, Henning Schneider. William Patterson University.

GABA Receptors in *Paramecia.*
Emily F. Myers, Susan R. Barry. Mount Holyoke College

Identification and characterization of the *Aplysia* leucokinin related peptide precursor (ALK) from neuron B48 using cDNA amplification and subtraction.
Ferdinand Sven Vilim, S. Saunders, E.C. Cropper, V. Alexeeva, J. Jing, P.J Church, K.R. Weiss. Mount Sinai School of Medicine

Information transmission in crustacean proprioceptors: Nonspiking TCMRO afferents.
Ralph DiCaprio, Rollie Gamble. Ohio University

Information transmission in crustacean proprioceptors: Spiking CB chordotonal afferents.
Rollie Gamble, R.A. DiCaprio. Ohio University

Multiplicity of interneurons and diversity of their synaptic connections contribute to multifunctionality of *Aplysia* feeding motor network.
Jian Jing, K.R. Weiss. Mt. Sinai Med Ctr

Cloning and partial localization of a putative serotonin receptor in crayfish CNS.
Nadja Spitzer, Brian. L. Antonsen, Deborah J. Baro, Donald H. Edwards. Georgia State University

Colocalization of GABA-like immunoreactivity and catecholamine histofluorescence in neurons of the feeding motor circuitry in *Aplysia californica*.
Manuel Diaz-Rios, Mark W. Miller. University of Puerto Rico, Inst. of Neurobiology

Central patterning of alternating motoneuron activity in the stick insect leg control system: phasic inhibition and tonic excitation.
Dirk Bucher, Joachim Schmidt. Ansgar Bschges. University of Cologne, Zoological Institute, Animal Physiology

Hot and Breathless: Stress-management in the locust.
Tomas G. Money, J.K. Lee, B.S. Wu, I. Singh, K.L. Shoemaker, R.M. Robertson. Queen's University

Changes in levels of 5-HT-ir in crayfish hindgut neurons following food intake.
Barbara E. Musolf, Carolin Kraft, Donald H. Edwards. Georgia State University

Progress towards the identification of a tyraminergic neurotransmitter system in insects.
Herm Lehman, Lauren Harper, Sara Scott, Marc Petrivelli, Mike Feuerstein. Hamilton College

Ultrastructural investigation of the innervation of the lobster dactyl opener muscle.
Jonna Hamilton and Mary Kate Worden. University of Virginia Dept. Neuroscience.

Effects of starvation period of lobster aggression: Implications for experimental bioassays for crustaceans in general.
Stuart Cromarty. Assumption College