

MGH Next-Gen PSTP Participating Faculty and Research Focus

DEPARTMENT OF MEDICINE

- Amy Barczak, MD (ID) – TB host-pathogen interface
- Ingrid Bassett, MD, MPH (ID) – HIV and TB epidemiology; clinical research and implementation science
- Shannon Bromley, PhD (CIID) – Lymphocyte migration in normal and inflamed non-lymphoid tissues
- Richelle Charles, MD (ID) – Global burden of mucosal and enteric infections
- Raymond Chung, MD (GI) – Hep C liver disease
- Andrea Ciaranello, MD, MPH (ID) – Clinical outcomes and cost-effectiveness for HIV-infected women and their children
- Joseph El Khoury, MD (ID) – macrophages and microglia in infection, host defense, and neurodegeneration
- Kenneth Freedberg, MD (ID) – HIV/AIDS clinical strategies, outcome research, cost-effectiveness analysis, and HIV cohort studies
- Marcia Goldberg, MD (ID) – Molecular mechanisms of bacterial pathogen manipulation of host signaling
- Steven Grinspoon, MD (Endo) – Inflammatory complications in HIV
- David Hooper, MD (ID) – Molecular mechanisms and epidemiology of antibiotic resistance
- Sabina Islam, MD (AI) – Chronic skin inflammation and host immunity
- Kate Jeffrey, PhD (GI) – Immunology epigenetics
- Georg Lauer, MD, PhD (GI) – Immunology of viral infections
- Cammie Lesser, MD, PhD (ID) – Modeling mechanisms of bacterial pathogenesis
- Andrew Luster, MD, PhD (RAI) – Chemokines, lipid chemoattractants, immune cell trafficking, and human translational immunology
- Michael Mansour, MD, PhD (ID) – Innate immunity and fungal infections
- Thorsten Mempel, MD, PhD (RAI) – *In vivo* imaging and immune cell interaction/trafficking
- Edward Ryan, MD (ID) – Immune responses and vaccines for enteric bacteria
- Mark Siedner, MD, MPH (ID) – HIV/AIDS treatment outcomes in sub-Saharan Africa, HIV/ AIDS and aging, and implementation science of HIV/AIDS care delivery in sub-Saharan Africa
- Allen Steere, MD (RAI) – Infection-induced autoimmunity in Lyme arthritis and rheumatoid arthritis
- Jatin Vyas MD, PhD (ID) – Innate immunity response to fungal pathogens
- Ramnik Xavier, MD, PhD (GI) – Gut immunology and the microbiome
- Markella Zanni, MD (Endo) – Metabolic and cardiovascular complication immunology

DEPARTMENT OF SURGERY

- Gilles Benichou, PhD, DSc – Immune mechanism by T and B cells in transplant rejection and tolerance
- Joren Madsen, MD, DPhil – Transplantation tolerance, chronic rejection, innate immunity, and desensitization protocols
- James Markmann, MD, PhD – B cells and transplant tolerance
- Laurence Rahme, PhD – Molecular host-pathogen interactions, bacterial pathogenesis, and host-responses to infection

OTHER MGH DEPARTMENTS

- Mikael Pittet, PhD (Center for Systems Biology) – Innate immunology

BROAD INSTITUTE

- Bruce Birren, PhD – Host-pathogen interactions and the microbiome
- Paul Blainey, PhD – DNA-protein interaction, evolutionary processes and cell differences

Updated July 2021

- Nir Hacohen, PhD – Innate immune system processes
- Deborah Hung, MD, PhD – Molecular diagnoses of infectious disease progression
- David Liu, PhD – Engineering evolution and delivery of genomic editing proteins
- Pardis Sabeti, MD, DPhil – Evolutionary adaptations in humans and pathogens

RAGON INSTITUTE

- Todd Allen, PhD – Viral sequence diversity and immune control in HIV-1 infection
- Galit Alter, PhD – Innate immune response in chronic viral infections, HIV/HCV, natural killer cells in antiviral control
- Facundo Batista, PhD – B cell biology
- Douglas Kwon, MD, PhD – Mucosal tissues in HIV acquisition and disease progression
- Sylvie Le Gall, PhD – Antigen processing and presentation in infection and vaccination
- Daniel Lingwood, PhD – B cell antigen interactions, antibody targeting, HIV, and influenza
- Shiv Pillai, MD, PhD – Biology of B cell and IgG4-related diseases
- Bruce Walker, MD – Immune control and immune failure in HIV infection
- Xu Yu, MD – Molecular and cellular mechanisms in immune control of HIV-1

POTENTIAL MENTORS THAT WOULD NEED TO BE ADDED TO THE R25 GRANT

- Robert Anthony, PhD (CIID) – IgE in anaphylaxis
- M. Amin Arnaout, MD (Nephrology) – Integrins in graft function and allorejection
- Roby Bhattacharyya, MD, PhD (Medicine/Broad) – Characterizing response of pathogens (bacteria & fungi) to antimicrobials, and of patients to systemic infections
- Christina Faherty, PhD (Peds) – Enteric bacterial pathogenesis
- Jason Harris, MD (Peds) – Antibody mediated protective immunity against cholera
- Kohei Hasegawa, MD (Emergency Med) – Omics of bronchiolitis and asthma
- Bryan Hurley, PhD (Peds) – Neutrophils during bacterial infection of airway mucosa
- Nitya Jain, PhD (Peds) – Microbiota and immune system development
- Boris Juelg, MD, PhD (ID) – Immunological strategies to prevent and treat HIV
- Satoshi Kashiwagi, MD, PhD (Radiology) – Development of safe/effective vaccines and immunotherapies through biomedical imaging
- Shoko Kimura, MD (Surgery) – Allograft tolerance in liver transplantation
- Peggy Lai, MD (DPCCM) – School microbiome and asthma morbidity in children and cystic fibrosis lung microbiome
- Sarita Patil, MD (RAI) – Antibody mediated tolerance in food allergy
- Richard (Robin) Pierson, MD (Surgery) – Xenotransplantation and costimulatory blockade in allotransplantation
- Kathleen Powis, MD (Peds) – TB and non-TB infections in HIV-exposed infants
- Krishna Reddy, MD (DPCCM) – Modeling, epidemiology, and cost-effectiveness analysis in tobacco use, HIV, and tuberculosis
- Leonardo Riella, MD, PhD (Nephrology) – Transplant rejection and immune cell tolerance; antibody-mediated rejection and recurrence of glomerular disease
- Rebecca Sandlin, PhD (Engineering in Medicine) – Global health, biomineralization in disease, and biostabilization
- Angela Schmider, PhD (Nephrology) – Leukotriene synthetic complex in myeloid cells
- Aaron Schmidt, PhD (Microbiology/Ragon) – Adaptive immune response, protein evolution, and host-pathogen interactions
- Caroline Sokol, MD, PhD (RAI) – neuroimmune control of allergic immunity