

BIOGRAPHICAL SKETCH

NAME Espenshade, Peter John		POSITION TITLE Associate Professor Department of Cell Biology	
EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Princeton University	B.A.	1986-1990	Molecular Biology
Massachusetts Institute of Technology	Ph.D.	1991-1998	Biology
UT-Southwestern Medical Center, Dallas, TX	Postdoc	1998-2002	Molecular Cell Biology

A. Positions and Honors.

Positions and Employment

1990-1991 Research assistant, Princeton University, Department of Molecular Biology
1991-1997 Graduate student, Massachusetts Institute of Technology, Department of Biology
1997-2002 Postdoctoral fellow, UT-Southwestern Medical Center at Dallas, Department of Mol. Genetics
2002-2008 Assistant professor, Johns Hopkins University School of Medicine, Department of Cell Biology
2008- Associate professor, Johns Hopkins University School of Medicine, Department of Cell Biology

Honors

1990 Summa cum laude, Department of Molecular Biology, Princeton University
1990 Phi Beta Kappa, Princeton University chapter
1992 National Science Foundation Pre-Doctoral Fellowship
1998 National Research Service Award, NIH
2001 Career Award in the Biomedical Sciences, Burroughs Wellcome Fund
2006 Investigator in Pathogenesis of Infectious Disease Award, Burroughs Wellcome Fund
2007 Dean's Fund Award, Johns Hopkins University School of Medicine
2008 Established Investigator Award, American Heart Association
2009- INMP NIH Study Section, Permanent Member

B. Peer-reviewed publications (selected from 30).

10. DeBose-Boyd RA, Brown MS, Li WP, Nohturfft A, Goldstein JL, Espenshade PJ. 1999. Transport-dependent proteolysis of SREBP: relocation of site-1 protease from Golgi to ER obviates the need for SREBP transport to Golgi. *Cell* 99:703-712.
11. Nohturfft A, Yabe D, Goldstein JL, Brown MS, Espenshade PJ. 2000. Regulated step in cholesterol feedback localized to budding of SCAP from ER membranes. *Cell* 102:315-323.
12. Yang T, Espenshade PJ, Wright ME, Yabe D, Gong Y, Aebersold R, Goldstein JL, Brown MS. 2002. Crucial step in cholesterol homeostasis: sterols promote binding of SCAP to INSIG-1, a membrane protein that facilitates retention of SREBPs in the ER. *Cell* 110:489-500.
14. Hughes AL, Todd BL, Espenshade PJ. 2005. SREBP pathway responds to sterols and functions as an oxygen sensor in fission yeast. *Cell* 120:831-842.
16. Todd BL, Stewart EV, Burg JS, Hughes AL, Espenshade PJ. 2006. SREBP is a principal regulator of anaerobic gene expression in fission yeast. *Mol. Cell. Biol.* 26:2817-2831.
18. Hughes AL, Powell DW, Bard M, Eckstein J, Barbuch R, Link AJ, Espenshade PJ. 2007. Dap1/PGRMC1 binds and regulates cytochrome P450 enzymes. *Cell Metabolism* 5:143-149.

19. Chang YC, Bien CM, Lee H, Espenshade PJ*, Kwon-Chung KJ*. 2007. Sre1p, a regulator of oxygen sensing and sterol homeostasis, is required for virulence in *Cryptococcus neoformans*. *Mol. Microbiol.* 64:614-629. *Corresponding authors.
21. Sehgal A, Lee CS, Espenshade PJ. 2007. SREBP controls oxygen-dependent mobilization of retrotransposons in fission yeast. *PLoS Genet.* 3:1389-1396.
22. Hughes AL, Lee CS, Bien CM, Espenshade PJ. 2007. 4-methyl sterols regulate fission yeast SREBP-Scap under low oxygen and cell stress. *J. Biol. Chem.* 282:24388-96.
23. Sehgal A, Hughes BT, Espenshade PJ. 2008. Oxygen-dependent, alternative promoter controls translation of *tco1⁺* in fission yeast. *Nucleic Acids Research* 36:2024-2031.
24. Hughes BT and Espenshade PJ. 2008. Oxygen-regulated degradation of fission yeast SREBP by Ofd1, a prolyl hydroxylase family member. *EMBO J.* 27:1491-1501.
25. Hughes AL, Stewart EV and Espenshade PJ. 2008. Identification of 23 mutations in fission yeast Scap that constitutively activate SREBP. *J. Lipid Research.* 49:2001-2012.
26. Burg JS, Powell DW, Chai R, Hughes AL, Link AJ and Espenshade PJ. 2008. Insig regulates HMG-CoA reductase by controlling enzyme phosphorylation in fission yeast. *Cell Metabolism* 8:522-31.
27. Lee CY, Stewart EV, Hughes BT and Espenshade PJ. 2009. Oxygen-dependent binding of Nro1 to the prolyl hydroxylase Ofd1 regulates SREBP degradation in yeast. *EMBO J.* 28:135-43.
28. Hughes BT, Nwosu CC, and Espenshade PJ. 2009. Degradation of SREBP precursor requires the ERAD components UBC7 and HRD1 in fission yeast. *J. Biol. Chem.* 284:20512-20521.

C. Active Research Support.

<u>R01 HL077588-06 National Heart, Lung, Blood Institute – NIH</u> Title: Regulation of Cellular Cholesterol Homeostasis	05/01/09 – 04/30/14
<u>R21 HL094774-01 National Heart, Lung, Blood Institute – NIH</u> Title: Functional studies of PGRMC1 in cholesterol homeostasis	08/01/09 – 07/31/11
<u>0840100N American Heart Association Established Investigator Award</u> Title: Regulation of Cellular Sterol Homeostasis in Eukaryotes	01/01/08 – 12/31/12
<u>Burroughs Wellcome Fund Investigator in Pathogenesis of Infectious Disease</u> Title: Oxygen-sensing and adaptation to host tissue hypoxia in the human fungal pathogen <i>Cryptococcus neoformans</i>	07/01/06 – 6/30/14