

The Harvard Career Development Program in Translational Glycobiology (ProTG): *Bridging Glycoscience and Clinical Medicine*

1K12HL14195301

There are four main macromolecules of nature: the proteins, the lipids, the nucleic acids, and the glycans (carbohydrates). Though many people recognize that glycans play key roles in nutrition and in various diseases (e.g., diabetes), few people appreciate that glycans program a wide variety of biologic processes impacting both health and disease. There is a pressing need to expand our knowledge into how glycans affect human well-being, but there are very few biomedical scientists that possess the needed education and skills for performing research into how glycans control human biology. The key to bridging this translational chasm is to support the development of scientists with requisite interdisciplinary knowledge and experience by providing training in glycosciences concomitantly with education in human biology, altogether framed by an appreciation of human diseases and clinical urgency.

To meet this goal, the National Heart, Lung, Blood Institute (NHLBI) has funded a Career Development Program (K12 Program) at the Harvard Medical School. This program, the “Harvard Program in Translational Glycobiology Career Development” (**Harvard ProTG**), is a Harvard University-wide program, linking the Harvard Medical School Quadrangle (HMS Quad) together with all the major HMS teaching hospitals and the Harvard University Main Campus.

It is expected that Harvard ProTG Scholars (trainees) will immerse themselves in glycoscience-based laboratory inquiry, focusing on the glycobiology of conditions related to the mission of the NHLBI (i.e., heart, blood, lung, and sleep disorders). Training in glycoscience tools and techniques will be provided concomitantly with didactic curriculum, intermeshed to ensure that Scholars will be knowledgeable not only about the molecular aspects of glycoscience, but how to forge glycoscience-related bench research efforts into transformative clinical strategies.

Harvard ProTG Scholars must be U.S. citizens or have been lawfully admitted for permanent residence at the time of appointment. Candidates must be willing to commit to at least two years of training. Eligibility includes post-doctoral fellows that have completed at least 2 years of research training, physicians who have completed residencies or fellowships in clinical specialties, and early stage faculty members (*please note below other factors affecting eligibility). Scholars will receive salary support of up to \$100,000 each year, plus fringe benefits, commensurate with the applicant's salary structure for persons of equivalent qualifications, experience and rank.

Scholars will be selected by application through a national search. Funding will be available starting July 1, 2018.

All interested candidates are asked to submit:

- A completed application form
- A brief research proposal including references (not to exceed 5 pages)
- CV or NIH biosketch
- 3 letters of references from prior mentors/supervisors.
- A letter of support from the (proposed) faculty mentor (a list of program faculty members is provided below**)

Women, minorities, and individuals with disabilities are strongly encouraged to apply.

Applications will be reviewed on a rotating basis, with the deadline for receipt of all applications for year 1 being **July 30, 2018**.

An electronic application is preferred. Please submit to:

Robert Sackstein, PI, via by email: tbkershaw@bwh.harvard.edu

If you have any questions, please contact Tanya Kershaw at tbkershaw@bwh.harvard.edu

***Individuals are not eligible for the Harvard Pro-TG if they:**

1. Have simultaneously submitted or have an application pending peer review for any other federal career development award or a research project grant (R01). However, individuals may concurrently submit an application for an AHRQ or NIH Small Grant (R03) or Exploratory/Developmental Grants (R21);
2. Have simultaneously submitted or have an application pending peer review for any non-federal research grant, contract, or cooperative agreement over \$100,000 in direct costs per year;
3. Have been or are currently a PD/PI on any other federal mentored career development awards;
4. Have been or are currently supported on an institutional K12 grant or KL2 (or similar grant);
5. Have been or are currently a PD/PI on a Federal research grant (such as R01, R29, P01) or subproject leaders on Program Project (P01) and Center Grants (P50); and/or
6. Have been or are currently a PD/PI on peer-reviewed non-federal research grants, contracts or cooperative agreements over \$100,000 direct costs per year.

****PROGRAM FACULTY:**

Robert Sackstein, MD, PhD, Program Director. Professor of Dermatology and Professor of Medicine at Harvard Medical School; Co-Director of the Harvard Glycoscience Center and the Director of the NHLBI-funded Program of Excellence in Glycosciences at Harvard Medical School

Richard D. Cummings, PhD, Program Co-Director. Professor of Surgery at Harvard Medical School; Director of the Harvard Glycoscience Center and the National Center for Functional Glycomics, Vice-Chair of Basic and Translational Research at Beth Israel Deaconess Medical Center (BIDMC), Chair of the BIDMC Research Council, and Associate Director for Drug Discovery and Translational Research at BIDMC

Elliot L. Chaikof, MD, PhD, Program Co-Director. Johnson & Johnson Professor of Surgery at Harvard Medical School; Chief of Surgery at the BIDMC

Galit Alter, PhD, Professor of Medicine at Harvard Medical School (HMS); Kristine and Bob Higgins Massachusetts General Hospital (MGH) Research Scholar, Director of the Ragon Institute Imaging Core of MGH, and Director of the Harvard Center for Aids Research Immunology Core

Robert Anthony, PhD, Assistant Professor of Medicine at Harvard Medical School; Principal investigator at the Center for Immunology and Inflammatory Diseases at MGH.

Pablo Argueso, PhD, Associate Professor of Ophthalmology at Harvard Medical School; Senior Scientist at Schepens Eye Research Institute of Mass. Eye and Ear Infirmary.

Laurie Comstock, PhD, Associate Professor of Medicine at Harvard Medical School (BWH)

Charles Dimitroff, PhD, Associate Professor of Dermatology at Harvard Medical School; Vice-chair for Research, BWH Department of Dermatology.

Christiane Ferran, MD, PhD, Professor of Surgery at Harvard Medical School; Division of Vascular Surgery at the Transplant Institute of BIDMC

Vijay Kuchroo, DVM, PhD, Samuel L. Wasserstrom Professor of Neurology at Harvard Medical School; Senior Scientist at Brigham and Women's Hospital (BWH), and Co-Director of the Center for Infection and Immunity, at the BWH Research Institutes

Thomas S. Kupper, MD, Thomas B. Fitzpatrick Professor of Dermatology at Harvard Medical School; Chairman of the Department of Dermatology at BWH.

Michael K. Mansour, MD, PhD, Assistant Professor of Medicine at Harvard Medical School; Transplant Infectious Diseases Attending in the Division of Infectious Diseases at MGH

Peter Nigrovic, MD, Associate Professor of Medicine at Harvard Medical School; Director of the Center for Adults with Pediatric Rheumatic Illness at BWH.

Gerald B. Pier, PhD, Professor of Medicine (Microbiology and Molecular Genetics) at Harvard Medical School

Shiv Pillai, PhD, Professor of Medicine at Harvard Medical School; Director of the Harvard Immunology PhD program, Director of Master's in Medical Sciences in Immunology Program at Harvard, and Director of MD Student Research for the Harvard-MIT Division of Health Sciences and Technology at Harvard Medical School

Seth Rakoff-Nahoum, MD, PhD, Assistant Professor of Pediatrics at Harvard Medical School, Boston Children's Hospital

Ellis Reinherz, MD, Professor of Medicine at Harvard Medical School; Chief of the Laboratory of Immunobiology and the co-director of the Cancer Vaccine Center at Dana-Farber Cancer Institute, and Chairman of the Steering Committee of the NIH Human Immunology Project Consortium

Joseph G. Sodroski, MD, Professor in the Department of Immunology and Infectious Diseases at the Harvard T.H. Chan School of Public Health, and Professor of Microbiology and Immunobiology at Harvard Medical School (HMS); Associate Director of the HMS Center for Aids Research, Dana-Farber Cancer Institute

Timothy Springer, PhD, Latham Family Professor of Pathology and Professor of Medicine at Harvard Medical School

Christina Woo, PhD, Assistant Professor in the Department of Chemistry and Chemical Biology at Harvard University