

Jonathan O. Benjamin

Current Address

1200-F University Terrace
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5000 Greenbrook Drive
Norfolk, VA 23703
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EDUCATION

Doctorate of Philosophy, Microbiology, Expected June 2000

Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg, VA

Dissertation: Regulation of aerobic gene expression in *Escherichia coli*

Advisor: Thomas W. Kingrea

Bachelor of Science, Biology; Minor: Chemistry, May 1995

Old Dominion University, Norfolk, VA

HONORS/AFFILIATIONS

Phi Beta Kappa

Cunningham Dissertation Fellowship (Virginia Tech research grant), 1999 - 2000

American Society for Microbiology, 1999 - present

Sigma Xi, The Scientific Research Society, 1998 - present

National Institutes of Health Pre-doctoral Fellowship, 1996 - 1997

RESEARCH INTERESTS

- Regulation of aerobic gene expression
- DNA sequencing and determination of DNA binding domains

TEACHING INTERESTS

- Undergraduate biology and microbiology courses including microbiology, genetics, and microbial genetics
- Graduate microbiology courses

RELATED EXPERIENCE

Research

Pre-Doctoral Fellow/Ph.D. Research, Department of Biology, Virginia Tech
Blacksburg, VA, August 1997 - present

- Design and conduct experiments for purification and characterization of the repressor for the sn-glycerol 3-phosphate regulon of *Escherichia coli* K-12
- Identified structure of the *glp* repressor and determined DNA binding domains

Research Fellow, National Institutes of Health, Poolesville, MD
May 1996 - August 1997

- Synthesized and purified hundreds of oligonucleotides
- Sequenced DNA
- Constructed a cosmid library from human blood DNA

Research Assistant, Department of Biology, Virginia Tech, Blacksburg, VA

August 1995 - May 1996

- Performed protein bioassays and prepared tissue cultures
- Assisted with DNA preparations for DNA fingerprinting including isolating DNA and gel electrophoresis
- Analyzed data

Biology Research Technician, Biotech Research Laboratories, Inc., Roanoke, VA

June 1994 - August 1995

- Participated in DNA fingerprinting project
- Digested genomic DNA with restriction enzymes
- Separated digested DNA fragments by electrophoresis through agarose gels and transferring by Southern blotting technique
- Prepared buffers, photographed gels, developed autoradiographs

Teaching

Laboratory Instructor, Department of Biology, Virginia Tech, Blacksburg, VA

August 1999 - present

- Taught two laboratory sections for undergraduate introductory Microbiology course

Teaching Assistant, Department of Biochemistry and Nutrition, Virginia Tech, Blacksburg, VA

August 1997 - May 1998; August 1998 - May 1999

- Advised undergraduate biochemistry students during office hours
- Graded quizzes and assignments

PUBLICATIONS

Doctor, J. B. and T. W. Advisor. Structure of the *glp* repressor and the determination of DNA binding domains. (in preparation)

Doctor, J. B. and T. W. Advisor. 1999. Structures of the promoter and operator of the *glpD* gene encoding aerobic *sn*-glycerol 3-phosphate dehydrogenase of *Escherichia coli* K-12. J. Bacteriol. xx: xxxx-xxxx.

Advisor, T. W., J. B. Doctor, A. Colleague, and S. Colleague. 1997. Purification and characterization of the repressor for the *sn*-glycerol 3-phosphate regulon of *Escherichia coli* K-12. J. Biol. Chem. xxx: xxxx-xxxx.

ABSTRACTS

Doctor, J. B. and T. W. Advisor. 1999. Nucleotide sequence of the *glpR* gene encoding the repressor of *Escherichia coli* K-12. Am. Society for Microbiol., Anaheim, CA.

Advisor, T. W., J. B. Doctor, A. Colleague, and S. Colleague, A. M. Graduate. 1998. Tandem operators control *sn*-glycerol 3-phosphate *glp* gene expression in *Escherichia coli* Gordon Res. Conf., Meriden, NH.

Doctor, J. B. and T. W. Advisor. 1997. Regulation of aerobic *sn*-glycerol 3-phosphate dehydrogenase *glpD* gene expression in *Escherichia coli* K-12. Am. Soc. for Microbiol., Miami Beach, FL.

