

Mohan Viswanathan

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Education

Massachusetts Institute of Technology (Cambridge, MA) Postdoctoral Fellow Department of Biology Mentor: Dr. Leonard P. Guarente	2001-present
Brandeis University (Waltham, MA) Doctor of Philosophy, Cell and Molecular Biology Department of Biology Advisor: Dr. Susan T. Lovett	1993-2000
Carnegie Mellon University (Pittsburgh, PA) Bachelors of Science, Chemistry and Biology	1988-1992

Fellowships

Jane Coffin Childs Memorial Fund for Medical Research Postdoctoral Fellowship	2001-2004
National Research Service Award – PHS/NIH Predoctoral Fellowship	1994-1997

Publications

Viswanathan M., Kim S.K., Berdichevsky, A., and L. Guarente. "A Role for SIR-2.1 regulation of ER-stress genes in determining *C. elegans* lifespan." Developmental Cell, 9: 1-11 (2005).

Berdichevsky A., **Viswanathan M.**, Horvitz R., and L. Guarente. "*C. elegans* SIR-2.1 interacts with 14-3-3 proteins to activate DAF-16 and extend lifespan." Cell, in revision, (2005).

Viswanathan M., Berdichevsky A., Sai V., Plasterk R., and L. Guarente. "Characterization of *C. elegans sir-2.1*: Role in lifespan regulation and endoplasmic reticulum stress response." *manuscript in preparation*.

Viswanathan, M., Burdett V., Baitinger C., Modrich, P. and S.T. Lovett. "Redundant exonuclease involvement in *Escherichia coli* methyl-directed mismatch repair" Journal of Biological Chemistry 276: 31,053-31,058 (2001).

Burdett V., Baitinger C., **Viswanathan M.**, S.T. Lovett and Modrich P. "*In vivo* requirement for RecJ, ExoVII, ExoI and ExoX in methyl-directed mismatch repair" Proceedings of the National Academy of Sciences 98: 6,765-6,770 (2001).

Viswanathan, M., Lacirignola, J.J., Hurley R.L and S.T. Lovett. "A novel mutational hotspot templated by a naturally occurring quasipalindrome in *E. coli*." Journal of Molecular Biology 302: 553-564 (2000).

Viswanathan, M., and S.T. Lovett. "Exonuclease X: A novel 3'-5' DNase of *Escherichia coli* belonging to the DnaQ superfamily involved in DNA repair." Journal of Biological Chemistry 274: 30,094-30,100 (1999).

Viswanathan, M. Lanjuin, A., and S.T. Lovett. "Identification of RNase T as a high-copy suppressor of the UV sensitivity associated with single-strand DNA exonuclease deficiency in *Escherichia coli*." Genetics 151: 929-934 (1999).

Viswanathan, M., Dower, K. W. and S.T. Lovett. "Identification of a potent DNase activity associated with RNase T of *Escherichia coli*." Journal of Biological Chemistry. 273: 35,126-35,131 (1998).

Viswanathan, M. and S.T. Lovett. "Single-strand DNA-specific exonucleases in *Escherichia coli*: Roles in repair and mutation avoidance." Genetics 149: 7-16 (1998).

Teaching Experience

Courses

Woods Hole Marine Biological Laboratory

Course Instructor (2001)- "Molecular biology of aging"

Brandeis University, Department of Biology

Teaching assistant (1995)- "Molecular and cellular biology laboratory" (lab instructor)

Teaching assistant (1994)- "Molecular biology" (weekly discussion section)

Boston University, Department of Biology

Teaching assistant (1993)- "Developmental biology" (weekly lecture class and laboratory instruction)

Teaching assistant (1992)- "Cellular biology" (two biweekly discussion sections)

Mentoring

Victor Sai (2001-2003), Undergraduate Research Opportunity Program student, MIT.

Instructed Victor on *C. elegans* genetics and molecular biology and supervised his research on the role of *sir* genes in *C. elegans* lifespan regulation (manuscript in preparation). Victor is currently a MD/Ph.D. student at the University of California, San Francisco.

Joseph Lacirignola (1999), Master's student, Brandeis University.

Supervised thesis research project on quasipalindrome-templated mutagenesis in *E. coli*, which was published in The Journal of Molecular Biology. Joe is currently a research scientist at Massachusetts Institute of Technology Lincoln Labs.

Anne Lanjuin and Ken Dower (1998), Graduate students, Brandeis University.

Supervised Anne and Ken during lab rotations. Both contributed significantly to two publications on the identification and characterization of the enzyme Exonuclease T (a.k.a. RNase T), which is now produced by New England Biolabs. Anne and Ken are currently postdoctoral fellows at Harvard University and Wyeth Pharmaceuticals, respectively.

Presentations

Jane Coffin Childs Symposium. Interlaken, CT. October 2003 "Loss of Putative RNA-Directed RNA Polymerases RRF-2 and RRF-3 Extends *C. elegans* Lifespan." Poster.

University of Utrecht, Hubrect Laboratory. Utrecht, The Netherlands. October 2001. "Role of silent information regulatory genes in *C. elegans* aging." Talk.

Yeast Genetics and Human Disease II. Vancouver, British Columbia. June 1999. "Single-strand exonucleases in *E. coli* methyl-directed mismatch repair." Poster.

-Awarded American Society of Microbiology travel award.

DNA Repair and Human Disease. Jerusalem, Israel. May 1999. "The role of single-strand exonucleases in DNA repair." Talk and Poster.

-Awarded Victor Rothschild Foundation travel award.

DNA repair: Bacteria to Humans. Warrenton, VA. August 1998. "High-copy suppression of UV repair defects in *Escherichia coli*." Poster

Boston Bacterial Meeting. Harvard University, Boston, MA. June 1997. "*E. coli* single-strand specific exonucleases: Roles in UV-Repair, and mutation avoidance." Talk and Poster.

Boston Bacterial Meeting. Harvard University, Boston, MA. October 1996. "Single-strand exonucleases in recombination, UV repair and mutation avoidance." Talk and Poster.

Keystone Symposia: DNA recombination and replication. Taos, NM. February 1996. "Single-strand specific exonucleases and their role in genetic recombination repair and mutation avoidance." Talk and Poster.

Additional Research Experience

Visiting Scientist, University of Utrecht, Laboratory of Ronald Plasterk. Screened *C. elegans* deletion and transposon insertion libraries for *sir* gene mutants (2002). Constructed low-copy *sir* gene transgenic worms using high-speed particle bombardment (2003).

Summer internships, Johnson and Johnson (Immunobiology Research Institute), Annandale, NJ. cDNA library screening for human thymopoietin gene (1992). Isolation of impurities from the large-scale drug production of thymopoietin by preparative HPLC (1991).

Personal Information

Citizenship

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References

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