

Curriculum Vitae

Stuti Desai

Mechanobiology Institute

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National University of Singapore,

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Current Position

Senior Research Fellow, January 2016-

Mechanobiology Institute,

National University of Singapore, Singapore

Research Interests

- Bacterial pathogenesis and survival strategies
- Community behaviour in bacteria
- Regulation of host cell signaling by pathogenic bacteria

Education

Doctorate of Philosophy, August 2002- June 2009

Department of Molecular Reproduction, Development and Genetics

Indian Institute of Science, Bangalore, Karnataka, India

Master of Science, Biochemistry, July 2000- May 2002

Department of Biochemistry

Maharaja Sayajirao University of Baroda, Baroda, India

Bachelor of Science, Chemistry (Honors), July 1997- May 2000

Maharaja Sayajirao University of Baroda, Baroda, India

Research Projects

Current Research

1. Investigation of genetic mechanisms underlying the formation of biofilms by *Salmonella* Typhimurium on solid tumors, July 2014-

Advisor: Prof. Linda J. Kenney

Collaborator: Dr. Siegfried Weiss, Helmholtz Centre of Infection Research and Hannover Medical School, Germany.

2. Combinatorial libraries of metal oxide thin films as tools for inhibiting *Salmonella* Typhimurium biofilms, April 2013-

Advisor: Prof. Linda J. Kenney

Collaborator: Prof. T Venky Venkatesan, NUSNNI, National University of Singapore, Singapore.

3. A novel role for the SPI-2 regulatory system in biofilm formation in *Salmonella enterica* serovar Typhimurium, July 2012-

Advisor: Prof. Linda J. Kenney

Collaborator: Assoc. Prof. Yan Jie, Mechanobiology Institute, National University of Singapore, Singapore.

Previous Research

Doctorate thesis: Aromatic beta-glucoside utilization in *Shigella sonnei*: Comparison with the *Escherichia coli* paradigm, 2003- 2008.

Advisor: Prof. Subramony Mahadevan

Secondary project: Investigating the differential Bgl⁺ mutation profile in an *rpoS* background, 2002-2005.

Advisor: Prof. Subramony Mahadevan

Master's dissertation project: Characterization of possible factor(s) in the conditioned medium for growth, 2001- 2002.

Advisor: Dr. Shashikant Acharya

Publications

Desai, S. K., Winardhi, R. S., Periasamy, S., Dykas, M. M., Jie, Y., Kenney, L. J. (2016) The horizontally-acquired response regulator SsrB drives a *Salmonella* lifestyle switch by relieving biofilm silencing. *eLife* 5: e10747.

Desai, S. K., Nandimath, K., Mahadevan, S. (2010) Diverse pathways for salicin utilization in *Shigella sonnei* and *Escherichia coli* carrying an impaired *bgl* operon. *Arch Microbiol* 192: 821-3.

Desai, S. K. and Mahadevan, S. (2006) Accumulation of *hns* mutations specifically in stationary phase in an *E. coli* strain carrying an impaired *rpoS* locus. *J Genet* 85: 221-4.

Scientific Performances

- Selected for a poster presentation at the Cold Spring Harbor Laboratories (CSHL) Microbial Pathogenesis 2015 meeting, New York, United States of America, September 2015.
- Selected for a talk at the Bacterial Locomotion and Signal Transduction (BLAST) 2015 meeting, Tucson, USA, January 2015.
- Selected for a poster presentation at the 4th ASM Conference on Salmonella: The Bacterium, the Host and the Environment, Boston, USA, October 2013.

- Selected for a poster presentation at the 60th Nobel Conference on Biofilm formation, its clinical impact and potential treatment, Stockholm, Sweden, August 2013.

Academic Services

- Team advisor to the National University of Singapore, Singapore, team for the International Genetically Engineered Machine (iGEM) Competition for 2016.
- Advisor to the silver medallist team from the National University of Singapore, Singapore, for the International Genetically Engineered Machine (iGEM) Competition in 2015.
- Co-advisor for the Special Program in Science (SPS), Department of Biological Sciences, National University of Singapore, Singapore, 2014-
- Active member of the Women in Science Initiative (WIS) at the Mechanobiology Institute, National University of Singapore, Singapore, 2014-
- Co-chair: Staff Welfare Committee, Mechanobiology Institute, National University of Singapore, Singapore, Dec 2012-
- Organizing Secretary: 'Genesis' Society, Department of Molecular Reproduction, Development and Genetics, Indian Institute of Science, 2005-2006.

References

- Prof. Linda Kenney
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National University of Singapore,
Singapore- 117 411
email: kenneyl@uic.edu
- Prof. Subramony Mahadevan
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Indian Institute of Science,
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- Dr. Shashikant Acharya
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