

HHMI Distinguished Mentor awards recognize excellence in undergraduate mentoring. Eight awardees were selected in the 2008 competition. These came from dozens of nominees and applicants from numerous different colleges and units at Louisiana State University and the University of Florida representing ranks from junior faculty to distinguished professors.



Mark A. Batzer is the Andrew C. Pereboom Alumni Departmental Professor of Biological Sciences in the College of Basic Sciences at Louisiana State University. Dr. Batzer has spent 20 years studying mobile elements and his research is funded by multiple awards from the National Institutes of Health and National Science Foundation as well as the Louisiana Board of Regents. Mobile elements, also called “jumping genes”, are stretches of DNA sequence that duplicate themselves throughout the genomes in which they reside. Research projects in Dr. Batzer’s laboratory have involved 26 undergraduate research assistants who have been authors on 24 of the more than 200 peer reviewed publications from the Batzer group. The undergraduate

research assistants in the laboratory receive practical hands on training in a variety of molecular genetics techniques and computational biology. Dr. Batzer has served as a mentor for undergraduate research through the Chancellor’s Future Leaders in Research (CFLR) program, a scholarship program through the LSU Office of Research and Economic Development, the Chancellor’s Aide scholarship program, the LSU Honor’s College, the Louisiana Biomedical Research Network (LBRN), NSF-REU program and HHMI undergraduate summer research program. Thus far, all of Dr. Batzer’s undergraduate research fellows have successfully completed their undergraduate degree programs in 3-4 years and the majority of them have continued on to pursue advanced degree programs in medicine, law, pharmacy or other related fields. Dr. Batzer is currently an Associate Editor for Genomics, Executive Editor for Analytical Biochemistry, Editor for Gene, member of the editorial board for the Repeated DNA Sequence Database and was recently named a Fellow of the American Association for the Advancement of Science (AAAS). mbatzer@lsu.edu

Miklos Bona is an Associate Professor of Mathematics at the University of Florida, specializing in Combinatorics. He is the author of three successful textbooks, two of which are meant for advanced undergraduates. He currently works on an NSF-NIH sponsored project on Macromolecular Assembly with Meera Sitharam of the Computer Science Department of UF, and Mavis McKenna from the Brain Institute. His own research in combinatorial enumeration has been supported by continuous grants from the National Security Agency since 2003. Dr. Bona graduated his first doctoral student at UF before getting tenured. He has mentored four undergraduates in the UF Scholars Program, two of whom went on to publish their results in academic



journals and to present them in international conferences. Funds from the current HHMI grant will enable Miklos Bona and his team of students to research the role of permutations in genome sorting, and use techniques of advanced combinatorics to find the shortest evolutionary distance between two genomes. Their work will also study genome sorting algorithms with block transpositions and block reversals. bona@ufl.edu



Hartmut Derendorf is Distinguished Professor and Chairman of the Department of Pharmaceutics at the University of Florida College of Pharmacy in Gainesville. He

has been teaching Biopharmaceutics, Pharmacokinetics and Clinical Pharmacokinetics. In 1995, he received the Teaching Improvement Award of the University of Florida. He was awarded the University of Florida Research Foundation Professorship (2002), the CVS Pharmacy Endowed Professorship(2007-12)and the International Educator of the Year Award (2004-7).

Prof. Derendorf has hosted over 80 undergraduate students over the last 20 years and more than half have moved on to Graduate School afterwards. He also has coordinated undergraduate student experiences with other Faculty in his Department (approximately 10 students/year). Prof. Derendorf has published over 300 scientific publications and among these are more than 30 papers with undergraduate co-authors have been published. He has published six textbooks. He is one of the editors of the *International Journal of Clinical Pharmacology and Therapeutics* and *Die Pharmazie* and Associate Editor for *J. Clin. Pharmacol.* His research interests include the pharmacokinetics and pharmacodynamics of corticosteroids, analgesics, antibiotics as well as drug interactions. Prof. Derendorf is currently President of the American College of Clinical Pharmacology (ACCP). He won the Rottendorf-Award for Pharmaceutical Sciences (1983), the McKeen-Cattell Award for the best publication in *J. Clin. Pharmacology* (1994) and the Faculty Award of the University of Utrecht (2005). In 2003, he was awarded the Nathaniel T. Kwit Distinguished Service Award of ACCP and the Research Achievement Award in Clinical Science of the American Association of Pharmaceutical Sciences (AAPS). He is past-President (2004/06) of the International Society of Antiinfective Pharmacology (ISAP). He is also a member of the Nutrition and Therapeutics Committee of the NASA Space Medicine Program and a member of the FDA Clinical Pharmacology Advisory Committee. hartmut@cop.ufl.edu

Anne Grove is an Associate Professor of Biochemistry in the Department of Biological Sciences, Louisiana State University. Her research, which is supported by NSF, focuses on protein-DNA interactions, with an emphasis on proteins involved in organizing the bacterial nucleoid. In addition to roles in nucleoid compaction or dynamics, these proteins also play roles in processes such as regulation of gene expression and DNA repair. Over the years, Dr. Grove has mentored 28 undergraduate students through several different programs, such as NSF-REU, HHMI and IMSD. Several students have co-authored peer-reviewed publications, three as first author. Undergraduate students have also contributed to a number of presentations at scientific meetings, some as recipients of awards such as undergraduate travel awards from the American Society for Biochemistry and Molecular Biology (ASBMB). In 2007, Dr. Grove was named a National Academies Education Fellow in the Life Sciences. agrove@lsu.edu



Karen E. Koch is a Professor in the Plant Molecular and Cellular Biology Program, the Horticultural Sciences Dept. (IFAS), and UF Genetics Institute. She and her research group study genes for sugar metabolism and effects of sugars on gene expression. To do so, they use a combination of corn genetics, genomics, and genetic engineering. Goals range from applied ends (improving kernel composition and yield), to fundamental questions (how fates of sugars are regulated). Central contributions continue to be made by Undergraduate Interns, with the 21 most recent students each presenting their own, first-authored papers at national or regional meetings. Participants have received national and UF awards, plus top fellowships at graduate and professional schools. The Koch lab is currently funded by the USDA-NRI-Plant Biochemistry Program (genes affecting kernel metabolism) and the NSF-Plant Genomics Research Program (functional genomics of maize). Dr. Koch has served on numerous grant review panels for national agencies, and managed three of them. She is currently an elected member of the Executive Committee for the American Society of Plant Biologists. KEKoch@ufl.edu



Dr. Robert McKenna is an associate professor of Biochemistry and Molecular Biology in the College of Medicine with an appointment through the McKnight Brain Institute. Using X-ray and neutron crystallography and other biophysical techniques, his main research focus is on structural studies of the zinc

metalloenzyme Carbonic Anhydrase (CA). His studies on CA range from; understanding basic science questions of how protons are transfer in the enzyme's active; to developing compounds that inhibit the enzyme and have possible therapeutic applications in cancer therapy, to the engineering of thermally stable forms of the enzyme for possible use in industrial-scale CO₂ sequestration. Rob is also involved with many other research collaborations throughout the University of Florida, including structural studies of ssDNA viruses used for gene delivery, and HIV protease a target enzyme for AIDs treatments. Rob enjoys strong research support from 2 simultaneous NIH and 1 NSF grant and he has published some 84 papers, with two notable recent reports in *Acc Chem. Res.* and *Biochemistry*. Rob's research has involved over 30 undergraduates since 2000, each with their own research project. Undergraduates in the lab have been awarded research fellowships, and awards at national conferences, including travel and poster awards. rmckenna@ufl.edu

Dr. David L. Reed is an Assistant Curator in the Florida Museum of Natural History, an Adjunct Assistant Professor in the Department of Zoology, and a Graduate Faculty Member of UF's Genetics Institute. He received his Ph.D. from Louisiana State University in Biology in 2000 and joined the faculty at UF in 2004.

Dr. Reed has broad research interests in evolutionary biology, although much of his lab's research focuses on parasites that evolve in tandem with their mammalian hosts. For example, students in the Reed lab have been studying human head lice in order to better understand human evolutionary history and recent human migrations. Research from the Reed Lab has shown that human head lice show the same Out-of-Africa population expansion that we see in modern humans 100,000 years ago, and that human and chimpanzee lice diverged contemporaneously with their primate hosts approximately six million years ago. Dr. Reed's research has been supported by three NSF grants, and has received wide media attention in the New York Times, Science, Nature, and o the BBC World Service. He has mentored nine students at UF through three NSF-REU supplements, the University Scholars Program, and HHMI's Science for Life program. Students in the Reed Lab regularly give talks at national and international meetings, and are co-authors on his publications. Dr. Reed encourages students to work on diverse projects in his lab ranging from Florida Panther Conservation to the population genetics of human parasites. dreed@flmnh.ufl.edu.



Dr. Robin Lea West is professor of psychology at the University of Florida, and currently the department Graduate Coordinator. Supported by grants from the National Institute of Health, the Brookdale Foundation, and The Retirement Research Foundation, Dr. West's research on everyday memory and memory self-regulation has focused on ways to maximize the memory performance of older adults. Since 2001, Dr. West has worked with over 60 undergraduate students in her research laboratory, studying the impact of memory training on seniors, the effects of goal setting on memory for all ages, and adults' hopes and fears ("possible selves") concerning memory and health. She has worked closely on senior thesis projects with 15 students; almost all of these have been awarded highest honors from the university and three projects won the Leighton E. Cluff Award for Aging Research. Dr. West is the author of over 60 academic papers, and two popular memory books, including the "Everyday Memory Clinic Workbook" and "Memory Fitness Over 40," which has been published in four countries. In addition to the HHMI award, Dr. West has won a Fulbright Fellowship, a TIP Teaching Award, a Mentor award from the American Psychological Association Division 20 (for graduate and undergraduate mentoring), and a MindAlert award from the American Society on Aging for her Everyday Memory Clinic training program for seniors. She has served on three national editorial boards for aging research journals. Dr. West is eager to work closely with more students in the Science for Life program that are interested in aging and memory. West51@ufl.edu

The University of Florida, Morehouse College, and Louisiana State University will award at least 37 HHMI-DM awards in six university-wide competitions over the first four years of the Science for Life program. A rotating seven-member selection committee reviews applications. Contacts: P. Soltis psoltis@flmnh.ufl.edu, R. Duran duran@chem.ufl.edu, K. Carman zocarm@lsu.edu, J.P. Brown jbrown@morehouse.edu