

**University Distinguished Professors:**


	<p><b>Raymond Carroll, Ph.D.</b>, Department of Statistics. <u>Role in program:</u> Mentor. <u>Research:</u> Dr. Carroll directs the Laboratory for Statistical Bioinformatics in Nutrition and Cancer, which is developing novel statistical methods to analyze data in order to understand the links between nutrition and cancer. Dr. Carroll's work encompasses the analysis of data from cell-based molecular biology experiments in rat and mouse models, along with the epidemiologic data from large surveys of humans. <u>Training:</u> Dr. Carroll is a director of an NCI-funded R25 postdoctoral training program in Biostatistics, Bioinformatics, Nutrition and Cancer. He has mentored over 40 trainees.</p>
	<p><b>Robert Chapkin, Ph.D.</b>, Department of Biochemistry and Biophysics. <u>Role in program:</u> Mentor. <u>Research:</u> Dr. Chapkin is Deputy Director of the NIEHS-funded Center for Translational Environmental Health Research and directs the Genomics and Bioinformatics Facility Core in the Center. His research focuses on understanding the molecular mechanisms through which diet modulates innate immune responses and cancer. His laboratory uses cell culture and transgenic animal models of acute/chronic inflammation and colon cancer, including a primary somatic stem cell-derived colonic crypt "organoid" cell culture system. These models are used to examine the effects of environmental agents on self-organizing epithelial structure <i>ex vivo</i>. <u>Training:</u> Dr. Chapkin mentored 14 masters and 17 Ph.D. students, and 19 postdocs.</p>
	<p><b>Timothy Phillips, Ph.D.</b>, Department of Veterinary Integrative Biosciences. <u>Role in program:</u> Mentor. <u>Research:</u> Dr. Phillips is Director of the Interdisciplinary Faculty of Toxicology graduate training program. His research focuses on the development and evaluation of chemical and biological methods to detect and mitigate environmental chemicals. He developed and optimized multifunctional high affinity enterosorbents. His lab is investigating the molecular mechanisms behind the efficacy of these materials and performing molecular modeling and thermodynamics of surface-toxin interactions. His clinical intervention trials have led to the translation of clay-based strategies. <u>Training:</u> Dr. Phillips has mentored 40 Ph.D. and 8 masters students, and 5 postdocs.</p>
	<p><b>Stephen Safe, Ph.D.</b>, Department of Veterinary Physiology &amp; Pharmacology. <u>Role in program:</u> Mentor. <u>Research:</u> Environmental research ongoing in Safe laboratory is primarily focused on the environmental and human health impacts of aryl hydrocarbon receptor (AhR)-active compounds. In a collaborative multi-investigator study, the effects of AhR-active environmental contaminants on colonic stem cells, gut health and the distribution of microbiota-derived metabolites is currently being studied in rodent models. His laboratory is also identifying and characterizing novel persistent organic pollutants which have been isolated from extracts of Great Lakes sediments. <u>Training:</u> Dr. Safe has mentored 94 Ph.D. and 15 masters students, and 20 postdocs.</p>
	<p><b>David Threadgill, Ph.D.</b>, Department of Veterinary Pathobiology. <u>Role in program:</u> Mentor. <u>Research:</u> Dr. Threadgill is Director of the Texas Institute for Genome Sciences and Society. His research interests are in the susceptibility to environmental exposures with a focus on how genetics of exposed individuals impacts response. The areas of specific emphasis are cardiotoxicity, developmental toxicity, and carcinogenesis. Dr. Threadgill investigates several environmental toxicants and co-exposures (e.g., chlorinated solvent trichloroethylene and arsenic). <u>Training:</u> Dr. Threadgill has mentored 72 undergraduate students, 21 Ph.D. and masters graduate students, and 11 postdoctoral scholars.</p>

**Professors:**

	<p><b>Weihsueh Chiu, Ph.D.</b>, Department of Veterinary Integrative Biosciences.  <u>Role in program:</u> Mentor; Director of “Health Assessment” track; Coordinator of the trainee externships program.  <u>Research:</u> Dr. Chiu’s research has focused on development of quantitative approaches that integrate laboratory research findings so as to directly inform decision-making related to chemicals in the environment. He is an expert in toxicokinetics, mechanisms of toxicity, dose-response assessment, and characterization of uncertainty and variability. He is applying probabilistic statistical methods and computational models to characterize inter-individual variability in susceptibility to toxic insults.  <u>Training:</u> Dr. Chiu provided training and mentorship to 9 junior EPA staff and 1 postdoc, and co-mentored 4 graduate students at UNC and 1 graduate student at UMBC.</p>
	<p><b>Robin Fuchs-Young, Ph.D.</b>, Department of Molecular and Cellular Medicine.  <u>Role in program:</u> Mentor; Director of “Mechanistic Research” track.  <u>Research:</u> Dr. Fuchs-Young’s laboratory studies basic mechanisms of breast cancer, with a special focus on determinants of susceptibility. Part of this focus includes investigations of the interactions of genetic and environmental risk factors that may underpin premenopausal aggressive disease. These studies encompass research into contributors to disproportionately poor outcomes in women of color. Her lab utilizes a variety of <i>in vitro</i> and <i>in vivo</i> models to assess contributors to tumorigenesis.  <u>Training:</u> Dr. Fuchs-Young has mentored 15 undergraduate students, 25 graduate students, 5 MPH students, 4 medical students, and 7 post-doctoral or resident fellows.</p>
	<p><b>Anthony Knap, Ph.D.</b>, Department of Oceanography.  <u>Role in program:</u> Mentor.  <u>Research:</u> Dr. Knap directs TAMU Geochemical and Environmental Research Group, a major national center dedicated to applied interdisciplinary research in the ocean and environmental sciences. Dr. Knap is a biogeochemist interested in petroleum hydrocarbons and climate studies and was the founder and PI of the Bermuda Atlantic Time-series program. His scientific interests are oceanography, organic geochemistry, environmental science, atmosphere/ocean interactions, oil pollution and dispersants, effects of chemicals on marine environment, and ocean and human health interactions.  <u>Training:</u> Dr. Knap has mentored 4 Ph.D. students and has 1 Ph.D. student at TAMU.</p>
	<p><b>Thomas McDonald, Ph.D.</b>, Department of Environmental and Occupational Health.  <u>Role in program:</u> Mentor  <u>Research:</u> Dr. McDonald is Assistant Dean for Academic Affairs at the School of Public Health. His knowledge and experience span over a wide range of topics encompassing analytical and environmental chemistry, environmental health sciences, and toxicology. His current research focuses on the investigation of contaminants impacting the environment and specifically in areas that are inhabited by underserved minority populations especially those along the Texas/Mexico border. The chemicals of concern range from chlorinated and organo-phosphate pesticides to petroleum hydrocarbons.  <u>Training:</u> Dr. McDonald mentored/co-mentored 35 doctoral and 26 master students.</p>
	<p><b>Weston Porter, Ph.D.</b>, Department of Veterinary Integrative Biosciences.  <u>Role in program:</u> Mentor.  <u>Research:</u> Dr. Porter’s research is focused on delineating the mechanisms by which cells interact with their environment. His laboratory identifies and characterizes factors involved in normal mammary gland development and how their disruption may lead to breast cancer. Utilizing the mouse mammary gland as a model system, he is currently investigating the effect of circadian rhythms on normal mammary gland development and how disruption of circadian rhythms through shift work as well as individual circadian clock components uniquely regulate xenobiotic metabolism.  <u>Training:</u> Dr. Porter trained 8 Ph.D. and masters students, and over 20 undergraduates.</p>

	<p><b>Ivan Rusyn, M.D., Ph.D.</b>, Department of Veterinary Integrative Biosciences. <u>Role in program:</u> Mentor; Program Director. <u>Research:</u> Dr. Rusyn's laboratory is applying molecular, biochemical, genetic and genomics approaches to research into the mode of action of environmental agents with an emphasis on inter-individual variability. Through a combination of <i>in vivo</i> animal studies and experiments that utilize cellular and molecular models, they aim to better understand why certain chemicals cause cancer or organ-specific toxicity and whether humans in general, or any susceptible sub-population in particular, are at risk from exposures. They study variation in response to chemicals using a mouse population <i>in vivo</i> model, human population-based <i>in vitro</i> models, and computational modeling. <u>Training:</u> Dr. Rusyn supervised research and/or academic progress of 10 undergraduate, 24 masters, and 12 Ph.D. students and 10 postdocs.</p>
	<p><b>Virender Sharma, Ph.D.</b>, Department of Environmental and Occupational Health. <u>Role in program:</u> Mentor. <u>Research:</u> Dr. Sharma's research interests include applications of ferrates (VI, V, and IV) for inactivation of toxins in water and air, and removal of emerging contaminants such as antibiotics, estrogens and toxic metals in water. He is an expert in formation, fate, and toxicity of silver and gold engineered and natural nanoparticles in aquatic environments. Additional area of focus includes applications of ferrites to destroy toxins and pollutants under solar light. <u>Training:</u> Dr. Sharma trained 10 undergraduate, 19 masters and 5 Ph.D. students, as well as 5 postdocs.</p>
	<p><b>Terry Wade, Ph.D.</b>, Department of Oceanography. <u>Role in program:</u> Mentor. <u>Research:</u> Dr. Wade's research involves studies of the sources, fate and effects of environmental contaminants. This work involves the analyses of a wide range of environmental contaminants in water, air, sediments and organisms. He has developed and validated methods for the analysis of pollutants in environmental samples, and applies these methods to research projects involving air, rain, fresh water, seawater, soils, sediments, plant tissues and animal tissues. He is interested in the current status and trends over time of pollutants in a variety of ecosystems. <u>Training:</u> Dr. Wade has mentored 15 Ph.D. and several postdoctoral research fellows.</p>

**Associate Professors:**

	<p><b>Jennifer Horney, Ph.D.</b>, Department of Epidemiology &amp; Biostatistics. <u>Role in program:</u> Mentor. <u>Research:</u> Dr. Horney's research interests include measuring the health impacts of disasters, as well as the linkages between high-quality pre-disaster planning and household actions related to preparedness, response, and recovery. She is an expert in the collection and analysis of primary data in the post-disaster period using multi-stage cluster sampling methods. Additional areas include the linkages between urban planning and health and the use of community-driven data collection for documenting risks and vulnerabilities to help create more resilient individuals and communities. <u>Training:</u> Dr. Horney has trained 22 masters and 1 Ph.D. student.</p>
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**Assistant Professors:**



**Leslie Cizmas, Ph.D.**, Department of Environmental and Occupational Health.

Role in program: Co-Mentor.

Research: Dr. Cizmas conducts chemical exposure assessment in underserved communities and development of interventions with community involvement to improve community health. Her research expertise focuses on assessing the toxicity of complex mixtures from hazardous waste sites, with emphasis on polycyclic aromatic hydrocarbons and pentachlorophenols. She has used mixture fractionation, followed by chemical and biological characterization of the whole mixture and fractions, to assess the relationship between predicted and actual toxicity of mixtures.

Training: Dr. Cizmas has mentored 3 Dr.P.H. students.



**Tracy Clement, Ph.D.**, Department of Veterinary Physiology & Pharmacology.

Role in program: Co-Mentor.

Research: Dr. Clement's research utilizes a multidisciplinary approach to understand the cellular reorganization of the male germline during spermatogenesis affecting male fertility and contributions to the next generation, including preconception exposure effects and the underlying epigenetic mechanisms. She discovered a novel actin related protein in spermatid morphogenesis and initiated and developed a new line of research to define the role of actin related proteins in spermatogenesis.

Training: Dr. Clement has mentored 4 undergraduate and 2 Ph.D rotation students.



**Natalie Johnson, Ph.D.**, Department of Environmental and Occupational Health.

Role in program: Co-Mentor; Director of Diversity in Training.

Research: Dr. Johnson's human health research includes understanding how early life exposure to air pollutants influences adverse health outcomes, such as low-birth weight and asthma. Specifically, she is interested in epigenomic responses to prenatal air pollution exposure and the role of genetic and epigenetic factors in determining susceptibility. She is characterizing maternal exposures to air pollution in vulnerable populations. Additional ecological health research interests include assessing the toxicity of gold and silver nanoparticles.

Training: Dr. Johnson mentored 25 undergrad, 2 masters, and 1 Ph.D. student.

**Research Assistant Professor:**



**Candice Langford, Ph.D.**, Department of Veterinary Integrative Biosciences.

Role in program: Co-Mentor; Director of Special Programs.

Research: Dr. Langford's research interests center on the interplay between genomic background and environmental factors that influence individual susceptibility and responses to chronic diseases and inflammation. The long term goal of this research is to understand how the development and progression of chronic inflammatory disease is shaped by genetically-programmed responses to environmental factors, and what genetic factors may be protective against disease by modulating the immune response and/or mitigating damage caused by excessive inflammation.

Training: Dr. Langford co-mentored 1 masters and 3 Ph.D. students, and 2 postdocs.