

Research Trainee position in Dr. Jacqueline Achkar's lab

Albert Einstein College of Medicine, 1300 Morris Park Ave, Bronx, NY 10461

Department of Medicine, Division of Infectious Diseases

Department of Microbiology & Immunology

Principal Investigator: [Jacqueline M. Achkar](#), M.D., M.Sc., FIDSA

About us:

Dr. Achkar is an NIH-funded physician scientist who is specialized in Infectious Diseases with an additional master's degree in clinical research methods. Her translational research program is focused on the evaluation of immune and other host responses to *Mycobacterium tuberculosis* in patients at various states of infection towards i) the development of better serodiagnostic tests for active tuberculosis (TB); ii) the prediction of TB development in HIV+ subjects; iii) the study of protective antibody functions against *M. tuberculosis*; and iv) the identification of host responses that correlate with TB vaccine effectiveness. Dr. Achkar has several national and international collaborations with investigators from a broad range of expertise in areas such as clinical trials/research, biodesign, biochemistry, epidemiology, and biostatistics. As a specialist in Infectious Diseases with a master's in clinical research methods, Dr. Achkar analyzes her laboratory data in the context of clinical findings to contribute critical data to the field of TB diagnostics, immunotherapy, and vaccine development.

Responsibilities:

The research trainee will be involved and trained in techniques relevant to our translational research program exploring the human immune response to tuberculosis. The focus will be on identifying antibody responses to *M. tuberculosis* antigens that could serve as biomarkers or correlates of protection against TB. This will include techniques such as the culturing of mycobacteria, the production of antigens, human sample preparations, data recording, and the performance and analysis of antibody detection assays such as immunoblots, ELISAs, and microarrays. In addition, the trainee will help with breeding a colony of humanized mice, and will specifically be involved in genotyping offspring.

Please note: Applicants must be able to make **at least** a two-year, full-time commitment to the lab. Based on performance, the research trainee will have the opportunity to move on to a lab technician position in their second year. This will confer extra responsibilities including more independence and data analysis.

Minimum Qualifications:

- Prior laboratory experience with bachelors in biology or a related scientific field · Broad skill base in standard techniques (such as ELISA, Western Blot, DNA and RNA extraction, PCR, and protein purification)
- Detail-oriented, organized, and have at least a simple understanding of scientific literature · Excellent interpersonal skills and self-directed work ethic

Preferred Qualifications:

- Prior mouse experience
- Specific research experience and/or extensive coursework in microbiology and immunology · Experience using GraphPad Prism and Endnote

If interested, please send your CV and cover letter to JAchkarLab@gmail.com. Please do not directly contact the lab by phone, unless otherwise stated. First round interviews will be held through Zoom. Depending on the situation, a second in-person interview might be required.