LAB CRAWL FALL 2013

Fill up your passport with stickers by visiting the labs listed here. Three stickers get you pizza in the Love Lounge or the Math Lounge, and every sticker you get is an entry in the raffle. Labs in Carnegie, Severance, and the AJLC get you two stickers, and they’re where you can find dessert. Have fun and good luck! Labs are open from 11:45-1:30 unless otherwise indicated.

**Anthropology**, located in King and Rice

Amy Margaris, King 322. The Osseous Materials Research & Education Project (OMREP) and archaeology research lab studies how ancient technologies were crafted and used, with emphasis on organic media including bone and antler. 11:45-1:15

Jason Haugen, Rice 32. The Linguistics Lab is studying Native American languages, including the structures of individual languages (esp. Classical Nahuatl and Hiaki/Yaqui), historical linguistics (esp. Uto-Aztecans), and theoretical linguistics (esp. morphology and its interfaces with phonology and syntax). 12:00-1:30

**Biology**, located in Kettering, the west end of the Science Center

Michael Moore, Science Center K112. The Moore lab studies the evolution of plants using comparative analyses of DNA sequence data, morphology, biogeography, and ecological preferences. The primary focus of recent work in the Moore lab is on plants that grow only on unusual soils in the Chihuahuan Desert.

Marta Laskowski, Science Center K113. The Laskowski lab is studying the cellular mechanisms that lead to the formation and positioning of lateral roots, particularly in the model plant Arabidopsis thaliana.

Yolanda Cruz, Science Center K217. The Cruz lab studies embryonic development and reproduction in marsupials. Ongoing projects include embryo-maternal signaling during pregnancy, expression of transposon sequences and conserved genes in the opossum genome, and biology of embryonic stem cells. 12:00-1:15

Taylor Allen, Science Center K200. With approaches from engineering, genetics, and physiology, the Allen lab is investigating how muscle generates force and how muscular performance is optimally tuned to match the demand. 11:45-1:00

Maureen Peters, Science Center K212. The Peters lab investigates the molecular and cellular basis of a multi-tissue signaling system controlling the timely elimination of waste products from the body. We use genetic, genomic, molecular, physiological and in vivo imaging approaches for our studies in C. elegans.

**Chemistry and Biochemistry**, located between Kettering and Wright

Matthew Elrod, Science Center N285. The Elrod lab is studying atmospheric chemistry processes, particularly those related to air pollution and climate change. 12:00-1:30

Jason Belitsky, Science Center N386. The Belitsky lab is studying melanins, the pigments in humans, and related synthetic analogs, including melanin-inspired materials as potential sensors for heavy metals.

Chelsea Martinez, Science Center N282. The Martinez lab is studying (1) permeability of artificial lipid membranes, (2) aromatic donor-acceptor interactions, (3) synthesis of aromatic ligands for EuS, and (4) purification methods for investigating covalent RNA-protein hybrids. 12:00-1:30

Rebecca Whelan, Science Center N391. The Whelan lab focuses on new ways to diagnose and treat ovarian cancer. We approach this problem with a diverse toolkit of techniques drawn from analytical science, bioinformatics, molecular biology, and nanotechnology.

Robert Thompson, Science Center N373. The Thompson lab develops forensic analytical chemistry experiments, analyzes "blood" for alcohol and illegal drugs, isolates drugs in blood by protein precipitation and solid phase extraction, and determine drugs by liquid chromatography-mass spectrometry. 11:45-1:15

**Computer Science**, located on the second floor of King

Cynthia Taylor, King 233. The Taylor lab works on Distributed Systems (allowing computers to work together over a network), Internet measurement, and currently a user study of the Prestissimo project.

Benjamin Kuperman, King 221. The Kuperman lab does work in computer and information security with a focus on audit systems and the use of virtualization for "hands-on" computer security exercises, and also supports the development of Prestissimo -- a student designed and maintained search engine for Oberlin classes.

**Environmental Studies**, located in the Adam Joseph Lewis Center

Sean Hayes, the Living Machine in the Adam Joseph Lewis Center. The Living Machine in the AJLC is a wastewater treatment system that is built to mimic a natural wetlands ecosystem. 11:45-1:00
Geology, located in Carnegie

Amanda Schmidt, Carnegie 418. The Schmidt lab is studying how people alter erosion rates through changing land cover and land use. We use GIS analyses and short-lived radionuclides to fingerprint sediment sources and sinks. They use GIS and remote sensing to quantify past land uses.

Karla Hubbard, Carnegie 415. The paleontology lab is studying tiny fungus and algae that bore into clam shells on the seafloor. They are devising a way to use the borings as a proxy for seawater depth in modern shells that can be applied to fossil shells.

Mathematics, located on the second floor of King

Jack Calcut, King 203. Calcut’s students are working on low dimensional topology and will demonstrate this work to visitors by drawing pictures. 12:00-1:00

Kevin Woods, King 205. Students will showcase Honors work in the mathematics department, with topics ranging from quantum information theory to topology and graph theory. 12:00-1:15

Neuroscience, located just east of Kettering

Tracie Paine, Science Center A242. The Paine lab is studying the GABAergic and dopaminergic regulation of attention and impulse control in rodents because these neurotransmitter systems and cognitive functions are abnormal in mental disorders such as schizophrenia.

Jan Thornton, Science Center A240. The Thornton lab studies the effects of estrogens on cognition, neurogenesis and GABA neurons in an animal model of schizophrenia. They also study how estrogens and Luteinizing Hormone (LH) affect spatial memory in female rats and in an animal model of Alzheimer’s disease, and the role of LH receptors in the prefrontal cortex and hippocampus of the brain.

Gunnar Kwakye, Science Center A245. The Gunnar Kwakye lab utilizes cellular and molecular approaches to investigate the environmental influences on neurodegenerative diseases such as Huntington’s and Parkinson’s. 12:00-1:20

Leslie Kwakye, Science Center A257. The Leslie Kwakye Lab is interested in how the brain combines information from the different senses and how cognitive factors such as attention modulate this multisensory integration.

Pat Simen, Science Center A239. The Simen lab is studying human decision making and timing behavior.

OCTET, located in the basement of Severance

Glen Gerbush, Severance 030. The 3D Printer Lab is researching 3D printing technologies as well as producing custom parts for faculty and students. 11:55-1:30

Physics & Astronomy, located in Wright, the east end of the Science Center

Robert Owen, Wright 014. The Wright lab works on general relativity theory, specifically studying the structure of colliding black holes, through a mixture of mathematical calculations and computational simulations.

Jason Stalnaker, Wright 104. The Stalnaker lab uses precision atomic spectroscopy using an optical frequency comb based on a femtosecond mode-locked laser.

Yumi Ijiri, Wright 017. The Ijiri lab studies properties of magnetic nanoparticles and other unusual magnets, and is working on developing new methods to probe magnetic samples. 11:45-1:00

Dan Styer, Wright 014. The Styer lab is working on computer simulations of quantal interference, and particularly the Aharonov-Bohm effect. 12:15-1:30

Psychology, located in Severance

Al Porterfield, Severance 240. The Porterfield lab is studying modulation of acoustic startle response by affective face stimuli. 12:00-1:15

Patricia deWinstanley, Severance 234. The deWinstanley lab studies the impact of sleep on memory consolidation.

Quantitative Skills Center, located in the Science Library

Our peer tutors represent a variety of majors and provide help with a large range of quantitative skills in all courses, especially introductory math and science courses, including but not limited to help with math, software, stats, spreadsheets, scientific paper, lab reports, and more. 11:30-1:00