

Biology

Alumni Newsletter

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College of Arts & Sciences Alumni Association

Membership Matters. This publication is paid for in part by dues-paying members of the Indiana University Alumni Association.

A sticky situation in Jordan Hall



Courtesy of Yves Brun, 2006

Yves Brun co-led a research team that discovered a natural super glue with tremendous holding power. NIH awarded the team a four-year grant to further their studies of this substance.

Professor Yves Brun and Brown University biophysicist Jay Tang led a research team that discovered a natural adhesive with more than twice the holding power of super glue. It takes a stress of 5 tons per square inch before the glue loses its hold.

Caulobacter crescentus, a harmless bacterium found in rivers and tap water, produces this substance. Its “holdfast” stalk, tipped with sticky chains of sugar molecules, enables the bacterium to attach itself firmly to wet surfaces, even those dampened by salt water.

The adhesive has potential applications in engineering and marine technology, as well as the medical and dental fields — if manufacturing problems are solved. The glue’s tenacious holding power causes it to

stick to everything, including any equipment used in its production.

While *Caulobacter* is harmless, its holdfast ability might provide clues as to how harmful bacteria adhere to surfaces. The ability of harmful bacteria to cling to surfaces enables them to foul submerged surfaces such as the hulls of ships and to infect living cells.

Initial funding for this research came from seed money provided by Indiana’s Metabolomics and Cytomics Initiative (METACyt) and IU’s Faculty Research Support Program. In January, the National Institutes of Health issued a four-year grant to the Brun and Tang research teams to enable additional studies of the mechanisms of bacterial adhesion to surfaces and the biosynthesis of the holdfast adhesive.

Serotonin, and bats, and mice! Oh, my!

Laura Hurley studies them all

Assistant Professor Laura Hurley does not wait for Halloween to surround herself with bats. They have been her research models for more than five years, and she has recently included mice in her studies.

Hurley’s research examines how brain circuitry interprets the sounds we hear. She does this by studying the effect of serotonin in the inferior colliculus, an auditory region on the neural pathway leading from the ear to the cerebral cortex. Serotonin, a neural-signaling molecule, helps us filter and understand complicated sensory environments.

Bats make excellent research models due to their highly developed auditory systems. Hurley says, “Many features of their auditory systems are also quite similar to those seen in other mammals, which facilitates comparisons with other species.” Adding mice to the repertoire allows her lab to collaborate with colleagues on new projects more easily and establishes the potential for using genetically manipulated strains of mice in the future.

In February, Hurley, with speech and hearing sciences faculty Robert Withnell and

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Kudos!
Well Done!
Bravo!

Bauer merits 10 years' funding

Carl Bauer, the Department of Biology's Clyde Culbertson Endowed Professor, earned the National Institutes of Health's Method to Extend Research In Time (MERIT) Award. Few researchers receive this award designed to free scientists from the burden of constantly writing grant proposals. NIH guarantees Bauer 10 years of funding as long as he meets the requirements of a 2011 renewal. His research involves the growth of bacteria in the presence, or absence, of oxygen. Since the program's inception in 1986, only nine IU professors, including Bauer, have received this award.

Ketterson promoted to Distinguished Professor

Ellen Ketterson was promoted to Distinguished Professor last year. An international expert in evolutionary biology, Ketterson is known for her long-term population study of the dark-eyed junco. This small songbird has been her research model for 20 years.

Estelle receives Kumbo award

Professor and Miller Chair **Mark Estelle** earned a Kumho Science International Award in recognition of his contributions to plant molecular biology and biotechnology. This award is considered one of the most prestigious given in plant biology.

Students earn Guidant awards

Congratulations to **Alec Sexton**, who earned a 2006 Guidant Life Science Scholarship. Sexton, a double major in biology and French, is in IU's Science, Technology, and Research Scholars Program. He was an undergraduate teaching intern in Assistant Professor **Wayne Forrester's** L311 Genetics class during the fall semester.

Jordan Raynor, a biology minor, also received a 2006 scholarship from Guidant. The company gives these \$10,000 scholarships to academically gifted life-science students who plan on health-care careers.



Ashley Rider Mattingly

Professors, from left, Jeff Palmer, Jerry Gastony, and Charlie Heiser received the Botanical Society of America's Centennial Award at the Botany 2006 Conference.

Botanical Society honors faculty, alumni

Professors **Gerald J. Gastony**, **Charles B. Heiser Jr.**, and **Jeffrey D. Palmer** received the Botanical Society of America's Centennial Award at the Botany 2006 Conference. They were among more than 100 prominent scientists presented with commemorative medals for their significant contributions to the field of plant sciences and to the botanical society. Former faculty member **David L. Dilcher** also earned one of these awards, as did former IU postdoctoral fellow **Peter R. Crane**, director emeritus of the Royal Botanic Gardens, Kew.

Centennial Awards also went to eight of our alumni. They are **Gregory J. Anderson**, PhD'71; **Charles P. Daghljan**, BA'73; **W. Hardy Eshbaugh III**, MA'61, PhD'64; **Christopher H. Haufler**, MA'74, PhD'77; **Patricia Kern Holmgren**, BA'62; **Raymond C. Jackson**, BA'52, MA'53; **David W. Kramer**, MA'63, PhD'69; and **Douglas E. Soltis**, MA'77, PhD'80. Another recipient with ties to our department is Florida International University Professor **Jennifer H. Richards**, who did one year of graduate work in our department.

Serotonin

(continued from page 1)

William Shofner, received seed money from the Faculty Research Support Program. They are looking at tinnitus, a condition caused by auditory damage that results in the perception of ringing in the ears. The three want to understand the changes in the brain that cause this annoying condition.

FRSP, funded by IU's Office of the Vice Provost for Research, enables faculty to conduct preliminary research, the results of which could lead to new external funding opportunities for larger projects. Microbiologist **Yves Brun**, a previous FRSP recipient, says that the funding he received from this program was certainly a factor in obtaining a large National Institutes of Health grant in January.

Hurley, a member of the Department of Biology's faculty, is affiliated also with the Neuroscience Program and the Center for

the Integrative Study of Animal Behavior. She came to IU in 2002 from the University of Texas at Austin and was promoted to assistant professor in 2005. Last year, Hurley received a Ralph E. Powe Junior Faculty Enhancement Award from the ORAU University Consortium. The program provides seed money to foster the professional growth of junior faculty whose institutions belong to the Oak Ridge Associated Universities.

Hurley earned a BA from the University of Virginia, followed by a PhD, in 1997, from the University of Washington. She did postdoctoral work at the University of Texas in Austin.



Ashley Rider Mattingly

Laura Hurley studies how brain circuitry interprets sounds.

Office of Vice Provost for Research provides faculty grants

The Faculty Research Support Program enables faculty to conduct preliminary research, which could lead to new external funding opportunities for larger projects.

2004–05

- **James Bever** and **Miriam Zolan**, “Developing genetic markers for the study of genomic structure of arbuscular mycorrhizal fungi”
- **Yves Brun**, “Synthesis and localization of a strong bacterial adhesive”
- **Patricia Foster**, “DNA repair and mutagenesis in a thermophilic archaeon”
- **Richard Hardy**, “A genome-wide investigation of host-response to viral infection”
- **Ellen Ketterson**, “Bridge funds for National Science Foundation proposal”

Study compares humans, chimps

A statistical comparison of the human and chimpanzee genomes led by computational biologist **Matthew Hahn** indicates a difference of about 6 percent in the number and identity of genes between the two species.

The study, reported in the first issue of *Public Library of Science ONE*, found differences in 1,418 out of 22,000 genes compared. The 6 percent figure varies from the 1.5 percent nucleotide-by-nucleotide difference commonly reported.

Hahn says that both figures are correct, depending upon what is being asked, adding, “There isn’t a single, standard estimate of variation that incorporates all the ways humans and chimps can be genetically different.”

Researchers determined that humans have gained 689 genes since diverging from their common ancestor with chimps. Many of these were gained from the duplication of genes influencing brain functions.

Postdoctoral research associate **Jeffrey Demuth**, PhD’04, is lead author of the study. Researchers from the University of California at Berkeley, the University of Southampton, and the University of Bristol also contributed to the study.

2005–06

- **Gregory Demas**, “Seasonal changes in aggression”
- **Justin Kumar**, “Identification of transcriptional targets of the eye specification gene *sine oculis*”
- **Emília Martins**, “Zebrafish behavioral genomics”
- **Rudolph Raff** and **Elizabeth Raff**, with **John Colbourne**, Center for Genomics and Bioinformatics, “Microarray analysis of gene expression changes associated with a radical evolutionary change in development between two closely related species”

2006–07

- **Lynda Delph**, “Developing genomic tools for the study of sex–chromosome evolution”
- **Laura Hurley**, with Robert Withnell and William Shofner, Speech and Hearing Sciences, “A role for serotonin in tinnitus”
- **Justin Kumar**, “Fine tuning of eye development by miRNA genes”
- **Scott Michaels**, “Development of tools to study the nuclear pore”
- **Rudolph Raff** and **Elizabeth Raff**, with **John Colbourne**, Center for Genomics and Bioinformatics, “Microarray and genomic analysis of changes in gene expression and genome organization in two closely related species associated with

a radical evolutionary change in embryonic development”

The Indiana University Bloomington and Purdue University Collaborations in Life Sciences and Informatics Research program encourages collaboration between IUB and Purdue faculty in the life sciences or informatics with the goal of finding external funding opportunities for larger projects.

2005–06

- **John Colbourne**, Center for Genomics and Bioinformatics, with Purdue University collaborators Hugo Ochao-Acura and Maria Sepulveda, “Construction of cDNA libraries for the development of genomic signatures of sediment toxicity”
- **Zhao-Qing Luo**, Purdue University, with **Lingling Chen**, “Inhibition of host cell apoptosis by the *Legionella pneumophila* protein SidF”
- **Michael Lynch** with Purdue University’s James Forney, “The origins and mechanisms of DNA and mRNA splicing in Ciliates”
- **Katy Simonsen**, Purdue University, with **Matthew Hahn**, “Powerful methods for autocorrelated genomic data”

2006–07

- Purdue University’s Stanton Gelvin with **Clay Fuqua**, “Agrobacterium biofilms and gene transfer to plants”

Fern expert Jerry Gastony retires from IU

Professor **Gerald Gastony** retired in his 36th year with the university. An expert in plant systematics and evolution, Gastony (*see photo on page 2*) joined the department in 1970, immediately after earning his PhD at Harvard.

Chair Beth Raff says of him, “Jerry is ‘the’ person responsible for essentially everything that we know about fern systematics. He was a pioneer in coupling [isozyme and restriction site] molecular data and DNA sequences with other kinds of data to analyze relationships among species and to establish phylogenies for ferns. [His research] resulted in the first comprehensive phylogeny for ferns. Most recently, his lab generated the first genetic linkage map for ferns.”

The Botanical Society of America recognized Gastony’s work with the Edgar Wherry Award in 1995 and a Centennial Award given last year. He served a two-year stint

as president of the American Fern Society, directed our herbarium for 14 years, is in his 34th year as associate editor of the *American Fern Journal*, served as editor in chief of *Systematic Botany* for three years, and was the department’s Evolution, Ecology, and Behavior Program director for 11 years.

Considering Gastony’s passion for ferns, it is fitting that two fern species bear his name. They are *Phanerophlebia gastonyi* Yatskievych and *Pellaea gastonyi* Windham. There is also a moss, *Macrocoma gastonyi* Norris & Vitt, named in his honor.

His B300 Vascular Plants course was one of the department’s best. A highly respected teacher, he was a recipient of the Senior Class Award for Teaching Excellence in Biology and Dedication to Undergraduates.

“Jerry has been a wonderful colleague,” Raff says, “and he also made very deep and important contributions in teaching.”

Sowing the seeds of a space odyssey

The Department of Biology's **Roger Hangarter** is working with scientists from Miami University of Ohio and the University of Florida to examine the effects of microgravity on plant growth.

Last year, their experiment, dubbed Tropi, flew to the International Space Station via the Discovery space shuttle. Seeds from *Arabidopsis thaliana*, a plant in the mustard family, were germinated inside the European Modular Cultivation System; an automated system waters and stimulates the resulting plants with various light treat-

ments and gravity forces at select times.

Hardy *Arabidopsis* is perfect for this space project because it is very small, it has a short life cycle, and its genetic structure is fully mapped. Long-term space flights will require sustainable food crops for the crews and plants to act as supplemental air filtration systems as well as additional oxygen sources.

The new information Tropi provides on molecular aspects of plant growth could help solve long-term space flight problems and lead to agricultural advancements on Earth.



Ashley Rider Mattingly

The College of Arts and Sciences named the Department of Biology's **Emília Martins** their associate dean for graduate education last year. Martins, who directs the Center for the Integrative Study of Animal Behavior, also will work on life-sciences initiatives for the College. Her research involves the evolution of complex traits, such as communication and social behavior, in lizards and zebrafish. She is seen here with a sagebrush lizard, *Sceloporus graciosus*.

Beetles rock in Armin Moczek's laboratory

2006 was quite a year for student **Richie Madewell**, who conducts research in **Armin Moczek's** laboratory. In August, Madewell attended the annual Animal Behavior Society meeting with help from a Turner Award. His poster on the mobility costs of beetle horns earned him an ABS Genesis Award for the best undergraduate poster presentation.

Madewell's research was published in the *Journal of Insect Science*, with lead authorship going to Madewell. He capped off the year with an independent study project in Tanzania,

where he surveyed nocturnal wildlife diversity at a small preserve.

Armin Moczek discovered that elaborate beetle horns have a use in addition to combat or mate selection. Moczek and his research team discovered that beetles in the pupal stage use their horns much like a can opener to pry their way out of thick, larval shells. If the horn tissue is destroyed, the larvae cannot break out of their shells. Many more beetle species use their horns for this purpose rather than combat, suggesting that horns' function in development preceded their function as weapons in male combat.

Moczek's findings appear in the *American Naturalist* (December 2006). Another paper on the subject, co-authored by Moczek, graduate student **Tami Cruickshank**, and undergraduate **Andrew Shelby**, appeared in the November 2006 issue of *Evolution*.



Courtesy of Armin Moczek

where he surveyed nocturnal wildlife diversity at a small preserve.

Microbiology major earns Beckman award

Microbiology major **Charles Haitjema** earned a Beckman Scholarship to fund his research on the plant pathogen *Agrobacterium tumefaciens*. Haitjema, a member of IU's Science, Technology, and Research Scholars Program, works with Associate Professor **Clay Fuqua**. Previous Beckman Scholars include Department of Biology alumni **Jeremy Brown**, BS'02; **Aaron Hinz**, BS'02; **Sarah Brown**, BS/BA'04; and **Emily Powell**, BS'05.

Meet the challenge ...

DeLaCroixes to match gifts to fellowship

Fern Hays DeLaCroix, BA'70, MA'73, and her husband, **Cliff**, BS'69, JD'72, MBA'73, created the George Hudock Fellowship to honor her former professor and mentor, **George A. Hudock**. Ten awards, ranging from \$500 to \$1,500, have been granted since 1997, when the fund was established. The fellowship is open to qualified students earning a graduate degree from our de-

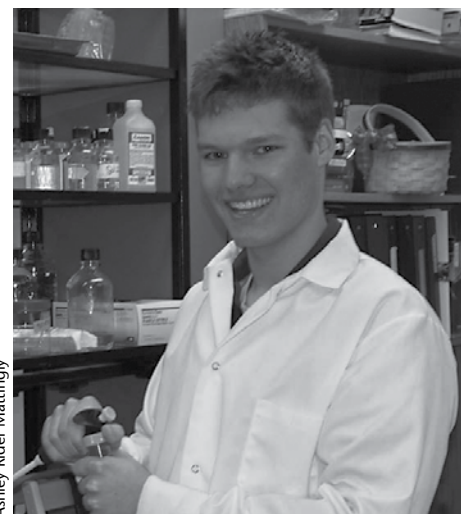


Courtesy of Cameron Turner

Cameron Turner received the 2006 Hudock Fellowship.

partment, with first preference going to master's candidates.

In an effort to generate more Hudock Fellowship funds for deserving students, the DeLaCroixes have offered to match a portion of any donations received over the next six months. Those interested in supporting their efforts are invited to contact **Kathy Wyss** for further details at (812) 855-6195 or kwyss@indiana.edu.



Ashley Rider Mattingly

Beckman Scholar **Charles Haitjema** received support for two semesters plus funding for two summers of scientific research.

Alumni Notebook

Before 1970

Meredith N. Runner, BA'37, PhD'42, appears in the International Biographical Centre's *Outstanding Scientists of the 21st Century*. He retired in 1984 from the University of Colorado in Boulder.

Richard E. Lahr, BA'46, MD'49, and his wife, Marilyn (Utrecht), GN'51, live in West Lafayette, Ind., and have three children.

James E. Dill, BS'47, is a retired U.S. Army colonel. He lives in Westminster, Calif.

James P. Comer, BA'56, ScD'91, is the Maurice Falk Professor of Child Psychiatry and the Child Study Center associate dean for student affairs at Yale University's School of Medicine in New Haven, Conn. He received the 2007 University of Louisville (Ky.) Grawemeyer Award for Education, which includes a \$200,000 prize.

Jorge A. Soria, PhD'58, received an honorary doctorate from the Tropical Agricultural Research and Higher Education Center on Sept. 1, 2005.

Robert R. Wylie, BA'61, MD'65, retired from private medical practice in 2004. Now living in Bloomington, Ind., with his wife,

Nancy, he enjoys IU sports. He has two daughters and one grandson.

Sharon Kelly Buehler, MA'64, an honorary research professor in the Division of Community Health & Humanities at Memorial University of Newfoundland in Canada, received a 2006 Distinguished Service Citation from the Illinois College Alumni Association.

The Linnean Society of London hosted a summer symposium to honor retiring plant geneticist **Barbara Pickersgill**, PhD'66. Specialists in plant domestication, cytogenetics, and taxonomy gathered to present their research and celebrate her 30-plus years of teaching and research at Reading University. Pickersgill is an expert on *Capsicum*.

Michael B. Weeks, BA'66, MD'70, did volunteer teaching at the IU School of Medicine. He left private practice to join IU Medical Group-Primary Care. He has been working exclusively in Wishard Memorial Hospital. Weeks lives in Indianapolis with his wife, Mary, BA'82, MS'97. They have two children: Christopher M. Weeks, BS'96, and **Lara K. Weeks Bogness**, BA'97, MS'02, MD'05.

Bloomington optometrist **Edwin C. Marshall**, BA'68, BS'70,

OD'71, MS'79, was named 2006 Optometrist of the Year by the Indiana Optometric Association for his work in public health. A professor at the IU School of Optometry in Bloomington, he is also associate dean for academic affairs and student administration.

Nolan W. Allen, BA'69, DDS'73, president-elect of the Florida Dental Association, works in Clearwater, Fla., and lives in Largo.

1970s

Judith McClain Daviero, BS'70, and her husband, Henry W., BS'72, celebrated their 35th wedding anniversary in New York City.

In September, **Gregory J. Anderson**, PhD'71, was appointed to a two-year term as vice provost for research and graduate education and dean of the graduate school at the University of Connecticut.

Thomas A. Cicarella, BA'71, JD'74, a partner in the law firm of Calfee Halter & Griswold in Cleveland, was included in *The Best Lawyers in America 2006*. His firm was distinguished in the 2006 *Chambers USA Guide*, and he was ranked a leader in banking and finance.

Philip J. Eversman, BA'71, DDS'75, was inducted into the International College of Dentists. He owns a practice in Avon, Ind.,

where his wife, **Cynthia (Slowik)**, BS'73, is a dentist hygienist.

Living in Quincy, Ill., **David W. Lockhart**, BA'72, MD'76, is a board-certified hospice and palliative-care doctor. He writes, "I somehow feel like end-of-life care is what I have spent my life preparing for, and I'm happy to be able to do it well."

On July 1, **Thomas J. DeCaro**, BA'73, chief of dental services for the Gila River Health Care Corp. in Sacaton, Ariz., retired. He and his wife, Jackie, plan to remain in Phoenix. They also plan to visit Bloomington, Ind., at least once a year to enjoy an IU basketball or football game.

Keven C. Reed, BA'73, OD'77, writes, "After practicing almost 30 years in the [U.S.] Naval service, including working on three islands a cumulative 14 years and being a hospital director of 160 employees, I am devoting [my] energy to writing a book about the coral reefs of the Ryukyu Islands [in Japan]. I study coral taxonomy, diseases, and tropical coral ecology." He and his wife, Kiyoko, live in Orange Park, Fla.

Duke University Professor of Biology and Vice Provost for Research **James N. Siedow**, PhD'73, was named to the U.S. Department of Commerce's Deemed Export Advisory Committee. Siedow lives

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Biology Alumni Newsletter

This newsletter is published by the Indiana University Alumni Association, in cooperation with the Department of Biology and the College of Arts and Sciences Alumni Association, to encourage alumni interest in and support for Indiana University. For activities and membership information, call (800) 824-3044 or send e-mail to iualumni@indiana.edu. Visit the Department of Biology's Web site at development.bio.indiana.edu.

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In memoriam: Frank W. Putnam

Frank W. Putnam, a member of our faculty for 23 years, died on Nov. 29, 2006, at the age of 89. He came to IU in 1965 after stints at Duke University, the University of Chicago, and the University of Florida Medical College. Putnam was promoted to Distinguished Professor in 1974, a title he held until his retirement in 1988.



Courtesy of the Putnam family

Frank Putnam, an avid water-skier, continued to ski into his mid-70s.

His work focused on proteins found in human blood. He was among the first to uncover the importance of the Bence Jones protein in the human immune system. High levels of Bence Jones proteins could mean that certain white blood cells are producing too many antibodies. During a 1952 sabbatical to Cambridge University, he worked with Fred Sanger, who went on to earn two Nobel Prizes. While chair of the biochemistry department at the University of Florida College of Medicine, Putnam developed new techniques for analyzing the amino acid sequences of proteins. In 1965, he founded one of the first programs in molecular biology at Indiana University. During his tenure at IU, Putnam and his lab published many important scientific articles, including "Complete Amino Acid Sequence of the Mu Heavy Chain of a Human IgM Immunoglobulin."

Putnam's honors included a Guggenheim Fellowship in 1969 and election to the American Academy of Arts and Sciences and the National Academy of Sciences. He was a fellow of Churchill College in Cambridge, England, and a Markel fellow. Putnam did a four-year stint as chair of the National Research Council's Assembly of Life Sciences and served on the board of directors for the National Science Foundation's Atomic Bomb Casualty Commission.

— Rachel Resler

Alumni notebook

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and works in Durham, N.C.

After 36 years with Indiana University, sculptor **Georgia K. Strange**, BA'73, MS'77, MFA'79, left her position as director of the Henry Radford Hope School of Art to become the director of the University of Georgia's Lamar Dodd School of Art in Athens.

Larry M. Jones, BA'74, MD'77, was lead physician for Pittsburgh Steelers quarterback Ben Roethlisberger following his motorcycle accident. Jones is chief of the Division of Multisystem Trauma and director of the Birmingham Trauma and Burn Center at Mercy Hospital of Pittsburgh. He and his wife, Donna, live in Canonsburg, Pa.

Mary Barwe Rexing, BA'74, of Evansville, Ind., is now part-owner of Tri-State Bearing Co. Inc.

David J. Palmer, BA'76, is a board-certified ophthalmologist and a clinical assistant professor at Northwestern University's Feinberg School of Medicine in Chicago. Palmer is in private practice in Chicago and Glenview, Ill.

Ricardo R. Salvat, BA'76, a lieutenant colonel in the U.S. Air Reserve Base, is the officer in charge of optometry at the 434th Aerospace Medicine Squadron at Grissom Air Force Base in Indiana. Staff optometrist at the Veterans Affairs outpatient clinic in Evansville, Salvat lives in Newburgh.

Thomas A. Kenyon, BA'77, principal deputy coordinator and chief medical officer in the Office of the U.S. Global AIDS Coordinator, assists with managing the day-to-day implementation of President Bush's emergency plan for AIDS relief.

Walter D. Bourke, BS'78, MS'84, EdD'93, is superintendent of Franklin Township (Ind.) Community School Corp. He is active with the Indiana Principal Leadership Academy. He and his wife, Shawn L. (Ewers), BSN'78, have two children.

Richmond, Ind., gastroenterologist **Eileen E. Cravens**, BA'78, MD'82, shows horses on the national quarter-horse circuit. Her husband, **Dana H. Reihman**, BA'76, MD'79, is a physician in Richmond.

1980s

Thomas W. Moffo, BA'80, MD'84, Res'87, is on the medical

advisory board for Dermacare Laser & Skin Clinics. Moffo, who has 15 years of emergency-room experience and is board-certified in internal medicine, lives in Phoenix.

Michael G. Chez, BS'81, MD'85, is the director of pediatric neurology at the Child Neurology Program at Sutter Medical Center in Sacramento, Calif.

Mary Bishop Hilgart, BS'83, is an associate director of global projects and alliance management at Enzon Pharmaceuticals in Piscataway, N.J. She is married, has two sons, and lives in Newton.

David J. Seay, BS'83, OD'87, an associate optometrist with Dr. Tavel's Family Eye Care in Indianapolis, was formerly with Dixie Vision Center in Louisville, Ky.

In February 2006, **Thomas A. Vogel**, BS'83, opened his solo practice, Hamilton Foot and Ankle Care, in Fishers, Ind. Vogel, his wife, Lesley, and their two daughters live in Fishers.

Timothy C. Heffernan, BS'84, MS'88, wrote *Of Blood and Blackwater*. Published last year by AuthorHouse, it won the 2007 Allbooks Review Editor's Choice Award in the mystery genre. His sister, Kellee Heffernan Heisel, BSN'81, provided the cover art, and her daughter helped illustrate the book.

Environmental, health, and safety manager for International Truck and Engine in Springfield, Ohio, **Tim W. McDaniel**, MA/MS'85, began to run four years ago. He was recognized by the Ohio River Road Runners Club as the most improved male athlete of 2006. McDaniel lives in New Carlisle.

A podiatrist in Chicago, **David A. Gerst**, BS'86, reports that he has completed 10 Ironman Triathlons. He lives in Orland Park, Ill.

E. Morrey Atkinson, BS'87, is director of bioprocess research and development at Eli Lilly and Co. in Indianapolis. He appears in the September 2006 issue of *Indianapolis Monthly* in "Seeking Shelter," which featured people who wanted to relocate near family after Sept. 11.

Robert E. Bancroft, BS'87, is senior vice president of sales and marketing for Healthpoint's tissue management division, based in Fort Worth, Texas.

Lawyer **Kathy L. Osborn**, BA/BS'87, JD'99, designed a programmable musical mobile, compatible with digital music devices, that allows parents to choose the music their child hears. The design earned a \$5,000 second-place prize in

MacArthur 'Genius Award' for biology alumna Nicole King

Congratulations to biology alumna Nicole King, BS'92, who earned a MacArthur Fellowship. King, an assistant professor of genetics and development at the University of California at Berkeley, receives five years of unrestricted funding. She studies choanoflagellates and says her research "concerns the evolution of multicellular animals from their single-celled, protozoan ancestors."

King earned her biology degree here at IU with honors. She writes that the program provided her with "an exceptional educational experience," adding that it "allowed a small cadre of students to take all of their biology lectures and labs together under the instruction of top-notch researchers. It was an intense and personalized program that provided the strengths of a small liberal arts college within the resources of a research university."

As an undergraduate, King worked in IU Distinguished Professor **Thom Kaufman's** *Drosophila* lab, finding him a warm and supportive adviser. Kaufman's former student visited the Bloomington campus on April 4 to give the 25th presentation of the Joan Wood Lecture Series. During her talk, "Finding My Way: Fossils, Choanoflagellates, and Motherhood," King discussed her career path and the joys and challenges of juggling career and family (her son, Nate, born last spring, accompanied her to Bloomington). The Wood Lecture Series is designed to encourage undergraduate women to pursue advanced science degrees, and it showcases the many career opportunities available to science majors.

the nationwide 2006 Whirlpool brand Mother of Invention grant competition. An associate at the Indianapolis law firm of Baker & Daniels, she practices in commercial and appellate litigation.

In January, **Tracy Lawhon**, MS'88, JD'94, joined Tragara Pharmaceuticals in San Diego as an officer and vice president of regulatory affairs and development operations. She was previously with Cabrellis.

Kristine M. Enderle, MS'89, is a managing editor for a book-publishing company in Washington, D.C. Her brother, **David M. Enderle**, BA'98, is branch manager at Patterson Dental Supply Co. Inc. in Little Rock, Ark.

1990s

Orthodontist **Timothy J. Bussick**, BA'90, DDS'94, specializes in dentofacial orthopedics at his practice, Bussick Orthodontics, in Fort Wayne, Ind. He also teaches dental education at IPFW.

Laura A. Enfield, BS'91, received a doctorate of naturopathic medicine and an MS in Oriental medicine. She is doing a residency in Portland, Ore. She writes, "It is rewarding to see how effective natural medicine is in helping people with chronic disease." Her e-mail address

is drlaenfield@gmail.com.

Richard J. Berger, BS'92, is a physician in Florence, Ky. He lives in Cincinnati.

Lisa J. Jerrells, BS'92, MD'97, has been a doctor at Landmark Family Practice in Bloomington, Ind., for six years. She ran her first mini-marathon in Indianapolis in 2006. She and her husband, Joby D., BA'89, MPA'94, JD'03, have two daughters and live in Bloomington.

Physician-assistant **Jeremy T. Heinerich**, BS'93, has worked in oncology for five years. He lives in New York City and works at New York-Presbyterian Hospital.

Rick Schmidt, '93, is a project manager at Harmon Inc. in South Bend, Ind. His projects include a renovation for Wabash (Ind.) Middle School; a new parking garage for Blue Chip Casino in Michigan City, Ind.; and Stryker Corp.'s new office complex in Kalamazoo, Mich.

Alix D. Dowling, BS'94, an assistant professor of biology at Longwood University in Farmville, Va., since 2001, received the Junior Faculty Award last year.

Avis Ewry Jolly, BS'95, works part time at Sierra Vista Vineyards & Winery in Placerville, Calif. She, her husband, Andy, and their two children live in Rescue.

Rebecca C. Rastetter, BS'95,

is a pediatrician in Milford, Ohio. She, her husband, Jonathan Puchalski, and their two young children live in Cincinnati. She can be reached at rrastetter@hotmail.com.

Thomas R. Clouse, BS'96, MD'04, is finishing his internal medicine residency at St. Vincent Indianapolis Hospital. He and his wife, Claire (Newbury), BSN'04, live in Indianapolis.

Brian Dimitri, BA'97, teaches biology and chemistry at Edward Little High School in Auburn, Maine. He, his wife, Liza (Marczak), BS'96, and their two sons live in Auburn.

After several years in the genetic research field, **Mary C. Hardy**, BS'97, enrolled in law school in San Diego to become a patent attorney. She had a daughter, Madeline, in 2005. Hardy can be reached at maryhardy@hotmail.com.

Optometrist **John D. McKenna II**, BS'97, OD'01, writes, "[I'm] living the dream of owning and operating my own private practice in Indianapolis. I bought the practice two years ago from Norman D. Young, BS'60, MS'61."

Scott C. Pike, BS'97, MD'01, joined Urology of Indiana's Carmel branch. His address is scottiepike@yahoo.com.

I-Man **Christopher W. Plumb**, BS'97, is the head coach of swimming and diving at Carmel (Ind.) High School. He oversees the Carmel Swim Club. He lives in Carmel with his wife, I-Woman Emily S. (Dunn), BS'97, and two sons.

Monica M. Price, BS'97, OD'02, of Greenfield, Ind., practices optometry in New Castle and is vice president of the IU School of Optometry Alumni Board. Her address is iu_idoc@hotmail.com.

Tara L. Wright, BS'97, a licensed funeral director and embalmer at Kuiper Funeral Home in Highland, Ind., teaches at Ivy Tech Community College Northwest's mortuary-science program and restorative art and embalming practicum. Wright lives in Schererville.

Christopher J. Browning, BS'98, OD'02, is an optometrist at VisionQuest Eyecare in Indianapolis. He has two children.

Jodi Troendle Silcox, BS'98, is an attorney at Cline Farrell Christie Lee & Caress in Indianapolis, specializing in medical negligence cases. Her husband, **Jeffery**, BA'98, is a sergeant with the Indianapolis Metropolitan Police Department. They have two children.

Michael F. Carter, BA'99, a former U.S. Army signal communica-

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tions officer, did four tours of duty in Afghanistan. He now works for a small-bone orthopedic company, OsteoMed, in Columbia, S.C.

2000s

Hilary A. Feister, PhD'00, is a medical writer in clinical development for a pharmaceutical company. She has two sons and lives in Brighton, Mich.

Samuel Horton, Cert/BA'00, MD'04, is an IU neurology resident. He and his wife, Holly (Taylor), BS'02, live in Indianapolis.

Joshua B. Lee, BA'00, JD'05, director of planned giving at the IU School of Medicine's Office of Gift Development, lives in Indianapolis.

Tiffany E. Owens, BS'00, OD'04, started the not-for-profit Low Vision Center of Northeast Florida in Jacksonville. She is also pursuing an MBA degree.

Kathleen Kaczmarek Bradley, BS'02, DDS'06, is a dentist in Denver. Her husband, Scott, BS'02, MPA'06, is an auditor at BKD, a CPA and advisory firm. They can be reached at kb Bradleydds@gmail.com.

Matthew R. Cramer, BA'02, is a production assistant at television

station KEYE in Austin, Texas. He and his wife, Allison (Mehring), MBA'03, live in Austin.

Aaron J. Sauer, BS'02, DDS'06, is an associate at Arnold Family Dentistry in Indianapolis. His wife, Ambrosia A. (King), BS'02, is an eighth-grade English teacher at Creston Middle School.

Allison Stoel Wiesman, BS'02, MD'06, is completing a residency in pediatrics through the IU School of Medicine in Indianapolis. She and her husband live in Indianapolis.

In March 2006, **Christiane Hassel**, BS'03, became a certified Jazzercise instructor. She is an assistant staff scientist at the Center for Genomics and Bioinformatics at IU Bloomington.

Carrie Zboch Kopala, BA'03, is a physician-assistant at General & Vascular Surgery in Elgin, Ill. She received a master's degree from Midwestern University in Downers Grove. She and her husband, Robert, live in Carpentersville.

Kristina Higdon Yoder, BS'03, is a third-year medical student at Ohio University's College of Osteopathic Medicine in Athens.

Michelle L. Garcia, BA'04, is a third-year optometry student at

IU Bloomington. She is a research assistant with Dr. Carolyn Begley, concentrating on dry eyes.

Zachary T. Jones, BS'04, is a second-year optometry student at IU Bloomington.

Jeffrey P. Mower, MS'04, PhD'05, was awarded a two-year postdoctoral fellowship from the Irish Research Council for Science, Engineering, and Technology. He will work with Professor Ken Wolfe at the University of Dublin's Trinity College.

Christen G. Prather, BA'04, of Kokomo, Ind., is pursuing a doctorate of physical therapy at the University of Indianapolis.

Sarah E. Good, BS'05, is a pharmacy intern pursuing her pharmacy degree at the University of Cincinnati. She lives in Centerville, Ohio.

Jacqueline F. Schwarz, BS'05, of Indianapolis, is attending the West Virginia School of Osteopathic Medicine in Lewisburg.

Tammy E. Tintjer, PhD'05, of Conway, Ark., is a visiting assistant professor of biology at Hendrix College. She is a former IU associate instructor in biology.

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Summer lovin': Light affects libido

A neuropeptide in the brain of rodents appears to control their reproductive activity by cuing in to seasonal light changes, according to a report by Indiana

University and University of California at Berkeley researchers. Siberian hamsters exposed to short, winter-like days had fewer kisspeptin-expressing brain cells and reduced libido in comparison to hamsters living in summer lighting conditions.

Timothy Greives, Cert/BA'03, an IU graduate student in Assistant Professor **Greg Demas's** lab, is lead author of this study published in the March issue of *Endocrinology*. "What is really striking is the disappearance of kisspeptin in animals experiencing winter-like days, yet if we give them kisspeptin, they increase the level of luteinizing hormone, a hormone important for turning on reproduction," Greives says, adding, "These data show that the disappearance of kisspeptin in the brain is likely critical in turning off reproduction during the winter."

Other IU personnel involved with the study are Demas; Distinguished Professor **Ellen Ketterson**, BA'66, MA'68, PhD'74; and graduate student **Melissa Scotti**.



Courtesy of Greg Demas

Siberian hamsters

Kehoe receives two-year NSF grant

David Kehoe and Baylor College of Medicine faculty member George Weinstock received a two-year grant from the National Science Foundation to sequence the genome of *Fremyella diplosiphon*. This cyanobacterium senses different light colors and can alter its gene expression patterns to adjust to the changing light conditions. A portion of the grant funds an outreach program that enables Kehoe to teach genome structures to local high-school science classes.



Courtesy of the Bloomington Herald-Times

David Kehoe is seen at the farmers' market with his children, Ivy and Jasper, in 2003.

Life Sciences Initiative in full swing at IU

Wondering what's going on with the Indiana Life Sciences Initiative? Check out <http://lifesciences.iu.edu>. The Web site contains news and events, information on IU's commitment to the project, its partnership with other Indiana universities, and the initiative's benefit to Hoosier citizens.

In February, public radio station WFIU ran a four-part series, "Life Sciences: Reshaping Your World." The broadcasts are online at www.indiana.edu/~wfiu/lifesciences.htm. Topics included a life-sciences primer, the structure of the industry, and the future of life-sciences research. Biology faculty member **Jeff Palmer**, who chairs IU's Life Sciences Task Force, was part of the first broadcast. Alumnus **Dan Peterson**, BS'84, MBA'89, vice president for industry and government relations at Cook Pharmica, participated in the segment on accomplishments in the life-sciences field.