Biological Sciences

ALUMNI NEWS

University of Missouri - Columbia
Spring 1994

BIO LINES . . . .

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Greetings!

In this issue of Alumni News we return our focus to our undergraduate program, and in particular to our undergraduate-faculty research collaborations. Last summer, over 60 undergraduates were involved in collaborative research projects in life sciences on campus, and the majority of those students were working with our own faculty. Over 20 undergraduates continued their research projects through the academic year, and sixteen graduated with an Honors Research Degree in Biological Sciences. They presented the results of their research projects at the Missouri Academy of Sciences annual meeting, as well as at national meetings including the Argonne National Laboratory Student Research Symposium. We’re extremely proud of all these young men and women.

Several faculty were honored by student groups for their teaching and advising. Gerald Summers received the Arts & Science Student Government Purple Chalk Award for Excellence in Teaching, while Billy Cumbie was honored by the same group for Excellence in Advising. Jim Carrel received the Missouri Students Association Teaching Award and was elected an honorary member of the Golden Key National Honor Society. John Faaborg received the Gamma Sigma Delta Award of Merit for Outstanding Teaching. Finally, Robin Hurst received the Arts & Science Student Government Green Chalk Award for Outstanding Teaching as a Graduate Teaching Assistant.

We welcomed two new faculty this year, Lee Dugatkin and Ray Semlitsch. And we said our final good-byes to two old friends, Joe Wood and Dave Dunn.

We close this issue, as always, with news from your friends and colleagues. I hope you will take a few minutes to fill out the attached questionnaire so we can all continue to keep in touch.

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Cover illustration: Lefevre Hall (opened in 1914) and Tucker Hall (opened in 1969).
An Educational Partnership: 
Faculty and Undergraduate Research Collaborations

by Linda Blockus

Although MU has long been recognized as a premier training ground for graduate students, the Division of Biological Sciences is especially pleased with the recognition our faculty and programs have received as they provide individualized research experiences for undergraduates. The number of undergraduates graduating with honors research degrees has steadily increased over the past five years, as has the number of students presenting their research at local, regional and national conferences and appearing as co-authors on papers. The Division has received funding from the Howard Hughes Medical Institute, the National Science Foundation, the National Institutes of Health, and Merck Industries to enhance the research opportunities for undergraduates at all levels. We continue to seek external funding from federal and private sources to support research experiences for all interested students. As the premier public research institution in Missouri, MU is able to provide the research facilities and attract federal funding; however it is the faculty mentorship that truly distinguishes our students’ education. Faculty devote a great deal of their time and enthusiasm to undergraduate research initiatives. The impact of faculty mentorship on our student’s educational experience is quite remarkable. We highlight some of our faculty-student research pairs below.

**Steve Danzer & Dr. Mark Kirk**

Steve learned many basic neurobiology research skills when he enrolled in the new Neurobiology Techniques laboratory course taught by Drs. Allan Harrelson, Mark Kirk, and Andy McClellan. This new knowledge was put to the test during his senior year when, in Dr. Kirk’s laboratory, Steve studied functional neural regeneration in reflex pathways of the feeding system in the marine mollusc, *Aplysia californica*.

Using electrophysiological recordings and immunocytochemistry techniques, Steve’s research added to the laboratory’s understanding of functional neural regeneration after bilateral nerve damage. With his research experience and a grade point average well above 3.9 (Steve received his only B’s in Scuba Diving and College Physics!), Steve was courted by several graduate schools. He has decided to enroll in the PhD program in Neurosciences at the University of Arizona. Steve attended high school in St. Louis. While at MU he received a Hughes Undergraduate Research Internship and was selected as one of only 300 Goldwater Scholars nationwide.

**Mark Troxel & Dr. Andrew McClellan**

Mark learned first-hand where Dr. McClellan’s lab animals come from - not from a mail-order supply company, but from a tributary of Lake Michigan! Mark went on a three day collect-

*Dr. Mark Kirk and Steve Danzer*
An Educational Partnership

Laine Young & Dr. Don Riddle

Laine began work in Dr. Don Riddle’s genetics laboratory during her freshman year, as part of the pilot EXPRESS Program (Exposure to Research for Science Students). EXPRESS has been funded by MU’s Howard Hughes Grant as a way to get more minority students into science research programs. Laine continued to work in Dr. Riddle’s laboratory throughout her undergraduate career and helped to clone the daf-2 gene from the nematode Caenorhabditis elegans. She presented a poster based on her research during Molecular Biology Week at MU. Laine feels that among the most valuable experiences to come from working in Dr. Riddle’s lab was meeting other people interested in science and learning techniques not taught in formal classes. Laine served as the President of the Blacks in Pursuit of Medicine club and was selected to assist the Division with our Summer Welcome advising program. She is now a first year medical student at the MU School of Medicine.

Rustico Ramos & Dr. Tom Phillips

Throughout his four year undergraduate career, Rustico was actively involved in Dr. Phillips’ cell biology laboratory and received support from the EXPRESS Program, the McNair Internship Program, the Hughes Internship Program, and from Dr. Phillips’ research grant. One of Rustico’s research projects involved defining the growth conditions which promote differentiation of a human colon cancer cell line in serum-free medium. His findings led the lab to significantly modify the way they routinely grow this cell line, which is essential for all of their research. Rustico was one of very

ing trip to Michigan with Dr. McClellan and post-doctoral researcher G.R. Davis to gather the lampreys that they use in their neurobiology research. Even though it rained the whole trip, it was an educational experience he won’t soon forget! Mark worked in Dr. McClellan’s lab in Lefevre Hall for two years studying the recovery of locomotor function in spinal-transsected larval lamprey. He presented his research at the Midwest Neurobiology Meeting and his name will appear on at least two research publications. Mark was accepted at several graduate schools, but elected to enroll in the PhD program in neurobiology at the University of Michigan.

above: Dr. Andrew McClellan and Mark Troxel
right: Dr. Tom Phillips and Rustico Ramos

Laine Young and Dr. Don Riddle
few students from across the country selected to participate in a summer research program at the Southwestern Medical Branch of the University of Texas. A native of Knob Noster, Missouri, he has twice presented his research at both the Argonne National Laboratory Undergraduate Symposium and the Missouri Academy of Science. Rustico has served as a role model for younger students in the lab. He was selected by a faculty committee to receive the Cancer Federation Scholarship, and enrolled in medical school at MU this fall.

**Kelly Grace & Dr. Kathy Newton**

Kelly Grace, from Bosworth, Missouri, spent the summer after her graduation writing a manuscript based on research completed with her mentor Kathy Newton. Writing that scientific paper allowed Kelly to put her research into a broader scientific context. Originally interested in medical school, Kelly decided to major in both Biology and Anthropology at MU and completed honors research projects in both fields. Her anthropology project, designed in conjunction with the Missouri Department of Health, examined human cancer rates in St. Louis. Her research in Dr. Newton’s lab focused on maize genetics, and Kelly says she had experiences in the lab that she never could have gotten in the classroom. Kelly has combined her interests in human epidemiology and genetics by pursuing a PhD in Molecular and Medical Genetics at the Oregon Health Sciences School of Medicine.

**Beth Kent & Dr. Karen Cone**

As a new transfer student from the University of Delaware, Beth first began working in Dr. Cone’s lab washing dishes and sterilizing glassware. Three years later, with an outstanding undergraduate research record, she received a fellowship from the University of Minnesota to enter their PhD program in Plant Evolutionary Genetics. Beth presented her undergraduate research at the Argonne National Laboratory’s Undergraduate Symposia and at the national Maize Genetics Conference. She received Second Place honors at the Missouri Academy of Science meeting and an Honorable Mention Award at the Molecular Biology Week Poster Session (the only undergraduate to receive recognition amidst a group of senior graduate students!) Beth says that accompanying Dr. Cone to the Maize Genetics Conference in Chicago was invaluable. “Dr. Cone introduced me to leaders in the field — people whose papers I had read for my own research! I had the opportunity to discuss my research with them at the poster session, explore graduate opportunities, and discuss their research interests. Dr. Cone’s guidance and support enabled me to interact with other nationally recognized scientists.”
In Memorium

Joseph M. Wood

Joseph Miller Wood, Professor Emeritus of Biological Sciences, died at the Boone Retirement Center in Columbia on January 14, 1994. He is survived by his wife Betty, two children and two grandchildren.

After completing his PhD in botany at Indiana University, Joe came to the Botany Department at MU in 1960. He quickly became known as an exceptional teacher: as a student once remarked, "He is a master with a piece of chalk!" Joe regularly taught Botany to an audience of more than 500 students, and when the Division of Biological Sciences was formed he was the first to develop a new general course in Introductory Biology. At the graduate level he taught Paleobotany, Palynology and Micropaleobotany.

Joe always had high expectations of his students. He challenged them with the details of biology, while teaching them to think about the principles involved. At the same time he was very responsive to the needs of students. He coordinated individual help sessions on study techniques and test anxiety control methods and wrote innumerable letters for students and recent graduates who were applying for admittance to professional schools or the workplace. Joe taught with a sense of humor that always came through in his lectures and helped make biology more interesting.

Joe's teaching awards include the Standard Oil Teaching Award, the Teaching Award of Merit (Gamma Sigma Delta honor society), and the Arts and Science Student Government Purple Chalk Award. He was elected an honorary member of the Mystical Seven Honorary Society and selected for the Outstanding Faculty Member Award by Beta Theta Pi Fraternity.

Joe maintained an active research program in paleobotany and micropaleobotany, training seven PhD and two MA students. He also served as a member of many PhD and MA committees in the Department of Geology at MU. His work centered on characterization of pollen from modern and Cretaceous eras and also some macrofossils (cone spores and fossil algae). In addition to his research, Joe identified countless fossil materials for people outside MU.

In 1985 Joe Wood elected to retire at the age of 64, and was appointed Professor Emeritus of Biological Sciences. At that time he donated his extensive pollen slide collection to the MU Herbarium, and continued adding to that collection until his death. Joe Wood was a gentleman and a scholar. His wit and gracious presence will long be remembered in Tucker Hall and across the MU campus.

The Division Gives a Helping Hand at Christmas

For the second year in a row the Division of Biological Sciences staff, faculty and students have shown the true Christmas spirit by "adopting" families through the Voluntary Action Center, a United Way Agency that identifies and helps needy families in mid-Missouri. When administrative assistant Pat Willis first contacted the VAC in 1992, she was told that groups adopting a family must provide at least one new toy or gift per family member, along with food for a holiday meal. We weren't sure how much to expect in donations that first year, so Pat only signed the Division up for a single five-member family. The response was so great however, that we later adopted a second family that same year.

In 1993 we adopted a large extended family of three adults and six children. On December 10, a group of seven staff, faculty and student volunteers spent four hours wrapping the donations of clothes, shoes, toys and kitchen items including a microwave. Our adopted family received 75 individual packages and $200 in cash for gift certificates and a Christmas dinner. Pat spoke for the other organizers (Jan Wilson, Roslyn O’Conner, Connie LaBarbera) and everyone else in the Division when she said, "It gives us all a good feeling to know that we’re helping mid-Missouri people less fortunate than we are."

“We have so much, and others have so little.”
In Memorium

David Baxter Dunn

David Baxter Dunn, Professor Emeritus of Biological Sciences and Curator of the MU Herbarium from 1956 to 1987 died at his home after a brief illness, Monday, January 3, 1994. He was 76. Throughout his career, "Doc's" contributions to the field of systematic botany through his studies of the genus Lupinus were as prolific and lasting as the additions he made to the Herbarium. The field trips he and his wife Betty took with his students to the Western U.S., the Southwest and Mexico were legendary. So was his teaching in and out of the classroom.

"He opened up a new world of exploration for me," says Mike Currier, one of Doc's many graduate students. "Doc was an encyclopedia of plant knowledge. He was very generous with his time, always willing to share his knowledge and experience. He typified the classic mentor. Doc had a big influence on the development of my professional career."

Doc had a greenhouse built onto the back of his home in Columbia when he retired, and continued to carry on correspondence with colleagues and friends all over the world. Doc is survived by his wife, four sons, two daughters and 12 grandchildren. They will miss him and so will his students and the world of botany.

A Special Summer Welcome for Biology Majors

You may be surprised to learn that the months of June and July are perhaps the busiest for undergraduate advising in the Division. The University offers a well-coordinated orientation program for new freshmen and transfer students known as "Summer Welcome." An integral component of Summer Welcome is academic advising. Of the 1700 Arts & Science students participating in Summer Welcome in 1993, over 225 were prospective biology majors who were advised in Tucker Hall by Biological Sciences faculty advisors. That made our program the largest single Summer Welcome effort by any department on campus.

In addition to the thirteen volunteer faculty members, five senior biology majors assisted students with scheduling and registration, offered first-hand advice about succeeding as a biology student at MU, answered questions, and provided a perspective on course options that was uniquely their own. Frequently-asked questions included: How many hours can I take? Which foreign language should I learn? Can I finish my classes by noon each day? The advising program was coordinated by Dr. Billy Cumbie, Director of Undergraduate Programs, and Linda Blockus, Academic Advisor and Program Coordinator.

Freshman biology major Monica Brown (Kansas City) commented that the student assistants were very friendly and worked hard to schedule times that were convenient for her. Sakina Ahmnd (St. Louis) and Roberta Magai (Columbia) were especially pleased that the advisors took the time to listen to their interests and their preferences in classes. Providing faculty advisors throughout the Summer Welcome period gave our new majors a more personal advising experience, and got them off to a good start in their first year at MU.
Scientists searching for vaccines, drugs, or diagnostic tools have a powerful new technology available, thanks to Dr. George Smith, professor of biological sciences, and inventor of the epitope library. Epitope libraries are huge collections of cloned peptides. In brief, Smith synthesized a collection of short segments of DNA (oligonucleotides) capable of coding for all possible hexapeptides (protein sequences six amino acids long). These oligonucleotides were inserted into the genome of a bacterial virus in such a way that the hexapeptides eventually appeared as the aminoterminal portion of a viral surface coat protein. A single virus thus displays a single unique hexapeptide on its surface; a collection of hundreds of millions of viruses displays almost every possible hexapeptide sequence, creating a “hexapeptide epitope library.”

Now suppose one wants to develop a drug that blocks the action of a hormone. The hormone is known to bind to a protein receptor on the surface of mammalian cells, but the protein and exact binding site (short sequence of amino acids on the receptor which is in direct contact with the hormone) is unknown. The hexapeptide epitope library permits the rapid identification of the amino acid sequence of the binding site, and the eventual identification of the protein receptor itself. The hormone is reacted with the viral hexapeptide epitope library, and all the viruses that bind the hormone can be easily separated from those that don’t. Several rounds of this selection process yields a small collection of viruses which contain surface hexapeptide sequences with a high affinity for the hormone. Once the viruses have been isolated and purified the exact hexapeptide binding sequence that the hormone recognizes can be determined, and that amino acid sequence can be used to design new drugs to compete with the hormone for binding to the protein receptor on the cell surface. The hexapeptide epitope library thus provides a simple, rapid and cheap alternative to surveying peptides one at a time, as is the conventional practice in drug discovery. The time invested in the search for an important amino acid sequence is reduced from years to weeks.

Smith’s hexapeptide epitope library can also be used to design new vaccines. Individuals infected by a disease-causing agent produce antibodies to that agent. Those antibodies can be purified. The antibodies, which recognize and bind to the disease-causing agent, can then be reacted with the hexapeptide epitope library to determine the specific amino acid sequence to which the antibody binds. This sequence is presumably present on the disease-causing agent that originally elicited antibody production in the patient. That purified peptide could then be tested for its ability to elicit the production of antibodies to the disease-causing agent in individuals not yet exposed to the agent itself. This technology could lead to the development of vaccines for diseases such as AIDS and malaria.

The epitope library developed at MU has been shared with investigators at over 50 companies and 10 research institutions including MIT, UC-San Francisco, Scripps Clinic and Rockefeller University. The research at MU has been funded by a $1.2 million grant from the U.S. Army, as well as grants from the National Institutes of Health and Abbott Laboratories.
Lee Dugatkin received his BA in history from SUNY-Albany. As a senior he read John Alcock’s Animal Behavior: An Evolutionary Approach and was fascinated by the interpretation of animal behavior as the product of evolutionary forces. Three years later he received his MA in behavioral ecology from SUNY-Albany and then moved to SUNY-Binghamton to pursue his PhD with David Sloan Wilson. In his doctoral thesis, Lee demonstrated that the behavior of wild guppies who are engaged in inspecting intruders (to determine if they are predators) can be explained by evolutionary game theory. In this TIT-FOR-TAT strategy, individual guppies remember associations from previous inspections, and base their current behavior on the past-behavior of their associates. The degree of cooperative behavior shown by a guppy in a new inspection is dependent on that guppy’s previous experience with its inspection partners.

Following completion of his doctoral work in 1991, Lee accepted a one-year international postdoctoral fellowship from the Canadian National Sciences and Engineering Research Council and then moved to the University of Kentucky and a postdoctoral position with Craig Sargent and Andrew Sih. Shortly after his arrival he received his own NSF grant to fund studies on theoretical models of the evolution of cooperative and altruistic behavior, both in the laboratory and in the field. He is addressing these topics in such diverse groups as fish, birds, social insects and humans. He is currently writing a book on Cooperation in Animals: A Modern Perspective for the Oxford University Press Series in Ecology and Evolution.

Lee will arrive in June 1994. In addition to continuing to develop and test new models of cooperative and altruistic behavior, Lee will expand his research program to include studies on the effect of imitation on the evolution of female mate choice and the structuring of dominance hierarchies. Lee will teach Evolution, Animal Behavior, and a graduate-level course in evolutionary and modeling theory.

Ray Semlitsch received his BA in biology from SUNY-Buffalo, an MA in zoology from the University of Maryland, and his PhD in zoology from the University of Georgia. Ray’s doctoral thesis with J.W. Gibbons at the Savannah River Ecology Laboratory described the population biology and life history patterns of amphibians and the effects of habitat changes on native amphibian communities of a natural Carolina bay. Part of this research was used in an analysis of long-term trends in amphibian populations, recently published in Science.

As a postdoctoral fellow with Henry Wilbur at Duke University (currently at the University of Virginia), Ray used observations of natural populations, “common garden” breeding experiments and five generations of artificial selection to demonstrate that the “propensity to metamorphose” is a polygenic trait. This study of the evolutionary basis of phenotypic plasticity has been widely cited and has interesting implications for morphological evolution and population dynamics.

Ray was most recently an Associate Professor in the Institute of Zoology, University of Zurich, where his research was funded by the Swiss National Fund (equivalent to the U.S. National Science Foundation). His program concerned the microevolutionary processes that affect the maintenance of additive genetic variance and phenotypic variation in traits closely associated with fitness. The study of these processes has important implications concerning adaptation, natural selection and evolutionary change. Using an unusual combination of field study and sophisticated experimental and statistical approaches to study mixed populations of hemiclonal hybrid frogs, Ray examined “success” and “fitness” of offspring of known mating combinations in terms of swimming behavior, feeding behavior, habitat selection, growth, development, anti-predator behavior of larvae, and mate choice in adults.

Ray arrived January 1, 1994. He will continue his research on processes that lead to genetic and phenotypic variability in life history traits as well as the development of a new research program in the evolution of neoteny (larval reproduction) systems. Ray will teach Evolution, Ecology, and a graduate-level course in experimental ecology.

Both Lee and Ray have equal enthusiasm for whole organism biology and evolutionary theory. They both have demonstrated an unusual talent for involving undergraduates in their research, usually resulting in co-authored publications. Our faculty and students have welcomed Ray and look forward to the arrival of Lee.
News from Alumni

1930-39

Carl W. Hughes (AB, Biology, 1939; MD, University of Tennessee, 1944) is Professor of Surgery at the Uniformed Services University of Health Sciences in Bethesda, MD. Carl helped to pioneer repair of acute vascular injuries on the battlefield and retired from active duty with the U.S. Army in 1974 as a Major General. He was Assistant Chief and Medical Director of Professional Services for the Veterans Administration from 1981-1985. Carl has received the Faculty-Alumni Award and Citation of Merit from the MU Alumni Association and the Distinguished Alumnus Award from the University of Tennessee.

1940-49

Edward Tolkoff (BA, Zoology, 1940; DDS, Marquette University, 1944) has retired from the U.S. Navy and is in private practice in Valley Stream, NY.

William E. Fennel (AB, Zoology, 1946; MA, Zoology, 1949; PhD, Zoology, University of Michigan, 1959) was Professor and Head of the Biology Department at Eastern Michigan University. He received the Eastern Michigan University Distinguished Teaching Award in 1980 and the State of Michigan Distinguished Teaching Award in 1981. William just retired and continues to live in Ypsilanti, MI.

1950-59

Donna FitzRoy Hardy (AB, Zoology, 1956; MA, Zoology, University of Kansas, 1960; PhD, Psychobiology, University of California-Irvine, 1969) is a Professor of Psychology at California State University-Northridge. She founded the Consortium of Aquariums, Universities and Zoos (C.A.U.Z.) in 1985, a network which now has 660 members from over 300 institutions in 15 countries.

Warren A. Heffron (AB, PreMed, 1958; MD, 1962) is Professor and Chairman of Family, Community and Emergency Medicine, University of New Mexico. He was Vice-President of the American Academy of Family Physicians, New Mexico Family Physician of the Year in 1990 and has received the MU Alumni Service Award.

1960-69

George E. Volk (AB, Zoology, 1961; MD, 1965) has been in private practice in obstetrics and gynecology in Kansas City and on the Attending Faculty at the UMKC Kansas City School of Medicine since 1971. He has been married to Ellen Harvey Anderson for 26 years. They have two children, Emily in the UMKC Medical School and Eddie who is majoring in Math and Physics at Colorado College.

Jon Ronald Bopp (AB, Zoology, 1963; MD, 1967) is an Obstetrician with Women’s Clinic of Joplin, MO. He is past president and trustee of the Music Box Society, International and has published several articles and audio/visual programs dealing with antique mechanical musical instruments.

José R. Alcalá (AB, Zoology, 1964; MA, Zoology, 1966; PhD, Anatomy, University of Illinois-Chicago, 1972) was Professor of Anatomy at Wayne State University School of Medicine. In 1992 he accepted a position as chairman of the Anatomy Department, Ponce School of Medicine, Ponce, Puerto Rico.

Paul F. Reith (AB, PreMed, 1965; MD, St. Louis University, 1969) was a Staff Physician in Student Health Services, University of Kansas until 1990. He is now Assistant Professor of Clinical Medicine at University of Illinois-Chicago School of Medicine, Rockford, IL. Paul is developing a second year curriculum in endocrinology and metabolism for University of Illinois medical students, teaches internal medicine to premedical students in Belvedere, IL, and is promoting diabetes education in a 30,000 resident rural county in Illinois.

Curtis Wayne Schupbach (AB, Zoology, 1965; MD, Washington University-St. Louis, 1969) is an Associate Clinical Professor in Dermatology at the University of North Carolina, Charlotte, NC.

Max Shaw (MS, Biology, 1966; PhD, Biology 1971) is General Manager of Savoldi Cheese Company in Youngstown, OH.

Joseph P. Ward (AB, Zoology, 1967; MD, Zoology, 1970; PhD, Zoology, North Carolina State University, 1980) was a Lt. Colonel in the U.S. Air Force and flew combat missions in Vietnam and Cambodia. He was a Senior Staff Biologist with the U.S. Air Force and is now Assistant Professor of Anatomy at the Herbert School of Medicine, Andrews Air Force Base, MD.

Wayne Hunthausen (BA, Zoology, 1969; DVM, 1979) is Director of Animal Behavior Consultations in Westwood, KS, and owner of the Westwood Animal Hospital. He was recently elected Secretary-Treasurer of the American Veterinary Society of Animal Behavior. He is advisor to the pet rescue organization “Puppy Love” and provides pet health and behavior information on the WDAF-
TV news segment “The Midday Veterinarian.”

1970-79

Robert M. Jarrett, Jr. (AB, Zoology, 1970; MD, University of Iowa, 1974) is an orthopedic surgeon with Rockford Clinic, Ltd., Rockford, IL.

Milamaria A. Cunningham (AB, Biology, 1971; MD, 1975) started her own anesthesia service, Cunningham Anesthesia, in Columbia in 1986. She is past-president of the Missouri Society of Anesthesiologists and raises Belgian Draft horses with her husband.

Stacey Daniels (AB, Biology, 1973; MA, Psychology, UM-Kansas City, 1979; PhD, Community Psychology, UMKC, 1986) is an Assistant Professor at UMKC School of Medicine and Manager of Research and Evaluation for the Ewing Marion Kauffman Foundation.

Wendy Peterson Faxon (BS, Biology, 1973) is president of the New England Chapter of the American Medical Writers Association and has launched a freelance writing and editing business in West Falmouth, MA.

Jeff Copeland (AB, Biology, 1974; MD, 1979) is in private practice with Copeland Plastic Surgery, Inc., St. Charles, MO.

Gregory Olaf Ness (BA, Zoology, 1974; MS, Public Health, 1976; BS, Electrical Engineering, California State University-Fullerton, 1985) has a certificate as a U.S. Public Health Service Physician’s Assistant. He is a Field Clinical Engineer with Medtronic, Inc. in Seattle, WA.

Joy (Hoemann) Rodenberger (AB, Biology, 1974; BS, Physician’s Associate Program, University of Oklahoma, 1976) is a Physician’s Assistant in Cardiothoracic Surgery at the Veteran’s Administration Center, and an Organ Procurement Specialist in Cardiothoracic Surgery at the University of Oklahoma Health Sciences Center, Oklahoma City, OK.

Nadine Anne Bopp (AB, Biology, 1975) will complete an MA in Landscape Architecture at Louisiana State University in May.

Frank R. Dawson, Jr. (BA, Biology, 1975; MS, Electrical Engineering, 1978) is with IBM Corporation in Roanoke, TX. He is on the Board of Advisors of the Institute for Studies of Organizational Automation at Texas Tech University.


Marcia Wolf (AB, Microbiology, 1976; MS, PhD, Microbiology, University of Illinois, 1982) is a Research Microbiologist in Gastroenterology at the Walter Reed Army Institute of Research, Silver Springs, MD.

Michael Randell Lieber (AB, Biology, 1977; BS, Biochemistry, 1977; MD/PhD, University of Chicago, 1983) is an Assistant Professor in the Department of Pathology, Stanford University School of Medicine. He is a Lucile Markey Scholar and member of the American Association of Pathologists.

Nelson Adams (AB, Biology, 1978; PhD, Psychology, State University of New York-Albany, 1982) is an Associate Professor of Psychology at Winston-Salem State University, NC. Nelson has had NIH support to study social stress and cardiovascular response in inbred rats.

Kathleen (Prevedel) Manley (AB, Microbiology, 1978; MEd, Education, UM-St. Louis, 1988) teaches biology and chemistry at Lindbergh Senior High School, Imperial, MO. Kathleen has an 11 year old son and is a Boy Scout leader.

Paul W. Sletten (AB, Biology, 1978; MD, 1982) completed a residency in family medicine and then accepted a permanent position in family medicine at the University of Minnesota Medical School. He lived in arctic Alaska for two and a half years in an Eskimo community as a family practice doctor in the Indian Health Service.

Philip S. Haufman (PhD, Microbiology, 1979) received the 1991 Faculty Recognition Award from students in the honors program at Texas Christian University, Fort Worth, TX. Phil is Associate Professor of Biology.

Richard Selwyn Jones (AB, Biology, 1979; PhD, Wesleyan University, 1984) is an Assistant Professor of Biological Sciences at Southern Methodist University, Dallas, TX. He recently received a five-year research grant from the National Institutes of Health.

Bruce Kaplan (AB, Biology, 1979; MD, 1983) is a staff physician (family practice) at the Carle Clinic in Champaign, IL. He attended the 25th Anniversary Convention of Star Trek in Los Angeles in 1991.

Debbie Jacobson Meyer (AB, Biology, 1979) was a Research Technician at Washington University Medical School, a Medical Technologist (Test Development) at SmithKline Chemical Labs, and is now a Research Biologist (Molecular and Cellular Biology) at Monsanto. She has managed the monoclonal antibody facility at Monsanto for the past seven years, and received the Achievement Award from Monsanto in 1991.
News from Alumni . . . . .

1980-89

Nancy McCall (AB, Biology, 1980; MS, Public Health, University of Massachusetts, 1919) is an Instructor in Chemistry/Biology at Merrimack Valley High School, Goffstown, NH.

Cynthia Hecker Brown (AB, Biology, 1981; MD, 1985) was Chief of Pediatrics at St. Joseph’s Hospital and is now President of the Mountain Pediatric Society in Asheville, NC.

David Braverman (AB, Biology, 1982; MA and PhD, Counselor Education, University of Iowa, 1990) is Assistant Dean at the University of Richmond, VA. David has worked in sports radio, served as an executive for Sigma Tau Gamma, received the Ellsworth C. Dent Man of the Year Award and was named Outstanding Master's Student in 1987.

Donald K. Scott (AB, Biology, 1982; MA, Biology, 1985; PhD, Cell and Molecular Biology, St. Louis University, 1991) is a postdoctoral fellow in Molecular Physiology and Biophysics at Vanderbilt University, Nashville, TN.

Dianna Baker Shew (AB, Biology, 1982; JD, School of Law, Vanderbilt University, 1987) is an attorney with Farris, Warfield and Kanaday in Kingston Springs, TN. She is married to Chris Shew (DVM, UMC, 1984); they have a three-year-old daughter.

Mark R. Bagby (AB, Biology, 1984; DDS, UM-Kansas City School of Dentistry, 1991) is in private practice in St. Joseph, MO. Mark was married in May 1992 and honeymooned on Kauai, HI.

Mary B. Bancroft Lux (AB, Biology, 1985; MD, University of Nebraska, 1990) is a Resident in Pathology at East Carolina University, Selma, NC.

Thomas Magee (AB, Microbiology, 1985; PhD, Biology, University of New Mexico, 1990) is the recipient of a Lucille P. Markey Postdoctoral Fellowship in Biological Chemistry at the University of California-Los Angeles.

Denise H. Kung Ilhat (AB, Biology, 1986; MD, Yale University School of Medicine, 1991) is completing her residency in pediatrics at St. Louis Children’s Hospital. Her husband Rick Ilhat, who was a classmate at Yale Medical School, is completing his residency at Burns Hospital in St. Louis.

Diane C. Lipscomb (AB, Biology, 1986; MD, 1990) is a Resident in Pediatrics at the Ohio State University Children’s Hospital, Dublin, OH.

Devesh Srivastava (AB, Biology, 1986; PhD, Physiological Optics and Vision Science, College of Optometry, University of Houston, 1988) was a National Eye Institute pre-doctoral fellow and won a Society of Toxicology Graduate Student Research Award, Sigma Xi Scientific Research Society Outstanding Poster Award, and University of Houston Teaching Award. He is currently investigating the effects of lead on the rod photoreceptor’s visual signal transduction cascade.

C. Thomas Nugent, IV (AB, Biology, 1987) is completing his PhD in Microbiology and Immunology at the Louisiana State University Medical Center. His thesis research involves the acute and memory immune responses to Herpes Simplex Virus type I.

Brian Brunig (AB, Biology, 1988) received his Doctor of Optometry from UM-St. Louis in June 1993.

Amy J. Owen (AB, Biology, 1988; MD, 1992) is a resident in Pathology at St. John’s Mercy Medical Center, St. Louis, MO.

Stephen F. Parmley (PhD, Biology, 1988) is a McArthur Foundation Postdoctoral Fellow in Infectious Diseases at Stanford University.

Marcia Bray (BA, Biology, 1989) will graduate from the UM-St. Louis School of Optometry this spring.

David Gattermeir (AB, Microbiology, 1989) is a Medical Research Technician in the Washington University Department of Cell Biology and Physiology. He recently had an article published in Cell Motility and the Cytoskeleton.

Rhonda S. Hoglen (AB, Biology, 1989) represented Missouri as Miss Missouri in the 1989 Miss U.S.A. Pageant. She is completing her MD at the University of Kansas.

Sara Holland (AB, Biology, 1989) will graduate from MU School of Medicine this spring.

1990-1994

Sharon Wulf Batek (AB, Biology, 1990) was married in June 1992 and entered the UM-St. Louis School of Optometry that fall.

Gregory D. Eberhart (BS, Biology, 1990) will complete his MD program at St. Louis University in May.
ALUMNI UPDATE

NAME: ______________________  ADDRESS: ______________________

PHONE: ______________________  ______________________

DEGREE PROGRAM:  AB ___ BS ___ MA ___ PhD ___  GRADUATION DATE: _________

ADVISOR: ______________________

DEPARTMENT:  BIOLOGY ___ ZOOLOGY ___ BOTANY ___ MICROBIOLOGY ___

Since I graduated from MU I have:

Continued my education at:

Institution: ______________________  Degree: ______________________

Department: ______________________  Dates: ______________________

Accepted a position in industry at:

Company: ______________________  Department/Division: ______________________

Position: ______________________  Dates: ______________________

Accepted a position in academia at:

Institution: ______________________  Department: ______________________

Position: ______________________  Dates: ______________________

Accepted other employment at:

Company/Institution, etc.: ______________________  Department/Division: ______________________

Position: ______________________  Dates: ______________________

Done other interesting things, including:

(PLEASE ANSWER QUESTIONS ON BACK)

FOLD SO RETURN ADDRESS SHOWS, TAPE SHUT AND MAIL.
I have received the following awards and honors:

I have retired and moved to:

Suggestions for future articles (who or what would you like to read about in the Biology Alumni News?)
Your friends want to hear from you!

The most frequent response to suggestions for future issues of Alumni News is “tell us more about our fellow alumni.” We’d love to. Of course, we’re dependent on each of you to keep us informed. Please take a minute to write us and tell us anything and everything you’d like about either yourself or one of your fellow alums: weddings, children, new jobs, promotions, awards, articles or books, retirement, special achievements, or special events. We’ve enclosed a self-addressed, pre-paid postcard. If you’d like to send a letter, address it to:

Alumni News
105 Tucker Hall
University of Missouri
Columbia, MO 65211

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