

Biographical Sketch

Sarah Marie Boomer

Education

Ph.D. Microbiology, 1996

University of Washington (UW), Seattle, WA

Advisor: Julie Overbaugh, Ph.D.

Dissertation: Evolution of host range and receptor-binding determinants of feline leukemia viruses

B.S. Biology (with Honors), 1989

University of Puget Sound, Tacoma, WA

Advisor: Beverly Pierson, Ph.D.

Honors Thesis: Characterization of Hot Spring Bacteria Resembling Heliothrix oregonensis

B.A. English (with Honors), 1989

University of Puget Sound, Tacoma, WA

Research

Independent Study Undergraduate Mentees: (career interests or position in parentheses)

Jeanine Earnest, fall/winter 1999-2000, molecular analysis, Yellowstone mats (grad. school)

James Erdman, winter 1999-2000, molecular analysis, Yellowstone mats (grad. school)

Sean Vigil, winter, 1999, DNA sequence analysis (pre-medicine)

Kody Phillis, spring/summer 1998, molecular analysis, Yellowstone mats (biotechnology)

Alex Dumanovsky, spring, 1998, molecular cloning from soil samples (medical school)

Robin Leitch, winter, 1998, basic molecular techniques (pre-elementary education)

Course Based:

Molecular Biology (Biology 475, spring 1998-9), four undergraduates each term; molecular analysis of hot spring mat communities

Field Research:

Yellowstone Field Research, Western Oregon University, four undergraduates, August 1999

Yellowstone Field Research, Western Oregon U., six undergraduates, June/August 1998

Yellowstone Field Research, Collaboration with BK Pierson/UPS, July 1997

Yellowstone Field Research, Undergraduate with BK Pierson/UPS, July 1988

Post-doctoral Training:

HIV Phylogenetics, 1997, J Overbaugh (UW)

Fine Mapping FeLV receptor domains, 1996-1997, J Overbaugh (UW), MV Eiden (NIH)

Grants and Funding

Western Foundation Grant: Submitted only, November 1999. \$1000

Western Faculty Development Grant: May 1999. \$1000

NSF-ILI Grant: June, 1998. DNA Sequencer. \$39,000

Western Faculty Development Grant: March, 1998. Electroporator. \$3,000.

Western Oregon University Start-Up Funds: January, 1998. \$6,000

Western Foundation Grant: December, 1997 and 1998. Yellowstone field research. \$2000

Molecular and Cellular Biology Training Grant, NIH: 1992-1996. Graduate Student Stipend.

Murdock Undergraduate Research Stipend: 1988. Undergraduate Research Stipend. \$2,000

Academic Teaching

Sept. 1997 - Present, Assistant Professor of Biology, Western Oregon University

Mar. 1997-June 1997, Teaching Associate, Biology, University of Washington

Sept. 1989-June 1990, Teaching Assistant, Microbiology, University of Washington

Courses

Principles of Genetics (Biology 341)

Microbiology for Majors (Biology 331) and Non-Majors (Biology 218)

Biology for Majors (Biology 211) and Non-Majors (Biology 101, 102)

Molecular Biology (Biology 475)

Emerging and Re-Emerging Infectious Diseases (Biology 440/540)

Molecular Virology (Biology 420)

Computational Biology (submitted 1999 as new course)

Abstracts

Research Publications:

Moser M, Burns CC, Boomer S, Overbaugh J (1998) The host range and interference properties of two closely related feline leukemia variants suggest that they use distinct receptors. *Virology* 242: 366-7.

Boomer S, Eiden MV, Burns CC, Overbaugh J (1997) Three distinct envelope domains, variably present in subgroup B feline leukemia virus recombinants, mediate Pit1 and Pit2 receptor recognition. *J. Virology* 71: 8116-23.

Boomer, S, Whalen LR, Gasper P, and Overbaugh J. (1994) Isolation of a novel subgroup-B feline leukemia virus from a cat infected with FeLV-A. *Virology*, 204: 805-810.

Boomer, S, Austinhirst RA, Castenholz RW, and Pierson BK. Filamentous bacteria containing bacteriochlorophyll *a* from deep layers in Yellowstone hot spring mats resemble *Heliothrix oregonensis*. Submitted.

Relevant Meetings Abstracts:

Boomer, S, Austinhirst RA, and Pierson BK. (1995) Filamentous phototrophic bacteria containing bacteriochlorophyll *a* from deep layers in hot spring microbial mats. Yellowstone Thermophile Conference. Yellowstone National Park, WY.

Boomer S., Austinhirst, RA and Pierson BK. (1989) A new bacteriochlorophyll-containing filamentous phototroph from hot spring microbial mats. American Society for Microbiology Annual Meeting. Anaheim, CA.

Yellowstone Permit/Reports:

Boomer S. (1998, 1999) Molecular ecology of photosynthetic hot spring bacteria that resemble *Heliothrix oregonensis*. Research Proposal and Permit (216OR), Yellowstone National Park/Resource Center, WY.