

Suman Ghosh, Ph.D.

E-mail: sumanghosh_143@yahoo.com

Phone: 402-617-2712

Address: 8308 Tomashaw Street

Lenexa, KS 66219

SUMMARY

Postdoctoral fellow at Stowers Institute for Medical Research, Kansas City.

Expert in Molecular Biology and Cell Biology.

Experienced in writing/reviewing SOPs and technical reports.

Effective communication, interpersonal and leadership skills.

EDUCATION/TRAINING

Post Doctoral (2010)	Stowers Institute for Medical Research	Cell Biology / Genetics
Post Doctoral (2009)	Harvard Medical School	Infectious Diseases
Ph.D. (2009)	University of Nebraska Lincoln, NE	Micro/Molecular Biology
M.Pharm. (2000)	College of Pharmaceutical Sciences, India	Pharmaceutical Sciences
B. Pharm. (1998)	Jadavpur University, Calcutta, India	Pharmaceutical Sciences

TECHNICAL EXPERTISE

Molecular Biology and Biochemistry

Isolation/purification of nucleic acids, plasmids and proteins; PCR and qRT-PCR, gel electrophoresis, SDS-PAGE, immunoprecipitation, western blotting, immuno affinity chromatography, ELISA, northern blotting, cDNA micro array.

Cell Biology and Genetics

Gene tagging and deletion, Avalanche Photo Diode (APD) imaging on live cells for protein localization and protein protein interaction, Cryo EM, immunohistochemistry, multi-color flow-cytometry and FACS. Experienced in High Throughput Screening (HTS) with Singer robots.

Microbiology

Experienced in working with a variety of bacterial, yeast and fungal strains. Production, propagation and purification of yeast and *Candida albicans* strains; Co infection of macrophage, *Caenorhabditis elegans*, *Galleria mellonella* invertebrate animal models with fungal strains; experienced in cytokine and chemokine assays, High Throughput Screen (HTS) with Well-Mate for small molecule bioactivity assays.

Analytical Techniques

Expert in chromatographic techniques such as GC/MS, HPLC, LC/MS, HPTLC and spectroscopic techniques such as UV, FTIR, NMR, MS for isolation and characterization of pure bioactive chemical compounds.

Computer / Data Analysis

Proficient in a variety of software including Microsoft Office, GraphPad PRISM, Flow-Jo, Origin Pro, Storm, Odyssey IR imaging system, Biogrid, Adobe Photoshop and Illustrator, basic bioinformatics such as BLAST, Vector NTI, multiple alignment, protein structure and function prediction.

LEADERSHIP, TEACHING and MENTORING

- 2011 Currently mentoring Alexander Smith, undergraduate student at University of Missouri, Kansas City.
- 2010 Supervised V. K. Chaithanya Ponnaluri, graduate student at the University of Missouri, Kansas City.
- 2008–09 Mentored and supervised Nina Howe and Katie Volk, undergraduate students at Dental School of University of Nebraska Medical Center. They have both coauthored with me in scientific publication.
- 2007–08 Mentored and supervised Jake T. Cooper, undergraduate student at University of Nebraska Lincoln. He is a coauthor of one of my publications.
- 2008–09 Taught freshman microbiology laboratory as the head teaching assistant, mentored other teaching assistants and conducted laboratory examinations at University of Nebraska Lincoln.
- 2004–09 Taught freshman biology, freshman microbiology, and senior microbiology laboratory classes as teaching assistant at University of Nebraska Lincoln.
- 2001–04 Taught pharmaceutical sciences at the Himalayan Pharmacy Institute, North Bengal University. India.

COLLABORATION

- Prof. Ruth Welti, Kansas Lipidomics Research Center. Collaborated on lipidomics study of various yeast nuclear envelope protein mutants.
- Prof. Aaron P. Mitchell, Carnegie Mellon University. Studied quorum sensing molecules secreted from *Candida albicans* mutants defective in biofilm formation.
- Prof. Thomas M. Petro, Dental School of University of Nebraska Medical Center. Studied cytokine and chemokine responses of macrophages after *Candida albicans* coinfection.

PROFESSIONAL ASSOCIATION

- Association for the Advancement of Science (AAAS)
American Society for Microbiology (ASM)

AWARDS AND GRANTS

- 2007 & 08 Jessie Lee Scholarship Fund for Research, University of Nebraska Lincoln, awarded \$1500.00 each year for 2 years.
- 2008 National level Travel grant award from American Society for Microbiology, awarded \$500.00
- 2006 & 08 Adela and Harold Holck Travel Fellowship Award, University of Nebraska Lincoln, awarded \$500.00 each year.

JOURNAL REVIEW

- Served in the peer review committees for the following journals.
- Research in Microbiology (Pasteur, Fontis Media).
Fungal Biology (Elsevier).
Journal of Applied Microbiology (Wiley).
Letters in Applied Microbiology (Wiley).

PUBLICATIONS AND PRESENTATIONS

Peer-reviewed Journals

1. Jennifer M. Friederichs[†], **Ghosh S[†]**, Smoyer CJ, McCroskey S, Miller BD, Weaver KJ, Delventhal KM, Unruh J, Slaughter BD, Jaspersen SL. The SUN protein Mps3 is required for spindle pole body insertion into the nuclear membrane and nuclear envelope homeostasis. **PLoS Genetics**. 2011 Nov. 7(11): e1002365. (†Equal contributing first authors)
2. Jeffrey J. Coleman[†], **Ghosh S[†]**, Okoli I, Mylonakis E. Antifungal activity of microbial secondary metabolites. **PLoS One**. 2011 Sep. 6(9): e25321. (†Equal contributing first authors)
3. Shantanu Ganguly, Bishop AC, Xu W, **Ghosh S**, Nickerson KW, Lanni F, Patton-Vogt J, Mitchell AP. Zap1 control of cell-cell signaling in *Candida albicans* biofilms. **Eukaryot Cell**. 2011 Nov. 10(11): 1448–54.
4. **Suman Ghosh**, Howe N, Volk K, Tati S, Nickerson KW, and Petro TM. *Candida albicans* cell wall components and farnesol stimulate the expression of both inflammatory and regulatory cytokines in the murine RAW264.7 macrophage cell line. **FEMS Immunol Med Microbiol**. 2010 Oct. 60(1): 63–73.
5. **Suman Ghosh[†]**, Navarathna DHMLP[†], Roberts DD, Cooper JT, Atkin AL, Petro TM, and Nickerson KW. Arginine induced germ tube formation in *Candida albicans* is essential for escape from murine macrophage cell line RAW264.7. **Infect. Immun**. 2009 Apr. 77(4): 1596–605. (†Equal contributing first authors)
6. **Suman Ghosh**, Kebaara BW, Atkin AL, and Nickerson KW. Regulation of aromatic alcohol production in *Candida albicans*. **Appl. Environ. Microbiol**. 2008 Dec. 74(23): 7211–8.
7. Annie Shirwaikar, **Ghosh S** and Rao PGMC. Effect of *Gmelina arborea* (Roxb.) Leaves on Wound Healing in rats. **Journal of Natural Remedies**. 2003 Jan. 3(1): 45–48.

Manuscripts in preparation/submitted

1. **Suman Ghosh[†]**, Gardner JM[†], Friederichs JM, Smoyer CJ, Chisholm RD, Lee K, Workman JL, and Jaspersen SL. Acetylation of the SUN protein Mps3 by Eco1 regulate its function in nuclear organization. (Submitted) (†Equal contributing first authors)
2. **Suman Ghosh**, Tati S, and Nickerson KW. Aromatic alcohols induce pseudohyphae in a GCN4 dependent manner in *Candida albicans*.
3. **Suman Ghosh**, Kebaara BW, Nickerson KW, and Atkin AL. Regulation of Aro80p is critical for virulence in *Candida albicans*.

Abstracts and Presentations

Acetylation of the SUN protein Mps3 by Eco1 regulates its function in nuclear organization. FASEB. Yeast chromosome structure, replication and segregation. Carefree. Arizona in August 2010.

(Presented in 8 other national level conferences)