Translational GlycOmics (Translational GlycO) Program for Career Development in Glycoscience
Bridging Glycosciences with Medical Needs

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Translational medicine fosters cross-functional collaborations between researchers and clinicians to facilitate new and precision-driven treatments for individualized therapy. While scientists and clinicians successfully applied this approach to four fundamental building blocks of life (nucleic acids, lipids, proteins and carbohydrates), the science of glycans (carbohydrates) has received the least attention. The diverse functions of glycans contribute to the structural integrity of biomolecules, extracellular matrix formation, signal transduction, protein folding, information exchange between cells, and host-pathogen interactions. Despite their functional diversity and specificity, carbohydrates are commonly associated with weight gain and diabetes while their major contributions to health and disease remain vastly understudied. Furthermore, the use and modulation of glycans has been largely unexplored in therapeutic strategies. There is an urgent need to support and educate glycoscientists concomitantly with the biology of human health and disease, thus enabling clinicians and glycoscientists to recognize medical needs and therapeutic opportunities.

To meet these needs, the National Heart, Lung, and Blood Institute (NHLBI) for the first time has offered a K12 Career Development Program in translational glycoscience titled “National Career Development Consortium for Excellence in Glycosciences.” One of the four national sites is the Blood Research Institute and the Center for Translational Glycomics, BloodCenter of Wisconsin (BCW), in association with the Medical College of Wisconsin (MCW), Roswell Park Comprehensive Cancer Center (Roswell), and Virginia Commonwealth University (VCU). This program, The Medical and Translational GlycOmics Program (Translational GlycO Program), is a multi-institution (Wisconsin, New York and Virginia) program, linking unique and diverse glycoscience expertise with research facilities, major teaching hospitals, blood banking and pharmaceutical education.

It is expected that the Translational GlycO Scholars will commit to and pursue a glycoscience based investigation, as it relates to the mission of the NHLBI (heart, blood, lung, and sleep disorders). Training in investigative glycoscience thought processes and experimental tools will be provided through a rigorous program involving hands-on research, didactic coursework, collaboration with experienced scientists in and outside the field, dissemination of knowledge, paper and grant writing activities, and participation in the national K12 consortium. Scholars will become knowledgeable in 1) molecular aspects of glycoscience; 2) experimental research inquiries into functions of glycans; 3) translation of bench research to the bedside; 4) dissemination of research to scientists and the lay public; and 4) writing extramurally funded grant applications.

Translational GlycO Scholars and prospective candidates must be U.S. citizens or non-citizen nationals, or individuals lawfully admitted for permanent residence at the time of appointment.

Candidates must commit to at least 2 years of training. Eligibility includes post-doctoral fellows that have completed at least 2 years of research training or have gained exceptional research qualifications during their graduate training, physicians who have completed residencies or fellowships in clinical specialties, and early stage faculty members. See below for exclusion criteria. Scholars will receive a salary commensurate with the Scholar’s qualifications and experience, within the range of $60,000 - $120,000 and fringe benefits. Funding will become available July 1, 2018. Scholars will be selected on a competitive basis through a national search.

Interested candidates are required to submit:

- A completed application form (translationalglycomics.com).
- Complete full Curriculum Vitae
- Cover letter clearly stating the desired Center for Translational GlycO (BCW, MCW, Roswell, or VCU) (Program Faculty members are listed below)
- 1 – 2 page personal statement summarizing 1) past accomplishments; 2) area of intended research; 3) future career goals and timeline; 4) justification on how K12 training correlates with career goals; and 5) past and future interest in the field of glycosciences
- 3 letters of recommendations to independently reach the K12 office (send to k12Admin@BCW.edu).

All institutions of the Translational GlycO Program are Equal Opportunity/Affirmative Action Employers M/F/D/V/SO
Applications will be reviewed on a rolling basis throughout the program, although applications received by **July 30, 2018** will be reviewed and considered on an accelerated basis. Applications should be submitted to: Karin Hoffmeister, Principal Investigator (PI) and Program Director, via email to k12Admin@BCW.edu. In case of questions, please contact Christina Daniels at k12Admin@BCW.edu.

Exclusion criteria for eligibility to the Translational Glycomics Program:

1. Applicants who have been or are currently PI on other federally mentored carrier awards (K series awards) or other federal mentored carrier awards;
2. Applicants who are currently PI on a federal grant (R01 and P01) or are PIs of a subproject on a federal program project (P01) and center grants (P50);
3. Applications who are not U.S. citizens or who do not have U.S. permanent residency status at the proposed starting dates.

a) PROGRAM FACULTY

1. **Center for Translational Glycomics, Blood Research Institute, Milwaukee, WI**
   - **Karin Hoffmeister, MD**, *Program Director*, Director of the Translational Glycomics Center, Senior Investigator, Blood Research Institute, Professor of Biochemistry, Medical College of Wisconsin; Associate Professor of Pediatrics, Harvard Medical School
   - **Peter J. Newman, PhD**, Walter Schroeder Investigator and Associate Director of the Blood Research Institute, Professor of Pharmacology and Cell Biology, Medical College of Wisconsin, and Associate Director of the Medical College of Wisconsin Cardiovascular Research Center
   - **Thomas Abshire, MD**, Senior Vice President, Medical Sciences Institute (MSI), Section Chief of Benign Hematology at Medical College of Wisconsin, and Senior Investigator, Blood Research Institute; Professor of Pediatrics, Medical College of Wisconsin and Clinical and Translational Science Institute (CTSI) of Southeastern Wisconsin
   - **Hartmut Weiler, PhD**, Senior Investigator and Ziegler Family Chair in Research, Blood Research Institute, Associate Professor of Physiology, Medical College of Wisconsin, Director of the Transgenic Core Facility, Blood Research Institute
   - **Hervé Falet, PhD**, Investigator, Blood Research Institute and Assistant Professor of Cell Biology, Medical College of Wisconsin
   - **Sridhar Rao, MD, PhD**, Associate Investigator, Blood Research Institute, Assistant Professor of Pediatrics and Cell Biology, Medical College of Wisconsin; Pediatric Bone Marrow Transplant Specialist
   - **Greg Denomme, PhD/FCSMLS**, Senior Director, Immunohematology and Innovation, Senior Investigator, Blood Research Institute; Director BloodCenter of Wisconsin Immunohematology Reference Laboratory and patient red cell genotyping

2. **Medical College of Wisconsin, Milwaukee, WI**
   - **Nancy M. Dahms, PhD**, *Associate Program Director*, Professor of Biochemistry, Medical College of Wisconsin
   - **John A. Corbett, PhD**, Professor and Chair of Biochemistry, Medical College of Wisconsin
   - **William J. Rhead, MD, PhD**, Professor of Pediatrics and Pathology, Medical College of Wisconsin, Pediatrician and Clinical and Biochemical Geneticist
   - **Rebekah Gundry, PhD**, Associate Professor of Biochemistry, Director Center for Biomedical Mass Spectrometry Research, Medical College of Wisconsin
Matthew Scaglione, PhD, Assistant Professor of Biochemistry, Medical College of Wisconsin

3. Roswell Park Comprehensive Cancer Center, Buffalo NY
   Joseph T.Y. Lau, PhD, Associate Program Director, Distinguished Research Professor of Cell and Molecular Biology at the Roswell Park Division of State University of New York, Distinguished Member in the Department of Molecular and Cellular Biology and the Tumor Immunology and Immunotherapeutics Program at Roswell Park Comprehensive Cancer Center

   Sriram Neelamegham, PhD, Professor of Chemical and Biological Engineering, University at Buffalo, State University of New York, Buffalo Clinical and Translational Research Center, Steering Committee of a NY State Stem Cell Training grant (NYSTEM)

   Brahm H. Segal MD, Professor of Medicine and Vice Chair of Faculty Development, University at Buffalo Jacobs School of Medicine and Biomedical Sciences and Chief of Infectious Diseases, Member, Department of Immunology, and Director of Faculty Development, at Roswell Park Comprehensive Cancer Center, Chief of Infectious Diseases

   Philip McCarthy, MD, Professor of Oncology & Internal Medicine and staff physician and Chief of the Blood and Marrow Transplantation (BMT) Program at Roswell Park Comprehensive Cancer Center

   Kelvin Lee, MD, Jacobs Family Chair of the Department of Immunology, co-Leader of the Cancer Center’s Tumor Immunology and Immunotherapy Program, Professor of Medicine at Roswell Park Comprehensive Cancer Center

4. Virginia Commonwealth University, Richmond, VA
   Umesh Desai, PhD, Associate Program Director, Professor of Medicinal Chemistry, School of Pharmacy, and Director, Institute for Structural Biology, Drug Discovery and Development, Virginia Commonwealth University

   Bhaumik Patel, MD, Associate Professor of Medicine in the Division of Hematology and Oncology, McGuire VA Medical Center, Richmond and the VCU Health System/Massey Cancer Center, Virginia Commonwealth University

   Krishna Rajarathnam, PhD, Professor of Biochemistry, University of Texas Medical Branch (UTMB), Galveston, TX

   Kuberan Balagurunathan, PhD, Professor of Medicinal Chemistry, University of Utah

   Adam Hawkridge, PhD, Assistant Professor, School of Pharmacy at Virginia Commonwealth University