Erica D. Smith

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EDUCATION

1997-2002 *Ph.D.*, Biochemistry and Molecular Biology
University of Chicago Chicago, IL

1992-1996 *B.S.,* Biochemistry, *Cum Laude*
Denison University Granville, OH

CITIZENSHIP USA

RESEARCH EXPERIENCE

2003-present *Postdoctoral Fellow,* University of Washington Seattle, WA
Research Focus: The role of nuclear lamins in differentiation and disease
Advisor: Brian Kennedy, Ph.D.

1997-2002 *Graduate Student,* University of Chicago Chicago, IL
Dissertation Title: MTB: A novel regulator of stem cell growth
Advisor: John Crispino, Ph.D.

1996-1997 *Predoctoral Fellow,* National Institutes of Health Bethesda, MD
Research Focus: HIV-I entry into host cells: Interactions between HIV-I Env protein, cellular receptor CD4 and chemokine receptors
Advisor: Edward A. Berger, Ph.D.

1995 *Research Assistant,* Oak Ridge National Laboratories Oak Ridge, TN
Research Focus: Characterization of the intraembryonic freezing in *Anopheles gambiae* mosquito embryos
Advisor: Peter Mazur, Ph.D.

1995 *Anderson Summer Research Scholar,* Denison University Granville, OH
Research Focus: Cloning and expression of human acylpeptide hydrolase
Advisor: Charles W. Sokolik, Ph.D.

TEACHING EXPERIENCE

2005 *Teaching Apprentice and Course Coordinator*, University of Washington
- Designed and team-taught a new undergraduate non-majors seminar course, "Extreme Biology"

2004-present *Instuctor*, North Seattle Community College (part-time)
- Science, Mathematics, and Social Sciences Division: Biology 101

2003-2004 *Research Advisor*, University of Washington Undergraduate Research Program
- Currently training and advising an undergraduate for a two-year research project

2003-2004 *Research Advisor*, Temple Minority Access to Research Careers and Physician Scientist Training Program
- Directly mentored high school students during summer research programs

2001-2002 *Research Advisor*, Illinois Math and Science Academy Mentorship Program and University of Chicago Undergraduate Honors Program in the Biological Sciences
- Designed a research project for, trained, and advised a high school student and an undergraduate full-time in the summer and part-time during the school year

1998-2002 *Teaching Assistant*, University of Chicago
Graduate Course: Molecular Biology
Undergraduate Courses: Cell Biochemistry, The Biosphere, Life and Its Principles; and Developmental Biology, Guest Lecturer
- Teaching assistant responsibilities included leading discussion sections, directing laboratories, giving a lecture, writing and grading exam questions

1994-1996 *Laboratory Teaching Assistant*, Denison University
Undergraduate Courses: Zoology, General and Organic Chemistry

PROFESSIONAL DEVELOPMENT AND OUTREACH

2004-2005 *HHMI Future Faculty Fellows Project*, University of Washington
- Summer Teaching Workshop Participant
- Spring Teaching Apprenticeship Program Participant

2004 *Preparing Future Faculty Project*, University of Washington
- GRDSCH630 Participant: "Exploring Faculty Careers in Higher Education"

2003 *Laboratory Instructor,* "Explorations in Biotechnology and Bioengineering" workshop held at the University of Washington for junior high school students, sponsored by the Johns Hopkins University Center for Talented Youth 2003 Science and Technology Series

2002 *Laboratory Instructor*, Stem Cell Workshop for Journalists, sponsored by the Howard Hughes Medical Institute at the University of Chicago

AWARDS AND SOCIETIES

2004 American Society for Cell Biology Member

2003	NIH Genetic Approaches to Aging Training Grant Postdoctoral Awardee
1998	NIH Molecular and Cellular Biology Training Grant Predoctoral Awardee
1998	National Science Foundation Graduate Fellowship, Honorable Mention
1992-1996	Denison University Heritage Scholar
1994-1996	Denison University Chemistry and Biochemistry Departmental Fellow
1996	Sigma Xi, Undergraduate Science Honorary
1995	Omicron Delta Kappa, Undergraduate Leadership Honorary
1995	Mortar Board, Undergraduate Service Honor Society
1993	Phi Eta Sigma, Freshmen Scholarship Honorary

TECHNICAL EXPERIENCE

DNA	• Isolation and detection by Southern blotting, PCR, and sequencing
	• Subcloning with conventional plasmid and virus constucts
RNA	• Isolation and detection by Northern, RT-PCR, and *in situ* hybridization
Protein	• Isolation, purification, and detection by Western and ELISA
	• Cellular detection by flow cytometry, immunohistochemistry, and immunofluorescence
Interactions	• Yeast two-hybrid analysis, co-immunoprecipitations, and gel shifts
Cell culture	• Experience handling bacteria, yeast, insect and mammalian cell cultures, including embryonic stem cell lines and other primary mouse cell lines
	• Protein expression by transformation, transfection, and viral transduction methods
Biohazard	• Biosafety levels 2 and 3 (vaccinia virus and HIV)
Animal	• Mouse husbandry, breeding, embryo dissection, and tumor analysis

PUBLICATIONS

Smith, ED, Kudlow, BA, Frock, R. and Kennedy, BK. (2004) A-type Nuclear Lamins, Progeria and other Degenerative Disorders. *Mech. Ageing and Dev.* (in press)

Smith, ED, Xu, Y, Tomson, BN, Leung, C, Fujiwara, Y, Orkin, SH, and Crispino, JD. (2004) *More than blood (Mtb)*, a novel gene required for mammalian post-implantation development. *Mol. Cell. Bio.* **24**(3): 1168-1173.

Walsh, JC, DeKoter, RP, Lee, HJ, **Smith, ED**, Lancki, DW, Gurish, MF, Friend, DS, Stevens, RL, Anastasi, J, and Singh, H. (2002) Cooperative and antagonistic interplay between PU.1 and GATA-2 in the specification of myeloid cell fates. *Immunity* **17**: 665-676.

Rengarajan J, Mowen KA, McBride KD, **Smith ED**, Singh H, Glimcher LH. (2002) Interferon regulatory factor 4 (IRF4) interacts with NFATc2 to modulate interleukin 4 gene expression. *J. Exp. Med.* **195**(8): 1003-12.

McDermott DH, Colla JS, Kleeberger CA, Plankey M, Rosenberg PS, **Smith ED**, Zimmerman PA, Combadiere C, Leitman SF, Kaslow RA, Goedert JJ, Berger EA, O'Brien TR, Murphy PM. (2000). Genetic polymorphism in CX3CR1 and risk of HIV disease. *Science* **290**: 2031.

Smith, ED*, Salzwedel, K*, Dey, B, and Berger, EA. (2000) Sequential CD4-coreceptor interactions in human immunodeficiency virus type 1 Env function: Soluble CD4 activates Env for coreceptor-dependent fusion and reveals blocking activities of antibodies against cryptic conserved epitopes on gp120. *J. Virol.* **74**(1): 326-333.

Combadiere, C, Salzwedel, K, **Smith, ED**, Tiffany, HL, Berger, EA, and Murphy, PM. (1998). Identification of CX3CR1. A chemotactic receptor for the human CX3C chemokine fractalkine and a fusion coreceptor for HIV-1. *J. Biol. Chem.* **273**: 23799-804.

Schreuders, PD, **Smith, ED**, Cole, KW, Laughinghouse, A, Valencia, MP, and Mazur, P. (1996). Characterization of intraembryonic freezing in *Anopheles gambiae* mosquito embryos. *Cryobiology* **33**(5): 487-501.

CONFERENCES, POSTERS, AND PRESENTATIONS

2004	American Society for Cell Biology 44th Annual Meeting, Washington, D.C. Poster Title: Gene Regulation by A-type Lamins
2003-2004	University of Washington Department of Biochemistry Annual Retreat, Leavenworth, WA
2002	University of Chicago Oral Research Presentations, Chicago, IL: Genetics of Model Organisms Club, Graduate Student Seminar, and Mouse Development Group Meeting
2002	Keystone Symposium: Stem Cells: Origins, Fates and Functions, Keystone, CO Poster Title: A novel lineage-restricted transcription factor, MTB, is required for embryonic stem cell growth
2001	54th Annual Symposium on Fundamental Cancer Research: Mechanisms for Cell Growth and Differentiation, Houston, TX
1997-2001	University of Chicago Molecular Biosciences Retreat, Delevan, WI Presentation (2001): The role of a novel transcription factor, MTB, in blood cell development Poster (1999): Regulation of IFNγ expression by Pip/IRF4 and ICSBP
1997	Keystone Symposium: AIDS Pathogenesis, Keystone, CO Poster Title: Soluble CD4 activation of HIV-1 Env for fusion with cells expressing chemokine receptors