Curriculum Vitae

Michael Benjamin Roberts
Email: mrober21@uic.edu

I. Education and Experience

A. Graduate Institution

1. University of Illinois at Chicago, PhD student in the Department of Biological Sciences, 2016 to current
   a. Advisor: Dr. Emily Minor, Associate Professor, Department of Biological Sciences

B. Undergraduate Degrees

1. Indiana University Southeast, B.S., Biology with Highest Honors and Honors Program Scholar, 2015
2. Indiana University Southeast, Associate in Art (for chemistry work) with Highest Honors, 2015
3. Jefferson Community and Technical College, Associate in Arts with High Distinction, 2011
4. Jefferson Community and Technical College, Associate in Science with High Distinction, 2011

C. Research Experience

1. Laboratory Assistant for Dr. Randy Hunt, Indiana University Southeast Department of Biology, Jan 2012-May 2016
2. Volunteer Laboratory Assistant, Mood Disorders Lab, University of Louisville, May-Aug 2013
3. KBRIN Undergraduate Biomedical Research Program – Student Researcher, Summer 2013
4. Volunteer Laboratory Assistant, Mood Disorders Lab, University of Louisville, May-Aug 2012
5. Volunteer Laboratory Assistant, Mood Disorders Lab, University of Louisville, Feb-Aug 2011

D. Instructional and Related Experience

1. Teaching Assistant, Department of Biological Sciences, UIC, August 2016-current
   a. Discussion Section and Laboratory Instructor for BioS 101
      Fall 2016 (2 sections), Spring 2017 (2 sections)
2. Laboratory Prep, Biology Department, Indiana University Southeast, June 2015-June 2016
   a. Intro to Biological Sciences II (Majors), (two sections) Spring 2016
   b. Entomology, Fall 2015
   c. Evolution, Fall 2015
   d. Intro to Biological Sciences I (Majors), Fall 2015
   e. Humans and the Biological World (Non-majors), Summer II 2015
3. Supplemental Instruction for Molecular Biology, Fall 2014

II. Awards and Honors

1. Outstanding Biology Student (2015, awarded to two students each year)
2. William B. Hebard Scholarship (2013-2014 and 2014-2015 school years, awarded by faculty)
3. Chancellor's Honors Program Scholarship (Indiana University Southeast 2012-2013, 2013-2014, and 2014-2015)
4. Chancellors List (Fall 2011, Spring 2012, Fall 2012, Spring 2013, Fall 2013, Spring 2014, Fall 2014)
5. Nominee representing Indiana University Southeast for the Barry Goldwater Scholarship (Spring 2014)
6. Indiana University Southeast Student Research Fellowship (Fall 2013)

7. Tau Sigma Honors Society (2012)

III. Organization Memberships

1. Society for the Study of Evolution – Member, March 2013 - Current
2. Indiana Academy of Science – Member, Feb 2014 – December 2016
3. Biology Club Treasurer, IUS Student Organization, Sep 2014 – May 2015
4. Biology Club President, IUS Student Organization, Feb 2012 – Sep 2014

IV. Selected Work:

A. Peer-Reviewed Papers

Gao Y, Akers B, Roberts MB, El-Mallakh RS, [submitted]. Corticosterone response in sleep deprivation and sleep fragmentation.

B. Published Abstracts:

Roberts MB**,** Gao Y, El-Mallakh RS. June 2013. *Sleep fragmentation and corticosterone response in sodium pump alpha-2 knockout mice.* Bipolar Disorders, 15 (suppl. 1): 54

Bodarya K, Roberts MB**,** Jhaveri M, Gao Y, Lei Z, Lingrel J, El-Mallakh RS. June 9, 2011 *Knock out of the alpha2 isoform of the sodium pump not a reliable animal model for mania.* Ninth International Conference on Bipolar Disorders [Program]

C. Posters:

Roberts MB**,** Hunt R. March 15, 2014. *Phylogenetic Analysis of Color Morphs from Two Species of Erythroneura Leafhoppers.* Indiana Academy of Science, 129th Annual Academy Meeting

Roberts MB, Gao Y, El-Mallakh, RS. July 31, 2013. *Variation in Behavior and Corticosterone Levels Following the Moving Bar Method of Sleep Fragmentation vs. the Inverted Flowerpot Method of Sleep Deprivation.* Poster Session of Summer Undergraduate Research (University of Louisville)

Akers B, Krupp S, Gao Y, Roberts MB, El-Mallakh R. October 27 2015. *Corticosterone Levels in REM-Deprivation and REM-Fragmentation*. Research!Louisville 2015

D. Presentations:

Presented Seminar: *Vibrational Communication in Leafhoppers: Stereotyped Form and Plasticity*. Department of Biology, Indiana University Southeast, New Albany, IN. November 19, 2014

Roberts MB, Hunt R. March 26, 2016. *Amplitude Plasticity in Mating Duets of Male Erythroneura Leafhoppers During Mate Finding*. Indiana Academy of Science, 131st Annual Academy Meeting

V. Laboratory Research Skills:

A. Laboratory Experience:

Micro-pipetting
PCR
Gel electrophoresis (DNA, qualitative)
ELISA
Spectroscopy of fluid samples

Substrate vibration recording using a laser vibrometer
Substrate vibration recording using a phonograph cartridge
Vibration playback using a shaker
Constructing a phylogenetic tree with MEGA 6 software (maximum likelihood, bootstrapping)

B. Animal Research Experience:

Handling, sex determination of, tagging, tissue sampling, euthanizing (with blood collection) mice.
Sleep depriving mice (moving bar method and inverted flowerpot)
Catching insects and transferring them using an aspirator (field and lab)
Sex determination of leafhoppers

C. In Classroom Research Skill Experience:

Microscopy
Cloning and expressing genes in *E. coli* (choosing restriction sites on source and vector, designing primers, transforming bacteria, checking for marker genes)
Southern Blot
Tracking tagged turtles with radio equipment
Surveying honeysuckle bush size/density in an area via point transects
Cell staining
Cell plating
Identification of insects to family level using dichotomous keys
Collecting insects (sweeping and kill jars)
Small mammal dissections
Minor surgery on a mammal (testes removal and implantation of a subdermal hormone supplement device)
Fluorescent microscopy
Culturing animal cell lines
Western Blot
Statistics using R