

FACULTY AND AREAS OF RESEARCH

The following lists the full-time, tenured/tenure track, faculty in the Department of Biological Sciences, with the institution where they were awarded their doctorate degree, and their area of research interest. For more information please go to our website at www.csulb.edu/depts/biology.

*FACULTY AVAILABLE TO SERVE AS THESIS ADVISORS:

BENGT J. ALLEN, Ph.D. (State University of New York, Stony Brook). MARINE COMMUNITY ECOLOGY. Interaction of individual organisms with their environment and the mechanistic links to associated coastal marine populations, communities and ecosystems bjallen@csulb.edu

JAMES W. ARCHIE, Ph.D. (State University of New York, Stony Brook). EVOLUTIONARY AND ECOLOGICAL GENETICS; POPULATION BIOLOGY; BIOSTATISTICS. Evolutionary and ecological genetics of lizards in the genus *Sceloporus*. Phylogeography of *S. occidentalis* and *S. graciosus*. Evolutionary significance of mtDNA clade boundaries. jarchie@csulb.edu

FLORA BANUETT, Ph.D. (University of Oregon). FUNGAL GENETICS AND CELL BIOLOGY. Molecular mechanisms of cell morphogenesis in the fungus *Ustilago maydis*. Signal transduction and plant-pathogen interactions. Genetic determinants of the life cycle – the mating types. fbanuet@csulb.edu

JUDY A. BRUSSLAN, Ph.D. (University of Chicago). PLANT MOLECULAR GENETICS. Molecular analysis of two chloroplast-localized proteases that affect photoacclimation. Molecular analysis of chloroplast to nuclear signaling during exposure to high light intensity. bruss@csulb.edu

ASHLEY CARTER, Ph.D. (Yale University). THEORETICAL AND EMPIRICAL EVOLUTIONARY BIOLOGY. Theoretical: mathematical and computer simulation models of evolutionary processes, comparative allometric studies. Empirical: insect quantitative genetics and morphometrics, fluctuating asymmetry. acarter3@csulb.edu

JESSE DILLON, Ph.D. (University of Oregon). MICROBIAL ECOLOGY AND EVOLUTION. Molecular diversity and ecophysiology of microbial communities in extreme environments. jdillon@csulb.edu

ELIZABETH D. ELDON, Ph.D. (Indiana University, Bloomington). DEVELOPMENTAL BIOLOGY. Genetic and molecular analysis of receptor signaling in development and innate immunity. eeldon@csulb.edu

L.K. (VERN) EVELAND, Ph.D. (University of Iowa). PARASITOLOGY AND IMMUNOLOGY. Mechanisms of pathogenicity in parasite infections; chemoattraction in helminths. eveland@csulb.edu

ESTEBAN FERNANDEZ-JURICIC, Ph.D. (Universidad Complutense de Madrid). ORNITHOLOGY. BEHAVIORAL ECOLOGY: Visual perception and social foraging in birds. CONSERVATION BIOLOGY: Effects of human disturbance (tourism, urban sprawl) on bird populations and communities. efernand@csulb.edu

- EDITTE GHARAKHANIAN, Ph.D.** (University of California, Los Angeles). MOLECULAR CELL BIOLOGY. Identify genes and gene products involved in trafficking of proteins to the lysosome of Baker's yeast; study their conservation in humans and their connection to human diseases such as Alzheimer's and cancer. eghara@csulb.edu
- ERIC J. HAAS, Ph.D.** (University of California, Berkeley). INSECT VIROLOGY, PHYSIOLOGY and IMMUNOLOGY. Molecular mechanisms of resistance to baculovirus infection in lepidopteran larvae. Using genetically modified viruses, we study host-pathogen interactions with the goal of increasing the efficacy of these biological control agents. ehaas@csulb.edu
- KEVIN M. KELLEY, Ph.D.** (University of California, Berkeley). COMPARATIVE & ENVIRONMENTAL ENDOCRINOLOGY. Impacts of environmental stressors/factors on endocrine signaling ("environmental endocrine disruption") in marine fishes. Comparative endocrinology of anabolic and catabolic/stress regulatory systems. kmkelley@csulb.edu
- BALWANT S. KHATRA, Ph.D.** (University of Leeds, England). METABOLIC REGULATION. Hormonal regulation of cellular metabolism. bskhatra@csulb.edu
- LISA S. KLIG, Ph.D.** (Albert Einstein College of Medicine). MOLECULAR GENETICS AND BIOINFORMATICS. Analysis of inositol metabolism in humans and in pathogenic fungi of humans. Inositol is a sugar that can serve as a precursor for a membrane phospholipid (phosphatidylinositol), a second messenger in signal transduction, an osmolyte, or an energy source. Disruption of inositol metabolism has been observed in patients with bipolar disease and diabetes. Inositol metabolism may also be involved in the pathogenicity of specific fungi that infect humans. Furthering the understanding of inositol metabolism may lead to the development of effective therapeutic agents. lsklig@csulb.edu
- KAY LEE-FRUMAN, Ph.D.** (Harvard University). CANCER CELL BIOLOGY/IMMUNOLOGY. Molecular mechanism of immunosuppressant and anti-cancer drugs. We study the signal transduction pathways regulating cell growth and proliferation, with an emphasis on kinase enzymes. kleeffrum@csulb.edu
- BRIAN LIVINGSTON, Ph.D.**
- CHRISTOPHER G. LOWE, Ph.D.** (University of Hawaii, Manoa). PHYSIOLOGICAL AND BEHAVIORAL ECOLOGY OF TELEOST GAMEFISHES AND ELASMOBRANCHS. Emphasis on bioenergetics, physiological and behavioral fisheries ecology, and movement patterns of gamefishes and elasmobranchs. clowe@csulb.edu
- SIMON MALCOMBER, Ph.D.** (Washington University, St. Louis, MO). PLANT SYSTEMATICS AND EVOLUTION. Phylogenetic relationships among plants and developmental genetic mechanisms affecting morphological evolution, particularly in members of the grass family (Poaceae) and their close relatives. smalcomb@csulb.edu
- STEVEN L. MANLEY, Ph.D.** (University of California, Los Angeles). ALGAL PHYSIOLOGY AND BIOCHEMISTRY. Marine algal nutrient and pollutant assimilation, trace gas production and halogen metabolism. smanley@csulb.edu
- DONNA L. MARYKVAS, Ph.D.** (Cornell University). MOLECULAR MICROBIOLOGY AND MICROBIAL GENETICS. Motility in bacteria and marine archaea, emphasizing gene expression, flagellum assembly, and motor protein interactions. Nature's nanotechnology – molecular motors

Motility, pathogenesis, and genomics of enteropathogenic *E. coli* (EPEC). dmarykwa@csulb.edu
ANDREW Z. MASON, Ph.D. (University of Wales, U.K.). CELL BIOLOGY. Mechanisms of metal homeostasis, metabolism and detoxification in marine invertebrates. zedmason@csulb.edu

BRUNO PERNET, Ph.D. (University of Washington, Seattle). MARINE INVERTEBRATE BIOLOGY. Development, functional morphology, and evolution of marine invertebrate larvae. bpernet@csulb.edu

BRYAN ROURKE, Ph.D. (University of California, Irvine). INTEGRATIVE ANIMAL PHYSIOLOGY. Vertebrate muscle physiology, effects of hibernation, exercise, and metabolism. brouрке@csulb.edu

KEVIN SINCHAK, Ph.D. (Michigan State University). REPRODUCTIVE BEHAVIORAL NEUROENDOCRINOLOGY; NEUROSCIENCE; and NEUROSTEROIDS. I study the gonadal steroid regulation of neural circuits that control reproductive behavior, and the physiology and function of steroids made in the brain (neurosteroids). ksinchak@csulb.edu

DESSIE L. UNDERWOOD, Ph.D. (University of California, Davis). INSECT BIOLOGY. Insect behavioral ecology; plant-insect interactions; the evolution of cooperation, division of labor, and sex ratio; lepidopteran cytogenetics; chromosomal non-disjunction. dlunderw@csulb.edu

CHRISTINE R. WHITCRAFT, Ph.D. (University of California, San Diego). WETLAND ECOLOGY. Plant-animal interactions and mechanisms behind these interactions. Conservation biology. Human impacts (invasion, development, restoration) on salt marsh ecosystems and food webs.

RAYMOND R. WILSON, Ph.D. (University of California, San Diego-Scripps Institution of Oceanography). MARINE ICHTHYOLOGY. Population genetics of marine fishes. rwilson1@csulb.edu

KELLY YOUNG, Ph.D. (John Hopkins School of Public Health, Baltimore, MD). REPRODUCTIVE BIOLOGIST. Seasonal changes in reproductive physiology; photoperiodic regulation of ovarian/testicular function. kyoung4@csulb.edu

MASON X. ZHANG, Ph.D. (University of Wisconsin, Madison). HOST-PATHOGEN INTERACTIONS. Human anti-microbial mechanisms, passive immunization, immunoglobulin genes, genetic engineering of human antibody, microbial adhesions, opportunistic microbial infections. mzhang2@csulb.edu

FULL-TIME LECTURER

GWEN GOODMAN-LOWE, Ph.D. (University of Hawaii, Manoa). MARINE ECOLOGY, MARINE MAMMALOLOGY. ggoodman@csulb.edu

FACULTY WHO ARE CURRENTLY TEACHING BUT NOT ACCEPTING GRADUATE STUDENTS:

DAVID G. HUCKABY, Ph.D. (University of Michigan). BIOSYSTEMATICS.

CAROL A. ITATANI, Ph.D. (University of Southern California). HEMATOLOGY/CELLULAR IMMUNOLOGY.

ALAN C. MILLER, Ph.D. (University of Oregon). ECOLOGY.

TERRY A. SHUSTER, Ph.D. (University of Minnesota). CELL BIOLOGY.

***Important Note:** Some professors have a full contingent of graduate students and may not be accepting new students for a year or two. Please contact professors in your general area of interest to assess the potential availability of a thesis chair in the coming year.

8/04/08