CURRICULUM VITAE

JILL C. SIBLE
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Virginia Polytechnic Institute and State University
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EDUCATION

1995 Ph.D. Cell, Molecular and Developmental Biology
Tufts University School of Medicine
Advisor: Dr. Noelynn Oliver
Dissertation: "Fibronectin gene expression during normal and abnormal wound healing."

1990 B.S. Biochemistry, Summa Cum Laude, Honors Program
University of New Hampshire
Advisor: Dr. Charles Walker
Research: "Regulation of ornithine decarboxylase during sea star spermatogenesis."

PROFESSIONAL HISTORY

2008-present Associate Dean for Curriculum, Instruction and Advising, College of Science, Virginia Polytechnic Institute and State University, Blacksburg, VA

2004-present Associate Professor, Department of Biology, Virginia Polytechnic Institute and State University, Blacksburg, VA

1998-2004 Assistant Professor, Department of Biology, Virginia Polytechnic Institute and State University, Blacksburg, VA

1995-1998 Postdoctoral Fellow, Howard Hughes Medical Institute, University of Colorado Health Sciences Center, Denver, CO
Advisor: Dr. James Maller

GRANT FUNDING

Extramural:

NIH PREP 12/1/08-11/30/12 $1,277,607
Virginia Tech Post-baccalaureate Research and Education Program (VT-PREP)
Competitive renewal is currently under review
PI: Smith; Co-PIs: Wong and Sible

NSF S-STEM 8/1/08-7/31/13 $481,564
Training economically challenged students for careers in biotechnology
PI: Sible; Co-PIs: Walker and Rainey

NIH R01 GM 076112 2/1/06 – 1/31/10 $905,010
Building a systems level view of cell cycle checkpoints
PI: Sible; Co-PI: Tyson

NSF 9/1/03-8/31/05 $152,426 (approximately $50,000 to Sible)
PI: Lederman, Co-PIs: Scheckler and Sible; Gender Diversity in STEM Education

NIH 4/25/02 $407,209 (equipment funds)
PI: Etzkorn, Co-PIs – Sible and many others; Liquid Chromatograph-Tandem Mass Spectrometer

DARPA/BIOSPICE 9/1/01-9/30/06 $1,650,000; (~$150,000 to Sible)
PI: Tyson, Co-PIs – Sible and 7 others; Modeling a Collaborative Problem-Solving Environment

NIH RO1 GM59688, 5/1/00-4/30/04 $555,922
PI: Sible; Cell cycle checkpoints in the *Xenopus* embryo

NIH 5/1/02-4/30/04 $211,140 (approximately $123,000 to Sible)
PI: Sible, Co-PI: Tyson; Supplements for the Study of Complex Biological Systems

NIH 6/1/02-4/30/04 $75,915
PI: Sible, Graduate Student: Carter; Research Supplements for Underrepresented Minorities

Other extramural awards to Sible totaling $72,600

Intramural:
3 ASPIRES grants (2 as PI; 1 as Co-PI); 1 BSI grant; 2 CEUT grants;
total awards: ~$128,000

HONORS AND AWARDS

2008	National Academies Education Fellow in the Life Sciences
2008	Alumni Teaching Award; induction into Academy of Teaching Excellence
2007	College of Science Diversity Award
2006	Department of Biological Sciences Most Influential Professor Award
2006	Edward R. Diggs Teaching Scholar Award
2006	College of Science Certificate of Teaching Excellence
2005	Department of Biological Science Outstanding Teacher Award
2005	Recognized for teaching by VT Panhellenic Council and as Favorite Professor by ΑΦ Sorority
2003	Virginia Tech Researcher of the Week (November 1 – 8)
2003	Biology Department Most Effective Teacher Award
2002	Biology Department Most Effective Teacher Award
2001	Biology Department Outstanding Teacher Award
1999	Ralph E. Powe Junior Faculty Enhancement Award
1995-1998	Howard Hughes Postdoctoral Fellow
1994	Keynote Speaker, Third Annual College of Life Science and Agriculture Undergraduate Research Conference, University of New Hampshire
1991-1995	Howard Hughes Predoctoral Fellow
1989-1990	Undergraduate Research Opportunities Program (UROP) Fellowship Summer Undergraduate Research Fellowship (SURF)

TEACHING EXPERIENCE

BIOL 1105 Principles of Biology (Fall 2008)
BIOL 2104 Cell and Molecular Biology (9 semesters)
BIOL 4104 Developmental Biology (3 semesters)
BIOL 5174 Cell and Developmental Biology Seminar (Spring 2008)
BIOL 5984 Graduate Developmental Biology (2 semesters) (Sible developed this course.)
BIOL 6024 Molecular Biology of the Cell Cycle (and Cancer) (3 semesters)
BIOL 6024 Current Issues in Cell Biology (2 semesters) (Sible co-developed this course.)
BIOL 6024 Topics in Cell and Developmental Biology – Cell Signaling (Fall 2006; Sible developed this course.)
UH 3004 Honors Colloquium: Exploring Career Paths through The Artist's Way (Spring 2009)

PROFESSIONAL SERVICE AND ACTIVITIES

ad hoc manuscript reviewer: Nature, Current Biology, The Journal of Cell Biology, Experimental Cell Biology, Cell Biology Education, BMC Developmental Biology, Gene, Apoptosis, Chemical Research in Toxicology, PLOS Biology, PLOS Genetics, Molecular and Cell Biology and others
grant reviewer: NIH, NSF, The Wellcome Trust (UK), American Cancer Society, Cancer Research UK, The Jeffress Trust
NIH panels: October 2005, November 2006, June 2007; Member, NIH, NIEHS P01 program project study section

2008- College of Science Curriculum Committee
2008- Academic Deans' Roundtable
2008- Committee on Undergraduate Student Policies
2008- Human Diversity and Community Implementation Committee
2008 Advisor for the Biological and Life Sciences Learning Community (undergraduate themed housing)
2008 Fralin Institute for Biomedical and Life Sciences Coordinator for Undergraduate Research
2007 Revised all student materials and prepared clicker questions for all chapters of the 6th edition of Lodish et al. *Molecular Cell Biology*
2007-present Fralin Institute for Biomedical and Life Sciences Faculty Advisory Group
2006-2007 Department of Biological Sciences Internal Departmental Review Committee
2005 - present Ad Hoc Member, NIH NRSA Cell Biology study section
2005 – 2006 Cell Biologist Search Committee
2006 Co-Chair, Ad Hoc Search Committee
2004-present Graduate Evaluation Committee
2004-2005 Chair, Cell Biologist Search Committee
2004-present Faculty Scientific Council, Institute for Biomedical and Public Health Sciences
2004-2006 Computational Biologist Search Committee
2003-2005 Scientific Advisory Council for the Institute for Biomedical and Public Health Sciences
2002-2004 Department Diversity Committee
2002-present University Coordinating Council for the Mid Eastern Alliance for Minority Participation

2002-2003 University Biomedical and Public Health Implementation Committee
2001-2002 University Biomedical Committee, Chair Cell Cycle Subcommittee
2001-2002,
2005-2006 Department Executive Committee
2001-2002 Computer Science, Bioinformatics Search Committee
2000-2004 Department Alumni Advisory Committee
2000-2001 University Animal Care Committee
1999-present Department Animal Care Committee
1999-2001 Graduate Selection Committee
1998-2000 Department Seminar Committee

GRADUATE STUDENTS ADVISED
Wei Sha (2002) MS
Matthew Petrus (2002) MS
Ayesha Carter (2005) PhD
Brian Wroble (2005) PhD
Ian Auckland (2005) MS
Nassiba Adjerid (2008) PhD
Yu Chen (2008) PhD (co-advised with Dr. Anne McNabb)
Dr. Sible has served as a member of 30 additional graduate thesis and dissertation committees.

MEMBERSHIP IN PROFESSIONAL SOCIETIES
American Association for the Advancement of Science
American Society for Cell Biology
Society for Developmental Biology
Sigma Xi

PUBLICATIONS (*****indicates I am the senior, corresponding author, †indicates author as my student, undergraduate students are underlined)

Peer Reviewed

JC Sible and RM Holmes (2009) Teaching at the interface: does computational cell biology fit in the undergraduate curriculum? *CBE: Journal of Life Sciences Education,* in revision.

J Zwolak, N Adjerid†, EZ. Bagci, JJ. Tyson, and **JC. Sible*** (2009) A quantitative model of the effect of unreplicated DNA on cell cycle progression in frog egg extracts, *Journal of Theoretical Biology*, in press.

JC Sible* and BN Wroble† (2009) Chapter 1: Expression of exogenous mRNA in *Xenopus laevis* embryos for the study of cell cycle regulation. *Methods in Molecular Biology: Microinjection Techniques*, Vol. 518; 1 – 15. Humana Press: Totowa, NJ.

Chen Y†, FM McNabb, and **JC Sible** (2009) Percholorate exposure induces hypothyroidism and affects thyroid-responsive genes in liver but not brain of quail chicks.

Archives of Environmental Contamination and Toxicology, DOI: 10.1007/s00244-009-9304-0, epub ahead of print.

Chen Y†, **JC Sible**, and FM McNabb (2008) Effects of maternal exposure to ammonium perchlorate on thyroid function and the expression of thyroid-responsive genes in Japanese quail embryos. *General and Comparative Endocrinology*, 159:196-207.

Tyson, JJ, R Albert, A Goldbeter, P Ruoff, and **J Sible** (2008) Biological switches and clocks: preface to the special issue. *Interface: Journal of the Royal Society*, 5 Suppl 1: S1 – S8.

Adjerid N†, BN Wroble†, and **JC Sible*** (2008) Chk1 is activated at the midblastula transition in *Xenopus laevis* embryos independent of DNA content and the cyclin E developmental timer. *Cell Cycle*, 7: 1112-1116.

Wroble BN†, CV Finkielstein and **JC Sible*** (2007) Wee1 kinase alters cyclin E/Cdk2 and promotes apoptosis during the early embryonic development of *Xenopus laevis*. *BMC Developmental Biology* 7:119, doi:10.1186/1471-213X-7-119

Sible JC* and JJ Tyson (2007) Mathematical modeling as a tool for investigating cell cycle control networks. *Methods* 41:238-247.

Lederman M, **JC Sible**, DE Wilhelm† and L Spotswood (2007) Biological diversity in Brunson, D., L.L. Lampl, and B. Jarmon eds. Letters from the Future: Linking Students and Teaching with the Diversity of Everyday Life. Stylus: Sterling VA, pp. 45-70.

Carter, AD†, BN Wroble†, and **JC Sible*** (2006) Cyclin A1/Cdk2 is sufficient but not required to induce apoptosis in *Xenopus laevis* embryos, *Cell Cycle*, 5:2230-2236 .

Sible JC*, DE Wilhelm†, and M Lederman (2006) Teaching cell and molecular biology for gender equity. *Cell Biology Education* 5:227-238.

Wroble BN and **JC Sible*** (2005) Chk2/Cds1 protein kinase blocks apoptosis during early development of *Xenopus laevis*, *Developmental Dynamics* 233:1359-1365.

Petrus† MA, DE Wilhelm†, M Murakami, NC Kappas†, AD Carter†, BN Wroble†, and **JC Sible*** (2004) Altered expression of Chk1 disrupts cell cycle remodeling at the midblastula transition in *Xenopus laevis* embryos. *Cell Cycle* 3: 212-217.

Sha† W, J Moore, K Chen, AD Lassaletta†, C-S Yi, JJ Tyson, and **JC Sible*** (2003) Hysteresis drives cell-cycle transitions in *Xenopus laevis* egg extracts. *Proceedings of the National Academy of Science* 100: 975-980.

Carter† AD and **JC Sible*** (2003) Loss of XChk1 function leads to apoptosis after the midblastula transition in *Xenopus* embryos. *Mechanisms of Development* 120: 315-323.

Ciliberto A, MA Petrus†, JJ Tyson and **JC Sible*** (2003) A kinetic model of the cyclin E/Cdk2 developmental timer in *Xenopus laevis* embryos. *Biophysical Chemistry* 104: 573-589.

Allen N, L Calzone, KC Chen, A Ciliberto, N Ramakrishnan, CA Shaffer, **JC Sible**, JJ Tyson, M Vass, LT Watson, and J Zwolak (2003) Modeling regulatory networks at Virginia Tech. *OMICS: A Journal of Integrative Biology* 7: 285-299.

Novák B, **JC Sible**, and JJ Tyson (2002) Checkpoints in the Cell Cycle. In: *Encyclopedia of Life Sciences*. London: Nature Publishing Group. http://www.els.net/

Kappas† N, P Savage†, KC Chen, AT Walls†, and **JC Sible*** (2000) Dissection of the XChk1 signaling pathway in *Xenopus laevis* embryos. *Molecular Biology of the Cell* 11: 3101-3108.

Sible JC, E Erikson, M Hendrickson, JL Maller, and J Gautier (1998) Developmental regulation of MCM replication factors in *Xenopus laevis*. *Current Biology* 8:347-350.

Sible JC, JA Anderson, AL Lewellyn, and JL Maller (1997) Zygotic transcription is required to block a maternal program of apoptosis in *Xenopus* embryos. *Developmental Biology* 189: 335-346.

Hartley RS, **JC Sible**, AL Lewellyn, and JL Maller (1997) A role for cyclin E/Cdk2 as a developmental timer in *Xenopus* embryos. *Developmental Biology* 188: 312-321.

Sible JC, E Eriksson, and N Oliver (1996) DNA-binding proteins from keloid fibroblasts form unique complexes with the human fibronectin promoter. *Gene Expression* 5: 269-283.

Sible JC, WJ Rettig, E Eriksson, SP Smith, and N Oliver (1995) Gene expression of tenascin is altered in normal scars and keloids. *Wound Repair and Regeneration* 3: 37-48.

Sible JC, E Eriksson, SP Smith, and N Oliver (1994) Fibronectin gene expression differs in normal and abnormal wound healing. *Wound Repair and Regeneration* 2: 3-19.

Sible JC, AG Marsh, and CW Walker (1991) Effect of extrinsic polyamines on post-spawning testes of the sea star, *Asterias vulgaris* (Echinodermata): implications for the seasonal regulation of spermatogenesis. *Invertebrate Reproduction and Development* 19: 257-264.

Invited Commentary

Sible, JC* (2003) News and Views: Thanks for the memory. *Nature*, 426:392-393.

Teaching Materials

Storrie B, E Wong, RA Walker, G Gillaspy, **JC Sible**, and M Lederman (2003) *Working with Molecular Cell Biology: A Student Companion and Solutions Manual*. New York: W.H. Freeman. (I authored 5 out of 23 chapters.)

Storrie B, E Wong, RA Walker, G Gillaspy, **JC Sible**, and M Lederman (2003) *Testing on Molecular Cell Biology*. New York: W.H. Freeman. (I authored 5 out of 23 chapters).

Authored End-of-Chapter Questions for 5 out of 23 chapters of H. Lodish et al. (2003) *Molecular Cell Biology*. 5th ed. New York: W.H. Freeman.

INVITED SEMINARS (since 2000)

10/08 National Science Teachers Association Meeting, Charlotte, NC
07/08 Cold Spring Harbor Course on Computational Cell Biology
09/07 Department of Biology, James Madison University
08/07 Workshop on Biological Clocks and Switches, Workshop Co-organizer and Speaker, Kavli Institute for Theoretical Physics, University of California at Santa Barbara
07/07 Summit for Systems Biology, Invited Workshop Leader, Virginia Commonwealth University
04/07 Center for Excellence in Undergraduate Education, Virginia Tech, Workshop on Teaching and Diversity
02/07 Virginia Bioinformatics Institute, GBCB Seminar Series
08/05 Howard University, Invited Instructor, Workshop on Computational Biology
04/05 Department of Biology, College of William and Mary
10/04 Department of Biochemistry and Molecular Genetics, University of Virginia, Charlottesville, VA
10/03 Department of Biology, New Mexico State University, Las Cruces, NM
09/03 Mathematical Biosciences Institute, Ohio State University, Columbus, OH
01/03 MCBB Seminar Series, Virginia Tech, Blacksburg, VA
10/02 Department of Pharmacology, University of Colorado Health Sciences Center, Denver, CO
09/02 Virginia-Maryland Regional College of Veterinary Medicine, Blacksburg, VA
09/02 Department of Biochemistry and Molecular Genetics, University of Virginia, Charlottesville, VA
01/00 Department of Anatomy and Cell Biology, University of Iowa School of Medicine, Iowa City, IA

SELECT PRESENTATIONS AT MEETINGS

T. Gotoh and **J.C. Sible**. Role of Claspin in cell cycle remodeling in Xenopus laevis. American Society of Cell Biology Annual Meeting, San Francisco, CA, December 2008 (poster)

Member organized symposium co-organizer and speaker, Developmental Activation of Cell Cycle Checkpoints: Role of Chromatin Modifiers American Society of Cell Biology Annual Meeting, San Francisco, CA, December 10 – 14, 2005

Auckland, A. Dravid, J. J. Tyson, **J. C. Sible**. Quantitative Analysis of a Cell Cycle Checkpoint Response in *Xenopus laevis* Cell-Free Egg Extracts. American Society of Cell Biology Annual Meeting, San Francisco, CA, December 10 – 14, 2005 (poster)

B. N. Wroble, **J. C. Sible**. Wee1 Promotes Apoptosis during the Early Embryonic Development of *Xenopus laevis.* American Society of Cell Biology Annual Meeting, San Francisco, CA, December 10 – 14, 2005 (poster)

N. Adjerid, B. N. Wroble, **J. C. Sible**. Transient Activation of Protein Kinase Chk1 at the MBT in Xenopus laevis is Independent of Nuclear Concentration. American Society of Cell Biology Annual Meeting, San Francisco, CA, December 10 – 14, 2005 (poster)

A. Grewal, **J. Sible** and L.K. Belden. Examining the developmental response to environmental insults in early stage amphibian embryos. Annual Meeting of the Society of Integrative and Comparative Biology. Orlando, FL, January 2006. (poster)

d Wilhelm, M. Lederman and **J.C. Sible**. Teaching cell biology for gender equity. NSF Division of Human Resource Development Joint Annual Meeting, Washington, D.C. April 24-26, 2005 (virtual poster)

A Dravid, I Auckland, JJ Tyson and **JC Sible**, Cell cycle checkpoints in *Xenopus* embryos: molecular mechanisms and mathematical models, Cold Spring Harbor Cell Cycle Meeting, May 9-23, 2004, Cold Spring Harbor, NY (talk)

W Sha, K Chen, C-S Yi, JJ Tyson and **JC Sible**, Experimental evidence for hysteresis in the cell cycles of *Xenopus laevis* egg extracts, Cold Spring Harbor Cell Cycle Meeting, May 15-19, 2002, Cold Spring Harbor, NY (talk)

A Ciliberto, MJ Petrus, JJ Tyson and **JC Sible**, A mathematical and experimental model of the cyclin E/Cdk2 developmental timer in *Xenopus laevis* embryos, Cold Spring Harbor Cell Cycle Meeting, May 15-19, 2002, Cold Spring Harbor, NY (poster)

JC Sible and JJ Tyson, Introduction to model organisms and mathematical modeling of the cell cycle, American Cancer Society Annual Meeting of Cancer Researchers in Virginia, April 13, 2002, Virginia Tech (talk; session co-chair)

AD Carter, CK Travers, and **JC Sible**, XChk1 as a molecular switch between cell cycle arrest and apoptosis in *Xenopus* embryos. Annual Meeting of the Society for Developmental Biology, July 18-22, 2001, Seattle WA; (poster)

JC Sible, NC Kappas, MA Petrus, and AD Carter, The role of XChk1 in cell cycle remodeling during the development of *Xenopus laevis.* MD Anderson Annual Meeting on Basic Cancer Research, November 14-16, 2000, Houston, TX (poster)

JC Sible, NC Kappas, AT Walls and P Savage, The role of XChk1 in cell cycle remodeling during the development of *Xenopus laevis*. Annual Meeting of the American Society for Cell Biology, December 11-15, 1999, Washington, DC (poster)

JC Sible, NC Kappas and AT Walls, The role of XChk1 in cell cycle remodeling during the development of *Xenopus laevis*. Annual Meeting of the Society for Developmental Biology, June 13-18, 1999, Charlottesville, VA (poster)

NC Kappas, AT Walls, and **JC Sible**, The role of XChk1 during cell cycle remodeling. 19th Annual Meeting of Cancer Researchers in Virginia, American Cancer Society, March 13, 1999, Charlottesville, VA (talk)