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Education

1994 B. S. Agriculture, University of Agricultural Sciences, Bangalore, India
1996 M. S. Plant physiology, University of Agricultural Sciences, Bangalore, India
2002 Ph.D. Molecular Microbiology, University of Calgary, AB, Canada

Professional Experience

2010- current: Assistant Professor, Microbiology, Department of Biology, Lamar University
Beaumont TX

2007-2009: Assistant Professor/Research: School of Molecular Biosciences, Washington State University,
Pullman WA.

Project: Adhesin-mediated host inflammatory response during *Trichomonas vaginalis* infection.

2002-2007: Postdoctoral Research: Department of Microbiology and Immunology, University of Texas
Health Science Center at San Antonio.

Research advisor: Prof. John F. Alderete.

Project: Dissection of molecular mechanisms involved in parasite adherence to host vaginal epithelial
cells, expression of virulence genes, and host signaling for inflammation during *Trichomonas vaginalis*
infection.

1998-2002: Doctoral Research: Department of Biological Sciences, University of Calgary, Calgary, AB,
Canada.

Research advisor: Prof. Lashitew Gedamu.

Dissertation work: Isolation, characterization and functional studies of Cathepsin L and B like Cysteine
protease genes from *Leishmania donovani* complex.

1994-1996: Master's Research: Department of Plant Physiology, University of Agricultural Sciences,
India.

Research Advisor: Prof. M. Udaykumar.

Dissertation work: In vitro multiplication of *Stevia rebaudiana* by callus culture.

Teaching Experience

2010-current: BIOL2420 Microbiology
BIOL4404 Molecular Biology,
BIOL 4405 Immunology
Department of Biology, Lamar University Beaumont TX

2007- 2009: MBios 503 Prokaryotic Molecular Biology
MBios 496 Senior project in Microbiology

2003-2007: Department of Microbiology, UTHSCSA, Lectures on Parasitology for Graduate Students.

2000-2001: Teaching Assistant, Undergraduate Molecular Biology laboratory classes, University of Calgary.

2000: Teaching Assistant, Undergraduate Microbiology laboratory classes, University of Calgary.

1999: Teaching Assistant, Undergraduate Biology laboratory classes, University of Calgary.

Awards and Fellowships

1990-1994: Undergraduate Merit scholarship

1994-1996: Indian Council of Agricultural Research (ICAR) Junior Research fellowship

1998-2002: Bettina Bahlsen memorial Graduate merit Scholarship

2000-2001: University of Calgary Dean's Special Graduate Scholarship

2009: Award for Excellence in Teaching, School of Molecular Biosciences, WSU, Pullman.

2013: American Society for Microbiology ASMCUE Travel Award

Professional Affiliations

2003-present: American Society for Microbiology

2005-present: American Society for Cell Biology

1998-present: American Society of Tropical Medicine and Hygiene

Publications

Sharma J, Zhang X, Sarker T, Yan X, Washburn L, Qu H., Guo Z, **Kucknoor AS** and Wei S. 2014. Biocompatible Electrospun Tactic Poly(methyl methacrylate) Blend Fibers. *Polymer*, 55(15), 3261–3269.

Sadu RB, Chen DH, **Kucknoor AS**, Guo Z and Gomes AJ. 2014. Silver Doped - TiO₂/Polyurethane Nano-Composites for Antibacterial Textile Coating. *BioNanoScience*, 4(2), 136-148.

Atabey E, Wei S, Zhang X, Gu H, Yan X, Huang Y, Shao L, He Q, Zhu J, Sun L, **Kucknoor A S**, Wang A, Guo Z. 2013. Fluorescent Electrospun Polyvinyl Alcohol/CdSe@ZnS Nanocomposite Fibers. 2013. *Journal of Composite Materials*, 47(25), 3175-3185.

Farrell PJ, **Kucknoor AS**, Iatrou K, and Gedamu L. 2013. A simple technique to enhance the humoral immune response to intracellular protein antigens in genetic immunizations. *J Immunol Methods*. 2013 Jan 31;387(1-2):308-11. doi: 10.1016/j.jim.2012.08.017. PMID: 22964556

A.S. Kucknoor. 2013. Use of MasteringMicrobiology Online Resources to Implement “Learn Before Lecture” Strategy: A Comparative Analysis of Student Learning. ASMCUE. *Journal of Microbiology and Biology Education*. May 2013, 143-164.

Chen M, Qu H, Zhu J, Luo Z, Khasanov A, **Kucknoor A S**, Haldolaarachchige N, Young DP, Wei S, and Guo Z. 2012. Magnetic Electrospun Fluorescent Polyvinylpyrrolidone Nanocomposite Fibers.. *Polymer*, 53(20), 4501-451.

Wei S, Sampathi J, Guo Z, Anumandla N, Rutman D, **Kucknoor A S**, James L and Wang A. 2011. Nanoporous Poly(methyl methacrylate)-Quantum Dots Nanocomposite Fibers towards Biomedical Applications. *Polymer*, 52, 5817-5829.

Zhu J, Wei S, Patil R, Rutman D, **Kucknoor AS**, Wang A and Guo Z. 2011. Ionic Liquid Assisted Electrospinning of Quantum Dots/Elastomer Nanocomposite Fibers. *Polymer*, 52,

1954-1962.

Stark JR, Judson G, Alderete JF, Mundodi V, **Kucknoor AS**, Giovannucci EL, Platz EA, Sutcliffe S, Fall K, Kurth T, Ma J, Stampfer MJ, Mucci LA. 2009. Prospective study of *Trichomonas vaginalis* infection and prostate cancer incidence and mortality. Physicians' Health Study. *J Natl Cancer Inst.* 101(20):1406-11. doi: 10.1093/jnci/djp306. PMID:19741211

Lama A, **Kucknoor AS**, Mundodi V, Alderete JF. 2009. Glyceraldehyde-3-phosphate dehydrogenase is a surface-associated, fibronectin-binding protein of *Trichomonas vaginalis*. *Infect Immun.* (7):2703-11. doi: 10.1128/IAI.00157-09. PMID:19380472

Kucknoor AS, Mundodi V, Alderete J. *BMC Microbiol.*2009. Genetic identity and differential gene expression between *Trichomonas vaginalis* and *Trichomonas tenax*. 9:58. doi: 10.1186/1471-2180-9-58. PMID:19296850

Mundodi V, **Kucknoor AS**, Alderete JF. 2008. Immunogenic and plasminogen-binding surface-associated alpha-enolase of *Trichomonas vaginalis*. *Infect Immun.* 76(2):523-31. PMID:18070902

Kucknoor AS, Mundodi V, Alderete JF. 2007. The proteins secreted by *Trichomonas vaginalis* and vaginal epithelial cell response to secreted and episomally expressed AP65. *Cell Microbiol.* 11; 2586-97. Epub 2007 Jun 21. PMID:17590165

Mundodi V, **Kucknoor AS**, Alderete JF.2007. Antisense RNA decreases AP33 gene expression and cytoadherence by *T. vaginalis*. *BMC Microbiol.* 7:64.PMID:17608941

Mundodi V, **Kucknoor AS**, Chang TH, Alderete JF. 2006. A novel surface protein of *Trichomonas vaginalis* is regulated independently by low iron and contact with vaginal epithelial cells. *BMC Microbiol.* 6:6. PMID:16448556

Kucknoor AS, Mundodi V, Alderete JF. 2005. Adherence to human vaginal epithelial cells signals for increased expression of *Trichomonas vaginalis* genes. *Infect Immun.* (10):6472-8. PMID:16177319

Kucknoor AS, Mundodi V, Alderete JF. 2005. *Trichomonas vaginalis* adherence mediates differential gene expression in human vaginal epithelial cells. *Cell Microbiol.*7(6):887-97. PMID:15888089

Kucknoor AS, Mundodi V, Alderete JF. 2005. Heterologous expression in *Trichomonas foetus* of functional *Trichomonas vaginalis* AP65 adhesin..*BMC Mol Biol.* 6:5. PMID:15748280

Mundodi V, **Kucknoor AS**, Gedamu L.2005. Role of *Leishmania (Leishmania) chagasi* amastigote cysteine protease in intracellular parasite survival: studies by gene disruption and antisense mRNA inhibition. *BMC Mol Biol.*6:3.PMID:15691375

Mundodi V, **Kucknoor AS**, Klumpp DJ, Chang TH, Alderete JF.*Mol Microbiol.* 2004. Silencing the ap65 gene reduces adherence to vaginal epithelial cells by *Trichomonas vaginalis*. 53(4):1099-108.PMID:15306014

Somanna AK, Mundodi V, Gedamu L. 2002. Functional analysis of cathepsin B-like cysteine proteases from *Leishmania donovani* complex. Evidence for the activation of latent

transforming growth factor beta. J Biol Chem. 277(28):25305-12. Epub 2002 May 8. PMID:12000761

Somanna AK, Mundodi V, Gedamu L. 2002. In vitro cultivation and characterization of *Leishmania chagasi* amastigote-like forms. Acta Trop.83(1):37-42. PMID:12062791

Mundodi V, **Somanna AK**, Farrell PJ, Gedamu L. 2002. Genomic organization and functional expression of differentially regulated cysteine protease genes of *Leishmania donovani* complex. Gene. 282(1-2):257-65. PMID:11814698

Patil VS, **Somanna AK**, Reddy PC, Purushotham MG, Prasad TG, and M Udayakumar. 1996. In-vitro multiplication of *Stevia rebaudiana*. Curr. Sci. 70:960-962.

Abstract Presentations

Ashwini Kucknoor, 2013. Use of MasteringMicrobiology Online Resources to Implement “Learn before Lecture” Strategy: A Comparative Analyses of Student Learning. Poster presentation at ASMCUE 2013, Denver Colorado.

Darren Hallums, Quentin Sherman, Lauren Ware, Jason Janeaux and **Ashwini Kucknoor. 2013.** Rhomboid Proteins in *Leishmania* Species: A Gene Characterization Study. Poster presentation at ASM General meeting, Denver, Colorado.

Darren Hallums, Quentin Sherman, Lauren Ware and **Ashwini Kucknoor. 2013.** Rhomboid Proteins in *Leishmania* Species: A Gene Characterization Study. Poster presentation at ASM-Texas Branch meeting at New Braunfels, Texas.

Sneha Dommetty, Sampath Shetty, Shyam Shukla and **Ashwini Kucknoor. 2012.** Use of Photocatalyst Transparent Titanium Dioxide (TiO₂) to Increase Shelf-life of Fruits and Vegetables. Poster presentation at Texas ASM Regional Meeting, New Braunfels, TX.

Lauren Ware and **Ashwini Kucknoor. 2012.** Protein Disulfide Isomerase (PDI) genes in *Trichomonas vaginalis*. Poster presentation at Texas ASM Regional Meeting, New Braunfels, TX.

James Faulk and **Ashwini Kucknoor. 2012.** *Tritrichomonas foetus* Rhomboid Proteases: A Gene Characterization Study. Poster presentation at Texas ASM Regional Meeting, New Braunfels, TX.

Humberto Hernandez and **Ashwini Kucknoor. 2012.** Analysis of expression of Rhomboid genes among clinical isolates of *Trichomonas vaginalis*, a STD causing parasite. Poster presentation at Texas ASM Regional Meeting, New Braunfels, TX.

Lauren Ware, Charne' Rutherford and **Ashwini Kucknoor. 2012.** *Leishmania amazonensis* rhomboid proteins: A gene characterization study. Oral presentation at ABRCMS Annual Conference at San Francisco, CA.

Kucknoor, AS, and JF. Alderete. 2008. Genetic identity and differential gene expression between *Trichomonas vaginalis* and *T. tenax*. IV International Congress of Anaerobic Protists. Taipei, Taiwan, May 12-17.

Alderete, JF, and **AS Kucknoor.** 2008. Role of surface-associated GAPDH and α -enolase in persistence by *Trichomonas vaginalis*. IV International Congress of Anaerobic Protists. Taipei, Taiwan, May 12-17.

Alderete JF, **Kucknoor AS**, Chang TH. 2007. Approaches toward a non-invasive urine-based

diagnostic for *Trichomonas vaginalis* with new monoclonal antibodies. Abstracts of the 47th Interscience Conference on Antimicrobial Agents and Chemotherapy 2007 - American Society for Microbiology.

Kucknoor AS, Mundodi V and Alderete JF. 2007. Comparative gene expression analysis of pathogenic and non-pathogenic *Trichomonas* species. Abstracts of the General Meeting of the American Society for Microbiology, Toronto, Canada.

Kucknoor AS, Mundodi V, Alderete JF. 2006. Analysis of secreted proteins of urogenital pathogen *Trichomonas vaginalis*. Abstracts of the General Meeting of the American Society for Microbiology, Orlando FL.

Mundodi V, **Kucknoor AS**, Alderete JF. 2006. Inhibition of ap33 gene expression leads to low levels of *Trichomonas vaginalis* adherence to vaginal epithelial cells. Abstracts of the General Meeting of the American Society for Microbiology, Orlando FL.

Kucknoor AS, Mundodi V, Alderete JF. 2005. *Trichomonas vaginalis* genes induced upon contact with human vaginal epithelial cells. Abstracts of the Annual Meeting of the American Society for Cell Biology, San Francisco, CA.

Mundodi V, **Kucknoor AS**, Alderete JF. 2005. Antisense RNA inhibition of *Trichomonas vaginalis* AP33 adhesin gene expression. Abstracts of the Annual Meeting of the American Society for Cell Biology, San Francisco, CA.

Kucknoor AS, Mundodi., and Alderete JF. 2005. *Trichomonas vaginalis* adherence mediates differential gene expression in human vaginal epithelial cells. Abstracts of the Annual Meeting of the American Society for Microbiology, Atlanta, GA.

Mundodi V, **Kucknoor AS**, Chang TH, and Alderete JF. 2005. A specific immunoglobulin A (IgA) reactive protein of *Trichomonas vaginalis* homologous to TATA-binding protein-associated factor (TAF). Abstracts of the Annual Meeting of the American Society for Microbiology, Atlanta, GA.

Alderete JF, Mundodi V, **Kucknoor AS**, Garcia A, Tasca T, Chang TH, Nguyen J, Castella P and Alderete JP. 2004. *Trichomonas vaginalis* mucosal adherence, invasion and pathogenesis. Abstracts of the Congress of Parasitology, Tlaxcala, Mexico.

Kucknoor AS, Mundodi V and Alderete JF. 2004. Episomally expressed *Trichomonas vaginalis* AP65 in *Tritrichomonas foetus* is surface localized and functions as an adhesin. Abstracts of the Annual Meeting of American Society for Microbiology, New Orleans, LA.

Mundodi V, **Kucknoor AS** and Alderete JF. 2003. Antisense RNA inhibition of ap65 adhesin gene expression in *Trichomonas vaginalis*. Abstracts of the Annual Meeting of the American Society for Cell Biology, San Francisco, CA.

Alderete JF, Garcia AF, Chang TH, Lehker MW, Mundodi V, **Kucknoor AS**, Nguyen J, Benchimol M and Klumpp DJ. 2003. *Trichomonas vaginalis* virulence, cytoadherence and a rapid diagnostic. Proceedings of the International Society for Sexually Transmitted Disease Research (ISSTD) Congress Ottawa, Canada.

Somanna A, Mundodi V, and Gedamu L. 2001. Analysis of Cysteine Protease Gene Regulation in *Leishmania chagasi*. Abstracts of the Annual Meeting of American Society of Tropical Medicine and Hygiene, Atlanta, Georgia.

Somanna A, Mundodi V, and Gedamu L. 2001. Structure and Functional Analyses of Cysteine Proteases in *Leishmania chagasi* and *Leishmania donovani*. Abstracts of World Leish II, Crete, Greece.

Somanna A, Mundodi V, and Gedamu L. 2000. Cathepsin B-like Cysteine Proteases of *Leishmania donovani* and *Leishmania chagasi*. Abstracts of the Annual Meeting of American Society of Tropical Medicine and Hygiene, 2000, Houston, Texas.

Mundodi V, **Somanna A**, and Gedamu L. 2000. Characterization of Cathepsin L-Like Cysteine Protease Genes From *Leishmania donovani*. Abstracts of the Annual Meeting of American Society of Tropical Medicine and Hygiene, 2000, Houston, Texas.

Somanna A, Mundodi V, and Gedamu L. 2000. Isolation And Characterization Of Cathepsin B-Like Cysteine Protease Gene From *Leishmania Chagasi*. Abstracts of the International Congress of Infectious Diseases, Buenos Aires, Argentina.

Mundodi V, **Somanna A**, and Gedamu L. 2000. Characterization of A Multicopy Cysteine Protease Gene Cluster in *Leishmania Chagasi*. Abstracts of the International Congress of Infectious Diseases, Buenos Aires, Argentina.

Somanna A, Mundodi V, Farrell P J, Iatrou K, Behie L, and Gedamu L. 1999. Novel expression of functionally active *Leishmania chagasi* cysteine protease as a JHE-fusion protein. Abstracts of the Annual Meeting of American Society of Tropical Medicine and Hygiene, Washington, DC

Mundodi V, **Somanna A**, and Gedamu L. 1999. Organization and Functional Analysis of Cysteine Protease Genes in *Leishmania chagasi*. Abstracts of the Annual Meeting of American Society of Tropical Medicine and Hygiene, Washington, DC.