

Table 2. Participating Faculty Members (alphabetically by faculty member)				
Name/Degree(s)	Rank	Primary (& Secondary) Appointment(s)	Role in Program	Research interest
Michael J. Welsh, M.D.	Professor	Internal Medicine (Molecular Physiology and Biophysics)	Director & Mentor	Cystic fibrosis, biology of airway epithelia, and pathogenesis of airway disease.
Paul B. McCray, M.D.	Professor	Pediatrics	Co-Director, Module Leader & Mentor	Pulmonary innate immunity, host-pathogen interactions, and gene therapy for inherited diseases.
Joseph Zabner, M.D.	Professor	Internal Medicine (Institute for Clinical and Translational Science)	Co-Director, Module Leader & Mentor	Human airway and alveolar disease, host defense, pulmonary infections and their therapy.
E. Dale Abel, M.D., Ph.D.	Professor, Director	Internal Medicine, FOE Diabetes Research Center	Mentor	Metabolic and molecular bases of cardiopulmonary disease, identification of mechanisms responsible for cardiac and pulmonary dysfunction, and insulin signaling and diabetes in regulation of remodeling.
Christopher M. Adams, M.D., Ph.D.	Associate Professor	Internal Medicine	Mentor	Cellular and molecular mechanisms of muscle.
Lee-Ann Allen, Ph.D.	Professor	Internal Medicine (Microbiology)	Mentor	Biology of macrophages and neutrophils.
Kin Fai Au, Ph.D.	Assistant Professor	Internal Medicine	New Mentor	RNA-seq and third generation sequencing, stem cell transcriptome analysis, and proteomics in cancer and lung disease.
Botond B. Banfi, Ph.D.	Associate Professor	Anatomy and Cell Biology	Mentor	Innate defense of the airway.
Gail A. Bishop, Ph.D.	Professor	Microbiology (Internal Medicine)	Mentor	Molecular mechanisms of lymphocyte activation in normal immunity and autoimmunity.
Blaise R. Boles, Ph.D.	Assistant Professor	Microbiology	New Mentor	Microbial ecology and pathogenesis.

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Charles M. Brenner, Ph.D.	Professor & Head	Biochemistry	Mentor	Function of tumor suppressor genes including <i>FHIT</i> and <i>CHFR</i> that are inactivated in lung carcinogenesis. Utilizing biochemistry, cell biology, and genomics to dissect the normal function of these genes and to identify potential targets for cells missing this genetic information.
Kevin P. Campbell, Ph.D.	Professor & Head	Molecular Physiology and Biophysics (Neurology, Internal Medicine)	Mentor	Mechanisms that maintain muscle cell membrane integrity and development of therapeutic strategies to treat muscular dystrophy.
Barry L. Carter, PharmD	Professor	Pharmacy	Mentor	Team-based care to improve chronic disease control.
Elizabeth A. Chrischilles, Ph.D.	Professor	Epidemiology (Pharmacy and Institute for Clinical and Translational Science)	Mentor	Effectiveness of chronic disease therapies (especially asthma), factors related to medication use and effects among the elderly, disability measurement, pharmacoepidemiology, and health services epidemiology.
Alejandro Comellas, M.D.	Assistant Professor	Internal Medicine	New Mentor	Assessing the severity and progression of COPD, environmental lung injury, and regulation of the alveolar epithelial tight junctions.
John F. Engelhardt, Ph.D.	Professor & Head	Anatomy and Cell Biology (Internal Medicine)	Module Leader, Executive Committee & Mentor	Molecular mechanisms of redox-mediated injuries such as ischemia/reperfusion injury, sepsis, and CF and the development of gene therapies for these disorders.
John T. Harty, Ph.D.	Professor	Microbiology	Mentor	T cell responses to infection.

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Eric Hoffman, Ph.D.	Professor	Radiology (Internal Medicine, Biomed Engineering)	Module Leader, Executive Committee & Mentor	Use of advanced imaging to understand how the lung functions, with particular interest in the determination of how blood flow and gas delivery within the lung match and how this is altered in disease.
Alexander R. Horswill, Ph.D.	Associate Professor	Microbiology	Mentor	Staphylococcus aureus, MRSA, biofilms, and quorum-sensing in infection, including in the lung and CF.
Julia Klesney-Tait, M.D., Ph.D.	Associate Professor	Internal Medicine	New Mentor	Role of the innate immune system in the regulation of inflammation as it impacts on the evolution of sepsis and the development of bronchiolitis obliterans following lung transplantation.
Charles F. Lynch, M.D.	Professor	Epidemiology (Pathology)	Mentor	Cancer surveillance, cancer epidemiology, and environmental epidemiology, with an emphasis on the lung.
Wendy Maury, Ph.D.	Professor	Microbiology	Mentor	Filovirus, virus entry, cellular receptors, and airway epithelial infection.
Stanley Perlman, M.D., Ph.D.	Professor	Pediatrics and Microbiology	Mentor	Relationship between virus replication in infected hosts and the immune response to the virus. How the host response to the virus causes immunopathological disease. Coronavirus and viral lung infections.
Gary L. Pierce, Ph.D.	Assistant Professor	Health and Human Physiology	Mentor	Cellular and molecular mechanisms that contribute to endothelial and epithelial dysfunction with vascular and lung disease, aging, obesity, and diabetes.
Philip M. Polgreen, M.D.	Associate Professor	Internal Medicine	Mentor	Developing new ways to aggregate information and infectious diseases and applying quantitative methods to help prevent the spread of infection.

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Joseph Reinhardt, Ph.D.	Professor & Head	Biomedical Engineering	Mentor	Using medical imaging and image processing to develop new methods to study the anatomy and function of the pulmonary system.
George B. Richerson, M.D.	Professor & Head	Neurology	Mentor	Neural control of breathing by the brainstem, and the effects of serotonin on respiratory output from the medulla.
Val C. Sheffield, M.D., Ph.D.	Professor	Pediatrics	Mentor	Identifying and understanding role of genes and proteins that construct and regulate primary and motile cilia. Molecular genetics of monogenic disorders that have phenotypic overlap with common complex diseases.
Curt D. Sigmund, Ph.D.	Professor & Head	Pharmacology (Internal Medicine, Molecular Physiology & Biophysics)	Mentor	Regulation of genes involved in cardio-pulmonary homeostasis and in creating new transgenic and knockout models of cardio-pulmonary disease.
Richard J.H. Smith, M.D.	Professor	Otolaryngology, Director, Iowa Institute of Human Genetics	Mentor	Human genetics.
Milan Sonka, Ph.D.	Professor	Electrical/Computer Engineering	Module Leader & Mentor	Medical imaging and knowledge-based image analysis with emphasis on pulmonary and cardiovascular.
Jack T. Stapleton, M.D.	Professor	Internal Medicine	Mentor	Pathogenesis of HIV infection.
David A. Stoltz, M.D., Ph.D.	Associate Professor	Internal Medicine	Mentor	Pathogenesis of cystic fibrosis related airway disease with emphasis on airway epithelial and smooth muscle cells, the role of paraoxonases (pons) on Pseudomonas aeruginosa quorum-sensing regulation, mucociliary clearance, and advanced airway imaging modalities and analysis.
Kai Tan, Ph.D.	Associate Professor	Internal Medicine	Mentor	Systems biology of gene regulation, specifically focusing on understanding gene regulatory networks and molecular pathways.

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Eric B. Taylor, Ph.D.	Assistant Professor	Biochemistry	New Mentor	Mitochondrial mitochondrial and metabolic bases of disease.
Peter S. Thorne, Ph.D.	Professor	Occupational and Environmental Health (Civil and Environmental Engineering)	Mentor	Environmental risk factors for asthma, inflammatory lung diseases, endotoxin- and glucan-induced immunomodulation, and novel methodology for exposure assessment and modeling.
James C. Torner, Ph.D.	Professor	Epidemiology (Surgery, Neurosurgery and Institute for Clinical and Translational Science)	Mentor	Design and analysis of clinical research including in critical care. Women's health and aging.
Mary E. Wilson, M.D.	Professor	Internal Medicine (Microbiology, Epidemiology)	Mentor	Molecular and immunobiology of macrophage function in infections.

Faculty who are not Mentors, but play other key roles in the MLRCDP

Michael A. Apicella, M.D.	Professor & Head	Microbiology	Module Leader, Executive Committee	Role that microbial lipooligosaccharides play in the pathogenesis of human airway infections.
Gary Rosenthal, M.D.	Professor & Director	Internal Medicine (Director, Institute for Clinical and Translational Science)	Executive Committee	Quality measurement, health care disparities, severity and case-mix adjustment, and organizational interventions to improve health care delivery.

Rationale: This table provides information regarding the distribution of junior versus senior faculty and clinical versus basic scientists participating in the training program, as well as their distribution by department.