T32 FELLOWSHIP TRAINING PROGRAM IN VACCINOLOGY

Join the team fighting vaccine-preventable diseases

The National Research Service Award T32 training grant is a unique opportunity designed to prepare MDs, PhDs, or those with equivalent degrees, for careers in vaccinology. Fellows include clinicians (internists or pediatricians), epidemiologists, and scientists interested in vaccine development research or clinical trials and translational research. Each fellow chooses one of the following:

- **Laboratory track**: Trains basic scientists and physician-scientists in vaccine development laboratory research including molecular biology, immunology, animal and cell culture modeling, and biostatistics.
- **Clinical track**: Trains clinicians and epidemiologists in clinical trial study design, large scale field trials, protocol preparation, procurement of administrative, ethical and regulatory clearances, conducting trials, and data analysis.
- **Combined laboratory and clinical tracks**.

### Why the Center for Vaccine Development (CVD)?

The CVD at the University of Maryland School of Medicine (UM SOM) is a leader in vaccine development. It is one of only a few academic centers globally engaged in the full range of vaccinology from vaccine development to clinical evaluation and field studies. Our accomplished team collaborates to train investigators in all phases of vaccinology.

- Mentors are experts and leaders in domestic and international vaccine development
- Quality and innovation of training to include specialized courses, real-world experience, professional development, and career planning
- Broad exposure to both laboratory and clinical components of vaccinology
- Hands on experience from the laboratory to clinical development and field studies
- Vast opportunities for collaborative research
- International sites in Mali, Malawi, Myanmar, and Chile
- Specialty laboratories with state-of-the-art equipment and technologies

Each fellow will work with faculty mentors to develop a specialized training plan that includes: 1) coursework (Vaccinology, Research Ethics, and Laboratory Science of Vaccinology), workshops (e.g., Laboratory Leadership and Project Management), and training (e.g., grant writing, publications, NSF funding); 2) conference participation; 3) mentored research; 4) career development and guidance; 5) clinical or laboratory experience.

**Contact**: CVDtraining@medicine.umd.edu

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**Kathy Neuzil, MD, MPH, CVD Director**

Under the new leadership of Dr. Kathy Neuzil, opportunities at the CVD continue to abound. As a world leader in vaccinology, Dr. Neuzil brings extensive expertise in vaccine science, policy, and introduction. She has conducted pivotal vaccine trials and impacted domestic and global policy.

**About Us**: The CVD at the UM SOM works nationally and internationally to prevent disease and save lives through the development and delivery of vaccines. As an academic research center, the CVD is engaged in the full range of vaccinology, including basic science research, vaccine development, pre-clinical and clinical evaluation, and post-marketing field studies.

Visit us on the web at: medschool.umaryland.edu/cvd

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**Dr. Cunningham (center) is the 2016 recipient of the prestigious Maurice R. Hilleman Early-Stage Career Investigator Award for achievement in the field of vaccinology.**
We are looking for motivated, energetic applicants who have demonstrated outstanding ability and commitment to vaccinology:

- MDs completing residencies in internal medicine or pediatrics seeking an infectious diseases fellowship
- MDs completing infectious diseases fellowships seeking additional research training
- PhDs seeking postdoctoral training

Contact information:
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Current Fellows

Dr. Bailey develops antibody-based serodiagnostic assays to inform interventions for pathogen biosurveillance and malaria vaccine development. He uses a novel, high-throughput multiplex peptide microarray technology to find immunogenic epitopes of malaria parasite surface antigens whose antibody responses are correlated with protection from symptomatic malaria infections.

Dr. Cunningham works with vaccines against diarrheal disease agents Shigella and enterotoxigenic E. coli. She evaluates the protective efficacy and immune responses of Francisella tularensis, a top biodefense pathogen, using a mouse model.

Dr. Rapaka researches human immunologic host defense mechanisms against typhoidal and invasive non-typhoidal Salmonella. Her focus on antigen presentation, T cell priming, and T cell effector function will increase understanding of critical host defense pathways and inform vaccine design.

Past Fellows

We are conducting cutting-edge research as faculty at prestigious academic institutions and industry/government leaders at the forefront of our fields.

Project: Dr. Cohee conducted school- and community-based surveys of malaria epidemiology in Malawi to assess if schools can function as platforms for malaria intervention and integration of health services.

Current position: Burroughs Wellcome Fund/American Society of Tropical Medicine and Hygiene Postdoctoral Fellowship in Tropical Infectious Diseases malaria intervention and integration of health services.

Projects: Dr. Walldorf conducted malaria surveys using protein microarrays to compare serologic reactivity of Malawian maternal-infant pairs at birth to malaria vaccine target antigens.

Current position: Medical Epidemiologist, Centers for Disease Control and Prevention (CDC), Global Immunization Division, Vaccine Introduction Team.

Project: Dr. Faherty's research focused on the bacterial pathogen Shigella flexneri, which causes millions of infections in children annually and increased knowledge of how enteric pathogens alter gene expression during host transit to understand infection and enhance vaccine development strategies.

Current position: Assistant Molecular Biologist/Assistant Professor, Massachusetts General Hospital/Harvard Medical School.