
BIOGRAPHICAL SKETCH

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NAME Michael J. Matunis		POSITION TITLE Associate Professor	
eRA COMMONS USER NAME MMATUNI1			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Pennsylvania State University	B.S.	1982-1986	Biochemistry
Northwestern University	Ph.D.	1986-1992	Molecular and Cell Biology
University of Pennsylvania	Res. Fellow	1992-1993	Molecular and Cell Biology
Rockefeller University	Postdoc.	1993-1998	Molecular and Cell Biology

A. Positions and Honors.

Positions and Employment

1986-92 Graduate research with G. Dreyfuss: Structure and function of hnRNP proteins
1993-98 Postdoctoral research with G. Blobel: Nuclear pore complexes and SUMO Modification
1998-04 Assistant Professor: Dept. of Biochemistry and Molecular Biology, Johns Hopkins University
2004- Associate Professor: Dept. of Biochemistry and Molecular Biology, Johns Hopkins University
2000- Joint appointment: Dept. of Cell Biology, Johns Hopkins University

Honors and Awards

1984 PSU Department of Biochemistry Gilman Science Award
1988-1990 Amoco Foundation Pre-doctoral Research Fellowship
1994-1997 American Cancer Society-Amgen Post-doctoral Research Fellowship
1994 NIH Postdoctoral Fellowship Award (Declined)
1998 JHSPH Faculty Innovation Award
2003 American Cancer Society Research Scholar Award

Other Experiences and Professional Memberships

2003 Chair of nucleocytoplasmic transport sub-meeting: ASCB annual meeting
2004/06/08 Chair of SUMO sub-meeting: Conference on ubiquitin and ubiquitin like proteins
2003 Ad-Hoc member of NIH CDF2 study section
2006 Ad-Hoc member of NIH MG2 study section
2006 Member American Heart Association Basic Cell & Molecular Biology 3 study section
2006 Member of Abstract Review Committee: ASCB
1988-present: Member, American Association for the Advancement of Science
1996-present: Member, American Society for Cell Biology
2006-present Member, American Society for Biochemistry and Molecular Biology

2006-2011 Editorial Board of the *Journal of Biological Chemistry*

Peer review for: *Journal of Cell Biology, Nature Cell Biology, Molecular and Cell Biology, PNAS, EMBO J., Molecular Cell, Cell, Molecular Biology of the Cell, Journal of Biological Chemistry, Science* and others.

B. Selected Peer-Reviewed Publications (in chronological order).

1. Matunis, M.J., E. Coutavas and G. Blobel. 1996. A novel ubiquitin-like modification modulates the partitioning of the Ran-GTPase-activating protein RanGAP1 between the cytosol and the nuclear pore complex. *J. Cell Biol.* **135**:1457-1470.
 2. Müller, S., M.J. Matunis and A. Dejean. 1998. Conjugation with the ubiquitin-related modifier SUMO-1 regulates the partitioning of PML within the nucleus. *EMBO. J.* **17**:61-70.
 3. Matunis, M.J., J. Wu and G. Blobel. 1998. SUMO-1 modification and its role in targeting the Ran GTPase activating protein, RanGAP1, to the nuclear pore complex. *J. Cell Biol.* **140**:499-509.
 4. Sampson, D., M. Wang and M.J. Matunis. 2001. The small ubiquitin-like modifier-1 (SUMO-1) consensus sequence mediates Ubc9 binding and is essential for SUMO-1 modification. *J. Biol. Chem.* **276**:21664-21669.
 5. Hong, Y., R. Rogers, M.J. Matunis, C.N. Mayhew, M.L. Goodson, O.-K. Park-Sarge and K.D. Sarge. 2001. Regulation of HSF1 by stress-induced SUMO-1 modification. *J. Biol. Chem.* **276**:40263-4067.
 6. Bernier-Villamor, V., D.A. Sampson, M.J. Matunis and C.D. Lima. 2002. Structural basis for E2-mediated SUMO conjugation revealed by a complex between the SUMO conjugating enzyme Ubc9 and RanGAP1. *Cell.* **108**:345-356.
 7. Zhang, H., H. Saitoh and M.J. Matunis. 2002. Enzymes of the SUMO modification pathway localize to the filaments of the nuclear pore complex. *Mol. Cell. Biol.* **22**:6498-6508.
 8. Cronshaw, J.M., A.N. Krutchinsky, W. Zhang, B.T. Chait and M.J. Matunis. 2002. Proteomic analysis of the mammalian nuclear pore complex. *J. Cell Biol.* **158**:915-927.
 9. Wells, L., K. Vosseller, R.N. Cole, J.M. Cronshaw, M.J. Matunis, and G.W. Hart. 2002. Mapping sites of O-GlcNAc modification using affinity tags for serine and threonine post-translational modifications. *Mol. Cell. Proteomics.* **1**:791-804.
 10. Cronshaw, J.M. and M.J. Matunis. 2003. The nuclear pore complex protein ALADIN is mislocalized in triple A syndrome. *Proc. Natl. Acad. Sci. (USA).* **100**:5823-5827.
 11. Rogers, R., C.M. Horvath, and M.J. Matunis. 2003. SUMO modification of STAT1 and its relationship to PIAS-mediated inhibition of gene activation. *J. Biol. Chem.* **278**:30091-30097.
 12. Vassileva, M.T. and M.J. Matunis. 2004. SUMO modification of heterogeneous nuclear ribonucleoproteins. *Mol. Cell. Biol.* **24**:3623-3632.
 13. Rogers, R.S., A. Inselman, M.A. Handel and M.J. Matunis. 2004. SUMO modified proteins localize to the XY body of pachytene spermatocytes. *Chromosoma.* **113**:233-243.
 14. Smolen, G.A., M.T. Vassileva, J. Wells, M.J. Matunis and D.A. Haber. 2004. SUMO-1 modification of the Willms tumor suppressor WT1. *Cancer Res.* **64**:7846-7851.
 15. Eladad, S., T. Ye, P. Hu, M. Leversha, S. Beresten, H. Bromage, M.J. Matunis and N.A. Ellis. 2005. Nuclear Trafficking of the BLM helicase to DNA damage foci is regulated by SUMO modification. *Hum. Mol. Gen.* **14**:1351-1365.
 16. Zhu, S, H. Zhang and M.J. Matunis. 2006. SUMO modification through rapamycin-mediated heterodimerization reveals a dual role for Ubc9 in targeting RanGAP1 to nuclear pore complexes. *Exp. Cell Res.* **312**:1042-1049.
 17. Zhang, X.-D., J. Goeres, H. Zhang, T.J. Yen, A.C.G. Porter, and M.J. Matunis. 2008. SUMO-2/3 modification and binding regulate the association of CENP-E with kinetochores and progression through mitosis. *Mol. Cell.* **29**:729-741.
 18. La Salle, S., F. Sun, X.-D. Zhang, M.J. Matunis and M.A. Handel. 2008. Developmental control of sumoylation pathway protein in mouse male germ cells. *Dev. Biol.* **321**:227-237.
 19. Zhu, J., S. Zhu, C.M. Guzzo, N.A. Ellis, K.S. Sung, C.Y. Choi and M.J. Matunis. 2008. SUMO binding determines substrate recognition and paralog-selective SUMO modification. *JBC.* In press.
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