

## **CURRICULUM VITAE**

DAVID RICHARD MILLS

### **PERSONAL INFORMATION**

Place of Birth: Providence, RI  
Citizenship: USA

Home Address: 50 Columbia Avenue  
Cranston, RI 02905-3818

Business Address: Rhode Island Hospital  
Department of Hematology and Oncology  
593 Eddy Street  
Providence, RI 02903

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### **EDUCATION**

Undergraduate: University of Rhode Island, Kingston, RI. Biology, B.S., 1993.  
High distinction.

Graduate School: University of Rhode Island, Kingston, RI. Biology, M.S., 1995.  
Brown University, Providence, RI. Biology, Ph.D., 2001.

### **POSTGRADUATE TRAINING**

Fellowship: Postdoctoral Research Fellow, The Children's Hospital Boston,  
Boston, MA. Sponsored by Dr. Gary Silverman, M.D., Ph.D.  
August 2001 – February 2004.

Postdoctoral Research Fellow, Department of Pediatrics, Harvard  
Medical School, Boston, MA. Sponsored by Dr. Gary Silverman,  
M.D., Ph.D.  
August 2001 – February 2004.

Postdoctoral Research Fellow, Department of Hematology and  
Oncology, Rhode Island Hospital, Providence, RI. Sponsored by  
Dr. Douglas Hixson, Ph.D.  
March 2004 – Present.

Research Associate, Department of Medicine, Brown Medical School, Providence, RI. Sponsored by Dr. Douglas Hixson, Ph.D. August 2004 – Present.

### **HONORS AND AWARDS**

University of Rhode Island Undergraduate Laboratory Research Award, 1993.  
Scholarship support to attend “Positional Cloning: Contig to Candidate Gene” Course, Cold Spring Harbor Laboratories, Cold Spring Harbor, NY, 1997.  
National Institute of Environmental Health Science Predoctoral Training Fellowship, Brown University, 1997 – 1999.  
Pathobiology Retreat Poster Competition First Prize, Brown University Pathology Symposium and Pathobiology Retreat, 1999.  
Sigma Xi Scientific Honorary, Brown University, Providence, RI, 1999.  
Brown University Ph.D. Dissertation Fellowship, 2000.  
National Institute of Health Pathology of Newborn and Developmental Diseases Postdoctoral Training Grant, Harvard Medical School, 2001 – 2004.  
Travel Fellowship for The 3<sup>rd</sup> International Symposium on Serpin Biology, Structure and Function, 2002.

### **UNIVERSITY COMMITTEES**

Graduate Student Representative to Brown University Pathobiology Admissions Committee, 1995-1997.  
Member of Annual Brown University Pathobiology Retreat Committee, 1995-1997.  
Member of Brown University Pathobiology Seminar Series Committee, 1998-1999.  
Member of Brown University Pathobiology Curriculum Committee, 1999.

### **MEMBERSHIP IN SOCIETIES**

American Association for the Advancement of Science, 1993.  
American Society for Investigative Pathology, 1997.  
American Society of Human Genetics, 1999.  
Genetics Society of America, 1999.  
Sigma Xi, 1999.

## ORIGINAL PUBLICATIONS

1. Mark HFL, **Mills DR**, Kim E, Santoro K, Quddus MR, Lathrop JC. Fluorescent in situ hybridization assessment of chromosome copy number in buccal mucosal cells. *Cytobios* 1996;87:117-126.
2. Mark HFL, **Mills DR**, Santoro K, Quddus MR, Lathrop JC. Fluorescent in situ hybridization analysis of cervical smears: A pilot study of 20 cases. *Annals of Clinical and Laboratory Science* 1997;27:224-229.
3. **Mills DR**, Goldsmith MR. Characterization of early follicular cDNA library suggests evidence for genetic polymorphisms in the inbred strain C108 of *Bombyx mori*. *Genes and Genetic Systems* 2000;75:105-113.
4. DePaepe ME, Rubin LP, Jude C, Lesieur-Brooks AM, **Mills DR**, Luks FI. 2000. Fas ligand expression coincides with alveolar cell apoptosis in late-gestation fetal lung development. *American Journal of Physiology–Lung Cellular and Molecular Physiology* 2000;279:L967-L976.
5. **Mills DR**, Jackson CL. Assignment of p22 dynactin light chain (DCTN3) to human chromosome region 9p13 by radiation hybrid mapping. *Cytogenetics and Cell Genetics* 2001;92:166.
6. Askew YS, Pak SC, Luke CJ, Askew DJ, Cataltepe S, **Mills DR**, Kato H, Lehoczyk J, Dewar K, Birren B, Silverman GA. SepinB12 is a novel member of the human OV-serpin family that is widely expressed and inhibits trypsin-like serine proteinases. *Journal of Biological Chemistry* 2001;276(52):49320-49330.
7. Al-Khunaizi M, Luke CJ, Askew YS, Pak SC, Cataltepe S, Miller D, **Mills DR**, Tsu C, Bromme D, Irving JA, Whisstock JC, Silverman GA. The serpin SQN-5 is a dual mechanistic-class inhibitor of serine and cysteine proteinases. *Biochemistry* 2002;41(9):3189-3199.
8. Pak SC, Kumar V, Tsu C, Luke CJ, Askew YS, Askew DJ, **Mills DR**, Bromme D, Silverman GA. Srp-2 is a cross-class inhibitor that participates in post-embryonic development of the nematode *Caenorhabditis elegans*: Initial characterization of the Clade L serpins. *Journal of Biological Chemistry* 2004;279(15):15448-15459.
9. Cole E, Miller D, Rometo D, Cataltepe S, Pak SC, Askew DJ, **Mills DR**, Silverman GA, Luke CJ. Identification and activity of a lower eukaryotic serpin from *Cyanea capillata*: Analysis of a jellyfish serpin, jellypin. *Biochemistry* 2004;43(37):11750-11759.
10. Miao X-X, Xu S-J, Li M-H, Li M-W, Huang J-H, Dai F-Y, Marino SW, **Mills DR**, Zheng P- Y, Mita K, Jia S-H, Zhang Y, Liu W-B, Xiang H, Guo Q-H, Xu A-Y, Kong X-Y, Lin H-X, Shi Y-Z, Lu G, Zhang X, Huang W, Yasukochi Y, Sugasaki T, Shimada T, Nagaraju J, Xiang Z-H, Wang S-Y, Goldsmith MR, Lu C, Zhao G-P, Huang Y-P. Simple sequence repeat-based consensus linkage map of *Bombyx mori*. *Proc. Natl. Acad. Sci. USA* 2005;102(45):16303-16308.
11. **Mills DR**, Haskell MD, Britt D, Flanagan DL, Callanan HM, Brilliant KE, Carriero MP, Hixson DC. An early lineage marker on bipotent fetal rat

cholangiocytes and intrahepatic ducts is a cell surface form of Hsc70. Submitted to *Journal of Biological Chemistry*.

## **THESIS**

1. Mills DR. Characterization and contribution of molecular markers to the genetic linkage map for the domesticated silkworm, *Bombyx mori* [Masters thesis]. Kingston (RI): University of Rhode Island; 1995.
2. Mills DR. P22 dynactin light chain (DCTN3): positional cloning and investigation for involvement in cartilage–hair hypoplasia [Doctoral dissertation]. Providence (RI): Brown University; 2001.

## **ABSTRACTS**

1. Quddus MR, **Mills DR**, Kim E, Santoro K, Lathrop JC, Mark HFL. An optimized protocol for FISH in buccal mucosal cells: An obsolete assay revisited. The 46th Annual Meeting of The American Society of Human Genetics, October 1996, San Francisco, CA.
2. **Mills DR**, Santoro K, Quddus MR, Lathrop JC, Mark HFL. Fluorescent in situ hybridization (FISH) analysis of cervical smears: A pilot study of 20 cases. The 46th Annual Meeting of The American Society of Human Genetics, October 1996, San Francisco, CA.
3. **Mills DR**, Coughlin S, Volodina N, Jackson CL. Construction of a yeast artificial chromosome (YAC) contig in the region of the cartilage–hair hypoplasia gene in 9p13. *American Journal of Human Genetics* 1997; 61(4) Suppl: A239.
4. **Mills DR**, Parikh PM, Moore DV, Preparata RM, Jackson CL. Efforts towards developing a transcript map of human chromosome 9p13: Construction of a YAC–based physical map. *American Journal of Human Genetics* 1998; 63(4) Suppl: A254.
5. **Mills DR**, Preparata RM, Jackson CL. Physical and transcript map of the critical region for cartilage–hair hypoplasia and a candidate tumor suppressor gene on human chromosome region 9p13. *Cold Spring Harbor Meeting on Genome Sequencing & Biology*, 2000 May 10-14; Cold Spring Harbor, New York; p. 181.
6. Goldsmith MR, Zeng P, Okano K, Marino S, **Mills D**, Mita K, Sugasaki T, Shimada T, Yasakochi Y. Recent progress in genomic mapping in *Bombyx mori*: where should we go from here? XXI International Congress of Entomology, August 2000, Iguassu Falls, Parana, Brazil.
7. **Mills DR**, Humphray SJ, Jackson CL. Mapping and genomic structure of the gene encoding the p22 light chain of dynactin (DCTN3). *American Journal of Human Genetics* 2000; 67(4) Suppl 2: 185.
8. Jackson CL, **Mills DR**, Humphray SJ, Preparata RM, Huang C. A large insert clone–based transcript map of human chromosome region 9p13. *American Journal of Human Genetics* 2000; 67(4) Suppl 2: 272.
9. **Mills DR**, Pepperell J, Tantravahi U, Shiozawa M, Matsuzaki A, Kwitek–Black AE, Jacob HJ, Jackson CL. Genomic structure of the p22 dynactin light chain

- (DCTN3) and comparative mapping to rat chromosome 5. American Society of Human Genetics 2001; 69(4) Suppl: 359
10. **Mills DR**, Luke CJ, Pak SC, Cataltepe S, Silverman GA. Cell surface detection of SCCA protein. The 3<sup>rd</sup> International Symposium on Serpin Biology, Structure and Function, June 2002, Chicago, IL.
  11. Pak SC, Tsu C, Kumar V, Askew YS, Luke CJ, Askew DJ, **Mills DR**, Cataltepe S, Silverman GA. Serpins in *C. elegans*. The 3<sup>rd</sup> International Symposium on Serpin Biology, Structure and Function, June 2002, Chicago, IL.
  12. Pak SC, Luke CJ, Askew YS, Askew DJ, **Mills DR**, Tsu C, Kumar V, Cataltepe S, Silverman GA. Serpin function in *C. elegans*: a genetic and biochemical analysis. East Coast Worm Conference, June 2002, Durham, NH.
  13. Goldsmith MR, McGovern C, Wu C, Zhang H, Riddiford L, Mita K, Yasukochi Y, Shimada T, Sugasaki T, Okano K, Zeng P, **Mills DR**, Marino SW. New resources for comparative linkage mapping in Lepidoptera. Fourth International Workshop on Trangenesis and Genomics of Invertebrate Organisms, May 2003, Pacific Grove, CA.
  14. Goldsmith MR, McGovern C, Wu C, Zhang H, Mita K, Yasukochi Y, Shimada T, Sugasaki T, Okano K, Zeng P, **Mills DR**, Marino SW. Resources for comparative linkage mapping in Lepidoptera. International Workshop on Genetics & Genomics of the Lepidoptera, August 2003, Kolympari, Crete.

### **INVITED PRESENTATIONS**

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| 1999 | Invited speaker at the annual Brown University Pathobiology Program Retreat. Presentation was entitled “Positional cloning of disease genes from human chromosome region 9p13”.   |
| 2000 | Invited speaker for the Rhode Island Hospital Basic Research Seminar Series. Presentation was entitled “Positional cloning of disease genes from human chromosome region 9p13”.   |
| 2001 | Invited speaker for the University of Rhode Island Biological Sciences Research Colloquium. Presentation entitled “Proliferation defects and positional cloning: a tale of two strategies for gene identification”.                             |
| 2002 | Pak SC, Tsu C, Kumar V, Askew YS, Luke CJ, Askew DJ, <b>Mills DR</b> , Cataltepe S, Silverman GA. Serpins in <i>C. elegans</i> . The 3 <sup>rd</sup> International Symposium on Serpin Biology, Structure and Function, June 2002, Chicago, IL. |

### **UNIVERSITY TEACHING ROLES**

University of Rhode Island

- 1993 Laboratory teaching assistant for Bio 203 Evolutionary Genetics, two laboratory sections.
- 1994 Laboratory teaching assistant for Bio 104 Population and Community Dynamics, two laboratory sections.  
Laboratory teaching assistant for Bio 203 Evolutionary Genetics, three laboratory sections.
- 1995 Laboratory teaching assistant for Bio 104 Population and Community Dynamics, three laboratory sections.

Brown University

- 1996 Laboratory teaching assistant for Bio 47 Genetics, two laboratory sections.
- 1997 Laboratory teaching assistant for Bio 20 The Foundation of Living Systems, two laboratory sections.

**Leadership Role Related to Teaching**

- 1999 Laboratory Instructor, “Positional Cloning: Contig to Candidate Gene” Course, Cold Spring Harbor Laboratories, Cold Spring Harbor, NY.