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**List of Publications**

1. *Continuous control of flagellar gene expression by the  $\sigma_{28}$ -FlgM regulatory circuit in Salmonella enterica.* Saini, S., Aldridge, P.D., and Rao, C.V. *Molecular Microbiology*, 2011; 79(1), 264-78.
2. *The role of crosstalk in regulating the dynamic expression of the flagellar, Salmonella pathogenicity island 1 (SPII), and type I fimbrial genes.* Saini, S., Slauch, J.M., Aldridge, P.D., and Rao, C.V. *Journal of Bacteriology*, 2010; 192: 5767 - 5777.
3. *The role of coupled positive feedback in the expression of the SPII type three secretion system in Salmonella.* Saini, S., Ellermeier, J.R., Slauch, J.M., and Rao, C.V. *PLoS Pathogens*, 2010, 6(7): e1001025. Doi:10.1371/journal.ppat.1001025.
4. *SprB is the molecular link between Salmonella Pathogenicity island1 (SPII) and SPI4.* Saini, S., and Rao, C.V. *Journal of Bacteriology*, 2010; 192: 2459 - 2462.
5. *FliZ induces a kinetic switch in flagellar gene expression.* Saini, S., Koirala, S., Floess, E., Mears, P.J., Chemla, Y.R., Golding, I., Aldridge, C., Aldridge, P.D., and Rao, C.V. *Journal of Bacteriology*, 2010, doi:10.1128/JB.00751-10.
6. *The interaction dynamics of a negative feedback loop regulates flagellar number in Salmonella enterica serovar Typhimurium.* Aldridge, C., Poonchareon, K., Saini, S., Ewen, T., Soloyva, A., Rao, C.V., Imada, K., Minamino, T., and Aldridge, P.D. *Molecular Microbiology*, 2010, DOI: 10.1111/j.1365-2958.2010.07415.x
7. *Role of positive feedback in dictating flagellar gene expression dynamics in Salmonella enterica* Saini, S., Aldridge, P.D., and Rao, C.V. *IET Systems Biology*, 2009, 43-37.
8. *Role of FimW, FimY, and FimZ in regulating the expression of type i fimbriae in Salmonella enterica serovar Typhimurium.* Saini, S., Pearl, J.A., and Rao, C.V. *Journal of Bacteriology*, 2009, 191, 3003-3010.
9. *The rate of protein secretion dictates the temporal dynamics of flagellar gene expression.* Brown, J.D.\*, Saini, S.\*, Aldridge, C., Herbert, J., Rao, C.V., and Aldridge, P.D. *Molecular Microbiology*, 2008, 70, 924-937. (\* Equal Contribution)
10. *FliZ is a posttranslational activator of FlhD4C2-dependent flagellar gene expression.* Saini, S., Brown, J.D., Aldridge, P.D., and Rao, C.V. *Journal of Bacteriology*, 2008, 190, 4979-4988.
11. *Pressure drop and heat transfer study in tube-in-tube helical heat exchanger.* Kumar, V., Saini, S., Sharma, S., and Nigam, K.D.P. *Chemical Engineering Science*, 2006, 61, 4403-4416.

## Selected List of Presentations/Conference Papers

1. Kumar, S., Goyal, Y, Gayen, K., and Saini, S. “*Economic assessment of ABE (acetone-butanol-ethanol) fermentation for cellulosic and non-cellulosic feedstocks*” 64<sup>th</sup> Annual Session, Indian Institute of Chemical Engineers, CHEMCON, Bangalore (2011).
2. Saini, S. “*Computational Biology: A Systems Biology Perspective*” Conference Proceedings, Bioinformatics Workshop, Tripura University (2011).
3. Saini, S. “*Computational Biology & Bioinformatics: Research Tools in Microbiology*” Lecture, Bioinformatics Workshop, Tripura University (2011).
4. Saini, S. “*Protein Secretion and flagellar abundance in bacteria*” Lecture, National Institute of Technology Agartala (2011).
5. Saini, S. “*How do cells count? Flagellar regulation in Salmonella*” Chemference 2011, Indian Institute of Science (2011).
6. Saini, S. “*Role of global regulator, Fur, in dictating Salmonella Pathogenicity Island – 1 (SPII) gene expression in Salmonella typhimurium*” International Conference & Exhibition on Proteomics & Bioinformatics, HICC Hyderabad, India (2011).
7. Saini S. “*Role of efflux systems in regulating the concentration of cellular metabolic intermediates concentration and its impact on biofuel production*” Grow Diesel Annual Conference, Delhi, India (2010).
8. Saini S. “*Coordinated control of flagellar, needle, and fimbriae genes in Salmonella*” Conference of Modeling Infectious Diseases, Chennai, India (2010).
9. Saini S, Aldridge PD, and Rao CV. “*Role of Positive Feedback Loops in Dictating Flagellar Gene Expression in Salmonella Typhimurium.*” American Institute of Chemical Engineers (AIChE) National Conference, Nashville, Tennessee (2009).
10. Saini S, and Rao CV. “*Coordinate Regulation of Virulence in Salmonella Typhimurium.*” American Institute of Chemical Engineers (AIChE) National Conference, Nashville, Tennessee (2009).
11. Saini S, Chubiz LM, and Rao CV. “*Convergent Transcription and Transcriptional Interference as a Regulatory Element in the Rhamnose Regulon of Escherichia Coli.*” American Institute of Chemical Engineers (AIChE) National Conference, Nashville, Tennessee (2009).
12. Saini S, Aldridge PD, Rao CV. “*Role of feedback loops in dictating flagellar gene regulation dynamics in Salmonella Typhimurium.*” Foundations of Systems Biology and Engineering (FOSBE), Denver, Colorado (2009).
13. Saini S, Rao CV. “*Dynamics of Salmonella Pathogenicity Island-1 (SPII) gene expression in Salmonella Typhimurium.*” American Society of Microbiology (ASM) General Meeting, Philadelphia, Pennsylvania (2009).
14. Saini S, Rao CV. “*Dynamics of Virulence gene expression Initiation in Salmonella Typhimurium.*” American Society of Microbiology (ASM) General Meeting, Philadelphia Pennsylvania (2009).
15. Saini S, Aldridge PD, Rao CV. “*Characterization of FliZ as a Type III Secretion System (TTSS) gene activator in Salmonella Typhimurium.*” Bacterial Locomotion and Signal Transduction (BLAST), Cuernavaca, Mexico (2009).
16. Saini S, and Rao CV. “*Dynamics of Salmonella virulence.*” American Institute of Chemical Engineers (AIChE) National Conference, Philadelphia, Pennsylvania (2008).