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Friday evening, March 30th

5:30 pm

Welcome reception:

Poster area, Swope
Beer, wine, soft drinks,
and *hors d'oeuvre*.

**Reminder: please set up your posters
before the Grass Lecture.**

6:30 pm

Dinner in Meigs Room

8:00 pm

GRASS FOUNDATION LECTURE

Lillie Auditorium



Pierre Meyrand, Ph.D.

University of Bordeaux, France

*“Ontogenic Alterations in the Embryonic
Mouse Spinal Cord”*

9:00-11:00

Friday Night Social

Poster area, Swope.
Beer, wine and soft drinks provided.

Saturday a.m., March 31

7:00-8:15 Breakfast in Meigs Room

8:30-10:00 *Session I: Lillie Auditorium*

Regulation of Behavior

Chair: Jacob Krans, Mount Holyoke College

8:30 RESPONSES OF DOMINANT AND SUBORDINATE CRAYFISH TO MIRRORS DIVERGE WITH TIME OF SOCIALIZATION. H. Y. May & J. Mercier. Brock Univ

8:45 BEHAVIORAL ANALYSIS OF THE BIRDSONG PATTERN GENERATOR. Todd Troyer & Chris Glaze. University of Maryland, College Park.

9:00 DIFFERENTIAL GENE EXPRESSION DURING COMPENSATORY REGENERATION IN THE CRICKET AUDITORY SYSTEM. Hadley W. Horch & Sarah S. McCarthy. Bowdoin College.

9:15 THE CATERPILLAR STRETCH RECEPTOR ORGAN AS PUTATIVE PROPRIOCEPTOR: IT AIN'T WHERE YOU ARE, IT'S HOW YOU GOT THERE. M. A. Simon & B. A. Trimmer. Tufts University.

9:30 THE MAPPING FROM NEURONAL PARAMETERS TO BEHAVIORAL PROPERTIES. Adam L. Taylor & Eve Marder. Brandeis University.

9:45 SEROTONIN AND HOMOLOGOUS SEROTONERGIC INTERNEURONS PARTICIPATE DIFFERENTLY IN DIVERGENT RHYTHMIC BEHAVIORS. James M. Newcomb & Paul S. Katz. New England College.

10:00-10:30 Coffee Break

METHOD-DEPENDENCE OF MEASURED NEURONAL MEMBRANCE CAPACITANCE. Gladis Thomas, Chris Khalil, Arif Patel, Arlene Pineda, Huan-an Tzeng, Farzan Nadim, & Jorge Golowasch. UMDNJ.

CATECHOLAMINERGIC INNERVATION OF THE ESOPHAGUS AND PHARYNX OF *APLYSIA*

***CALIFORNICA*.** Clarissa Martínez-Rubio, Geidy Serrano, Keyla García-Crescioni, Manuel Déaz-Ríos, Angel Maldonado & Mark W. Miller. Institute of Neurobiology, University of Puerto Rico.

THE
BIOLOGICAL
BULLETIN

The MBL's Journal, *Biological Bulletin* (www.biobull.org) welcomes submissions from East Coast Nerve Net authors.

For more information, please contact the editor
James Olds at jolds@mbl.edu.

EXPRESSION AND CHARACTERIZATION OF A ZEBRAFISH SEROTONIN RECEPTOR. Jac Cooper, David Moore & Henning Schneider. DePauw University.

DO INNATE BEHAVIORS CHANGE WITH INBREEDING?. Steven Nilsen, Cristina Camyad & Dylan Nelson. Harvard Medical School.

LONG-TERM EFFECTS OF NEUROMODULATORY INPUT ON IONIC CURRENT INTERACTIONS. Olga Khorkova & Jorge Golowasch. NJIT.

CATCH RATE OF THE AMERICAN LOBSTER (*H. AMERICANUS*) AND WATER TEMPERATURE IN THE INSHORE AND OFFSHORE FISHERIES OF THE NORTHEAST ATLANTIC. Jasmit Brar & Mary Kate Worden. University of Virginia.

THE STEROID HORMONE ECDYSONE MODULATES SEXUAL BEHAVIOR IN FRUIT FLIES. Geoffrey Ganter, Kelsey Walton, Jacob Merriman, Mark Salmon, Maria Kenney, Krista Brooks, Swathi Maddula, Josiah Downey, Christina Magaruh, Matthew Doyle & Edward Kravitz. University of New England.

CLONING AND CHARACTERIZATION OF A ZEBRAFISH 5-HT7 RECEPTOR GENE. Danielle Brueck & Henning Schneider. DePauw University.

RECOVERY OF RHYTHMIC ACTIVITY DEPENDS ON BOTH NEUROMODULATOR AND ACTIVITY. Yili Zhang, Rosa Rodriguez, Olga Khorkova & Jorge Golowasch. Rutgers University.

10:30-12:00 *Session II: Lillie Auditorium*

Central Pattern Generators and Modulation

Chair: Adam Taylor, Brandeis University

- 10:30 FROM HUNGER TO SATIETY: RECONFIGURATION OF A FEEDING NETWORK BY *APLYSIA* NEUROPEPTIDE Y.** Jian Jing, Ferdinand S. Vilim, Charles C. Horn, Vera Alexeeva, Nathan G. Hatcher, Kosei Sasaki, Irene Yashina,, Yuriy Zhurov, Irving Kupfermann, Jonathan V. Sweedler & Klaudiusz R. Weiss. Mount Sinai School of Medicine.
- 10:45 STATE DEPENDENCE OF SPIKE TIMING AND NEURONAL FUNCTION IN A MOTOR PATTERN GENERATING NETWORK.** Michael R. Due, Jin-sheng Wu, Mike R. Due, Alex Proekt, Jian Jing & Klaudiusz R. Weiss. Mt. Sinai School of Medicine.
- 11:00 STATE-DEPENDENT COORDINATION OF *APLYSIA* RADULA OPENERS AND CLOSERS..** Allyson Friedman, Y. Zhurov & K. R. Weiss. Mt Sinai Grad. Sch.
- 11:15 CHARACTERIZATION OF FAST AND SLOW COMPONENTS IN THE RHYTHMIC ACTIVITY OF LOBSTER EMBRYONIC STOMATO-GASTRIC MOTOR PATTERNS.** Kristina J. Rehm, Adam L. Taylor, Stefan R Pulver & Eve Marder. Brandeis Univ.
- 11:30 MASS SPECTROMETRIC CHARACTERIZATION AND PHYSIOLOGICAL ACTIONS OF A NOVEL B TYPE ALLATOSTATIN IN *CANCER BOREALIS*.** Lamont S. Tang, Qiang Fu, Eve Marder, & Lingjun Li. Brandeis University.
- 11:45 Ih AND DOPAMINE REDUCE TEMPORAL DISPERSION OF SPIKES IN A STOMATO-GASTRIC MOTOR AXON.** Dirk Bucher & Alex W. Ballo. University of Florida.

12:00-1:30 *Lunch in Meigs Room*

Saturday p.m., March 31

1:45-3:15 pm *Session III: Lillie Auditorium*

Cellular and Network Mechanisms

Chair: Sven Vilim, Mount Sinai

- 1:45 A NOVEL RHO GTPASE IN *TRYPANOSOMA BRUCEI*.** Kanwal Abbasi & Mark Field. Department of Pathology. University of Cambridge, UK.
- 2:00 THE VOLATILE ANESTHETIC ISOFLURANE ACTIVATES A HYPERPOLARIZING LEAK CONDUCTANCE IN *DROSOPHILA* MOTONEURONS.** David J. Sandstrom & Howard A. Nash. National Institutes of Health.
- 2:15 CHANGES IN SEAWATER TEMPERATURE MODULATE THE IONIC COMPOSITION OF LOBSTER HEMOLYMPH: IMPLICATIONS FOR CARDIAC AND NEURAL ACTIVITY.** Mary Kate Worden, Joseph Camacho, Syed Aman Qadri, Jared Cassin, Josi Taylor & Martin Grosell. Univ. of Virginia.
- 2:30 DECODING NEUROPHYSIOLOGICAL RESPONSES TO ARBITRARY SPIKE TRAINS.** Vladimir Brezina, Estee Stern, Timothy J. Fort, Mark W. Miller & Charles S. Peskin. Mt. Sinai Sch. of Med.
- 2:45 INHIBITORY FEEDBACK TO PACEMAKER NEURONS PROMOTES OSCILLATION STABILITY.** Lian Zhou, Shunbing Zhao, Amitabha Bose & Farzan Nadim. Rutgers University.
- 3:00 MAXIMUM SPIKE TIMING RELIABILITY OCCURS AT THE INTRINSIC RESONANCE FREQUENCY.** Vahid Tohidi & Farzan Nadim. Rutgers University.

CALCIUM MEDIATES POSTSYNAPTIC ACTIONS OF DPKQDFMRamide IN *DROSOPHILA* LARVAL MUSCLES. Maja Milakovic, Julie Clark, Amanda Cull & Joffre Mercier. Brock University.

CALCIUM CHANNEL TYPES INVOLVED IN LONG-TERM ADAPTATION OF CRAYFISH MOTOR NEURONS. Megan Mottershead & Joffre Mercier. Brock University.

INTERACTIVE EFFECTS OF TWO FMRamide-LIKE PEPTIDES ON *DROSOPHILA* LARVAL MUSCLES. Christopher G. L. Ng & Joffre Mercier. Brock University.

***XENOPUS* FICTIVE VOCAL BEHAVIOR IS UNDER THE CONTROL OF 5-HT₂ RECEPTORS.** Heather Yu & Ayako Yamaguchi. Boston University.

EFFECTS OF A CHOLESTEROL CHELATOR ON SYNAPTIC TRANSMISSION DEPEND ON ACCLIMITIZATION TEMPERATURE. Amanda Lehmann, Jens Coorssen & Joffre Mercier. Brock University.

DOES VARIATION IN THE BRAIN MORPHOLOGY OF THE NICARAGUAN CICHLID PERSIST IN THE ABSENCE OF OLFACTORY ALARM CUES? Maria Abate, Andrew Eng, Hung Pham, Elise Magarian & Les Kaufman. Boston University.

THE NEUROMORPHOLOGICAL RESPONSES OF NICARAGUAN CICHLIDS EXPOSED TO FAMILIAR AND NOVEL OLFACTORY ALARM CUES. Maria Abate, Hung Pham, Andrew Eng, Elise Magarian & Les Kaufman. Boston Univ.

INTERACTION BETWEEN DESCENDING INPUT AND LOCAL THORACIC REFLEXES FOR JOINT COORDINATION IN COCKROACH TURNING. Laiyong Mu, Brian K. Taylor, Brandon L. Rutter & Roy E. Ritzmann. Case Western Reserve Univ.

SOFT-BODIED LOCOMOTION: CATERPILLAR NEUROMECHANICS AND A NEW CLASS OF BIOMIMETIC ROBOTS. Barry Trimmer, Huai-Ti Lin, Linnea van Griethuijsen & Greg Bettencourt. Tufts University.

EXPERIMENTAL CHARACTERIZATION AND NUMERICAL MODELING OF MUSCLE PROPERTIES IN A SOFT-BODIED ARTHROPOD. W. A. Woods Jr., L. Dorfmann & B. A. Trimmer. Tufts University.

ONTOGENETIC CHANGES IN ZEBRAFISH PREY CAPTURE KINEMATICS: IMPLICATIONS FOR UNDERLYING NEURAL CONTROLS. Rebecca Bonaiuto, Jared Shubert, Michael Trautwein & Donald O'Malley. Northeastern University.

DEVELOPMENT OF A SENSITIVE FORCE TRANSDUCER FOR USE WITH LARVAL DIPTERAN MUSCLE. Julia Dettinger, Stephanie Albero & Jacob Krans. Mount Holyoke College.

WHEN DO LOSERS WIN? A BEHAVIORAL ANALYSIS OF AGGRESSION AND SOCIAL STATUS IN *DROSOPHILA MELANOGASTER*. Jill Penn & Edward Kravitz. Harvard Medical School.

EFFECTS OF NMDA RECEPTOR LIGANDS ON THE PACEMAKER SYSTEMS OF HYDRA. Jarren C. Kay & G. Kass-Simon. University of Rhode Island.

EXPRESSION PATTERNS OF OCTOPAMINE RECEPTORS IN THE *DROSOPHILA MELANOGASTER* BRAIN. Julia W. Cohen, Lisa A. Gunaydin, Jason Yamada-Hanff, & Kathleen K. Siwicki. Swarthmore College.

3:30-4:00 *Coffee and cookies*
Poster Area, Swope

4:00-6:00 *Poster Session*

6:00-7:00 *Cocktails in Poster Area, Swope*
Beer, wine, soft drinks, and *hors d'oeuvres*.

7:00-8:30 *Dinner in Meigs Room*

9:00-11:00 *Ed and Barry's Annual Tour of Margaritaville*
Poster Area
Margaritas, beer, wine, soft drinks provided.

Sunday a.m. April 1

7:30 – 9:00 **Breakfast, Meigs Room**

Participants are reminded that Swope check out time is 10:00 a.m.

9:00 -11:00

Sunday Symposium

Lillie Auditorium

“Modulation of Insect Social Behavior”

“To Fight or to Court: Modulation of Drosophila Male Behavioral Choice”

Sarah Certel, Ph.D.

**Department of Neurobiology
Harvard Medical School**

“Courtship Learning Mediated by Aversive Pheromones of Mated Females”

Aki Ejima, Ph.D.

**Department of Biology
Brandeis University**

“Social Context, Circadian Clocks, and Behavior”

Joel Levine, Ph.D.

**Department of Biology
University of Toronto Mississauga**

11:00-11:30

ECNN Business Meeting

11:30-1:00

Lunch in Meigs Room

Posters

LOCATION AND EFFECTS OF NITRIC OXIDE IN THE STOMATOGASTRIC NERVOUS SYSTEM OF *MANDUCA SEXTA*. Nina Mallozzi & Barry Trimmer. Tufts University.

BAYESIAN CLASSIFICATION OF APLYSIA FEEDING MOTOR PROGRAMS IN VIVO BASED ON THEIR NEUROMUSCULAR ELECTRICAL ACTIVITY PATTERNS. Vladimir Brezina, Jane Wong, Yuriy Zhurov, Nataliya Kozlova, Michael R. Due & Alex Proekt. Mt. Sinai School of Medicine.

PERCEPTION OF THE STEROID MOLTING HORMONE (20-HYDROXYECDYSONE) MODIFIES AGONISTIC BEHAVIOR IN THE AMERICAN LOBSTER, *HOMARUS AMERICANUS*. Stuart Cromarty, Debra Coglianesi, Lenore Martin & Gabriele Kass-Simon, Assumption College.

DETERMINING THE EFFECT OF THE A-CURRENT ON THE ACTIVITY PHASE OF A FOLLOWER NEURON IN AN INHIBITORY NETWORK. Yu Zhang & Farzan Nadim. New Jersey Institute of Technology.

IS ELECTRICAL COUPLING RESPONSIBLE FOR INTERACTIONS BETWEEN TWO PATTERN GENERATORS IN THE LOBSTER STOMATOGASTRIC NERVOUS SYSTEM? Vijay Kotecha & Patsy Dickinson. Bowdoin College.

ROLE OF NON-NMDA RECEPTORS IN SUSTAINING SWIMMING IN THE LEECH. Astra Bryant, Elizabeth Still & Peter D. Brodfuehrer. Bryn Mawr College.

CLONING AND CHARACTERIZATION OF A ZEBRAFISH 5-HT_{1A} RECEPTOR. Ashley Strahley, Henning Schneider & Mark Gonzales. DePauw University.

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33rd East Coast Nerve Net

Program



**Marine Biological Laboratory
Woods Hole**

March 30 - April 1, 2007

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