



# BioNotes

**Dr. A. Lorena Passarelli**, assistant professor of biology, is the recipient of the inaugural **H. Henley Haymaker Teaching Excellence Award**. Professor Passarelli teaches undergraduate and graduate courses in virology in the K-State Division of Biology, and she conducts research in the general area of molecular virology. She receives outstanding teaching evaluations from students and peers, who uniformly praise the quality of her teaching, her passion for the subject matter, and her mentorship of students. Dr. Passarelli's receipt of the 2005 Haymaker Teaching Excellence Award was preceded earlier by her receipt of the 2005 College of Arts and Sciences William L. Stamey Teaching Award. This award, including a \$500 stipend, is funded by the H. Henley Haymaker Endowment, in memory of Professor Haymaker, a K-State biological sciences faculty member for 44 years. The endowment also funds the Haymaker Award to the Outstanding Senior Biology Student, and the Haymaker Graduate Student Research Award. Recipients of the Haymaker Teaching Excellence Award are Division of Biology faculty members who are nominated by the Division and selected by the College of Arts and Sciences for Stamey Teaching Awards in the same calendar year.

**Dr. Chris Thorpe** (Assistant Professor, tenure track) joined the Division of Biology in October in the general area of developmental genetics. Dr. Thorpe received his Ph.D. in 1998 from the University of Oregon, and most recently was a postdoctoral researcher at the University of Washington.

**Dr. Rollie Clem** spent the summer at Colorado State University learning how to work with mosquitoes and arboviruses, working with Drs. Carol Blair, Ken Olson and Barry Beaty in the Arthropod-borne Infectious Disease Laboratory. The mini-sabbatical was sponsored by the Terry C. Johnson Center for Basic Cancer Research.

**Tammi Johnson** (student of **Dr. Jack Cully**) was chosen to receive the **Outstanding Graduate Student Research Scholarship** from the **Wildlife Disease Association**, and was a featured student presenter at an international meeting in Australia in June 2005.

**Dr. Glennis Kaufman** was elected Vice President of the **American Society of Mammalogists**, during the 85<sup>th</sup> Annual Meeting in June at Missouri State University in Springfield, MO. Glennis is only the fifth woman to be elected to this office since the establishment of the Society in 1919.

**Dr. Glennis Kaufman** completed her 2-year term as President of the **Central Plains Society of Mammalogists** at the annual meeting in October at Truman State University in Kirksville, MO, and now is serving a 2-year term as Past President.

**Dr. Donald Kaufman** was recognized with an **Alumni Achievement Award** by **Fort Hays State University** in September. He received his BS and MS degrees from FHSU in 1965 and 1967, respectively.

**Dr. Kimberly With** has accepted an editorship with the journal **Biological Conservation**, an international journal that was the first major scientific journal devoted to the (then emerging) science of conservation biology.

Drs. C. Mundt, K. Garrett, J.P. Stack, **Kimberly With**, and X.B. Yang were awarded \$1,362,000 for research titled, "*Collaborative Research: Epidemic waves, landscape heterogeneity, and spatial scale*," by the **Ecology of Infectious Disease, National Science Foundation (NSF) and the National Institutes for Health (NIH)**.

**Drs. Walter Dodds, Kimberly With, Keith Gido**, and J. K. Koelliker were awarded \$299,566 for research titled, "*Ecosystem thresholds and alternate states in Great Plains rivers and streams: cascading effects of anthropogenic hydrologic disturbance*," by **RFA: Understanding Ecological Thresholds Through Retrospective Analysis, Science to Achieve Results Program, Environmental Protection Agency**.

**Dr. Craig Paukert** and **Andy Makinster** (MS student in Biology) have been invited to participate in a workshop on evaluating removal efforts of non-native warmwater fish from Grand Canyon. This workshop will be held in December 2005 and is sponsored by the Glen Canyon Dam Adaptive Management Program and USGS.

**Dr. Craig Paukert** was invited to be on the Science team of the **National Fish Habitat Initiative (NFHI)**. The NFHI was instigated by Congress to determine the state of the nation's fish habitat, and the Science Team consists of 14 members from NGOs, state and federal agencies, and academia and is charged with determining what metrics should be used to assess fish habitat nationwide. A report will be provided to Congress in early 2006 on this effort.

**Dr. Craig Paukert** accepted an invitation for a 3-year term as an Associate Editor for **North American Journal of Fisheries Management**.

Kansas State University is now a partner institution on the National Park Service Great Plains Cooperative Ecosystems Study Unit (CESU). This is designed to provide non-competitive funding to 13 partner universities in Kansas, Oklahoma, Nebraska, Wyoming, Minnesota, Colorado, North Dakota, and South Dakota from the cooperating agencies (US Geological Survey, National Park Service, Bureau of Land Management, Bureau of Reclamation, US Forest Service, and Natural Resource Conservation Service) at an approved 17.5% indirect cost rate. See <http://greatplains.cesu.unl.edu/> for details. **Dr. Craig Paukert** is the technical contact at KSU.

**Dr. Craig Paukert** and **Dr. Joanna Whittier** were awarded \$104,322 by the **US Geological Survey, National Biological Information Infrastructure** for research titled, "*Modeling fish species occurrences in the Verde River basin.*"

**Dr. Craig Paukert** was awarded \$14,975 by the **Kansas Department of Wildlife and Parks** for research titled, "*Status of blue suckers in the Kansas River.*"

**Dr. Katsura Asano** received a pilot grant for \$51,429 from the **Kansas IDeA Networks of Biomedical Research Excellence (K-INBRE) Research Support Core** for research titled, "*Studies on human eIF5 and its AAV-interacting ortholog.*"

**Dr. Rollie Clem** received a pilot grant for \$35,000 from the **K-INBRE Research Support Core** for research titled, "*Apoptosis as an anti-viral response in mosquito midgut.*"

The **Ecological Genomics Initiative** has received 4-year funding of \$2 million through the **Kansas State University's Targeted Excellence (TE)** program. Administered through the Provost's Office at KSU, TE was initiated to elevate the standing and reputation of K-State and to help the university achieve the goal of becoming one of the top 10 land-grant institutions in the United States. The university TE program makes resources available to enhance programs with the most promise of elevating the university's stature. Targeted Excellence funding enables continuation and expansion of the Ecological Genomics (EG) program and activities initiated with funding from NSF-EPSCoR in 2003. This interdisciplinary EG Institute involves over 25 faculty, post-docs, and students in seven departments and three colleges at KSU (Division of Biology as well as Departments of Agronomy, Biochemistry, Computer and Information Sciences, Electrical and Computer Engineering, Entomology, and Plant Pathology). Collective extramural support of EG participants in February 2005 was over \$30 million. Goals and activities of the Ecological Genomics Institute include providing funding for research through seed grants, support to hire two new tenure-track EG faculty, facilitating the development of infrastructure to enhance EG activities, continuing the annual "Genes in Ecology, Ecology in Genes" Symposium, developing an interdisciplinary curriculum in EG, establishing technical and synthesis workshops, and the initiation of visiting scholar, seminar, and international collaborative programs. Co-Principal Investigators of the Targeted Excellence project are **Drs. Loretta Johnson** and **Michael Herman**. Anyone interested in learning more about EG or becoming a part of the Ecological Genomics Institute are encouraged to contact Johnson or Herman, and to visit the website, <http://www.ksu.edu/ecogen>.

A delegation of faculty, postdocs and students from The Netherlands Ecogenomics program spent time with KSU faculty and student participants of the Ecological Genomics Institute on November 2-3. The purpose of the group's visit was to explore possibilities for collaborative research and a student exchange program.

They also toured Konza to view the LTER site as a research platform for potential EcoGen projects. **Drs. Loretta Johnson** and **Mike Herman** served as hosts for the group to fulfill goals of the Ecological Genomics Targeted Excellence program. Dr. Jan Kammenga, Wageningen University, presented an overview of The Netherlands' Ecogenomics program at a special Ecogen Journal Club on November 2. Other members of the delegation, Dr. Andre' van der Wurff, Wageningen University; Dr. Joop Ouborg, Radboud University at Nijmegen; Dr. Sung Schoondermark-Stolk, Netherlands Institute of Ecology; Ms. Agnieszka Doroszuk, Wageningen University; and Ms. Olga Alda Alvarez, Wageningen University, also presented summaries of their research. On Friday, the group traveled to Kansas City to attend the Ecological Genomics Symposium. In the upcoming year, the Netherlands delegation and KSU Ecological Genomics faculty will be planning a workshop to be held in The Netherlands to refine plans for research collaboration and a student exchange program.

**Sara Maatta**, a Manhattan High School senior who worked with the **Dr. Ruth Welti** group/Kansas Lipidomics Research Center in the Division of Biology this summer, was awarded semi-finalist status in the **Siemens-Westinghouse Competition** for her project titled, "*The Effects of Day and Night Cycles on the Lipid Composition of Arabidopsis thaliana.*"

**Drs. Ruth Welti**, John Tomich, Frank Blecha, Mike Kanost, and Scot Hulbert, received a \$1,539,360 Major Research Instrumentation award from NSF for "*Acquisition of Mass Spectrometers for the Kansas State University Functional Genomics Laboratories.*"

**Drs. Ruth Welti**, Tom Schermerhorn, **Jyoti Shah**, Barbara Valent, and Weiqin Wang, received \$319,999 from **Kansas NSF Experimental Program to Stimulate Competitive Research (EPSCoR)** for Acquisition of a Mass Spectrometer for Lipidomics. This award, along with the award listed in the previous announcement, will provide major new instrumentation for lipidomics applications at the Kansas Lipidomics Center, where Welti serves as Director and Schermerhorn, Shah, Valent and Wang are associated scientists, and for proteomics applications at the KSU Biotechnology Center, which is headed by Tomich.

**Dr. Ruth Welti** and her colleagues will participate in an Arabidopsis 2010 project, funded by NSF. The project, "*Metabolomics: A Functional Genomics Tool for Deciphering Functions of Arabidopsis Genes in the Context of Metabolic and Regulatory Networks,*" is coordinated by Basil Nikolau of Iowa State. Co-PIs are Oliver Fiehn (U. of CA at Davis), Seung Rhee (Carnegie Institute), Lloyd Sumner (Noble Foundation) and Welti. Funding for KSU will be \$84,402.

**Drs. Sue Brown** and **Katsura Asano** have each been selected for the **K-INBRE 2005 Faculty Scholar Award**. The Faculty Scholar Award was designed as a prestigious mid-level faculty of distinction program. This highly competitive award (\$20,000, K-INBRE + KSU), is for any academic endeavor. Previous Division of Biology recipients of this award have been **Dr. Rollie Clem** in 2003 and **Dr. Mike Herman** in 2004.

**Dr. Jyoti Shah** and Dr. Harold Trick have been awarded \$69,876 by the **United States Department of Agriculture (US Wheat and Barley Scab Initiative)** for research titled, "*Enhancing scab resistance in wheat by overexpressing wheat and Arabidopsis NPR1.*"

**Chanitchote Detvisitsakun (Am)** was awarded second place for her oral presentation titled "*Stimulation of cell motility by a viral fibroblast growth factor homolog: proposal for a role in viral pathogenesis*" at the Annual Meeting of the Society of Invertebrate Pathology in Anchorage, Alaska, on August 2005. Also at the meeting, Am was awarded the **Mauro Martingnoni Student Travel Award** in support of her research. This is a prestigious and competitive student award, and you can be the recipient of this award only once. Am is a graduate student in **Dr. A. Lorena Passarelli's** lab.

## PRESENTATIONS

The following research was presented at the American Fisheries Society Annual Meeting, Anchorage, AK. September 13-14, 2005: W. Doyle, **C. Paukert**, and A. Starostka presented "*Microhabitat use of shovelnose and pallid sturgeon in the Lower Missouri River,*" and **J. Eitzmann, A. Makinster, and C. P. Paukert** presented "*Spatial and temporal patterns in blue suckers in the Kansas River, Kansas.*" A poster titled "*Biotic and Abiotic Correlates with Black Bullhead Population Characteristics in Nebraska Sandhill Lakes,*" was also presented by Q.E. Phelps, M.J. Ward, **C.P. Paukert**, and D.W. Willis.

**Dr. Brett Sandercock** presented an invited paper titled “*Population models for migratory waders: the case of the Upland Sandpiper*,” at the International Wader Study Group Annual Conference, Knockadoon Head, Co. Cork, Ireland, in October 2005.

The 3rd Annual *Genes in Ecology, Ecology in Genes* Symposium was held November 4-6 in Lenexa-Overland Park, Kansas. The symposium, organized by **Dr. Michael Herman**, **Dr. Loretta Johnson**, and **Doris Merrill** in the Division of Biology, showcased nationally-acclaimed scientists and researchers in the emerging field of ecological genomics. The symposium provides opportunities for researchers to share ideas and present their current research on the emerging links between ecology and genomics. Over 150 scientists and educators from 26 states and 3 international countries attended the conference, representing 47 individual Universities and organizations. This statewide NSF-EPSCoR interdisciplinary research initiative (see <http://www.ksu.edu/ecogen>) aims to couple the tools and expertise of molecular genetics with ecology to ask and answer questions at the interface between ecology and genomics. Beginning in 2003, the initiative has funded 20 research projects involving faculty, post-docs, graduate students and undergraduates from nine departments at KSU, KU and WSU. The Symposium featured invited lectures by ten nationally recognized experts in this new field. Featured speakers included Toby Bradshaw, University of Washington; John Kenneth Colbourne, Indiana University; Edward F. DeLong, Massachusetts Institute of Technology; Martin E. Feder, The University of Chicago; Jan Kemmenga, Wageningen University; Trudy F. C. Mackay, North Carolina State University; Thomas Mitchell-Olds, Max-Planck Institute of Chemical Ecology; Johanna Schmitt, Brown University; Jack C. Schultz, Penn State University; and Charles W. Whitfield, University of Illinois. In addition, investigators with funded Ecological Genomics research projects showcased their scientific progress. Over 60 poster abstracts were presented at the Symposium. The Symposium was funded by Kansas NSF EPSCoR, Kansas Technology Enterprise Corporation, and Kansas State University. The following Division of Biology faculty/staff gave poster presentations and/or spoke at the Symposium:

- **Coolon, Joseph D.**, **Kenneth L. Jones**, Timothy C. Todd, Ludek Zurek, **John M. Blair**, and **Michael A. Herman**, “*Changes in nematode gene expression in response to soil bacteria.*”
- **Jones, Kenneth L.**, Timothy C. Todd, **Joseph D. Coolon**, **John M. Blair**, and **Michael A. Herman**, “*Changes in Nematode Species Composition in Response to Environmental Cues.*”
- **Patankar, Aparna**, **Tyler Suelter**, **Loretta Johnson** and **Jyoti Shah**, “*Environmental and ecological controls on gene expression of root processes in prairie plants.*”
- Reeck, Gerald and **Keith Gido**, “*Genes for direct methylation of glycine provide high levels of glycinebetaine and abiotic-stress tolerance in Synechococcus and Arabidopsis.*”
- **Ungerer, Mark C.**, **Suzanne C. Strakosh** and **Ying Zhen**, “*Retrotransposon proliferation and large-scale genome expansion in diploid hybrid sunflower species.*”
- **Wisely, Samantha M.**, **Susan J. Brown**, David Gasper, **Charity Patricola-Simpson** and Sanjeev Narayanan, “*Ecotoxicogenomics of a Small Mammal Community Exposed to Heavy Metals.*”

**Dr. Jyoti Shah** gave an invited seminar titled, “*Plant Response to Biotic Stress*,” at the Department of Biology, University of North Texas, November 2005.

**Dr. Jyoti Shah** gave an invited presentation titled, “*Lipids in Plant Defense*,” at the International Conference on Plant Lipid-mediated signaling: Building Connections, Raleigh, NC, October 2005.

John C. Reese, Gerald R. Reeck, **Jyoti Shah**, Navdeep Mutti, **Venkatramana Pegadaraju**, **Caleb Knepper**, William T. Schapaugh, Kenneth D. Kofoid, Leslie R. Campbell, C. Michael Smith, Jianye Meng, Joe Louis, and John Diaz-Montano presented research titled, “*Aphids and Plants: An Overview of Diverse Projects*,” at the 7th International Symposium on Aphids, Fremantle, Western Australia, October 2005.

**Jessica Morton** and **Jyoti Shah** presented a poster titled, “*Lipases in Plant Defense and Death*,” at the 16<sup>th</sup> International Conference on Arabidopsis Research, Madison, WI, June 2005.

In October 2005, **Dr. Ruth Welti**, spoke on Lipidomics at the International Conference on Plant-Mediated Lipid Signaling in Raleigh, NC, and also at the University of Chicago. In November, she spoke at Johns Hopkins University. In November 2005, Welti lab members **Giorgis Isaac**, **Alexis Sparks**, and **Richard Jeannotte** presented a poster titled, “*Analysis of Lipid Molecular Species Using Electrospray Ionization Tandem Mass Spectrometry*,” at the Plant Integrated Functional Genomics Workshop at the Noble Foundation in Ardmore, OK.

Members of **Dr. Carolyn Ferguson**'s lab attended Botany 2005, Austin, TX, and presented the following: **C.J. Ferguson** and **R. Patterson**, "*The big picture on Phlox phylogeny: evidence from two genomes*" (platform); and **T.M. Woods**, **S.C. Strakosh**, **M.P. Nepal**, **S. Chakrabarti**, **N.B. Simpson**, **M.H. Mayfield** and **C. J. Ferguson**, "*Introduced species in Kansas: floristic changes and patterns of collection based on an historical herbarium*" (poster). Also, **Dr. Mark Mayfield** was an invited participant and presenter in a discussion session on the future of herbarium databasing, based on his experience at three institutions.

The following posters were presented at the COBRE External Advisory Board meeting, University of Kansas, Lawrence, May 18, 2005: **Yasufumi Yamamoto**, **Chingakham Ranjit Singh**, Assen Marintchev, Nathan S. Hall, Ernest M. Hannig, Gerhard Wagner, and **Katsura Asano**, "*eIF5 AA-box domain has distinct interfaces to eIF2 and eIF3 critical for multifactor assembly and scanning*"; **Chingakham Ranjit Singh**, Cynthia Curtis, **Yasufumi Yamamoto**, Nathan S. Hall, Dustin S. Kruse, Hui He, Ernest M. Hannig, and **Katsura Asano**, "*eIF5 is critical for integrity of the scanning preinitiation complex and accurate control of GCN4 translation*" and; **Tsuyoshi Udagawa**, Jana Narashimhan, Jürg Bähler, Ronald Wek, and **Katsura Asano**, "*The role of Int6 and Gcn2 in general control response and tumorigenesis.*"

**Dr. Katsura Asano** gave several invited seminars the past summer: Nagoya University Graduate School of Science, Division of Biological Sciences, Nagoya, Japan, June 13, 2005; Tokyo Metropolitan Institute of Medical Science, Tokyo, Japan, June 20, 2005; National Institute of Advanced Industrial Science and Technology, Biological Information Research Center, Tokyo, Japan, June 22, 2005; University of Electro-Communications, Department of Applied Physics and Chemistry, Chofu, Japan, June 23, 2005; Cancer Institute of Japan Foundation for Cancer Research, Department of Protein Engineering, Tokyo, Japan, June 24, 2005; University of Tokyo, Institute of Medical Science, Tokyo, Japan, June 27, 2005; Chiba Institute of Technology, Department of Industrial Chemistry, Chiba, Japan, June 28, 2005; University of Tsukuba, Institute of Basic Medical Sciences, Tsukuba, Japan, June 30; National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan, July 1, 2005 and; National Food Research Institute, Microbial Function Laboratory, Tsukuba, Japan, July 1, 2005.

**Dr. Kimberly A. With** gave an invited seminar titled, "*Rapidly changing landscapes and slow-changing populations: what's a songbird to do?*" on September 21 at Michigan State University in East Lansing, MI.

C.R.I. Jung, W.E. Jensen, and **K.A. With** presented "*Effects of grassland management on breeding grassland birds in the Flint Hills,*" at the Joint Meeting of the Natural Areas Association and Center for Great Plains Studies, Lincoln, NE, September 21-24, 2005.

G.R. Schrott, **K.A. With**, and A. W. King presented "*Microevolutionary rates of brood parasite host defense behavior can affect extinction risk in dynamic landscapes,*" at the Ecological Society of America, Montreal, Quebec, Canada, August 7-12, 2005.

**Donald P. Althoff**, Peggy S. Althoff, Jeffrey S. Pontius, **Philip S. Gipson** and Philip B. Woodford presented "*Identification of Soil Characteristics That Facilitate Assessment of Ecosystem Health on Military Training Lands,*" at the 14th Annual Integrated Training Area Management (ITAM) Workshop, Indianapolis, IN, August 2005.

**Donald P. Althoff**, **Russell D. Japuntich**, **Philip S. Gipson** and Jeffrey S. Pontius presented "*Reproductive Success of Grasshopper Sparrows on a Military Installation,*" at the 12<sup>th</sup> Annual Conference of The Wildlife Society, Madison, WI, September 2005.

**Dr. George Marchin** presented "*Waterborne Illnesses,*" at the Kansas Department of Health and the Environment, Topeka, KS, August 30, 2005.

**Dr. Donald Kaufman** presented a seminar titled, "*How did I get to Fort Hays and back?—A career path and lessons learned, including insights into small mammals in tallgrass prairie,*" at Fort Hays State University in September 2005.

The Kaufman lab gave the following presentations at the American Society of Mammalogists meeting at Missouri State University, Springfield, June 15-19: **Glennis Kaufman**, **Donald Kaufman**, **Dawn Kaufman**,

Aaron Reed, Brock McMillan, Ray Matlack, and **Ryan Rehmeier** presented “*Small mammals and seasonal fires: community responses to post-fire conditions*”; **Donald Kaufman** and **Glennis Kaufman** “*Small mammals in tallgrass prairie: impact of woody invasion*”; Ray Matlack, **Donald Kaufman**, and **Glennis Kaufman** presented “*Shrub invasion in tallgrass prairie: influence of woody vegetation on small mammals*” and; **Ryan Rehmeier**, **Glennis Kaufman**, and **Donald Kaufman** presented “*Nest activity of deer mice in prairie: automatic monitoring in a natural system.*”

The following posters were presented at the 16<sup>th</sup> International Conference on Arabidopsis Research, Madison, WI, June 15-19: **Jessica Morton** and **Jyoti Shah** presented “*Lipases in Plant Defense and Death*” and; **Kartikeya Krothapalli**, Ashis Nandi, **Ruth Welti** and **Jyoti Shah** presented “*Investigating the role of lipids in systemic acquired resistance.*”

The following research was presented at the American Society for Virology Annual Meeting, June 18-22, 2005, College Park, PA, and at the Society for Invertebrate Pathology Annual Meeting, August 2005, Anchorage, AK: **C. Detvisitsakun**, **M.F. Berretta**, **C. Lehiy**, and **A.L. Passarelli** presented “*Stimulation of cell motility by a viral fibroblast growth factor homolog: proposal for a role in viral pathogenesis*”; **M.F. Berretta**, **M. Deshpande**, and **A.L. Passarelli** presented “*Functional characterization of BmNPV and SeMNPV late gene transcription and genome replication factors in the insect cell line SF-21*”; **R.J. Clem**, **L. Heaton**, and M. Burton presented “*Oral infection of Spodoptera exigua larvae with an AcMNPV mutant lacking the apoptosis suppressor p35*” and; **J.C. Means** and **R.J. Clem** presented “*Characterization of a novel entomopoxvirus homolog of baculovirus P35.*”

C. Amela-Cortes, M. Rezende, T. Yakovleva, **E.M. Perchellet**, and **J.P. Perchellet** presented “*Structure-activity relationship studies of a novel CXCR4 chemokine antagonist reveal unique activity profile,*” at the 19<sup>th</sup> American Peptide Symposium, San Diego, CA, June 18-23, 2005.

The following presentations were given by students in the **Dr. Keith Chapes** lab at the 38th annual Society for Leukocyte Biology Meeting, Oxford University, England, September 21-24, 2005: **Betsey Potts**, E.C. Miller, and **S.K. Chapes** presented “*In vivo responses and trafficking patterns of C2D macrophages after intraperitoneal adoptive transfer*”; **Bridget McGuire**, E.C. Miller, C. Cheng, R.R. Ganta, and **S.K. Chapes** presented “*Induction of immunological memory phenotypes in mice using Ehrlichia chaffeensis*” and; **Whitney Mordica**, E.C. Miller, **L. Passarelli**, **R.J. Clem** and **S.K. Chapes** presented “*Role of CD81 in LPS-mediated macrophage activation.*”

## PUBLICATIONS

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## UPCOMING EVENTS

The fourth annual **Kansas IDEA Networks of Biomedical Research Excellence Conference (K-INBRE)** will be held in Manhattan at the K-State Alumni Center on January 14-15, 2006. The conference will be a show place for undergraduates from across the state to present their research. To register go to the K-INBRE Website at <http://www.kumc.edu/kinbre>. Contact Heiata Chapman at [hchapman@kumc.edu](mailto:hchapman@kumc.edu) with questions.

The 31st meeting of the **Kansas Chapter of The American Fisheries Society** will be held on February 10-11, 2006 at Fort Hays State University, Hays, KS. For more information, visit the chapter website at <http://www.ksu.edu/kscfwru/ksafs/>.

The **Kansas Chapter of The Wildlife Society** will hold their spring meeting on February 24-25, 2006 at Fort Hays State University, Hays, KS.

The **Division of Biology 32<sup>nd</sup> Annual Graduate Student Research Forum** will be held on March 11, 2006 in the Big 12 Room of the K-State Student Union at 8:00 A.M.

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