

BIOGRAPHICAL SKETCH

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NAME: Green, Todd

eRA COMMONS USER NAME (credential, e.g., agency login): GREEN2004

POSITION TITLE: Director of Graduate Studies, Biomedical Sciences Program

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Florida State University; Tallahassee, FL	B.S.	06/1978	Biology
University of Virginia; Charlottesville, VA	Ph.D.	09/1985	Microbiology
Rutgers University - Newark; Newark, NJ		02/1989	Biology
Washington University; St. Louis, MO		09/1991	Anatomy & Neurobiology

Please refer to the Biographical Sketch sample in order to complete sections A, B, C, and D of the Biographical Sketch.

A. Personal Statement

I am well suited for this project because of my role as Director of Graduate Studies of the Biomedical Sciences (BMS) Program. My responsibilities include managing admissions for M.S., Ph.D., and M.D./Ph.D. students, advising the M.S. and first year Ph.D. students, directing the M.D./Ph.D. program, and counseling students on education and career options. In this project I would be performing these duties with prospective and current students.

I am director for all of the introductory biochemistry and cell biology courses currently being taught to graduate students in the program, and I teach in many other courses. I also would be involved in developing new courses. This experience in teaching and leading the courses the students in our program take will be beneficial to this project.

B. Positions and Honors

10/1985 - 02/1989	Postdoctoral Fellow Rutgers University-Newark Laboratory of Dr. Ronald Hart Department of Biology
02/1989 - 09/1991	Postdoctoral Fellow Washington University School of Medicine Laboratory of Dr. Joshua Sanes Department of Anatomy & Neurobiology
10/1991 - 06/1997	Assistant Professor Department of Physiology Marshall University Joan C. Edwards School of Medicine

07/1997 - present Associate Professor
Department of Pharmacology, Physiology & Toxicology
Marshall University Joan C. Edwards School of Medicine

08/2010 - present Director of Graduate Studies
Biomedical Sciences Program
Marshall University Joan C. Edwards School of Medicine

Panelist, NSF Graduate Research Fellowship - 2004, 2015, 2016

C. Contribution to Science

I have carried out research in a number of areas. However my primary interests have been in extracellular matrix formation and the role of enzymes involved in neurotransmitter synthesis in cardiovascular function, which has resulted in a total of 11 publications. Over the last decade I have concentrated on graduate education, and thus feel that my contribution goes far beyond that of my publication record. I believe my interests will help with the educational component of this COBRE.

Project 1: Neuromuscular junctions and novel mechanisms for vascular control

Regulation of vascular function via the activity of nervous system input has been relatively well characterized. During my post-doctoral studies I was involved in studies that characterized extracellular matrix formation and transcriptional regulation of enzymes in neurotransmitter synthesis during neuromuscular and synapse development. As a faculty member at Marshall, I became interested in histidine carboxylase and its potential for regulating the function of the aorta. Histamine had previously been found in the aorta, however we were the first to describe the presence of histidine decarboxylase mRNA and protein in the rat aorta. Based on the vasoactive nature of histamine, this ability to produce histamine in aortic tissue could play a significant role in vascular function.

Key papers:

- a. Sanes JR, Hunter DD, Green TL, Merlie JP. (1990). S-laminin. Cold Spring Harbor Symposium on Quantitative Biology, 55,419-30.
- b. Green TL, Hunter DD, Chan W, Merlie JP, Sanes JR. (1992). Synthesis and assembly of the synaptic cleft protein S-laminin by cultured cells, Journal of Biological Chemistry, 267(3), 2014-22.
- c. Tippens AS, Davis SV, Hayes JR, Bryda EC, Green TL, Gruetter CA. (2004). Detection of histidine decarboxylase in rat aorta and cultured rat aortic smooth muscle cells. Inflammation Research, 53(8):390-5.

Project 2: CAD genes in the WV population

This interest in regulation of vascular function in project 1 next led me into investigating what may be responsible for regulating some of the vascular problems in WV. In an IRB approved trial we investigated a number of candidate genes comparing CAD patients with normal patients. We identified two SNPs (rs1042031 and rs1800479) within the Apo B gene that were associated with CAD and one SNP in the LDLR gene (rs2569538). This could indicate issues with cholesterol handling in this patient group.

Key paper:

Dementieva Y, Green TL, Primerano DA, Wei L, Denvir J, Wehner P, Dodson S, Flood MR, Pollock BA, Huff M, Hill C, Kreisberg R, Francis A, Morrison K, Blackwood H, Davis M, Lee HM, Warren S; Appalachian Cardiovascular Research Network. (2012). Identification of genes contributing to cardiovascular disease in overweight and obese individuals from West Virginia. West Virginia Medical Journal 108(1):23-30.

Complete list of published work in MyBibliography:

<http://www.ncbi.nlm.nih.gov/sites/myncbi/1vU5wesyk9gAz/bibliography/48575213/public/?sort=date&direction=ascending>

D. Research Support

Expansion of STEM Doctoral Education at Marshall University

West Virginia Higher Education Policy Commission

01/01/2013 - 12/31/2016

\$200,000/year direct costs

PI - Manage grant and determine budget priorities each year.

The overall goal of this project is to help Marshall University recruit and support outstanding graduate students in STEM fields. To do this, the following goals were proposed.

1. Increase the quality of students applying to the BMS Ph.D. program by strategic investment in those M.S. STEM disciplines at Marshall that have contributed successful applicants to our Ph.D. program.
2. Entice Ph.D. graduates to stay in WV after they graduate.
3. Make curriculum changes that foster team-based research.