The current core faculty provide a wealth of experience from public health activities. In addition to the core faculty, adjunct faculty members who serve in public health departments at the state and local level bring the immediacy of practice concerns to full-time faculty and students alike.

Examples of such activities on the part of all faculty members are noted in the brief summaries below.

**Susan Olson Allen,** PhD, is an Assistant Professor in the Department of Health Management and Systems Sciences. She has a background in urban and public affairs with an emphasis on urban planning. Her primary focus in SPHIS is on how the built environment affects a community’s health. She teaches two courses relating to that topic, Public Health and the Built Environment and Health Impact Assessment. Additionally, for the past two years, she has collaborated with the university’s Department of Urban and Public Affairs to develop a dual degree program for an MPH-Master of Urban Planning.

**Ray Austin,** PhD, is an Assistant Professor in the Department of Health Management and Systems Sciences. He served as Director of Planning and Program Development for the Southern West Virginia Regional Health Council, Inc., a regional health care program that integrated primary care service delivery and public health programs. He worked with county health departments, the state health department and federal government health-related agencies in the development and operation of primary care health facilities and public health programs. He serves on the Business Development and Finance Committee of the Kentucky Health Information Exchange Coordinating Council, which assists with the development of efforts related to collecting and sharing of health-related electronic data.

**Kathy B. Baumgartner,** PhD, MS, MA, is Associate Dean for Faculty Affairs and Professor, Department of Epidemiology & Population Health. She has been principal investigator and co-investigator of several population-based epidemiologic studies on breast cancer, cervical cancer and pulmonary disease over the past 20 years. This experience has permitted her to involve many students in public health research activities and to incorporate real-life study examples into the classroom. She is a primary contributor to the chapter on breast cancer in the upcoming Surgeon General’s report to update the health consequences of smoking and exposure to secondhand smoke.

**Richard N. Baumgartner,** PhD, FACE, is Professor and Chair, Department of Epidemiology and Population Health, member of the Board of Directors of the American College of Epidemiology, the National Council of Epidemiology Chairs, the Society for Epidemiologic Research, and a participant in the CDC program “Building Epidemiologic Capacity in Kentucky” (BECKY). He is a former charter member of the NIH Cardiovascular and Sleep Epidemiology Study Section. These associations allow him to integrate diverse perspectives on public health priorities and to ensure that the department’s research, teaching and service missions are nationally aligned and competitive with best practices in epidemiology. He is a primary contributor to the chapter on breast cancer in the upcoming Surgeon General’s report on cigarette smoking and secondhand smoke exposure.

**Guy Brock,** PhD, is an Associate Professor in the Department of Bioinformatics and Biostatistics. He has considerable involvement with projects involving public health outcomes, including cancer epidemiology, transplantation, birth defects, community acquired pneumonia, and liver disease. His methodological focus in statistical bioinformatics and statistical genetics has resulted in publications and software on cluster validation, missing value imputation, and classification for high-throughput data. These publications and software are regularly cited and used by other investigators analyzing ‘omics’ data associated with public health. Additionally, the courses he teaches in statistical computing, survival analysis, and categorical data analysis all involve numerous examples of public health data.

**Richard D. Clover,** MD, is founding Dean of SPHIS and Professor, Department of Health Promotion and Behavioral Sciences. He also serves as Co-Director of the Center for Health Hazards Preparedness and Associate Vice President for Health Informatics at the UofL Health Sciences Center. His research interests are communicable diseases and vaccine-preventable diseases, which include infectious disease epidemiology, vaccine supply and production, new vaccines, pandemic influenza and emerging pathogens. He is a member of the Institute of Medicine, APHA, ASPH, DHHS National Vaccine Advisory Committee, and National Board of Public Health Examiners.

**Somnath Datta,** PhD, is a Professor in the Department of Bioinformatics and Biostatistics. He has collaborated with the CDC in detecting bioterrorism threats via proteomic profiling. He is collaborating with Susan Harkema at UofL on spinal cord injury research, and is developing statistical methodologies to
determine the appropriate recommended dose of daily fluoride intake for children in this country. Dr. Datta’s research is supported by the National Institutes of Health, the National Science Foundation and the National Security Agency. He regularly teaches “Advanced Survival Analysis” to the school’s doctoral students. “Time to Event” studies are fundamental in all aspects of public health research and this course trains our students to design and analyze such studies.

**Susmita Datta**, PhD, is a Professor in the Department of Bioinformatics and Biostatistics. She is actively involved in the area of public health research. She has developed efficient statistical designs for estimating HIV vaccine efficacy. Her research includes identification of molecular biomarkers for colon and ovarian cancer and predicting biological network using microarray and miRNA expression profiles through statistical methodology. She has predicted survival times of lung cancer patients from high dimensional mass spectrometry proteomic data. She has identified alpha fetoprotein as a major possible biomarker of fetal alcohol syndrome. Continuation of this research may result a new test for birth-defect identification in the future.

**Rose Devasia**, MD, MPH, is an Assistant Professor in the Department of Epidemiology and Population Health. She worked in the Tennessee Department of Health, gaining field experience for two years as part of the EIS program at CDC. Her expertise in infectious diseases and outbreak investigations have helped her teach Infectious Diseases Epidemiology, Field Epidemiology and Emerging Issues in Epidemiology to graduate students. Her past research interest in drug-resistant tuberculosis enabled her to discuss the pressing issue of antibiotic resistance with students. She is currently pursuing funding for a grant dealing with infectious diseases resulting in infertility.

**Robert Esterhay**, MD, is an Associate Professor and Chair of the Department of Health Management and Systems Sciences. His activities draw from the field of health information sciences and information and communication technologies. He has been at the informatics crossroads of individual health, health care and population health for over 35 years. He helped write the Kentucky eHealth Bill in 2005. Dr. Esterhay served as Co-Chair of the Kentucky eHealth Board and the Kentucky Healthcare Infrastructure Authority. He is currently a member of the Population Health Committee for the Kentucky Health Information Exchange (HIE) Coordinating Council. He helped develop the Louisville HIE organization. Dr. Esterhay previously served as a commissioned officer in the US Public Health Service.

**Linda J. Goldsmith**, PhD, is an Associate Professor in the Department of Bioinformatics and Biostatistics. Her contribution to the field of public health is primarily teaching statistical methods. She has taught the online course “Introduction to Biostatistics” since the establishment of the school. This course meets all the CEPH competencies for biostatistics except for computer usage, which students learn in another, hands-on class. Her other biostatistics courses, including Clinical Trials I, Statistics Laboratory for Clinical Trials, Biostatistical Methods II, and Nonlinear Regression, also impart important knowledge of biostatistics, which is useful in public health as well as many scientific disciplines.

**Frank D. Groves**, MD, is an Assistant Professor in the Department of Epidemiology and Population Health. He incorporates guest lectures by public health practitioners into the course, Introduction to Epidemiology: Sara Robeson of the Kentucky Department for Public Health discusses public health data sources in Kentucky, and Carl Hall of the Louisville Metro Department of Public Health and Wellness describes recent outbreak investigations. The course on Disease Surveillance & Health Statistics is organized around the Healthy People 2020 focus areas. Dr. Groves utilizes various NHANES surveys as sources of practice data for two lab courses focused on Data Management & Analysis, and he incorporates the NHANES data into the teaching of the course on Biology of Disease in Populations.

**Muriel J. Harris**, PhD, is an Associate Professor in the Department of Health Promotion and Behavioral Sciences. She teaches the Critical Thinking and Program Evaluation and the Advanced Evaluation classes, for which all students are required to complete public health program evaluation field projects. Students work in teams or individually and must answer an evaluation question provided by the community based organization or government agency. They work in close collaboration with the stakeholder who provides information about the program and access to resources to enable students to complete the assignment. The requirements of the courses may include, but are not limited to designing tools for evaluation and conducting assessments to determine program needs, the suitability of evaluation or program outcomes resulting in real world experiences for the students, and support in evaluating their programs for the organizations.
Carlton A. Hornung, PhD, MPH, is a Professor in the Department of Epidemiology and Population Health, and also served as its first Chair. He was a founding faculty of the school and developed the curriculum for the Epidemiology and Clinical Investigation Sciences Program (MSc CREST) with an NIH K30 Curriculum Development Award. He is an original member of the Association of Clinical Research Training Programs and Past President of the Consortium of Academic Programs in Clinical Research. He is a member of the ACE Education Committee and the Council on Epidemiology and Prevention of AHA and has served on several NIH Study Sections. His teaching and research interests are cardiovascular disease and clinical epidemiology.

Gary Hoyle, PhD, is a Professor in the Department of Environmental and Occupational Health Sciences. He is also a member of the NIH CounterACT (Countermeasures Against Chemical Threats) Research Network. CounterACT is a trans-NIH translational research initiative that seeks to develop medical countermeasures for chemical threat agents that may be used against the U.S. populace. Dr. Hoyle is researching countermeasures for lung injury caused by inhalation of toxic gases such as chlorine with the goal of developing rescue treatments that could be used in public health emergencies resulting from accidental or intentional release of chemical threat agents.

Robert Jacobs, PhD, is Professor, Department of Environmental and Occupational Health Sciences, and Director of the SPHIS MPH Program. Dr. Jacobs is past Chair of the Committee on Organic Dust of the International Commission for Occupational Health (ICOH) of the International Labor Organization (ILO) and has collaborated on international health projects in Sweden, Moldova, and Nigeria. In 2010-11, Dr. Jacobs completed a Fulbright Fellowship with the West China School of Public Health at Sichuan University in Chengdu, China. Dr. Jacobs is currently a member of the Environmental Health Committee of the Louisville Metro Department of Public Health and Wellness and a member of the ASPH Environmental and Occupational Health Council.

Richard A. Kerber, PhD, is an Associate Professor in the Department of Epidemiology and Population Health. He has developed probabilistic record linkage methods integral to the ongoing management of health and vital statistics records in the Utah Population Database, served as Interim Director for the NCI-funded Utah Cancer Registry, helped to develop the first Utah Health Status Survey, and designed a system to identify high-risk candidates for colonoscopy for an NCI-funded telemedicine intervention trial.

Seongho Kim, PhD, is an Assistant Professor in the Department of Bioinformatics and Biostatistics. His research focuses on the development of novel statistical methods for biological and clinical data using various methodologies such as graphical models, partial/semi-partial correlation analysis, multiple comparison, multivariate analysis, Bayesian analysis, etc. His current interests lie in metabolomics, pharmacokinetics/pharmacodynamics (PK/PD) analyses, and the integration of these two areas. The metabolomics and PK/PD are key areas for discovery of biomarkers as well as development of new drugs that can be used as diagnostics, prevention, and treatment of various diseases.

Maiying Kong, PhD, is an Associate Professor in the Department of Bioinformatics and Biostatistics. She has been active in teaching and conducting research in biostatistics, which includes educating students in SPHIS to apply statistic methods in designing their population/experiment studies, analyzing the resulting data, and interpreting the results appropriately. She also collaborates with researchers in SPHIS to study public health issues with statistical rigor.

Karunarathna “K.B.” Kulasekera, PhD, is a Professor and Chair of the Department of Bioinformatics and Biostatistics who joined the university in July 2012. He has been actively involved in undergraduate and graduate studies. He has authored or co-authored more than 47 peer-reviewed academic publications, and co-authored a textbook on statistics. Dr. Kulasekera is associate editor of the Journal of Statistical Computation and Simulation and serves on the board of editors for Involve. He has been funded by the National Science Foundation (NSF) for his mathematical research. He also has served as a consultant for the NSF. He is an elected member of the International Statistical Institute and a member of the American Statistical Association and the Institute of Mathematical Statistics.

A. Scott LaJoie, PhD, is an Associate Professor in the Department of Health Promotion and Behavioral Sciences. His primary research is in the area of health-related decision making. He studies shared decision-making, factors affecting quality of life, and risk communication. Currently, his research examines the impact of H1N1 mitigation efforts on physical and mental wellbeing. Factors he has been
looking at include risk communication and patient-provider communication. His research and service activities are tied directly to the classes he teaches (health decision making, health risk communication, psychology of decision making, and health communication). The integration of research and service with his teaching provides the students with an informed perspective on public health.

**Doug Lorenz**, PhD, is an Assistant Professor in the Department of Bioinformatics and Biostatistics. He works collaboratively in the NeuroRecovery Network (NRN), a national network of treatment centers providing activity-based therapy to individuals with spinal cord injury sponsored by the Christopher and Dana Reeve Foundation (CDRF) and CDC. He has participated in research estimating average functional recovery rates and identifying determinants of recovery for NRN patients as well as research on functional, health, and quality of life outcomes. He also works with investigators at UoFL and Children’s Memorial Hospital (Chicago, IL) in developing clinical decision rules to discriminate abusive trauma from accidental trauma in the pediatric emergency setting, research sponsored by NIH.

**William Paul McKinney**, MD, is Associate Dean for Research and Professor, Department of Health Promotion and Behavioral Sciences. He is Research Director of the Center for Health Hazards Preparedness and has overseen the instruction of over 30,000 practitioners from public health as well as those in medicine, dentistry, nursing, pharmacy, behavioral health, and veterinary medicine in the effective response to public health emergencies, providing leadership in federal grants from the CDC, HRSA, ASPR, and DHS. He previously served as an EIS officer with the CDC on assignment with the North Carolina State Health Department and as epidemiologist for two teaching hospitals affiliated with the Medical College of Wisconsin, Milwaukee. He is an attending physician in the university’s Internal Medicine training program and is Associate Director of the university’s International Travel Clinic. He also serves as liaison member from the Association for Prevention Teaching and Research to the CDC Advisory Committee on Immunization Practices (ACIP).

**Susan B. Muldoon**, PhD, MPH, is Associate Dean of Students Affairs, Director of the Clinical Research Epidemiology and Statistics Training Program, and Assistant Professor of the Department of Epidemiology and Population Health, as well as a member of the American Public Health Association and the Society for Epidemiological Research. As Epidemiology Section Chair of the Kentucky Public Health Association, she works with public health professional throughout the commonwealth to promote healthy communities through education, leadership and commitment to excellence. She has received several public health traineeship grants, which funds the training public health workers to improve Kentucky’s public health system by strengthening the necessary competencies and capabilities of current and future public health workforce.

**Rachel E. Neal**, PhD, is an Assistant Professor in the Department of Environmental and Occupational Health Sciences. A protein biochemist by training, she has spent the past ten years expanding the fields of environmental toxicoproteomics and toxicometabolomics. Her research interests include the impact of environmental toxins on child health and the impact of maternal environment on fetal/offspring development. She is an active member of the UoL Birth Defects Center and Alcohol Research Center.

**LaQuandra S. Nesbitt**, MD, MPH is an Assistant Professor in the Department of Health Management and Systems Sciences. As a public health official currently serving as the Health Director for Louisville Metro Government, she is an active public health practitioner. This allows for students and faculty to continuously engage with someone actively engaged in the field and allows for synergies between public health research and practice.

**Liz O’Brien**, PhD, is an Assistant Professor in the Department of Epidemiology and Population Health. Dr. O’Brien came to UoFL in 2008 with a PhD in Anthropology, and 25 years’ experience studying genetic variation in human populations. Her main interest is genetic contributions to chronic age-related diseases in human populations, and demographic effects of individual variation in mortality, senescence, and lifespan. To teaching, she brings notable experience in all phases of population research-- design, recruitment, field work, lab work, final data analysis. Dr. O’Brien teaches in the core series, is a contributing instructor to Genetic Epi, seminars and independent studies for theses and dissertations, and has launched two pilot studies in Ghana for MPH students.

**Rudolph S. Parrish**, PhD is a Professor in the Department of Bioinformatics and Biostatistics. His research interests include clinical trials design; linear models and mixed models; modeling; group
Dr. Barry Wainscott, MD, MPH, served as manager and chief physician with the Communicable Disease Branch of the Kentucky Department for Public Health from 2000 through 2005. His prior public health experiences include deputy director, medical director, and primary care director for the Jefferson County Health Department in Louisville; director of preventive medical services for the Santa Barbara County health agency in California; and physician health officer developing a district health department with regional programs serving a number of counties in north central Kentucky. His community health experience also includes the role of physician in preventive medicine with UofL Student Health Services. His teaching experiences have included developing array methodology.

Dr. Shesh N. Rai, PhD, is the Wendell Cherry Chair in Clinical and Translational Research, Professor in the Department of Bioinformatics and Biostatistics, Director of the Biostatistics Shared Facility of the James G. Brown Cancer Center, a member of the American Statistical Association and the Clinical and Scientific Review Committee and vice-chair of Data and Safety Monitoring Board. Over the last 25 years, he has contributed significantly to the development of biostatistical resources that support collaborative and methodological research, to the creation of collaborative research teams and to the education of health professionals and statisticians. These associations allow him to integrate diverse perspectives on public health research and priorities and ensure that his research, teaching and service missions are nationally aligned and competitive with best practices in applications of biostatistics.

Dr. Irma N. Ramos, MD, is an Assistant Professor in the Department for Environmental and Occupational Health Sciences Dr. Ramos is a physician-scientist with formal training in international medicine and pediatrics. Her areas of interest include environmental children’s health, global environmental health education, community medicine, and community-based research. She has provided executive leadership for several nationally recognized community outreach and education programs and is an internationally recognized leader in lay health worker education and training. She serves as community liaison for the National Children’s Study Center for Jefferson County, KY. Her current research projects are focused on the fetal basis of environmentally induced pediatric disease; community-based research with disadvantaged populations, environmental health literacy and epigenetics of environmental disease.

Dr. Rob Steiner, MD, PhD, is a Professor in the Department of Health Management and Systems Sciences. He teaches the methods of formal healthy communities approaches to improving population health in the course Managing Healthy Communities, which is based on his experience as Project Director for Improving Women’s Health in Constanta, Romania, (funded by American International Health Alliance and U.S. Agency for International Development). This project became a national and international model for several nations within Central and Eastern Europe to improve women’s health by addressing socially enmeshed health concerns, such as domestic violence. He was recognized for this pioneering work with a decennial award from leaders in Romania for his services in November 2010. He maintains an interest in managing change from the perspective of culture as a means to reframe and influence policy development.

Dr. Kira Taylor, PhD, MS, MAEd., is an Assistant Professor in the Department of Epidemiology and Population Health and is the director of the upcoming Bachelors in Public Health degree program. She is a member of the Society for Epidemiologic Research, the American Society of Human Genetics, and the American Heart Association. She was recently awarded a grant to incorporate critical thinking into all syllabi developed by SPHIS in anticipation of the BSPH program. She brings a unique combination of skills to the department with a background in education and laboratory sciences in addition to a PhD in Epidemiology.

Dr. David J. Tollerud, MD, is Professor and Chair of the Department for Environmental and Occupational Health Sciences. He has incorporated elements of public health practice into his faculty activities primarily through teaching and mentoring. Dr. Tollerud tries to include as much “real world” personal examples of how concepts are applied in the realm of practice. While he is a full-time faculty member, he has been involved over the years in a number of consulting activities and committee work that have involved the application of environmental health principles in practice. In mentoring graduate students, he always tries to relate what they are doing or learning to future applications in a setting relevant to their professional aspirations.

Dr. Barry Wainscott, MD, MPH, is an Assistant Professor in the Department of Health Management and Systems Sciences. He served as manager and chief physician with the Communicable Disease Branch of the Kentucky Department for Public Health from 2000 through 2005. His prior public health experiences include deputy director, medical director, and primary care director for the Jefferson County Health Department in Louisville; director of preventive medical services for the Santa Barbara County health agency in California; and physician health officer developing a district health department with regional programs serving a number of counties in north central Kentucky. His community health experience also includes the role of physician in preventive medicine with UofL Student Health Services. His teaching
draws on this experience. Interests include communicable disease control, disease prevention and management, and health system efficiency and effectiveness.

Peter L. Walton, MD, is Associate Dean for Academic Affairs and Assistant Professor, Department of Health Promotion and Behavioral Sciences. He devotes his efforts to four interrelated areas: undergraduate teaching, the university and school's quality enhancement plan focused on critical thinking, academic administration, and academic data systems. While these four areas may not be seen as "traditional practice," the education of public health workers is a large part of the essential service of assuring a competent workforce, particularly his work in teaching critical thinking. In addition, providing undergraduate students with an introductory exposure to public health contributes to the essential service to inform, educate, and empower.

Richard W. Wilson, DHSc, is Professor and Chair of the Department of Health Promotion and Behavioral Sciences. For many years and up to the present, he has served as a consultant and evaluator for a variety of public health agencies: local health departments, state health departments, federal agencies, and many private nonprofit health organizations. While he has contributed his expertise in each case, he's also gained a lot of real world experience, which he can bring to the classroom for MPH and doctoral students in public health. Because of his hands-on involvement, he is better able to prepare students for the world of practice.

Dongfeng Wu, PhD, is an Associate Professor in the Department of Bioinformatics and Biostatistics. She has been working on probability models in cancer screening for over ten years. She has developed methods to accurately estimate key parameters in screening, such as sensitivity, sojourn time and lead time; she has developed a systematic approach to evaluate the long term impact of cancer screening in people’s life, such as the proportion of over diagnosis, true early detection, no early detection and disease free life. She has applied these methods to three kinds of screening: breast, lung and colorectal cancer.

Dongyan Yang, MD, MS, is an Instructor of the Department of Epidemiology and Population Health (DEPH). She is interested in both clinical trials and population based epidemiologic studies. She has been actively involved in chronic disease research studies such as cardiovascular disease, stroke and cancer.

Qunwei Zhang, MD, MPH, PhD, is an Associate Professor in the Department for Environmental and Occupational Health Sciences. Although he is not directly involved in the MPH student practicum experience, he has a strong commitment to advising post-doctoral fellows and visiting scholars. He is a mentor on the NIH/NIEHS T32 UofL Environmental Health Sciences Training Program. He is also a mentor on the NIH/NCI R25 University of Louisville Cancer Education Program. His research is focused on the health effects of ambient particulate matter and engineered nanoparticles, which may help students to identify emerging health risks and to provide knowledge for understanding how people seek and respond to various potential environmental factor-induced health effects.

Kristina M. Zierold, PhD, MS is an Assistant Professor in the Department of Epidemiology and Population Health. She is an environmental and occupational epidemiologist who predominately focuses on applying epidemiology and environmental health concepts to community-based problems. Current examples of community projects that she is involved with in Louisville include: (1) a federally funded study working with racially diverse high-school students and teachers to study and promote workplace safety among teenagers; and, (2) a university funded project working with residents of multiple neighborhoods who are exposed to coal ash to assess exposure and health outcomes in children and adults.