

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

NHLBI TRAINING FELLOWSHIPS FOR PHYSICIAN-SCIENTISTS AND POST-DOCTORAL RESEARCHERS (K12)

This document provides an overview of the Translational GlycOmics (Translational GlycO) Program for Career Development in Glycoscience, which is based at the Blood Research Institute, Wisconsin (BRI) and the Center for Translational Glycomics, in collaboration with the Medical College of Wisconsin (MCW), Roswell Park Comprehensive Cancer Center (Roswell), and Virginia Commonwealth University (VCU). Selected scholars will commit to rigorous training in glycosciences for 2 to 3 years and perform research in a medical discipline involving glycosciences. The comprehensive program requires 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 be expected to travel to present their research results. We strongly encourage the participation of underrepresented scholars.

APPLICATION PROCESS

Candidates interested in this K12 program must satisfy the following criteria to be considered for a K12 Scholar position:

- U.S. citizenship, or U.S. permanent residency status at the time of appointment
- Appropriate doctoral degree (MD, MD/PhD, PhD or equivalent)
- Commitment to at least 2 years of intensive training
- Physicians without prior research experience must be motivated to pursue a basic academic research career
- Applicants must show high interest at least in one area of glycosciences
- Early stage faculty members who have not obtained prior major research funding
- Scholar and the Primary Faculty Mentor must be committed to research and scholarly program activities throughout the training period

Interested candidates should apply *via* the *Translational GlycOmics* website at www.translationalglycomics.com to be accepted into the program of a Primary Faculty Mentor (Dahms, Desai, Hoffmeister and Lau). The applicant should send the following materials to K12Admin@BCW.edu:

Interested candidates are required to submit:

- A completed application form (translationalglycomics.com).
- Complete full *Curriculum Vitae*
- Cover letter clearly stating the desired location 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

More information see www.translationalglycomics.com or contact k12Admin@BCW.edu

FACULTY MENTORS: Primary Faculty Mentors are indicated in bold *		
FACULTY MENTOR	INSTITUTION AND DEPARTMENT	RESEARCH INTEREST
Thomas Abshire Tom.Abshire@BCW.edu	Blood Research Institute, Medical Science Institute, Transfusion Medicine	Hematology, Coagulation Factors, Hemophilia
Greg Denomme Gregory.Denomme@BCW.edu	Blood Research Institute, Medical Science Institute, Transfusion Medicine	Blood Group Genetics and Alloimmunisation
Hervé Falet Herve.Falet@BCW.edu	Blood Research Institute, Department of Cell Biology, Medical College of Wisconsin	Hematology, Transfusion, Endosomal and Lysosomal Regulation of Thrombopoiesis
Karin Hoffmeister* Karin.hoffmeister@BCW.edu	Blood Research Institute, Translational Glycomics Center, Department of Biochemistry, Medical College of Wisconsin	Glycans in Hematopoiesis, Hematopoietic Stem Cells, Platelets and Megakaryocytes and Transfusion
Peter Newman Peter.Newman@BCW.edu	Blood Research Institute, Departments of Pharmacology and Cell Biology, Medical College of Wisconsin, Medical College of Wisconsin Cardiovascular Research Center	Hematology, Vascular Biology, Glycans and Receptor Function
Hartmut Weiler Hartmut.Weiler@BCW.edu	Blood Research Institute, Department of Physiology, Medical College of Wisconsin, Director of the Transgenic Core	Vascular Biology, Bone Marrow Niche and Coagulation factors
John A. Corbett jcorbett@mcw.edu	Department of Biochemistry, Medical College of Wisconsin	Metabolic Disease
Nancy M. Dahms* ndahms@mcw.edu	Department of Biochemistry, Medical College of Wisconsin	Lysosomal Storage Disease, Receptor Function and Glycans
Rebekah Gundry rebekah.gundry@unmc.edu	Assistant Chief for Basic and Translational Research in Cardiovascular Medicine, University of Nebraska Medical Center	N-linked Glycans Surfaceome, Proteomics
Stephanie Olivier-Van Stichelen Solivier@mcw.edu	Department of Biochemistry, Medical College of Wisconsin	Cell Signaling, O-GlcNacylation
William J. Rhead wrhead@mcw.edu	Departments of Pediatrics and Pathology, Medical College of Wisconsin, Pediatrician and Clinical and Biochemical Geneticist	Metabolic Disease, Genetics
Joseph T.Y. Lau* Joseph.Lau@RoswellPark.org	Department of Cell and Molecular Biology, State University of New York, Molecular and Cellular Biology, Tumor Immunology and Immunotherapeutics Program, Roswell Park Comprehensive Cancer Center (RPC3)	Hematology, Immunology and Immunotherapy, Stem Cell Biology, Bone Marrow (BM) Niche and Transplantation, Receptor Function and Glycans, Enzymology, Extrinsic and Intrinsic Glycosylation
Kelvin Lee kplee@buffalo.edu	Immunology, Cancer Center's Tumor Immunology and Immunotherapy Program, Department of Medicine, RPC3	Hematology, Immunology and Immunotherapy, BM Niche and Transplantation
Philip McCarthy plm1@buffalo.edu	Oncology & Internal Medicine, Department of Medicine; Blood and Marrow Transplantation Program, RPC3	Hematology, Stem Cell Biology, BM Niche and Transplantation,
Sriram Neelamegham neel@buffalo.edu	Chemical and Biological Engineering, University at Buffalo, SUNY, Buffalo Clinical and Translational Research Center	Vascular Biology, Enzymology, Extrinsic and Intrinsic Glycosylation, Glycomics and Glycoproteomics, Computational Biology
Brahm H. Segal bhsegal@buffalo.edu	Medicine and Biomedical Sciences, Infectious Diseases, Member, Department of Immunology	Immunology and Immunotherapy
Kuberan Balagurunathan kuby.balagurunathan@utah.edu	Medicinal Chemistry, University of Utah	Glycosaminoglycan (GAG) - protein interactions, GAG mimetics, GAG -based drugs, Computational Biology, Bioinformatics of GAGs
Umesh Desai* urdesai@vcu.edu	Medicinal Chemistry, School of Pharmacy, Virginia Commonwealth University, Program for Clinically-Relevant Molecules Design for glycosaminoglycans (GAGs) interaction	GAG - protein interactions, mimetics, GAG- based drugs, Glycomics and Glycoproteomics, Computational Biology, GAG Structure - Function Relationships
Adam Hawkrige amhawkrige@vcu.edu	School of Pharmacy, Virginia Commonwealth University	GAG - protein interactions, Glycomics and Glycoproteomics
Bhaumik Patel bhaumik.patel@vcuhealth.org	Hematology and Oncology, McGuire VA Medical Center, Richmond, Health System/Massey Cancer Center, Virginia Commonwealth University	GAG - protein interactions, GAG -based drugs, GAG Structure - Function Relationships
Krishna Rajarathnam krratjara@utmb.edu	Biochemistry, University of Texas Medical Branch (UTMB), Sealy Center for Structural Biology and Molecular Biophysics	GAG - protein interactions, Structural Biology

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PROGRAM PLAN

SCHOLAR APPOINTMENT AND COMPENSATION

Scholars are appointed on a rolling basis. Scholars will receive salary support plus fringe benefits, commensurate with the candidate's salary requirements for persons of equivalent qualifications, experience and rank, and in accordance with NIH policy for postdoctoral fellows. Additional support for travel, rotation costs and attending meetings and symposia will be provided. Each scholar will be required to spend at least 2 years in the Program, which is limited to 3 years. Each scholar will be evaluated independently and the program designed on an individual base. Changes will be made as needed to the scholar's program.

CORE PROGRAM ELEMENTS

- Individual Development Plan (IDP)
- Mentored Research Project
- Integration of Clinical and Bench Research: Mentoring teams of clinical and glycoscientist researchers
- Achievements and competence in glycoscience assessments
- Written and oral communication seminar

YEAR 1

- Active research project in mentor's laboratory
- Establish IDP
- Glycoscience education, Essentials of Glycobiology (3rd edition), including clinical-medical education
- Integration of Clinical and Bench Research: Mentoring teams of clinical and glycoscientist researchers
- Courses on grant and scientific paper writing, misconduct, bias, and other
- 60 minute weekly online meetings with ongoing research presentations, journal clubs
- Focused Technology Workshops (BootCamp) at Translational GlycO center labs, as needed
- Annual Milwaukee Glycobiology symposium
- Annual NIH all K12 sites meeting

YEAR 2

- Active research project in mentor's laboratory, continued
- Didactic Lecture Module (mandatory): Titled Translational GlycoSciences
- Technology BootCamp at other national sites
- 60 minute weekly online meetings with ongoing research presentations, journal clubs
- Focused Technology Workshops at Translational GlycO center labs (BootCamp), as needed
- Annual Milwaukee Glycobiology symposium
- Annual NIH all K12 sites meeting

YEAR 3

- Finish active research project in mentor's laboratory
- Write scientific paper, book chapter, evolving from research progress and recognition
- Scholar writes independent research proposal
- Annual Milwaukee Glycobiology symposium
- NIH all K12 sites meeting

OPTIONAL

Clinical and Translational Science Institute (CTSI) of Southeastern Wisconsin at MCW offers a masters program to obtain an MS in clinical investigation.