HIGUCHI – KU ENDOWMENT

RESEARCH ACHIEVEMENT AWARD CEREMONY

December 9, 2014

Education Pavilion, Lied Center of Kansas

Balfour Jeffrey Award in Humanities and Social Sciences

Based on his research achievements, Victor Bailey, Charles W. Battey Distinguished Professor of Modern British History at the University of Kansas, is presented with the Balfour Jeffrey Award in Humanities and Social Sciences.

Victor Bailey came to KU in 1988 following teaching and research positions at Hamilton College and the University of Rochester in New York and the University of Hull in England. Previously, he was a senior research fellow in modern history at Worcester College, Oxford; a research officer in the Centre for Criminological Research at Oxford, and a research fellow at the Institute of Historical Research, London University.

Dr. Bailey is a pioneering social historian of Britain, best known for a series of books that apply sociological and humanistic approaches to crime and disorder in the 19th and 20th centuries. The first of these was *Delinquency and Citizenship: Reclaiming the Young Offender, 1914-1948.* A KU colleague notes that Dr. Bailey's "interpretation that benign reform impulses actually fostered a more repressive bureaucratic regime was for a generation of historians utterly novel and, for a generation of social reformers, equally shocking. The work showcased Dr. Bailey's fine prose and original analysis, and it built an intellectual bridge between History and state policy makers."

Subsequent books include "*This Rash Act": Suicide Across the Life Cycle in the Victorian City*, and an edited volume, *Policing and Punishment in Nineteenth Century Britain*. Earlier this year, two new books came out: C*harles Booth's Policemen: Crime, Police and Community in Jack-the-Ripper's London;* and *Order and Disorder in Modern Britain: Essays on Riot, Crime, Policing and Punishment.* A book in progress – *The Myth of Rehabilitation: Punishment, Culture and Society in Modern Britain, 1890-1970* – promises to be equally significant. His work has received extensive external support from funding agencies and foundations in the U.S. and the U.K.

Dr. Bailey received his B.A. and Ph.D. degrees from the University of Warwick, and an M.Phil. degree from the Institute of Criminology at the University of Cambridge.

In addition to his active work as a scholar and teacher, Dr. Bailey has an extraordinary "day job." Since 2000, he has served as director of KU's prestigious Hall Center for the Humanities. Referring to that role, his nominator wrote "he has spurred on the careers of a

great many other scholars [and] has had, in other words, a multiplier effect on the University's research mission."

During his tenure, a new home was built for the Center, its academic and public programs have grown substantially, and it hosted the 2013 annual meeting of the international Consortium of Humanities Centers and Institutes – a real coup.

The Hall Center has also enjoyed remarkable success obtaining private funding from foundations and individual Friends of the Hall Center. Last summer, it completed the required private match of $1.275 million for a $425,000 challenge grant from the National Endowment for the Humanities. This unprecedented third challenge grant will seed new collaborative faculty research projects in the humanities.

Capping off a remarkable 2014 (before today), an investiture ceremony in September recognized Dr. Bailey as the inaugural endowed director of the Hall Center for the Humanities. This was made possible by a $500,000 gift from the Hall Family Foundation.

Olin Petefish Award in Basic Sciences.

Based on her research achievement, Susan J. Brown, University Distinguished Professor of Biology at Kansas State University, is presented with the Olin Petefish Award in Basic Sciences.

Dr. Brown came to Kansas State in 1983 from graduate school as a research associate in biochemistry. She became an assistant professor in the Division of Biology in 2001, advanced to full professor in 2007, and was made a University Distinguished Professor in 2012. In addition, she has held visiting scientist appointments at the Harvard School of Medicine and the Max Planck Institute for Developmental Biology in Germany.

Dr. Brown is recognized around the world for her work (and that of her colleagues) to develop a model system for developmental genetic and molecular studies based on the red flour beetle, Tribolium. She led early efforts to sequence the Tribolium genome, and is a founding member and steering committee member of an international effort to sequence the genomes of 5,000 insect species.

Known simply as the "i – 5 – K" initiative, it has been called "the Manhattan Project of Entomology." Launched in 2011, it is an undertaking that has the potential to revolutionize the way we think about insects. At the time, Dr. Brown commented:

> "We're trying to find out who's working on what insects, and if they feel that having genomic information about their insects would help. Quite a few researchers are probably working on transcriptomics, looking at the genes that are transcribed under certain contexts, environmental conditions or life stages. Looking at the whole genome will help us understand these comparatively and not just in one organism."

At Kansas State, Dr. Brown serves as director of the Arthropod Genomics Center. Her annual Arthropod Genomics Symposium, now in its eighth year, is the pre-eminent meeting of its kind and an international event.

Dr. Brown received her B.A. degree in biology from Smith College, and her Ph.D. degree in genetics from the University of Missouri – Columbia.

Currently, she is developing a novel genome mapping technology. It is based on imaging ultra-long molecules of DNA in nano-channels printed on silicon chips. She is using this technology to validate and extend genome assemblies of multiple Tribolium species, and providing access to this technology to genome researchers across the globe.

Dr. Brown has given tirelessly to her university and her profession over the years – in terms of campus service, mentoring of students, and editorial work for scholarly journals. She is a fellow of the Entomology Society of America and an editorial board member for two publications. Within Kansas, she helped establish and now directs the statewide Bioinformatics Core of the Kansas IDeA Network of Biomedical Research Excellence.

A Kansas State colleague notes Dr. Brown "has made strong contributions in three different areas: developing Tribolium as a premier genetic model organism, understanding segmentation mechanisms, and developing bioinformatics expertise and training opportunities.. One only has to peruse her publications in *Nature* and the *Proceedings of the National Academy of Science* to be convinced of the broad importance of her work."

Dolph Simons Award in Biomedical Sciences

Based on his research achievement, Craig Lunte, Professor of Chemistry at the University of Kansas, is presented with the Dolph Simons Award in Biomedical Sciences.

Craig Lunte came to KU in 1987 as an assistant professor, following a postdoctoral research appointment at the University of Cincinnati. He previously was a bioanalytical research scientist with Procter & Gamble. He advanced to full professor in 1997, and has twice served as chair of KU's Department of Chemistry.

Dr. Lunte is a leader in the development, calibration and pharmaceutical application of microdialysis sampling, especially the study of transdermal drug delivery and other translational uses of the technique. He was among the first researchers to demonstrate the utility of microdialysis sampling for the study of the bodily absorption, distribution, metabolism, and excretion of drugs. He then developed new probe designs that are better suited for sampling from peripheral tissues. These probes are now commercially available and used widely.

Dr. Lunte and his co-workers also developed approaches to studying transport across the blood-brain barrier, delivery to solid tumors, and oral absorption. This form of testing is most useful where analysis of blood and other fluids doesn't provide relevant information.

Another research focus is the development of sampling *in vivo* based on separations, using probes and other tools that provide near real-time monitoring of multiple compounds in the tissues of conscious, freely-moving animals. The objective of Dr. Lunte's research program is the development of new methods for the study of drug metabolism and disposition in the body. Such research has many applications, including the neuropharmacology of drugs used to fight addiction and approaches to inhibiting epileptic seizures.

His group's current research is focused primarily on epilepsy, and the development of analytical methods to detect biomarkers for DNA damage that results from oxidative stress during seizures. These methods can then be used with microdialysis sampling to study the effects of such stress. This research is also applicable with strokes and heart attacks.

Dr. Lunte received his B.S. degree in chemistry from the Missouri University of Science and Technology, and his Ph.D. degree in analytical chemistry from Purdue University. In 2011, he received Purdue's Department of Chemistry Outstanding Alumni Award. Other honors include recognition as a Fellow of the American Association of Pharmaceutical Scientists, which also bestowed its 2008 Research Achievement Award in Analysis and Pharmaceutical Quality.

At KU, Dr. Lunte is the recipient of a Self Graduate Fellowship Program Mentor Achievement Award, as well as the John C. Wright Graduate Mentor Award.

Dr. Lunte's research efforts have led to more than 150 publications, two patents, $7 million in NIH funding, and $1.2 million in industry support from such companies as Pfizer, Amgen, and AstraZeneca. Three KU colleagues, in nominating him, noted "His innovative research contributions, strong productivity, and long-time collaborations with industrial partners have significantly enhanced the visibility of KU. . He is a researcher at the forefront of his field [and] an outstanding mentor to many aspiring chemists."

I would note in passing that, while we don't track marital relationships in the Office of Research, it's possible this is the first time an Higuchi Award has been given to the spouse of a previous honoree. Dr. Susan Lunte received the Dolph Simons Award two years ago.

Irvin Youngberg Award in Applied Sciences

Based on his research achievement, Frank F. White, Professor of Plant Pathology at Kansas State University, is presented with the Irvin Youngberg Award in Applied Sciences.

Frank F. White came to Kansas State in 1985 as an assistant professor, following a post-doctoral fellowship in microbiology and immunology at the University of Washington. He advanced to

full professor in 2001. Today, he is recognized as a world expert in the molecular biology of bacterial diseases of plants and the genetic analysis of plant / microbe interactions.

Dr. White and his collaborators have identified a series of host genes that condition susceptibility and resistance in the host. His seminal research on Transcription Activation-Like (or "TAL") Type III effectors has received world acclaim, and has contributed to recent advances in TAL effector-mediated genome editing.

His work includes the discovery of the first TAL effector targeted host susceptibility and resistance genes in plants. That research led to the development of broadly applicable genome editing tools that have had a profound impact on agriculture and medical sciences.

Much of Dr. White's work involves bacterial blight diseases of rice, the world's number one staple crop. He was a co-principal investigator, for example, on a grant from the Bill and Melinda Gates Foundation to the Carnegie Institute of Science supporting work on a transformative strategy for controlling rice disease in developing countries. He also spent a sabbatical in Brazil, collaborating with scientists there in the sequencing and annotation of the citrus canker and cabbage black rot pathogens.

Dr. White is a Fellow of the American Phyto-Pathology Society and the 2010 recipient of Kansas State's Distinguished Graduate Faculty Award. During the course of his career, he has attracted nearly $12 million in research funding, including more than $6 million in the National Science Foundation's Plant Genome Research Program for 2009-2015.

His research support is widespread. In addition to the Gates Foundation, it includes the U.S. Department of Agriculture, the Kansas Department of Agriculture, the Kansas Biosciences Authority, the Rockefeller Foundation, and the Food and Agriculture Organization of the United Nations.

Dr. White received his B.S. degree in molecular biology at the University of Wisconsin-Madison, and M.S. and Ph.D. degrees in microbiology and immunology at the University of Washington.

In addition to his teaching research, he participates in Kansas State's Girls Researching Our World (GROW) summer program in STEM disciplines for sixth through eighth graders. He has also taught high school science teachers about biotechnology and genetic engineering, and even judged entries in the Kansas Junior Academy of Science annual science fair at Wichita State!

A colleague at Kansas State notes, "The aspect I most admire about Dr. White is his enthusiasm for science and his unselfishness – always bubbling with new ideas and insights that he freely shares."