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 Michael J Emanuele	POSITION TITLE Assistant Professor
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
Bucknell University, Lewisburg, PA	B.S.	05/2000	Biochemistry & Molecular Genetics
University of Virginia, Charlottesville, VA	Ph.D.	01/2008	Biochemistry & Cell Biology
Harvard Medical School, Boston, MA	---	---	Biochemistry & Cell Biology

A. Personal Statement

Our lab is interested in applying emerging genetic and proteomic techniques to gain a systems level understanding of global changes in protein stability. Moreover, since cancer is primarily a disease of cell cycle de-regulation, we are focused on identifying the regulatory circuits controlling proteins that are transcribed and degraded throughout the cell cycle. In addition, DNA damaging agents and mitotic inhibitors are the two most commonly used clinical anti-cancer agents and we are therefore also focused on how these compounds affect proteome reorganization.

B. Positions and Honors

2007 Outstanding Graduate Student Award, University of Virginia, Department of Biochemistry & Molecular Genetics

2004-2006 Executive Officer, Graduate Biosciences Society, University of Virginia

C. Selected Peer-Reviewed Publications

1. **Emanuele MJ**, Elia EH, Xu Q, Thoma CR, Izhar L, Guo A, Rush J, Hsu PW, Yen HS, Elledge SJ. Global Identification of Modular Cullin-Ring Ligase Substrates. *Cell*. 2011 Oct 14;147(2):459-74.
   Commented on in: Rosenthal C. Ubiquitinomics. Nature Cell Biology, 13, 1294 (2011).
2. **Emanuele MJ**, Ciccia A, Elia AE, Elledge SJ. Proliferating cell nuclear antigen (PCNA)-associated KIAA0101/PAF15 protein is a cell cycle-regulated anaphase-promoting complex/cyclosome substrate. *PNAS* 2011. 108 (24) 9845-9850
3. Luo J, **Emanuele MJ**, Li D, Creighton CJ, Schlabach MR, Westbrook TF, Wong K, Elledge SJ. A genome-wide RNAi screen identifies multiple synthetic lethal interactions with the Ras oncogene. *Cell*. 2009 May 29; 137(5). 835-48.
   Commented on in: Stein EV et al. shRNA technology: investigating Ras-dependent cancer. Cancer Biol Ther. 2009 Oct;8(19):1798-9 and in Sawyers CL. Finding and drugging the vulnerabilities of RAS-dependent cancers. Cell. 2009 May 29;137(5):796-8.
4. **Emanuele MJ**, Lan W, Jwa M, Miller SA, Chan, CSM, Stukenberg PT. Aurora B kinase and Protein Phosphatase 1 have opposing roles in modulating kinetochore assembly. *J Cell Biol*. 2008 Apr 21;181(2):241-54.

5. Vorozko VV, **Emanuele MJ**, Kallio MJ,Stukenberg PT, Gorbsky GJ. Multiple mechanisms of chromosome movement mediated through the Ndc80 complex and Dynein/Dynactin. *Chromosoma*. 2008 Apr;117(2):169-79.
6. **Emanuele MJ** and Stukenberg PT. Xenopus Cep57 is a novel kinetochore component involved in microtubule attachment. *Cell*. 2007 Sep 7;130(5):893-905.
   Commented on in DeLuca GJ. Current Biology. 2007 Nov 20;17(22):R966-9.
7. **Emanuele MJ***, McCleland ML*, Satinover DL, Stukenberg PT. Measuring the stoichiometry and physical interactions between components elucidates the architecture of the vertebrate kinetochore. *Mol Biol Cell*. 2005 Oct;16(10):4882-92. (*authors contributed equally to this work)
8. Wang HW, Putt ME, **Emanuele MJ**, Shin DB, Glatstein E, Yodh AG, Busch TM. Treatment-induced changes in tumor oxygenation predict photodynamic therapy outcome. *Cancer Res*. 2004 Oct 15;64(20):7553-61.
9. Busch TM, Hahn SM, Wileyto EP, Koch CJ, Fraker DL, Zhang P, Putt M, Gleason K, Shin DB, **Emanuele MJ**, Jenkins K, Glatstein E, Evans SM. Hypoxia and Photofrin uptake in the intraperitoneal carcinomatosis and sarcomatosis of photodynamic therapy patients. *Clin Cancer Res*. 2004 Jul 15;10(14):4630-8.
10. Busch TM, Wileyto EP, **Emanuele MJ**, Del Piero F, Marconato L, Glatstein E, Koch CJ. Photodynamic therapy creates fluence rate-dependent gradients in the intratumoral spatial distribution of oxygen. *Cancer Res*. 2002 Dec 15;62(24):7273-9.

D. Research Support

Ongoing Research Support

Completed Research Support

2008-2011 Post-doctoral Research Fellowship, Damon Runyon Cancer Research Fellowship

The goals of this project were to apply a novel screening platform, Global Protein Stability Profiling, to the identification of proteins that are stabilized or destroyed in response to DNA damage and to characterize the role of these proteins in responding to genomic insult.