Cell and Molecular Biology (CEMB)

Faculty
Paul D. Adams, Associate Professor
Nick Anthony, Professor
Jamie I. Baum, Assistant Professor
Robert R. Beitle Jr., Professor
Burt H. Bluhm, Assistant Professor
Walter G. Bottle, Professor
Nilda Roma Burgos, Professor
Jingyi Chen, Assistant Professor
Jim Correll, Professor
Danny J. Davis, Professor
Dan Donoghue, Professor
Michael Edward Douglas, Professor, 21st Century Chair in Global Change Biology
Marlins R. Douglas, Associate Professor, Bruker Life Sciences Chair
Ashley Patrick Gregg Dowling, Associate Professor
Yuchun Du, Associate Professor
Bill Durham, University Professor
Gisela F. Erf, Professor, Avian Immunology Professorship
William J. Etges, Professor
Ingrid Fritsch, Professor
Robyn Goforth, Research Assistant Professor
Fiona Goggin, Professor
Billy M. Hargis, Professor, Sustainable Poultry Health Chair
Ralph Leroy Henry, Distinguished Professor
Christa Hestekin, Associate Professor
Navam S. Hettiarachchy, University Professor
Mack Ivey, Associate Professor
Sha Jin, Assistant Professor
Jin-Woo Kim, Professor
Roger E. Koeppe II, Distinguished Professor
Byung-Whi Kong, Associate Professor
Ken L. Korth, Professor
Timothy Alan Kral, Professor
David L. Kreider, Associate Professor
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Young Min Kwon, Associate Professor
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Michael Herbert Lehmann, Associate Professor
Daniel J. Lessner, Assistant Professor
Jiali Li, Associate Professor
Yanbin Li, Professor
Matt McIntosh, Professor
David S. McNabb, Associate Professor
Frank Millett, Distinguished Professor
Derrick M. Oosterhuis, Distinguished Professor, Clyde H. Sites Endowed Professorship in International Crop Physiology
David W. Paul, Associate Professor
Andy Pereira, Professor
Ines Pinto, Associate Professor
Douglas Duane Rhoads
Steven C. Ricke, Professor, Donald “Buddy” Wray Chair in Food Safety
Donald K. Roper, Associate Professor
Rick Rorie, Professor
Charles F. Rosenkrans Jr., Professor
Craig S. Rothrock, Professor
Joshua Sakon, Associate Professor
Mary Cathleen Savin, Professor
Ron J. Sayler, Assistant Professor
Shannon Servoss, Assistant Professor
Jeffrey Donald Silberman, Associate Professor
Michael F. Slavik, Professor
Nancy J. Smith-Blair, Associate Professor
Fred Spiegel, Professor
Vibha Srivastava, Professor
Julie A. Stenkem, Professor
Wesley Stites, Professor
Allen Lawrence Szalanski, Professor
David Orien TeBeest, University Professor
Suresh Thallapuranam, Associate Professor
Ryan Tian, Associate Professor
Christian K. Tipsmark, Assistant Professor
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Degrees Conferred:
M.S., Ph.D. (CEMB)

Areas of Concentration: Graduate studies may be pursued in any area of Cell and/or Molecular Biology, including the study of various aspects of cell function, structure, metabolism, and chemical functions on, within, and between cells; the study of biomolecular interactions; the relationships between biomolecular reactions and observed cellular properties; molecular genetics, protein chemistry, biological structures; as well as the use of molecular detection methods to detect or characterize biological states in prokaryotes, eukaryotes, systematics, forensics, or health care.

Admission to Degree Program: All applicants must have a B.A. or B.S. in a basic or applied science. Applicants must present Graduate Record Examination scores for the Verbal and Quantitative tests, and the GRE writing instrument. For admission, a student must have a sponsoring faculty member. The sponsoring faculty member will submit probable thesis subjects to the Program Committee prior to acceptance of the student. Once an applicant has been approved by the Program Committee, applications are forwarded to the Graduate School for application for admission to the Graduate School. Admitted and sponsored students will be responsible for the Graduate School's application fee unless paid by the department of the sponsoring faculty member.
Requirements for the Master of Science Degree: For the M.S. degree, the Graduate School and/or the program requires 30 semester hours, a comprehensive examination, a cumulative GPA of 3.00, and a minimum residence of 30 weeks. Any student who receives a grade of “F” in any graduate-level course will be subject to dismissal following review by the Program Advisory Committee. All candidates for the M.S. must complete a minimum of 24 hours of post-baccalaureate graduate credits not including seminar and thesis credit hours (18 hours plus CHEM 5813 and CHEM 5843) in Cell and Molecular Biology-approved courses and 6 hours of thesis research. In addition, all candidates must enroll every fall and spring semester in a Cell and Molecular Biology designated seminar course. Graduate advisory and thesis committees will consist of at least three program faculty representing at least two different departments. With the approval of the student’s Graduate Advisory Committee, up to 6 hours of alternative graduate courses may be used to satisfy the 24 hours of course work. All M.S. candidates must complete a thesis based on their research and pass a comprehensive oral examination based on the thesis. Examination and approval of the thesis is by the student’s Graduate Thesis Committee. Just prior to the Final Examination, the M.S. candidate will present a public seminar announced to all CEMB faculty and students.

Requirements for the Doctor of Philosophy Degree: Candidates for the Ph.D. must complete 18 hours of dissertation research. Students wishing to bypass the M.S. for a Ph.D. must complete a minimum of 24 hours of course work in Cell and Molecular Biology approved course work and a minimum of 18 hours of dissertation research. In addition, all candidates must enroll every fall and spring semester in a Cell and Molecular Biology designated seminar course. Graduate advisory and dissertation committees will consist of at least four program faculty representing at least two different departments. With the approval of the student’s Graduate Advisory Committee, up to 6 hours of alternative graduate courses may be used to satisfy the 24 hours of course work. Any student who receives a grade of “D” or “F” in any graduate-level course will be subject to dismissal following review by the Program Advisory Committee. Any student receiving more than two grades of “C” in courses of two or more credit hours is no longer eligible for the Ph.D., but may elect to complete an M.S. degree in the program. All Ph.D. students must complete the Candidacy Examination. The Candidacy Examination for the Ph.D. will consist of the writing of an original research proposal using the guidelines for a federally funded post-doctoral fellowship (e.g., NIH, NSF, USDA) and an oral examination over the proposal, related subjects, and general knowledge. The written and oral portions of the candidacy examination must be completed within the Ph.D. candidate’s first two calendar years in this program. Students in the Ph.D. track will, in collaboration with their Graduate Advisory Committee, select a topic and format for their research proposal within the first year in the program. The proposal topic is to be within the field of Cell and Molecular Biology but on a subject distinct from the student’s Ph.D. research. The written proposal is submitted to the student’s Graduate Advisory Committee for evaluation and approval or rejection. Students may submit the proposal more than once. Upon completion of an approved proposal the candidate must then pass an oral examination by the student’s Graduate Advisory Committee covering the proposal, related subjects as determined by the examining committee, and general knowledge relevant to research in Cell and Molecular Biology. Only upon satisfactory completion of the proposal and oral examination, as judged by the student’s Graduate Advisory Committee, does a student become a candidate for the Ph.D. Students who fail to complete the candidacy examination in the allotted time will be dropped from the Ph.D. program but may choose to become candidates for the M.S. The Ph.D. is granted not only for fulfillment of technical requirements but also for development and possession of critical and creative thought abilities in the areas of Cell and Molecular Biology. Evidence of these abilities is given through the completion of a dissertation. The student’s Graduate Dissertation Committee will evaluate the dissertation and conduct an oral Final Examination of the candidate over the dissertation and any other subject matter deemed appropriate by the committee. Administration of the final oral defense will follow the Graduate School guidelines outlined in the Graduate Catalog. Just prior to the Final Examination, the Ph.D. candidate will present a public seminar announced to all CEMB faculty and students.