

SMART is a major research enterprise established by the Massachusetts Institute of Technology (MIT) in partnership with the National Research Foundation of Singapore (NRF). SMART serves as an intellectual hub for international research collaborations, not only between MIT and Singapore, but also involving researchers from the region and beyond. At SMART, we identify and carry out research on critical problems of societal importance. SMART is a magnet for attracting and anchoring global research talent, while simultaneously instilling and promoting a culture of translational research and entrepreneurship in Singapore. Five interdisciplinary research groups (IRGs) are currently in operation: Antimicrobial Resistance (AMR), Critical Analytics for Manufacturing Personalized-Medicine (CAMP), Disruptive & Sustainable Technologies for Agricultural Precision (DiSTAP), Future Urban Mobility (FM), and Low Energy Electronics Systems (LEES). In addition, SMART also operates an Innovation Centre.

**IRG / Department:** INNOVATION

**Job Title:** Postdoctoral Associate

**Project Overview *(Optional)***

Immunogenicity is a significant challenge in the development of safe and effective AAV-based gene therapies. We are developing a high-throughput computational and experimental platform for assessing immunogenicity and designing and testing deimmunized protein variants. Our goal is to create AAV gene therapy vectors with reduced immunogenicity profiles.

**Responsibilities**

Molecular immunology techniques and high throughput screening technologies will be used to assay immunogenicity and function of designed AAVs. The candidate will work primarily on

1. AAV production, functional profiling, and immunogenicity assays

2. MHC peptide display & stability

3. T cell activation in vitro

4. Rodent-based T cell and antibody response

Desired knowledge and experience

1. Experience with molecular immunology assays (esp. MHC and T cell) is highly desired

2. Experience with AAV is highly desired

3. Strong knowledge in immunology

4. Ability to work independently to design and troubleshoot experiments

5. Ability to work effectively within a broader team with complementary expertise

6. Ability to supervise a technician on the project

**Requirements**

Ph.D in Immunology, Bioengineering, Biochemistry, Biology, or related fields

Experience with molecular immunology assays

Strong knowledge of molecular biology and immunology

Experience with AAV is a plus.

Experience with high throughput assay development is a plus.

Good communication skills and ability to oversee a lab technician

To apply, please visit our website at: <http://smart.mit.edu/careers/career-opportunities>. Interested applicants are invited to send in their full CV/resume, cover letter and list of three references (to include reference names and contact information). We regret that only shortlisted candidates will be notified.