

SUBHASIS (SAM) B. BISWAS

Professor
Department of Medical Laboratory Sciences
University of Delaware
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EDUCATION:

University of Washington, Seattle, WA	Ph.D. (Biophysical Chemistry)
Stanford University School of Medicine Stanford, CA	American Cancer Society Postdoctoral Fellow, (Molecular Biology)

ACADEMIC APPOINTMENTS:

Professor, Department of Medical Laboratory Sciences, University of Delaware, Willard Hall,
Newark, DE 19761

Professor (Tenured), Department of Molecular Biology, Rowan University School of Osteopathic
Medicine (formerly University of Medicine and Dentistry of New Jersey), Stratford,
NJ 08084

Associate Professor (Tenured), Division of Endocrinology, University of Maryland School of
Medicine, Baltimore, MD 21201.

Assistant Professor (Tenure-track), Division of Endocrinology, University of Maryland School of
Medicine, Baltimore, MD 21201.

American Cancer Society Postdoctoral Fellow, Department of Biochemistry, Stanford University
School of Medicine, Stanford, CA

Teaching and Research Assistant, Department of Chemistry; University of Washington, Seattle, WA
98195.

OTHER PROFESSIONAL POSITIONS AND MAJOR VISITING APPOINTMENTS:

Worcester Foundation for Experimental Biology Visiting Scientist, Molecular Biology, Shrewsbury,
MA.

AWARDS AND HONORS:

Lindback Distinguished Teaching Award, UMDNJ/Rowan University (Spring 2010)
Frank G. Rizer Memorial Award for New Investigators, American Cancer Society, Maryland Division
American Cancer Society Postdoctoral Fellowship Award
National Merit Scholarship

PROGRAM DEVELOPMENT

Medical School Problem Based Learning (PBL) Program for Osteopathic Medical Students
Graduate School Masters of BioMedical Sciences Master of Biomedical Sciences (MBS) Program
Graduate School Masters of BioMedical Sciences Evening MBS Program
Graduate School Masters of BioMedical Sciences Thesis MBS Program

MAJOR TEACHING RESPONSIBILITIES:

- Fundamentals of Biochemistry & Molecular Biology, Rowan University Graduate School of Biomedical Sciences
- Medical Biochemistry, Rowan University School of Osteopathic Medicine
- Problem Based Learning Curriculum, Rowan University School of Osteopathic Medicine
- Physiological Chemistry, University of Maryland School of Medicine
- Inorganic and Organic Chemistry for Nursing Students, University of Washington, Department of Chemistry

MAJOR ADMINISTRATIVE RESPONSIBILITIES

Rowan/UMDNJ-GSBS MS & Ph.D. Admission Committees
Rowan/UMDNJ-GSBS MS Biomedical Science Curriculum Development
Rowan/UMDNJ-GSBS MS Biomedical Science Course Development
Rowan/UMDNJ-SOM Medical School Student Affairs Committee

SERVICE TO THE COMMUNITY:

- Mentor, Undergraduate Summer Pre-Medical Research and Education (PREP) Program for Under-Represented Students, 1996-present
- Mentor, Summer Undergraduate Research Experience (SURE), 1996-present
- Member, Thomas Jefferson University Biotechnology Board 2004-present
- Consultant, Microbiotix Inc., Worcester, MA. 2004-present

STUDENT MENTORING:

Masters' Students:

Maimouna Bah	2008	University of Toledo School of Medicine, MD program
Jirayu Kukaritirat	2009	UMDNJ School of Osteopathic Medicine
Nida Naqvi	2010	Ross University School of Medicine, MD program
Jessica Debski	2012	Creighton University School of Medicine, MD program
Tara Halpern	2012	Stony Brook University Physician Assistant Program
Khusbu Patel	2014	New York College of Podiatric Medicine
Tolulope Oyetunde	2014	New Jersey Medical School, MD program
Meera Patel	2015	University of Delaware PhD program
Lavesh Bhatia	2015	New Mexico State University PhD program

Graduate and Postdoctoral Fellows

Dr. Randall Hammond	Postdoctoral Fellow	Senior Scientist, Johnson & Johnson
Dr. Wesley Gray	Graduate Student	Professor, Southern Louisiana University
Dr. Fan Xiu Zhu	Postdoctoral Fellow	Associate Professor, Florida State University
Dr. Atanaska Mitkova	Postdoctoral Fellow	Associate Professor Medical University of Bulgaria
Dr. Sujata Khopde	Postdoctoral Fellow	Senior Scientist, Siemens Health Systems
Dr. Pei Hua Chen	Postdoctoral Fellow	Senior Scientist, Johns Hopkins University

MAJOR COMMITTEE ASSIGNMENTS:

Medical School

Rowan University Technology Committee
Faculty Affairs (Promotion & Tenure Committee) UMDNJ
School of Medicine Research Committee, UMDNJ
School of Medicine Student Affairs Committee, UMDNJ
Graduate School Admission Committee, University of Maryland at Baltimore
School of Medicine Research Committee, University of Maryland at Baltimore
Faculty Search Committees, University of Maryland at Baltimore

Editorial Activities

Peer-Reviewer for the following journals: Biochemistry, Journal of Biological Chemistry, Nucleic Acids Research, Cancer Biochemistry and Biophysics, Molecular Microbiology, Journal of Bacteriology, Journal of Molecular Biology

Study Sections

National Science Foundation; Molecular Biosciences Panel

National Institutes of Health

NIH Biophysical Fellowship Study Section F04B
NIH Biophysical Fellowship Study Section F04B
NIH Biophysical Fellowship Study Sections F04B
NIH Biophysical Chemistry Study Section
NIH Physiological Chemistry Study Section
NIH Biochemistry Study Section

MEMBERSHIPS, OFFICES AND COMMITTEE ASSIGNMENTS IN PROFESSIONAL SOCIETIES:

The American Chemical Society
The American Society for Microbiology

MAJOR RESEARCH INTERESTS:

DNA replication in *E. coli* and *Bacillus anthracis*
Human Papillomavirus and carcinogenesis
Development of novel antimicrobials
ABC transporters in human health and diseases

SELECTED PEER-REVIEWED PUBLICATIONS:

1. Gulden Yilmaz, Esther Biswas-Fiss, & **Subhasis B. Biswas** (2018) Genetic Variations in the DNA Replication Origins of Human Papillomavirus (HPV) Family Correlate with Their Oncogenic Potential. *Biochimica et Biophysica Acta*, **1862**, *In Press*.
2. Meera J. Patel, Lavesh Bhatia, Gulden Yilmaz, Esther Biswas-Fiss, & **Subhasis B. Biswas** (2017) Multiple Conformational States of DnaA Protein Regulate Its Binding to DnaA Boxes in the Initiation of DNA Replication. *Biochimica et Biophysica Acta*, **1861**, 2165-2174.
3. **Esther E. Biswas-Fiss**, Albtoul Alturke stani, Jazzlyn Jones, Joscelyn Korth, Subhasis B. Biswas. (2017) "ABCA Transporters" in Encyclopedia of Signaling Molecules, 2nd Ed., Choi, S. Editor, Invited Review, Springer Science Publishers. **2017**, pp 1-15. doi:10.1007/978-1-4614-6438-9_166-1
4. Meera J. Patel, Gulden Yilmaz, Lavesh Bhatia, Esther Biswas-Fiss, & **Subhasis B. Biswas** (2017) Site-Specific Fluorescence Labeling of Proteins and Analysis of Structural Changes in Solution by Fluorescence Resonance Energy Transfer *MethodsX*, Invited Article, *In Press*.
5. Rotoli, S. M., Esther E. Biswas-Fiss, & **Biswas, S. B.** (2012) Quantitative Analysis of the Mechanism of DNA Binding by *Bacillus* DnaA Protein. *Biochimie*, **94**, 2764-2775
6. Biswas-Fiss E. E., *Kukiratirat, J.*, & **Biswas, S. B.** (2012) Thermodynamic analysis of DNA Binding by a Bacillus Single Stranded DNA Binding Protein. *BMC Biochemistry*, 2012, **13**:10. PMID: 22698072
7. **Biswas-Fiss E.E.**, Affet S., Ha M., Biswas S. B. (2012) Retinoid binding properties of nucleotide binding domain 1 of the Stargardt disease-associated ATP binding cassette (ABC) transporter, ABCA4. *J. Biol. Chem.* **287**, 44097-44107 PMID: 23144455
8. **Biswas-Fiss EE**, Kurpad DS, Joshi K, Biswas S. B. (2010) Interaction of extracellular domain 2 of the human retina-specific ATP-binding cassette transporter (ABCA4) with all-trans-retinal. *J. Biol. Chem.* **285** 9372-9383. PMID: 20404325
9. Biswas, S.B, *Shankar, D., Clark, J.* & **Biswas, E. E.** (2009) Bacterial Replicative DNA Helicases, Invited Book Chapter, in "DNA Helicases", Edited by Frank Columbus, Nova Publishers Inc., Hauppauge, NY
10. **Biswas, S.B.**, *Wydra, E.*, & Biswas, E. E. (2009) Mechanisms of DNA binding and Regulation of Bacillus anthracis DNA primase. *Biochemistry*. **48**, 7373-7382 PMID: 19583259
11. Aiello D, Barnes MH, Biswas EE, **Biswas SB**, Gu S, Williams JD, Bowlin TL, Moir DT. (2009) Discovery, characterization and comparison of inhibitors of Bacillus anthracis and Staphylococcus aureus replicative DNA helicases. *Bioorg. Med. Chem.* 17(13):4466-76. PMID: 19477652
12. Biswas EE, Barnes MH, Moir DT, **Biswas SB**. (2009) An essential DnaB helicase of Bacillus anthracis: identification, characterization, and mechanism of action. *J. Bacteriol.* 191(1):249-60. PMID: 18931108
13. **Biswas SB**, & Biswas EE. (2006) Quantitative Analysis of Single Stranded DNA Binding by Escherichia coli DnaB Helicase and the DnaB.DnaC Complex. *Biochemistry*, **45**, 11505-11513.

14. *Mitkova, A.V., Biswas-Fiss, E.E. and Biswas, S.B.* (2005) Modulation of Plasmid DNA Replication in *Saccharomyces cerevisiae in vitro* by DNA Polymerases and Mcm467 complex. *J Biol Chem.* **280**, 6285-6292
15. Biswas-Fiss, E.E., *Khopde, S.* and **Biswas, S.B.** (2005) Mcm467 Complex of *Saccharomyces cerevisiae* is Preferentially Activated by the Autonomously Replicating DNA Sequences. *Biochemistry.* **44**, 2916-2925.
16. Biswas SB, *Khopde SM,* & Biswas EE. (2005) Control of ATP-Dependent Binding of *Saccharomyces cerevisiae* Origin Recognition Complex to Autonomously Replicating DNA Sequences. *Cell Cycle*, **4**, 113-120.
17. Biswas, E.E., *Flowers, S.* and **Biswas, S.B.** (2004) Quantitative analysis of nucleotide modulation of DNA binding by DnaC protein of *E. coli* and the mechanism of DNA helicase loading. *Biochemical Journal*, **379**, 553-62.
18. *Mitkova, A.V., Khopde, S.M.* and **Biswas, S.B.** (2003) Mechanism and stoichiometry of interaction of DnaG primase with DnaB helicase of *Escherichia coli* in RNA primer synthesis. *J Biol Chem*, **278**, 52253-52261.
19. **Biswas, S. B.**, *Khopde, S. M., Zhu, F.-X., & Biswas, E. E.* (2003) Protein-Protein Interaction in the Assembly of p170 and p79 Subunits of DNA Polymerase α by Two-Hybrid Analysis. *Nucleic Acids Research*, **31**, 2056-2065.