BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME	POSITION TITLE
Jennifer C. Peeler	Graduate Fellow
eRA COMMONS USER NAME (credential, e.g., agency login)	

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

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	MM/YY	FIELD OF STUDY
Franklin & Marshall College, Lancaster, PA	B.A.	05/10	Chemistry, Biochemistry & Molecular Biology
Rockefeller University, New York, NY	Ph.D.	Expected	Molecular Biology & Biochemistry

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

A. Personal Statement

During my undergraduate career, I spent four years in the laboratory of Dr. Ryan Mehl in the chemistry department of Franklin & Marshall College. I worked on the development of novel unnatural amino acids (UAAs), especially in evolving aminoacyl-tRNA synthetases for the genetic incorporation of these UAAs in response to an amber stop codon. My work with Dr. Mehl, in an entirely undergraduate lab, resulted in 4 publications, including 2 first-author papers, in addition to an interest chemical biology.

For my graduate work I wanted to use the sorts of chemical tools that I had spent time developing in order to elucidate information about biological systems and specifically signal transduction. After acceptance to The Rockefeller University's graduate program I joined the lab of Molecular Biology & Biochemistry, headed by Dr. Thomas Sakmar. Dr. Sakmar has pioneered the use of UAAs in mammalian cell culture, and specifically in G-protein coupled receptors (GPCRs). The lab focuses on innovating new technologies in order to better understand the molecular mechanism of GPCRs, the first component of some of life's most important signaling pathways. After joining the lab I was awarded a Graduate Research Fellowship from the National Science Foundation.

My current work in Dr. Sakmar's lab involves the D4 dopamine receptor. In collaboration with a post-doctorial trainee in the lab, Dr. Minyoung Park, I have performed preparative work on the D4 receptor and begun to study the controversial topic of D4 receptor internalization. I also intend to begin identifying novel D4 receptor interacting proteins (DRIPs) using a quantitative proteomics approach.

B. Positions and Honors

Positions:

2007-2010 Undergraduate Research Assistant, Department of Chemistry, Franklin & Marshall College, Lancaster, PA.

2010- Graduate Fellow, Laboratory of Molecular Biology and Biochemistry, Rockefeller University, New York, NY.

Honors:
National Science Foundation Graduate Research Fellowship recipient (2011-2014)
American Chemical Society Division of Analytical Chemistry Award (2009)
Annie and Ernest Weibrecht Award in Chemistry (2009)
Richard C. Schiedt Trust for Graduate Study in Chemistry (2010)
Phi Beta Kappa Honor Society
Magna Cum Laude graduate of Franklin & Marshall College

C. Selected Peer-reviewed Publications

1. Peeler, J.C. & Mehl, R.A. (2012). Site-specific incorporation of unnatural amino acids as probes for protein conformational changes. Methods in Molecular Biology, 794,125-34.
2. Peeler, J.C., Woodman, B.F., Averick, S., Miyake-Stoner, S.J., Stokes, A.L., Hess, K.R., Matyjaszewski, K. & Mehl, R.A. (2010). Genetically Encoded Initiator for Polymer Growth from Proteins. Journal of the American Chemical Society, 132(39),13575-13577.
3. Miyake-Stoner, S., Miller, A., Hammill, J.T., Peeler, J.C., Hess K.R., Mehl, R.A. & Brewer, S. H. (2009). Probing protein folding using site-specifically encoded unnatural amino acids as FRET donors with Trp. Biochemistry 48(25), 5953-5962.
4. Stokes, A.L., Miyake-Stoner, S.J., Peeler, J.C., Nguyen, D.P., Hammer, R.P. & Mehl, R.A. (2009). Enhancing the utility of unnatural amino acid synthetases by manipulating broad substrate specificity. Molecular BioSystems 5(9), 1032-1038.

D. Research Support

Ongoing Research Support:
None

Current Research Support:
None