

ROChester Stimulating Access to Research during Residency (ROC StARR) Training Program: Health and Immune Function Across the Lifespan

List of R38 Mentors and Brief Description of Research Interests

Pillar A: Translational Research

Table E. ROC StARR faculty with primary focus on Translational Research (Pillar A)	Pillar
<p>Jennifer Anolik, MD, PhD is Professor of Medicine (AIR) and physician-scientist focused on the role of B cells in the pathophysiology of autoimmune diseases including systemic lupus (SLE) and rheumatoid arthritis (RA), the study of new immuno-modulatory treatments, and autoantibody independent functions for B cells including interaction with T cells, the innate immune compartment, and bone cells. Her lab leverages animal models, relevant human samples, and investigator initiated clinical trials.</p>	A, B
<p>Laura Calvi, MD is Professor of Medicine (Endocrinology), a physician-scientist with a research program focused on the cellular and molecular mechanisms of microenvironmental regulation of hematopoietic stem cells in the bone marrow with a goal of identifying targets for therapeutic manipulation in cancer, inflammation, aging.</p>	A
<p>David Dean, PhD is Professor of Pediatrics focusing on novel gene therapy approaches for selective targeted expression in tissues including smooth muscle and alveolar epithelial cells for the treatment of acute lung injury and asthma in animal models with a goal of clinical translation.</p>	A
<p>Lisa DeLouise, PhD, MPH is Associate Professor of Dermatology focused on skin environmental exposures, nanotoxicology, and biomedical devices for drug discovery and the investigation of skin immune responses particularly in the context of skin allergy and autoimmunity.</p>	A
<p>Fabeha Fazal, PhD is Associate Professor of Pediatrics with a lab focused on understanding the pathogenesis of acute lung injury with a focus on endothelial cell inflammation and permeability.</p>	A
<p>Steven Gill, PhD is Professor of Microbiology and Immunology with research interests centered around microbial pathogens and the impact of human microbial flora on human health and disease.</p>	A
<p>Steve Georas, MD is Professor of Medicine (Pulmonary), physician-scientist investigating mechanisms of immune cell activation in the lung including defining immune responses in asthma and allergy, roles of T cells, innate lymphoid cells, and virus induced epithelial barrier dysfunction. Conducts clinical trials on new ways to diagnose and treatment options for asthma.</p>	A, B
<p>Vera Gorbunova, PhD is Professor of Biology and Director of the Rochester Aging Institute Research Program. Her lab focuses on aging, DNA repair, and cancer using the long-lived animal model the naked mole rat, with a goal of defining changes in DNA double-strand break repair during aging and cellular senescence. Recent work is investigating the impact of the inflammation of aging on immune responses.</p>	A
<p>Stephen Hammes, MD PhD is Professor of Medicine (Endocrinology), a physician-scientist focused on steroid signaling roles in normal ovarian function, breast and prostate cancer, and inflammation in the rare estrogen-sensitive cancer lymphangioleiomyomatosis.</p>	A
<p>Kirsi Jarvinen-Seppo, MD PhD is Professor of Pediatrics (Allergy-Immunology), a physician-scientist with a research program focused on infant systemic and mucosal immune system behind development of food allergy and atopic dermatitis, including the role of maternal and infant environmental factors and breast milk composition. Also leads clinical trials in allergic diseases.</p>	A, B
<p>Ben Korman, MD is Associate Professor of Medicine (Allergy-Immunology-Rheumatology) and physician-scientist focused on basic and translational mechanisms in scleroderma, pulmonary hypertension, and fibrosis, including studies of fibroblast heterogeneity using transcriptomic approaches. He has a scleroderma registry and biorepository to develop better biomarkers and genomics studies in the</p>	A, B
<p>Paige Lawrence, PhD is Professor and Chair of Environmental Medicine studying environment influences on health and the function of the immune system, including the impact of environmental agents on infectious, allergic and autoimmune diseases and early life development.</p>	A
<p>Benjamin Miller, PhD is Professor of Dermatology who studies biomolecular interactions through the synthesis of new small-molecule probes and the development of novel optical sensing technologies for measurement of inflammatory and vaccine responses to viral infections including COVID and develops rapid diagnostic tests for viral diseases in resource-limited environments, underserved communities.</p>	A, C
<p>Gloria Pryhuber, MD is Professor of Pediatrics and a physician-scientist focused on chronic lung disease of prematurity, human perinatal lung injury and repair. She is the Lead Site Investigator for the UR-Respiratory Pathogens Research Center Clinical Study (NIAID) and the Lung Molecular Atlas Program Human Tissue Core.</p>	A, B
<p>Laurie Steiner, MD is Professor of Pediatrics and a physician-scientist with a laboratory utilizing genomics techniques to study the molecular mechanisms underlying erythroid maturation, chromatin structure interactions during normal erythropoiesis, and how those interactions are perturbed in disease states.</p>	A
<p>Juilee Thakar, PhD is Associate Professor of Microbiology and Immunology whose lab uses systems biology approaches to identify immune signatures that can predict outcome of immune response to infections or vaccinations and perturbations during autoimmunity.</p>	A
<p>Martin Zand, MD PhD is Professor of Medicine (Nephrology) is a physician scientist with two areas of research: understanding how B cells respond to vaccines and organ transplants to produce antibodies and using graph theory to understand how we can understand and improve population health and healthcare delivery.</p>	A, B

Pillar B: Clinical Research

Table F. ROC StARR faculty with primary focus on Clinical Research (Pillar C)	Pillar
Lisa Beck, MD is Professor of Dermatology and physician-scientist who focuses on the pathophysiology of eczema and development novel treatment strategies utilizing clinical trials and lab-based research skin on barrier dysfunction in eczema.	A, B
Angela Branche, MD is Associate Professor of Medicine (Infectious Diseases) focusing on development of therapeutics and vaccine biology related to infection with viral and bacterial respiratory pathogens. She is Co-PI for the UR Vaccine Treatment and Evaluation Unit (UR VTEU).	B
Anna DeBenedetto, MD is Associate Professor of Dermatology and physician-scientist who focuses on the pathophysiology of atopic and hand dermatitis and development novel treatment strategies utilizing clinical trials.	B
Anne Falsey, MD is Professor of Medicine (Infectious Diseases) with a research program focused on adult surveillance and vaccine studies to numerous viral respiratory pathogens including influenza, coronaviruses, parainfluenza viruses and human metapneumovirus in a variety of settings including ambulatory older adult clinics, nursing homes and senior daycare centers.	B
Kathi Heffner, PhD is Professor of Medicine (Geriatrics and Aging). Her research centers on understanding the links between stress and health and how stress affects the immune system. Through the Center for Social Ties & Aging Research, a Latino Engagement Subcore fosters older adults' engagement in clinical trials of behavioral interventions aimed at promoting healthy aging	B, C
Todd Jusko, PhD is Associate Professor of Public Health Sciences and environmental epidemiologist. His research interests focus on how environmental chemicals contribute to adverse immunological development over the entire lifespan, including development of asthma and autoimmunity and impaired vaccine responses.	B
Jennifer Nayak, MD is Associate Professor of Medicine (Infectious Diseases) studies on how early life exposure to influenza shapes immunity with an emphasis on CD4 T cell-mediated immunity and vaccine responses.	B
David Rich, MPH is the Research Director of the Div. of Epidemiology and the Director of the Graduate Programs in Epidemiology in the Dept of Public Health Sciences studying the reproductive and cardiorespiratory effects of air pollution and maternal exposure during pregnancy on placental development and function, metabolic dysfunction, systemic inflammation, and fetal growth and development.	B
Christopher Ritchlin, MD MPH is Professor of Medicine (AIR) with a research program focused on the pathophysiology, clinical outcomes, and novel treatment strategies in psoriatic disease spectrum.	B
Fahad Saeed, MB BS is Associate Professor of Medicine (Nephrology and Palliative Care). His research focuses on outcomes in dialysis patients and shared decision-making models.	B
Karen Wilson, MD MPH is Professor of Pediatrics who studies the impact of second-hand smoke exposure on children, including recently COVID immune responses.	B
Julie Wolf, PhD MPH is Associate Professor of Dermatology. Areas of focus include the role of altered barrier function and ROS-mediated damage on radiation-induced skin injury and elucidating the potential physical and psychosocial factors that influence the frequency and severity of patient-reported outcomes and clinical outcomes, such as skin reactions, pain, anxiety, and itch.	B

Pillar C: Implementation Science and Health Equity Research

Table G. ROC StARR faculty with primary focus on Implementation Science and Health Equity Research (Pillar C)	Pillar
Paul Bohjanen, MD, PhD is Professor of Medicine (Infectious Diseases), a physician-scientist with a laboratory research program directed at understanding the regulation of gene expression in HIV and cancer. He runs a multidisciplinary collaborative international research program focused on global health equity to improve treatment approaches and outcomes targeting marginalized HIV-infected populations in resource-poor regions in rural sub-Saharan Africa involving implementation science to develop innovative strategies in rural northern Uganda.	A-C
Jill Halterman, MD MPH is Professor of Pediatrics. With implementation science focused research, her goal is to develop, test, and implement innovative programs to improve the delivery of care to historically marginalized children with asthma to reduce inequities in health outcomes. This has included several successful school-based randomized trials and newer community-wide implementation strategies to allow comprehensive school-based asthma program to be sustained throughout the community and to ensure equitable outcomes.	C
Supriya Mohile, MD MS is Professor of Medicine (Hematology Oncology) studies evaluation of patterns of care, health outcomes, and quality of life related to treatment for systemic cancer in older patients, including immune responses. Evaluates health equity frameworks within geriatric oncology and immunology; further, she evaluates implementation outcomes in care delivery studies for older adults with cancer.	B, C
Cynthia Rand, MD MPH is Professor of Pediatrics focusing on adolescent immunization and preventive services delivery, quality improvement, and health informatics. Studies interventions to increase Tdap, Flu and COVID vaccination rates in different demographic populations and of standing orders for HPV vaccination ensuring a variety of rural and Black patient participation.	C
Kristin Scheible, MD is Associate Professor of Pediatrics, a physician-scientist focused on complications in premature infants including impaired lung function, susceptibility to viral infection, and T cell dysfunction. Her part of Environmental Influences on Child Health Outcomes grant is social determinants of disease in maternal-child health.	A-C
Edith Williams, PhD MS is Associate Professor of Public Health Science and Medicine (Allergy-Immunology and Rheumatology) focusing on health outcomes in underrepresented women with autoimmune disease and behavioral interventions to improve outcomes in SLE.	C