

**Margaret Somosi Saha  
Curriculum Vitae  
(September, 2006)**

**PERSONAL INFORMATION**

1. **Name:** Margaret Somosi Saha  
(married, with five children)
- Office Address: Department of Biology  
314 Millington Hall  
College of William and Mary  
Williamsburg, VA 23187
- Phone: 757-221-2407  
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E-mail: [mssaha@wm.edu](mailto:mssaha@wm.edu)
- Home Address: 115 Bowstring Dr.  
Williamsburg, VA 23185  
Phone: 757-253-2472
2. **Position:** Professor, Department of Biology

**EDUCATION**

3. **Academic degrees, dates, and institutions**

- Ph.D. 1991 Biology, University of Virginia, Charlottesville, VA  
Ph.D. 1984 History, Michigan State University, East Lansing, MI  
M.A. 1973 History, Case Western Reserve University, Cleveland, OH  
B.A. 1973 History, Case Western Reserve University, Cleveland OH

**ACADEMIC POSITIONS**

Teaching and research positions, including dates:

- 2004 – present Professor, College of William and Mary, Dept. of Biology  
1998 - 2004 Associate Professor, College of William and Mary, Dept. of Biology  
1993 - 1998 Assistant Professor, College of William and Mary, Department of Biology  
1991 - 1993 Postdoctoral Associate, University of Virginia, Department of Biology,  
Charlottesville, VA  
1986 - 1990 National Institute of Health Predoctoral Fellow, University of Virginia,  
Department of Biology, Charlottesville, VA  
1985 - 1986 Teaching Assistant, University of Virginia, Department of Biology,  
Charlottesville,VA  
1980 - 1984 Tutor/Instructor, Oakton Community College, Skokie, IL

1979 - 1980            Instructor, Michigan State University, Humanities Department  
1977 - 1978            Research Associate on DAAD grant, Goettingen University  
1973 - 1977            Teaching Assistant, Michigan State University, Department of History

## **HONORS, PRIZES, AWARDS**

### **5. Professional Prizes, awards, honors, editorial positions, service on review boards, offices in professional societies**

#### **Prizes, Honors**

Outstanding Faculty Award (one of fifteen awarded each year by the State Council of Higher Education of Virginia), (2006)  
"Class of 2008" Professor (2005)  
"Class of 2005" Professor (2005)  
Honorary Marshal (2005, 1998)  
Grace Blank Teaching Award, *shared with three colleagues* (2000)  
Selected "Best Mentor" at Society for Developmental Biology 1999 Annual Meeting, *based on undergraduate poster entries* (1999)  
Voted Honorary Marshal for 1998 Commencement Exercises (1998)  
Alumni Society Fellowship Award (1998)  
Phi Beta Kappa Faculty Award for Advancement of Scholarship (1998)  
Grace Blank Teaching Award (1996-1997)  
Omicron Delta Kappa (1997)  
Golden Key Society (1997)  
Alpha Lambda Delta/Phi Eta Sigma Outstanding Teaching Award for 1994/1995: (1995)  
James Dent Doctoral Dissertation Award, University of Virginia, Dept. of Biology (1991)  
Department of Biology (University of Virginia) Teaching Award (1986)  
Fulbright/DAAD Award (1977-78) for doctoral dissertation research in Germany  
Graduated *summa cum laude*, Case Western Reserve University (1973)

#### **Service for Funding Agencies, Professional Societies and Organizations**

Member, Advisory panel for HHMI International Education Center (2006)  
Member of National Institutes of Health Cell Development and Function (ZRG1) Study Section, ad hoc member (November, 2000; March, 2001; June, 2001; March, 2002; June, 2002; February, 2003; June, 2003; October, 2003; June, 2004; February, 2005; June, 2005; March, 2006; June, 2006).  
Chair, ZRG1, CDF-4 Study Section, R15 Study Section Meeting (Cell Development and Function), (October, 2003; June, 2003).  
Member of Executive Board for Beckman Foundation, Beckman Scholars' Program (2002 – present)  
Chair, Executive Board for Beckman Foundation, Beckman Scholars' Program (2005-2006)  
Ad hoc reviewer for National Science Foundation (1994 - present)  
Ad hoc reviewer for journals including: *Isis, J. Theoretical Biology, Development, Developmental Biology, Developmental Dynamics, Mechanisms of Development: Gene Expression Patterns, International Journal of Developmental Biology*

Reviewer of “Core Knowledge Teacher Handbook” (two reviews, for Biology section), 2005)

Reviewer for “The Human Genome Project” (Palladino), (2005)

Reviewer for Brooker et al., Introductory Biology text, Development section (2005)

Review Committee for the 2004 HHMI Undergraduate Biological Sciences Education Program grants (2003-2004)

Reviewer of J. Slack’s *Essential Developmental Biology* (’04)

Society for Developmental Biology representative to FASEB (Federation of American Societies for Experimental Biology), Science Policy Committee (1999-2002)

Member of “Breakthroughs in Science” subcommittee of Science Policy Committee of FASEB (1999-2002)

Served on Advisory Panel for the Beckman Foundation for selection of Beckman Scholars Awards (1999-2000; 2000-2001; 2001-2002)

Served as Panel Member on National Science Foundation “Living Stocks Collection” Panel (November, 2002).

Panel Member, Developmental Mechanisms, National Science Foundation (three year term, 1996-1998)

Reviewed prospective Developmental Biology textbook for W.H. Freeman Co. (1998)

Reviewed selected chapters of Scott Gilbert’s *Developmental Biology* (1999-2000)

Reviewed five chapters of Carroll et al. book: *From DNA to Diversity* (Blackwell Science), (2000)

Co-organized Southeast Regional Developmental Biology Conference held at the College of William and Mary for the Society for Developmental Biology: served as local host (May, 1995)

## **TEACHING**

### **6. Courses taught**

Principles of Biology: Molecules, Cells, and Development (BIO 203, 3 credit hours): Spring 2005; Spring 2006

Developmental Biology (Biology 433, 3 credit hours): Spring 1994, 1995, 1996, 1997, 1998, 2001, 2002, 2003, 2004; Fall, 2005

Developmental Biology Laboratory (Biology 434, 1 credit hour): Spring 1994, 1995, 1996, 1998

Developmental Biology (Graduate level, 3 credit hours): Spring, 1995, 1996, 1998, 2001, 2003, 2004

Molecular Neurobiology (Biology 404, 3 credit hours): Fall, 2004

Developmental Neurobiology (Biology 404, 3 credits): Fall, 2002

Developmental Neurobiology (Graduate level, 3 credits): Fall, 2002

Bioinformatics (2 credit hours): Fall, 2002: team-taught course; taught 1/3 of course

Bioinformatics and Biotechnology (Biology 404, 1-3 credits): Fall, 2003

Molecular Biotechnology (Biology 404, 3 credit hours): Spring 1999, Fall 2001

Molecular Biotechnology (Graduate level, 3 credit hours): Spring 1999, Fall 2001

Neurobiology (Biology 445, 3 credit hours): Fall 1994, 1995, 1996, 1997, 1998, 2000

Neurobiology (Graduate level, 3 credit hours): Fall 1994, 1995, 1996, 1997, 1998, 2000

Teacher Update Course in Bioinformatics and Molecular Biotechnology (Spring, 2003)

Teacher Update Course in Molecular Biotechnology (Biology 504): Fall 2001  
Teacher Update Course: Molecular Biology and Biotech.(1 credit hour): Spring, 1999  
Topics: Angiogenic Factors (Biology 404, 1 credit hour, with D. Bebout): Spring, 1996  
Update in Developmental Biology (Biology 580, 1 credit hour): Spring, 1994  
Graduate Colloquium (Biology 582, 1 credit hour): Fall, 1994  
Current Topics in Neurobiology (Biology 580, 3 credit hours): Fall, 1993

Western Civilization: The Ancient World (Michigan State University, Fall 1979)  
Western Civilization: The Medieval and Renaissance World (Michigan State University, Winter 1980)  
Western Civilization: The Modern World (Michigan State University, Spring 1980)

### **Other Teaching Activities**

Assisted with overseeing restructuring of Biology Introductory labs (2004-6); contributing part of a new lab module for molecular development.

Organized, developed, and supervised animal development/molecular biology laboratories (five weeks) in Introductory Biology Laboratory (1994-present)

#### *Supervision of students:*

Research in Biology (Biology 403): 1994-present: average of seven to ten (or more) students each semester

Honors in Biology (Biology 495-496):

2006-2007: John Seeley, Natasha Golub, Stephanie Byers

2005-2006: Ryann Fame, Katherine Fisher, Kristen Malkus, Matt Wester

2004-2005: Marion Harris

2003-2004: Vijay Dondeti

2002-2003: John Hsia, Melissa Wright

2001-2002: Kim Briggs, Dave Solomon

2000-2001: Erika Gruber, Anthoney Lim

1999-2000: Kristina Hoke, Alix Purdy, Cecily Vanderspurt

1998-1999: Banu Kuppusami

1997-1998: Candice Brown, Kenna Mills, Alice Kraemer, Greg Politzer

1996-1997: Thomas Buss, John Cowden, Laura Green, Debbie Kruep, Jennifer Daigle

1995-1996: Kristin Whitford, Tina Tennenhaus

1994-1995: Wayne Outten, Carolyn Feltes, Dan Greenwald, Dara Lehigh

Thesis Research (Biology 600): 1993-2003: The following students completed (or are completing) MA degrees under my supervision: Brian Nicholson (1994) work performed under G. Phillips ; Rebecca Miles (1994), Cleve Sinor (1994); Laura Rochmis (1995); Krista Stimson (1998); Conor Sipe (2003); Lisa August (2003); Mei Li (2004)

Co-advisor for Ph.D. student: Drew Weisenberger (Applied Science) (on a collaborative project applying current developments in detector physics to biological problems, namely in vivo gene imaging)

Served on Honors Committees (1994-present)

Served on VIMS, Physics, Applied Science thesis committees

Served on Biology Masters' thesis committees (1994-2003): Sarena, Khosla, Gail Poulsen,

Amanda Kaye, Sean Majoy, Heather Ranel, Brian Lovitt, Maury Vines, George Liechti

Supervised summer research for two Wilson Cross-disciplinary scholars (summer, 1994; summer, 1995)

Presented lecture in the Freshman Honors Colloquium (Fall 1993, 1994, 1995) and supervised research projects for one-three students each year

## **RESEARCH**

### **7a. Outside Grants**

Howard Hughes Medical Institute, Undergraduate Biological Sciences Education Program Award, \$1.8 million, (2006-2010), Project Director.

Department of Defense Breast Cancer Research Program (BCRP) of the Office of the Congressionally Directed Medical Research Programs, "In Vivo Molecular Imaging of Mammary Tumorigenesis in Murine Model Systems" (2005-2007), \$107,015.

Jeffress Memorial Trust, "Novel Laser-Based Strategies for the Insertion of DNA into Cells of Living Organisms," 1/03-12/05, \$44,000.

Howard Hughes Medical Institute, Undergraduate Biological Sciences Education Program Award, \$1.6 million, (2002-2006), Project Director

Commonwealth Technology Research Fund, "Bringing the Future of Bioinformatics to Virginia," Principal Investigator: D. Manos; Co-PIs: M. Saha, G. Smith, and R. Voigt, \$3,251,901 (2001-2006).

Consultant on SBIR-NSF Proposal, "Use of a Visual Programming Environment to Promote Bioinformatics Education," (for Incogen); (1/04-7/04).

National Science Foundation, "A Confocal Microscope for Molecular, Cellular, and Integrative Biology," M. Saha, PI, with Co-PIs L. Allison, E. Bradley, P. Heideman, D. Shakes \$172,444 (2000-2002).

Commonwealth Health Research Board, "Imaging the Aging Brain: In vivo Detection of Key Aging Molecules," (PI), with Co-PIs E. Bradley, A. Weisenberger, S. Majewski, R. Welsh, \$65,000, (2000-2001).

Commonwealth Health Research Board, "Surface bound Antimicrobials to Control Disease Transmission," Co-PI with (M. Kelley, PI, and other Co-PIs), \$60,000 (2000-2001).

National Science Foundation, "Research Experience for Undergraduates" Supplement, \$3080, (2000).

Howard Hughes Medical Institute, Undergraduate Biological Sciences Education Program Award, \$1.6 million, (1998-2002), Project Director.

Presidential Faculty Fellowship administered by the National Science Foundation, "Mechanisms of Neural and Vascular Patterning during Vertebrate Embryogenesis," \$500,000 (1996-2003).

National Science Foundation, "Collaborative Research in Neuroscience: In Vivo Neural Gene Imaging Using a Novel Radiation Detector," \$99,998 (1996-1999).

National Science Foundation Instrumentation Grant, "Automated Sequencer for Population Genetics, Phylogeny, Toxicology and Immunology," (with J. Graves, PI, E. Burrenson, S. Kaattari, J. Duffy as Co-PIs, \$57,125)

National Institutes of Health, "Angiogenesis and the Role of xEGR1 in *Xenopus*," \$104,250, R15 HD32080-01A1 (1995-1998).

National Science Foundation, "Determination of the Dorsal-Ventral Neural Axis in *Xenopus*,"

Supplement for two summer students.  
National Science Foundation, "Determination of the Dorsal-Ventral Neural Axis in *Xenopus*,"  
IBN-9406326 for \$254,767 (1994-1997)  
Fight for Sight, "Experimental Analysis of the Generation of Bilateral Symmetry," (GA94025) for  
\$11,000 (1994-1995).  
Jeffress Memorial Foundation, "Determination and Patterning of the *Xenopus* Forebrain: The  
Role of XeNK-2 in Anterior Neural Development," (J299) for \$17,500 (1994-1995).  
National Institutes of Health Predoctoral Award: Developmental Biology Training Grant  
(1986 -1990).

## **7b. Internal grants**

Faculty Research Assignment (2006-2007)  
Faculty Research Assignment (1999-2000)  
Award from A&S Lecture Committee for Andrew Lumsden's seminar (November, 1998)  
Summer Research Grant (Summer 1994) for "Dorsal-Ventral Patterning in the *Xenopus*  
Forebrain"  
Contributed a section for the "Academic Technology" minigrant (organized by L. Sanderson) to  
obtain and utilize Macintosh computers in Neurobiology and Developmental Biology

## **8. Scholarly activity**

### **8a. Refereed publications in periodicals, chapters in books, and conference proceedings**

#### **Publications**

[underline denotes W&M undergraduate author; \* denotes W&M graduate student author]

- Sipe, C.W., Dondeti, V.R., Saha, M.S., In silico Gene Selection for Custom Oligonucleotide  
Microarray Design," *Methods in Molecular Biology*, Humana Press, in press.
- Sipe, C.W. and Saha, M.S., The use of Microarray Technology in Non-Mammalian Vertebrate  
Species," *Methods in Molecular Biology*, Humana Press, in press.
- Li, Mei\*; Sipe, Conor; Hoke, Kristina; August, Lisa\*; Wright, Melissa, **Saha, Margaret**. (2006).  
"The Role of Early Lineage in GABAergic and Glutamatergic Cell Fate Determination in  
*Xenopus laevis*," *Journal of Comparative Neurology*, 495: 645-657.
- Bradley, E., Cella, J., Majewski, S., Popov, V., Qian, J., **Saha, M.S.**, Smith, M., Weisenberger,  
A.G., and Welsh, R.E. (2006) "A 'Mouse-Sized' Gamma Camera for Biological Imaging",  
*IEEE, Trans. Nucl. Sci.*, 53 (1): 59-65.
- Dondeti, V.R., Sipe, C.W., and **Saha, M.S.** (2004) A Gene Selection Strategy for Custom  
Microarray Design," *BioTechniques*, 37(5):768-70, 772, 774-6.
- Saha, M.S.**, Cox, E.A and Sipe, C.W \*. (2004). Mechanisms Regulating the Origins of the  
Vertebrate Vascular System. *Journal of Cellular Biochemistry*, 93, 46-56.
- Sipe, C\*, Gruber, E., and **Saha, M.S.** (2004). A Short Upstream Region Drives Dynamic  
Expression of Hypoxia-inducible Factor 1[alpha] During *Xenopus* Development.  
*Developmental Dynamics*, 230, 229-238.
- Gleason, K.K.\*, Dondeti, V.R., Hsia, H.L., Cochran, E.R., Gumulak-Smith, J., and **Saha, M.S.**  
(2003). The vesicular glutamate transporter 1 (xVGlut1) is expressed in discrete regions  
of the developing *Xenopus laevis* nervous system. *Gene Expression Patterns: A section  
of Mechanisms of Development*, 3 (4), 503-507.

- Saha, M.S.**, Bradley, E.L., Brewer, P., Gleason, K.K.\* , Kross, B., Majewski, S., Popov, V., Ranck, A., Smith, K., Weisenberger, A.G., Wojcik, R., and Welsh, R.E. (2003). Incorporation of a fluoroscopic X-Ray modality in a small animal imaging system," *IEEE Transactions on Nuclear Science* 50 (3), 333-338.
- Weisenberger, A.G., Wojcik, R., Bradley, E.L., Brewer, P., Majewski, S., Qian, J.\*, Ranck, A., **Saha, M.S.**, Smith, K., Smith, M.F., Welsh, R.E. (2003). SPECT-CT system for small animal imaging, *IEEE Transactions on Nuclear Science* 50 (1), 74-79.
- Whitford, K. L., Oakes, J.A., Scholnick, J., and **Saha M.S.** (2000). Tissue-specific developmental expression of OAX, a *Xenopus* repetitive element. *Mechanisms of Development* 94 (1-2), 209-212.
- Mills, K.R., Krupp, D., and **Saha, M.S.** (1999). Elucidating the origins of the vascular system: A fate map of vascular endothelial and red blood cell lineages in *Xenopus laevis*, *Developmental Biology* 209 (2), 352-368.
- Weisenberger, A.G.\*, Kross, B., Majewski, S., Wojcik, R., Bradley, E., and **Saha, M.S.** (1998). Design features and performance of a CsI(Na) array based gamma camera for small animal gene research. *IEEE Transactions on Nuclear Science*, 45 (6), 3053-3058.
- Weisenberger, A.G\*., Bradley, E., Majewski, S., and **Saha, M.S.** (1998). Development of a novel radiation imaging detector system for in vivo gene imaging in small animal studies,@ *IEEE Transactions on Nuclear Science* 45 (3), 1743-1749.
- Scholnick, J., Oakes, J., Sinor, C.\*, Outten, W. and **Saha, M.** (1997). Differential expression of ribosomal protein gene *XlrpS1c*. *Biochimica et Biophysica Acta* 1354 (1), 72-82.
- Saha, M.S.**, Miles, R.R\*., and Grainger, R.M. (1997). Dorsal-ventral patterning during neural induction in *Xenopus*: assessment of spinal cord regionalization with *xHB9*, a marker for the motor neuron region. *Developmental Biology* 187 (2), 209-223.
- Weisenberger, A.G.\*, Majewski, S., **Saha, M.S.**, and Bradley, E. (1997). Coincident imaging of I-125 for in vivo gene imaging in small animals. *Nuclear Instruments and Methods in Physics Research, A* 392, 299-303.
- Drysdale, T.A., Patterson, K.D., **Saha, M.**, and Krieg, P.A. (1997). Retinoic acid can block differentiation of the myocardium after heart specification. *Developmental Biology* 188 (2), 205-215.
- Cleaver, O., Tonissen, K.F., **Saha, M.S.**, and Krieg, P. A. (1997). Neovascularization of the *Xenopus* embryo. *Developmental Dynamics* 210 (1), 66-77.
- Saha, M.S.** (1997). Illustrations of inductive phenomena in *Textbook of Tissue Engineering*, pp. 67-78, ed. R. P. Lanza. R.G. Landes Company, Publisher.
- Smolich, B.D., Tarkington, S.K., **Saha, M.S.** and Grainger, R.M. (1994). *Xenopus* gamma-crystallin gene expression: evidence that the gamma crystallin gene family is transcribed in lens and non-lens tissues. *Cellular and Molecular Biology* 14 (2), 1355-63.
- Saha, M.S.**, Michel, R.B., Gulding, K.M., and Grainger, R.M. (1993). A *Xenopus* homeobox gene defines dorsal-ventral domains in the developing brain. *Development* 118 (1), 193-202.
- Smolich, B.D., Tarkington, S.T., **Saha, M.S.**, Stathakis, D.G., and Grainger, R.M. (1993). Characterization of *Xenopus laevis* gamma-crystallin-encoding genes. *Gene* 128 (2), 189-195.
- Saha, M.S.** and Grainger, R.M. (1993). Opsin expression precedes photoreceptor differentiation in *Xenopus*. *Molecular Brain Research* 17 (3-4), 307-318.
- Gonzalez-Fernandez, F., Kittredge, K.L., Rayborn, M.E., Hollyfield, J.G., Landers, R.A., **Saha, M.**, and Grainger, R.M. (1993). IRBP, a major 124 kDa glycoprotein in the interphotoreceptor matrix of *Xenopus*. Characterization, molecular cloning, and biosynthesis. *J. Cell Science* 105, 7-21.

- Grainger, R.M., Henry, J.J., **Saha, M.S.**, and Servetnick, M. (1992). Recent progress on the mechanisms of embryonic lens formation. *Eye* 6, 117-122.
- Saha, M.S.** and Grainger, R.M. (1992). A labile period in the determination of the anterior-posterior axis during early neural development in *Xenopus*. *Neuron* 8 (6), 1003-1014.
- Saha, M.S.**, Servetnick, M., and Grainger, R.M. (1992). Vertebrate eye development. *Current Opinion in Genetics and Development*. 2 (4), 582-588.
- Saha, M.S.** (1991). Spemann seen through a lens, in *A Conceptual History of Induction*. Ed. S. Gilbert. New York, Plenum, pp. 91-108.
- Saha, M.S.**, Spann, C.L. and Grainger, R.M.. (1989). Embryonic lens induction: more than meets the optic vesicle. *Cell Differentiation and Development* 28 (3), 153-171.

#### **8d. Non-refereed conference proceedings**

- Weisenberger, A.G., Wojcik, R., Bradley, E.L., Brewer, P., Majewski, S., Qian, J.\*, Ranck, A., **Saha, M.S.**, Smith, M.F., and Welsh, R.E. SPECT-CT System for Small Animal Imaging IEEE Conference Record NSS-MIC, San Diego, 10 November 2001.
- Welsh, R.E., Bradley, E.L., Gleason, K.K.\*, Kross, B., Majewski, S., Popov, V., Qian, J.\*, Ranck, A., **Saha, M.S.**, Smith, K., Smith, M.F., Weisenberger, A.G., and Wojcik, R. An Economical Dual-Modality Small Animal Imaging System with Application to Studies of Diabetes., IEEE Conference Record NSS-MIC, San Diego, 10 November 2001.
- Weisenberger, A.G.\*, Bradley, E., Majewski, and **Saha, M.S.** (1997). A CsI(Na) based radiation detector for high resolution imaging studies using iodine 125 in small animal research. *Proceedings of SPIE*, 3115, 254-262.
- Weisenberger, A.G\*., S. Majewski, S. Mehrotra, V. Popov, and **M. Saha.** (1995). Investigation into the use of position sensitive photomultiplier tubes for beta radiography, in *Conference Record of the 1994 Nuclear Science Symposium and Medical Imaging Conference*, Vol. 1, pp. 351-355.

#### **8e. Invited scholarly talks**

- "Cell Fate Determination in the Nervous Vascular System," Longwood University (December, 2005).
- "Cell Fate Determination in the Vertebrate Nervous System," University of Richmond (October, 2004).
- "Determination and patterning of the nervous and vascular system in *Xenopus*," 2001 Society for Developmental Biology Southeast Regional Meeting, Montreat Conference Center, Asheville NC (May, 2001).
- "Determination and patterning of the nervous and vascular system in *Xenopus*," Eastern Virginia Medical School, Norfolk VA (May, 2001)
- "In Vivo Gene Imaging," Research Summit at Virginia Institute of Marine Science, Gloucester Point (January, 2001)
- "Determination and Patterning of the Vertebrate Vascular (and Nervous) Systems," Developmental Genetics, The National Institutes of Health, (January, 2000)
- "Veins and Brains: Determination and Patterning of the Vertebrate Nervous and Vascular Systems," University of North Carolina at Greensboro (November, 1999)
- "Plasticity in the Developing Vascular and Nervous System," (January, 1998), Medical College of Virginia, Department of Physiology
- "The Role of Angiogenesis in Cancer Research," With Good Reason, Virginia Public Radio,



- (October, 1996).
- "Dorsal-Ventral Patterning in the *Xenopus* Nervous and Vascular Systems," Southeastern Regional Developmental Biology Symposium (College of William and Mary), May, 1995).
- "Pattern Formation in the Nervous and Vascular Systems," University of Richmond, Richmond VA (September, 1995).
- "How to Make a Brain: Insights from Molecular Biology": College of William and Mary, Family Weekend (September, 1995).
- "Determination of the Anterior/Posterior Neural Axis in *Xenopus*," Department of Biology, University of Virginia (1991).
- "Homeobox Genes in Normal Development and Disease," Department of Ophthalmology, University of Virginia Medical School (1990).

#### **8f. Contributed scholarly talks**

- "Angioblasts as a Mesodermal Default State," (July 1997), International Congress of Developmental Biology, Snowbird, Utah. [selected from contributed abstracts]
- "Determination and Patterning of the Vascular System in *Xenopus*," National Society for Developmental Biology Symposium (May, 1996; Nashville TN). [selected from contributed abstracts]
- "Regional Neural Induction," Society for Developmental Biology Regional Meeting, Charlottesville, VA (1990).

#### **8g. Book reviews**

- Invited review of *Development of Cardiovascular Systems: Molecules to Organisms*, in *The Quarterly Review of Biology* (1998) 73, 506-507.

#### **8k. Technical reports**

- Saha, M.** (2002). Birth Control, in *Biology*, Richard Robinsin, ed., McMillan Reference USA, Vol. I, 82-84.
- Ribeiro, W. and **Saha, M.** (1998). Quantitation of DNA for automated sequencing, using the VersaFluor Fluorometer, (Tech Note 2387).
- Scholnick, J. and **Saha, M.** (1996). The use of pellet paint as a co-precipitant in the ribonuclease protection assay, (technical report). *Innovations Newsletter* (from Novagen). August, 1996, No.5., p. 11.
- Saha, M.** (1981). The Carl Correns Papers. *The Mendel Newsletter* 1, 1-6.

#### **8n. Work in progress or submitted**

In revision:

- Hammond, W., Bradley, E., Welsh, R., Qian, J., Weisenerger, A., Smith, M., Majewski, S., **Saha, M.S.**, "A Gamma Camera Re-evaluation of Potassium Iodide Blocking Efficiency in Mice," In revision for *Health Physics*.

**80. Selected abstracts and posters (presented at national meetings or regional meetings of national societies)**

Undergraduate students' names are underlined; graduate student names noted by asterisk.

- Wester, M., Sipe, C.W., **Saha, M.S.** The effects of cell cycle cessation on neurotransmitter specification in *X. laevis*. Society for Developmental Biology Meeting, Ann Arbor, MI, June 2006.
- Fisher, K.I., **Saha, M.S.** Is there a neurotransmitter default state? Society for Developmental Biology Meeting, Ann Arbor, MI, June 2006.
- Golub, N.I., Fame, R.M., **Saha, M.S.** Specification of neurotransmitter phenotypes in *Xenopus laevis*. Society for Developmental Biology Meeting, Ann Arbor, MI, June 2006.
- Sipe, C.W., Solomon, D., **Saha, M.S.** Cloning and functional characterization of GAD67 upstream regulatory regions in *Xenopus laevis*. Society for Developmental Biology Meeting, Ann Arbor, MI, June 2006.
- Qian, J., Bradley, E.L., Majewski, S., Popov, V., **Saha, M.S.**, Smith, M. Weisenberger, A.G., Welsh, R.E., Wojcik, R. A compact small-animal imaging system incorporating parallel-hole SPECT and multipinhole standard/helical SPECT. 2006 Academy of Molecular Imaging Annual Conference, March, 2006.
- Garcia, P., Guzzi, A Hammond, W.T. Welsh, R.E., Bradley, E.L., and **Saha, M.S.** Imaging of fluorescent dielectric "Quantum Dots" in biological imaging. American Physical Soc., SE Region Meeting (November, 2005).
- Guzzi, A., Garcia, P., Hammond, W.T. Welsh, R.E., Bradley, E.L., and **Saha, M.S.** Application of a cooled-CCD astronomy camera to biological imaging. American Physical Soc., SE Region Meeting (November, 2005).
- Li, M.\* , Fame, R., Fisher, K., Golub, N., Saha, M. "Specification of the GABAergic and Glutamatergic Phenotype in *Xenopus laevis*," Morphogenesis and Regenerative Medicine, Charlottesville, VA (May 2005).
- Wester, M., Filiberto, D., Sipe, C.W., Saha, M.S., "Effect of Early Cell Cycle Cessation on Neural Differentiation in *Xenopus*," Morphogenesis and Regenerative Medicine, Charlottesville, VA (May 2005).
- Hammond, W., Bradley, E., Weisenberger, A., Majewski, S., **Saha, M.S.**, Determination of Effective KI Blocking Doses Using an In Vivo Imaging System" APS, Tampa FL (April, 2005)
- Dondeti, V. and (**Saha, M.S.**). Using microarrays to study neural differentiation and plasticity in *Xenopus laevis*. Beckman Foundation Symposium, Irvine CA (July, 2004).
- Cella, J.T., Bradley, E.L., **Saha, M.S.**, Smith, K.J., and Welsh, R.E. Use of optical coupling and glass spacers in position sensitive scintillation detectors, (talk) Southeastern Section APS Meeting, Wilmington, N.C. (November, 2003).
- Smith, K.J., Bradley, E.L., Cella, J.T., **Saha, M.S.**, Welsh, R.E. Comparison of CsI(Tl) and NaI(Tl) Pixel Scintillators , (talk) Southeastern Section APS Meeting, Wilmington, N.C. (November, 2003).
- Dondeti, V.R., Wright, M. and **Saha, M.S.** Design of an 8K *Xenopus* Microarray for investigating neural development, Society for Developmental Biology, Annual Meeting, Boston MA, (July, 2003).
- Sipe, C.W.\* , Gruber, E.J., **Saha, M.S.** , Functional characterization of the *Xenopus HIF1 $\alpha$*  promoter, Society for Developmental Biology, Annual Meeting, Boston MA, (July, 2003).
- Gleason, K.K.\* , Curtis, T., Lim, A., DeSimone, D., and **Saha, M.S.** Functional analysis of X-mrs in the developing vascular and nervous system, Society for Developmental Biology,

- Annual Meeting, Boston MA, (July, 2003)
- Sipe, C.W.\*, Gruber, E.J., **Saha, M.S.** Functional characterization of the *Xenopus* HIF1 $\alpha$  promoter, Morphogenesis and Regenerative Medicine, Charlottesville VA (May, 2003).
- Gleason, K.K.\*, Curtis, T., Lim, A., DeSimone, D., and **Saha, M.S.** Functional analysis of X-msr in the developing vascular and nervous system, Morphogenesis and Regenerative Medicine, Charlottesville VA (May, 2003).
- Dondeti, V.R., Wright, M., and **Saha, M.S.** "Design of an 8K *Xenopus* Microarray for investigating neural development," Morphogenesis and Regenerative Medicine, Charlottesville VA (May, 2003).
- Weisenberger, A.G., Majewski, Smith, M.F., Meikle, S.R., Bradley, E.L., Welsh, R.E., **Saha, M.S.**, Gleason, K.K.\*S.S., Paulus, M.J., Glover, D.K., Goode, A.R., Williams, M.B. (2002). High resolution detector modules based on high granularity NaI(Tl) arrays utilizing optimized collimator designs customized for small animal single photon imaging. J. Nuclear Med. 43: 231P.
- Bradley, E.L., Gleason K.K.\*, Majewski, S., Ranck A.E., **Saha, M.S.**, Smith, M.F., Weisenberger, A.G., Welsh, R.E., and Wojcik, R. *In Vivo* Imaging of the Distribution and Pharmacodynamics of 125 Iodine-labeled Insulin During the Development of Streptozotocin-Induced Hyperglycemia in the C57BL/6J Mouse with a Dedicated Gamma Imager. High Resolution Imaging in Small Animals. 9-11 September 2001, Rockville MD.
- Weisenberger, A.G., Bradley, E.L., Majewski, S., **Saha, M.S.**, Smith, M.F., Welsh, R.E., and Wojcik, R. Development of a Miniature SPECT-CT System for Small Animal Imaging. High Resolution Imaging in Small Animals. 9-11 September 2001, Rockville MD.
- Sipe, C.\*, Gruber, E., and **Saha, M.S.** , Comparative study of HIF1 $\alpha$  regulatory regions. Society for Developmental Biology Southeast Regional Meeting, Asheville NC (May, 2001).
- Curtis, T.M., DeSimone, D.W., Kuppusami, B., and **Saha, M.S.** Endothelial cell determination requires stage-specific tissue interactions. Society for Developmental Biology Southeast Regional Meeting, Asheville NC (May, 2001).
- Ng, L., Ranck, A., Feldmann, J., Welsh, R. E., Bradley, E.L., **Saha, M.S.**, Smith, M., Kross, B., Popov, V., Weisenberger, A. and Wojcik, R. Experimental Results and Predictive Calculations for Pinhole Collimators Used in Small Animal Nuclear Imaging. American Physical Society, Annual Meeting, April 2001, Wash. DC
- Ranck, A., Feldmann, J., Welsh, R.E., Bradley, E.L. **Saha, M.S.**, Kross, B., Popov, V., Weisenberger, A. and Wojcik, R. A Novel Technique for Coregistration of Biological Images in a Multimodality Detector Array. American Physical Society, Southeastern Section, November 2000.
- Ranck, A., Feldmann, J., Saunders, R.S., Welsh, R.E., Bradley, E.L., **Saha, M.S.**, Kross, B., Majewski, S., Popov, V., Weisenberger, A. and Wojcik, R. Dual-Modality Small Animal Imaging System. American Physical Society, Division of Nuclear Physics, General Meeting, October, 2000.
- Feldmann, J., Ranck, A., Saunders, R.S., Welsh, R.E., Bradley, **Saha, M.S.**, Kross, B., Majewski, S., Popov, V., Weisenberger, A., and Wojcik, R. Single Photon Computed Tomography With Large Position-Sensitive Phototubes American Physical Society, Division of Nuclear Physics, General Meeting, October, 2000.
- August, L.L\*, Hoke, K., Solomon, D., Madden, N.\*, and **Saha, M.S.**, Cloning and Characterization of GABA Transporter Genes in *Xenopus*, Soc. for Developmental

- Biology Annual Meeting, Boulder CO (June, 2000).
- Gruber, E.J., Sadjadi, N., and **Saha, M.S.**, The Role of HIF Genes and Hypoxia in Early *Xenopus* Development, Soc. For Developmental Biology Annual Meeting, Boulder CO (June, 2000).
- Weisenberger, A.\*, Cross, B., Wojcik, R., Majewski, S., Bradley, E., **Saha, M.**, Stetka, B., and Saunders, R.S. Preliminary Results of the In Vivo Imaging of the [125]RTI-55 Uptake in the Mouse Using an optimized Small Animal Gamma Camera, High Resolution Imaging in Small Animals with PET, MR, and Other Modalities, Amsterdam, the Netherlands, (September, 1999).
- Hoke, K. (and **Saha, M.**), Characterization of the Gaba Transporter in *Xenopus laevis*, Talk presented by Kristina Hoke at the Beckman Foundation, Irvine CA (July, 1999)
- Vanderspurt, C., Purdy, A., Jackson, R., and **Saha, M.**, Determination and plasticity of the neural axes during early *Xenopus* embryogenesis, Society for Developmental Biology, Annual Meeting, Charlottesville VA (June, 1999).
- Hoke, K., and **Saha, M.**, Cloning and developmental characterization of a novel GABA transporter and other neurotransmitter receptors and transposrters in *Xenopus laevis*, Society for Developmental Biology, Annual Meeting, Charlottesville VA (June, 1999)
- Grattan, L. and **Saha, M.**, Analysis and characterization of a novel alpha-chemokine G-protein coupled receptor subfamily in *Xenopus laevis*: its role in development, the immune system and angiogenesis, Society for Developmental Biology, Annual Meeting, Charlottesville, VA (June, 1999) [Won Honorable Mention in Poster Competition which included graduate students and post-docs!]
- Sadjadi, N., Kuppusami, B., Park, L., Jenkins, A., Dryden, E., and **Saha M.S.**, Isolation and characterization of genes involved in vascular development in *Xenopus laevis*, Society of Developmental Biology, Annual Meeting, Charlottesville VA (June, 1999)
- Kuppusami, B. and **Saha, M.**, Analysis of the upstream region of Xangio, a vascular specific gene, Pfizer Corp. (September 1998)
- Mills, K., Stimson, K.\*, and **Saha, M.**, Elucidating the origins of the vascular system, National Symposium, Developmental Biology Society, Stanford, CA (June, 1998)
- Ribeiro, W., Kraemer, A., Kuppusami, B., Park, L., and **Saha, M.**, Molecular dissection of vascular development in *Xenopus laevis*, National Symposium, Developmental Biology Society, Stanford, CA (June, 1998)
- Weisenberger, A.G.\*, Bradley, E., Majewski, S., and **Saha, M.** A CsI(Na) array based gamma camera for iodine-125 imaging in small animal gene research, (invited talk for A. Weisenberger), at High Resolution PET and Single Photon Imaging in Small Animals: A Symposium on Recent Advances, Albuquerque, NM, (November 1997),
- Weisenberger, A.\*, Kross, B., Majewski, S., Wojcik, R., Bradley, E., and **Saha, M.**, Design features and performance of a CsI(Na) array based gamma camera for small animal gene research, IEEE Nuclear Science/Medical Imaging Conference, Albuquerque NM (November 1997)
- Stimson, K. and **Saha, M.** Cell-cell interactions in vascular development in *Xenopus*, October, 1997, Mid-Atlantic Regional Developmental Biology Symposium, Stratford, NJ
- Brown, C. And **Saha, M.**, Isolation and characterization of neural G-protein receptors in *Xenopus laevis*, @ September, 1997, Pfizer Corporation, Groton CN
- Saha, M.**, Krupp, D., Mills, K., Stimson, K.\*, Angioblasts as a mesodermal default state, International Developmental Biology Conference, Snowbird, UT, July 1997.
- Saha, M.** Miles, R., Oakes, J., Determination of the vascular system in *Xenopus laevis*, International *Xenopus* Conference, Estes Park CO, August, 1996.
- Whitford, K., J. Scholnick, and **M. Saha**. Characterization of a differentially expressed

- repetitive DNA element in *Xenopus*, Society for Developmental Biology Symposium, Nashville, (June, 1996).
- Andrews, G.\* and **Saha, M.S.**, Dorsal-ventral patterning in the forebrain of *Xenopus laevis*, Annual Symposium, Society for Developmental Biology, Nashville TN (June, 1996).
- Buss, T.G., C. Brown, and **M.S. Saha**. Cloning and developmental characterization of neural G protein coupled receptors in *Xenopus laevis*, Society for Developmental Biology Mid-Atlantic Conference, Washington, October, 1996.
- Daigle, J. P. Saladino, and **M.S. Saha**. Analysis of the early molecular mechanisms regulating angiogenesis in *Xenopus*, Society for Developmental Biology Mid-Atlantic Regional Conference, Washington DC, October, 1996.
- Green, L. and **M. Saha**. Endogenous retroviruses in *Xenopus*, Society for Developmental Biology Mid-Atlantic Regional Conference, Washington DC, October, 1996.
- Jackson, R.W.\* and **Saha, M.S.** The Investigation of neural axis determination in *Xenopus* by tissue rotations and transpositions, Society for Developmental Biology Mid-Atlantic Regional Conference, Washington DC, October, 1996.
- \*\*This poster won first prize for the graduate student category.
- Perazich, H.\* and **Saha, M.** Mid-Atlantic Regional Developmental Biology Meeting, Cloning and characterization of odorant receptors in *Xenopus* and *Peromyscus*, Washington DC, October, 1995.
- Weisenberger, A.\*, S. Majewski, and **M. Saha**. A radiation imaging detector appropriate for *In Vivo* molecular biology assays, Mid-Atlantic Regional Developmental Biology Meeting, Washington DC, October, 1995.
- Andrews, G.\* and **Saha, M.** Dorsal-ventral patterning in the nervous system of *Xenopus laevis*, Mid-Atlantic Regional Developmental Biology Meeting. Washington DC, October, 1995. This poster won first prize for the graduate student category.
- Andrews, G.\*, Perazich, H\* Rochmis, L.\* and **Saha, M.** Dorsal-ventral patterning in the nervous and vascular systems of *Xenopus laevis*. Southeast Regional Developmental Biology Meeting (College of William and Mary, Williamsburg, Va, May, 1995).
- Saha, M.**, Miles, R.\*, Sinor, C\*. And Joubin, K. Determination of the dorsal-ventral neural axis, International *Xenopus* Conference, Doorwerth, The Netherlands, June 1994.
- Kittredge, K., **Saha, M.**, Grainger, R., and Gonzalez-Fernandez, F.. Isolation and characterization of *Xenopus* IRBP cDNA. *Investigative Ophthalmology and Visual Science*. 33, 1007.
- Saha, M.**, Henry, J. and Grainger, R. (1989). UCLA Symposia Abstract, Gene expression during eye and lens formation, J. of Cell. Biochem. Suppl. 13C, 295.
- Saha, M.** (1985). Abstracts from the International Congress of History of Science, University of California, Berkeley: The Wissenschaft Ideal as a research tradition in early 20<sup>th</sup>-century genetics, Vol. I Bf4; Erwin Baur and the struggle to promote plant breeding research in Germany, Vol. 2, 3.6.

#### **Presentations (by mentored students) at William and Mary Undergraduate Symposium:**

- 2006:** Talk: Matt Wester  
Posters: Kristen Malkus, Brittany Johnson, Natasha Golub, Stephanie Byers, Negin Daneshpayeh
- 2004:** Talk: Ryann Fame  
Poster: Katherine Fisher
- 2003:** Talk: Vijay Dondeti  
Posters: Beth Cox, Kristin Malkus, Jason Molitoris

- 2002:** Talk: Melissa Wright  
Posters: John Hsia, Alessandra Davidson
- 2001:** Talks: Kim Briggs, Dave Solomon  
Posters: Melissa Wright, Elizabeth Ewart
- 2000:** Talks: Erika Gruber  
Posters: Kim Briggs, Melissa Mefford, Sarah Kandrach, Melissa Wright
- 1999:** Talks: Kristina Hoke and Cecily Vanderspurt  
Posters: Emily Dryden, Laura Grattan, Norie Sadjadi
- 1998:** Talks: Banu Kuppusami  
Posters: Laura Grattan, Kristina Hoke, Norie Sadjadi, Cecily Vanderspurt,
- 1997:** Talks: Candice Brown, Kenna Mills  
Posters: Robert DeWitt, Alice Kraemer, Banu Kuppusami, Laura Park, Ben Schwarz, Greg Politzer
- 1996:** Talks: Thomas Buss  
Posters: Candice Brown, Laura Green, Greg Politzer, Paul Saladino,
- 1995:** Talks: Amy Gooch, Kristin Whitford  
Posters: Laura Buchanan, Thomas Buss, Kenna Mills
- 1994:** Talks: Wayne Outten, Kristin Whitford, Carolyn Feltes  
Posters: Daniel Greenwald

## **PROFESSIONAL SERVICE**

### **9a. Departmental Committees**

- Graduate Committee, (2000-2006)
- Developmental Biology Search Committee, Chair (2004-2005)
- Radiation Safety Committee and Alternative Radiation Safety Officer (1993-present)
- Ad hoc Committee for Biology 200 (Freshmen Biology Laboratory) reform, Chair (2003-2006)
- Search Committee, Animal Care Research Aide (2005)
- Search Committee, Fiscal Technician (2005)
- M(olecular) C(ellular) D(evelopmental) Biology departmental journal clubs organizer (1994-2004)
- Search Committee, Plant Physiologist (2001-2002, search aborted)
- Search Committee, Plant Physiologist (2000-2001)
- Search Committee, Neurophysiology Position (1998-1999)
- Budget Committee (1997-1998)
- Search Committee, Chair, Molecular Cell Biologist and Molecular Geneticist, (1996-1997)
- Graduate Committee, Chair (1994-1996)
- Ad hoc Committee for curriculum review: Molecular and Cell Biology (1995-96)
- Ad hoc Committee for curriculum review: Freshman Seminar (1995-96)
- Cell Biology Search Committee, Chair (1994-95)
- Ad hoc "Response to Provost@ (with respect to the Strategic Plan) Committee (1994)
- Vertebrate Physiology Search Committee (1993-4)
- Animal Welfare (1993-4)
- Seminar Committee (1993-4)

## 9b. University Committees/Service

Institutional Biosafety Committee, Chair (1995 - 2006)  
*(organized committee; wrote handbook and forms; updated handbook and forms; obtained NIH certification; organizes meetings)*

Institutional Biosafety Committee, Ex officio member (2006 – present)

Campus Isotopes Committee (1993-present): participates as RSO Alternate for Biology; teaches course for faculty and students on use of radioactive materials once per year

W&M HHMI Executive Committee (1998-present): *responsible for HHMI grant administration, compiling annual (~100 page) reports; publicizing programs; maintaining Web site; reporting to administration and to the HHMI*

W&M HHMI Undergraduate Committee (Chair, 1998-present)

Research Committee (2002-2005)

College Scholars Advisory Board (2003-2005)

Term Distinguished Professorship Committee (2005)

Ad hoc Committee on Interdisciplinary Science Concentrations, Chair (2002-2003)

Faculty Assembly (1998 - 2003)

Faculty Assembly, Secretary and member of Executive Committee, (2000-2001)

Committee on Honors and Interdisciplinary Studies (1998-1999, 2000-2001)

Faculty Assembly Subcommittee: Model Faculty Program (1999-2000)

Biological Psychology Interest Group Committee (ad hoc committee to evaluate BioPsych program) (1998)

Ad hoc subcommittee for Dean's Search (1997)

Research Committee (1994-1997)

Council on Graduate Studies (1994-1996)

Natural Science and Technology Cluster Committee (to design clusters as specified in strategic plan), (1995)

Convener of Biotechnology and Biochemistry and Molecular Biology Subclusters (subcommittees to identify potential subclusters within the sciences (1995)

Provost's Task Force Allocation of Overhead Funds Committee (1995-1996)

### Additional Service to University:

Ad hoc group: School of Education Brainstorming Session (July, 2006)

Monroe Lunch speaker (March, 2005)

Panelist at Venture Program (October, 2004)

Presented "Testimonial" at the "Launch of the Campaign for William and Mary," (Feb. 8<sup>th</sup> 2003)

Host for laboratory tour to Williamsburg Quest Group (November, 2002)

Moderator of session at Charles Center Honors Colloquium (February, 2003, 2000)

Assistance (editing, some writing) to Development Office with proposals to Keck Foundation and Beckman Foundation (Fall, 2002; Fall, 2005)

Speaker at Virginia State Legislative Breakfast In Richmond on behalf of Millington Hall renovations (January, 1999)

Presentation to Virginia House Appropriations Committee, Botetourt Gallery, (December, 2001)

Presentation to College of William and Mary Board of Visitors (December, 2000)

Virginia Biotechnology Research Park Meeting (April, 1998)  
 Senate Finance Committee, Education Subcommittee (July, 1998)  
 Secretary of Education, Wilbert Bryant, Tour of Millington (September, 1998)  
 Presentation to Virginia House of Delegates Higher Education Subcommittee (12/98)  
 Assistance with fellowship proposal to the Luce Foundation (1997)  
 Presentation to New Endowment Association Members (March, 1997)  
 Participation in Faculty-Student GTE Roundtable Discussion (June, 1997)  
 Presentation to Monroe Scholars (September, 1997)  
 William and Mary Spring Open House, "Sample Lecture" (1997)  
 Johnson & Johnson Presentation at Virginia Biotechnology Research Park (Sept., 1997)  
 Speaker at Barrett Dormitory Forum (March, 1996)  
 Presentation to College of William and Mary Board of Visitors (Nov., 1996)  
 Presentation to State Council on Higher Education (December, 1996)  
 Panelist on "Grants Office" Seminar (November, 1996)

## COMMUNITY OUTREACH ACTIVITIES

Work with local teachers in setting up molecular biology experiments in their classrooms as part of the initiative sponsored by the HHMI Biological Education Program Grant to the College of William and Mary (1999-present).

*This has entailed providing the reagents, equipment, and necessary guidance for numerous teachers since 1999 so that they may perform molecular biology and biotechnology experiments in their classrooms.*

Routinely present science talks in local public schools (1993-present)

Judge local science fairs at Queen's Lake School (1996-present)

Judge York County Science Fair

Mentor local high school students for internships and/or science fairs (2000-present)

Present talk and/or moderated panel discussion for Johns Hopkins "Center for Talented Youth" Academic, College and Career Symposia hosted by the College (one to two each year, 1997 - 2002)

Mentor STAR students during summer in lab projects (1999 – present)

Presented career talk to STAR program participants (July, 2004, 2005)

Presented talk to teachers in Biology Advanced Placement workshop (July, 2003)

Provided an "afternoon" DNA Sequencing Activity for Chancellor Academy students (July, 2003); presented embryology unit (July, 2005)

Presented "Biotechnology Research and its Implications" talk to local Kiwanis Club (May, 2002)

Served as mentor for UVA Spring Break Internship Program (March, 2002)

Presented talk to Gifted Students (Center for Gifted Education Focusing on the Future colloquium (Jan. '99)

Presented Keynote speech for regional Governor's School for Science and Technology Final Awards Ceremony (May, 1996)

Introduced speaker on human genome project for "Air and Space Museum" science series talks (October, 1995)

Taught two weeks of the Biology Governor's School and organized three lab sessions (1994); gave Career talk (1995)

Served as a mentor for a high school teacher as part of the Howard Hughes summer internship program (Summer, 1994)



Assisted with setting up a science center at campus daycare (1994)

Membership in Professional Organizations

American Association for the Advancement of Science

Society for Developmental Biology

Society for Neuroscience

IEEE: Institute for Electrical and Electronics Engineers