

## CURRICULUM VITAE

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### EDUCATION

#### PhD

School of Life Sciences,  
Jawaharlal Nehru University

New Delhi, India

#### Master of Science in Biophysics and Molecular Biology

University of Calcutta

### POSITIONS HELD

Research Scientist

National Centre for Cell Science (NCCS)

Pune

## PUBLICATIONS

### Research articles

1. P. K. Kaur, N. Dinesh, N. Soumya, N. K. Babu, **S. Singh**. 2012. Identification and characterization of a novel Ribose 5-phosphate isomerase B from *Leishmania donovani* **Biochemical and Biophysical Research Communications** 27; 421(1):51-56.
2. S. Kumari, **S. Singh**, B. Saha, P. K. Paliwal. 2011. *Leishmania major* MAP kinase 10 is protective against experimental *L. major* infection. **Vaccine** 29(3): 8783-8787.
3. B. Chawla, A. Jhingran, **S. Singh**, N. Tyagi, M. H. Park, N. Srinivasan, S. C. Roberts, R. Madhubala 2010. Identification and characterization of a novel deoxyhypusine synthase in *Leishmania donovani*. **J Biol. Chem.** 285(1):453-463.
4. **Singh S**, Jhingran A, Sharma A, Alina R. Simonian, Pasi Soininen, Jouko Vepsalainen, Alex R. Khomutov, and Rentala Madhubala 2008. Novel agmatine analogue,  $\gamma$ -guanidinooxypropylamine (GAPA) efficiently inhibits proliferation of *Leishmania donovani* by depletion of intracellular polyamine levels. **Biochemical and Biophysics Research Communication** 375, 168-172.
5. Maharjan, M., **S. Singh**, M. Chatterjee, and R. Madhubala. 2008. Role of Aquaglyceroporin (AQP1) gene and drug uptake in Antimony-resistant clinical isolates of *Leishmania donovani*. **American Journal of Tropical Medicine and Hygiene** 79(1): 69-75.
6. **Singh, S.**, A. Mukherjee, A. R. Khomutov, L. Persson, O. Heby, M. Chatterjee, and R. Madhubala. 2007. Antileishmanial effect of 3-aminooxy-1-aminopropane is due to polyamine depletion. **Antimicrob. Agents Chemother.** 51:528-534.
7. Mukherjee, A., P. K. Padmanabhan, **S. Singh**, G. Roy, I. Girard, M. Chatterjee, M. Ouellette, and R. Madhubala. 2007. Role of ABC transporter MRPA, -glutamylcysteine synthetase and ornithine decarboxylase in natural antimony-resistant isolates of *Leishmania donovani*. **Journal of Antimicrobial Chemotherapy** 59:204-211.
8. Jhingaran, A., P. K. Padmanabhan, **S. Singh**, Anamika, A. B. Abhijeet, S. Bhattacharya, A. Bhattacharya, N. Srinivasan, and R. Madhubala. 2007. Characterization of the *Entamoeba histolytica* gene encoding ornithine decarboxylase and modeling of its 3-D structure. **PLoS- Neglected Tropical Diseases** 2 (1):e115.

9. Padmanabhan, P. K, A. Mukherjee, **S. Singh**, S. Chattopadhyaya, V. S. Gowri, P. J. Myler, N. Srinivasan, and R. Madhubala. 2005. Glyoxalase I from *Leishmania donovani*: A potential target for anti-parasite drug. **Biochemical and Biophysical Research Communications** **337**:1237-1248.

### **Review Articles**

1. S. Neelagiri, I. Sravan Kumar, **S. Singh**. 2010. Tools for antileishmanial drug discovery and drug development. Current Research and Information in Pharmaceutical Sciences (CRIPS) Vol 11, No.2.

2. S. Dhingra, P. Dheeraj Sree Ram, D. Jatekar and **S. Singh**. 2012. Immunotherapy: An alternative strategy for treatment of Visceral Leishmaniasis. Current Research and Information in Pharmaceutical Sciences (CRIPS) Vol.12, No.3.

### **PRESENTATIONS AT NATIONAL SEMINARS / SYMPOSIA**

1. **Oral presentation** on “Characterization of ornithine decarboxylase gene from *L. donovani*: A potential target for chemotherapy” **Sushma Singh** and R. Madhubala, at BIOSPARKS, Annual Research Festival 9th-10<sup>th</sup> March 2006, J.N.U., New Delhi.

2. **Poster presentation** on “Ornithine decarboxylase: A potential chemotherapeutic target for Leishmaniasis.” **Sushma Singh** and R. Madhubala at International Training and Research in Emerging Infectious Diseases Asian Regional Workshop on Intracellular Pathogens, 8-11 March 2005, J.N.U., New Delhi.

3. **Poster presentation** on “Antileishmanial effect of 3-aminooxy-1-aminopropane is due to polyamine depletion.” **Sushma Singh** and R. Madhubala, at 75<sup>th</sup> Annual Meeting of Society of Biological Chemists (INDIA), Jawaharlal Nehru University, New Delhi, December 8-11, 2006.

4. **Oral presentation** on “Antileishmanial effect of 3-aminooxy-1-aminopropane on clinical isolates and ODC-overexpressing *L. donovani*” **Sushma Singh** and R. Madhubala, in Theoretical and Practical Course “**Molecular Biology of Leishmania**” held from 25-27<sup>th</sup> October, 2006 in Trieste, Italy.

5. **Poster presentation** on “Isolation and characterization of functional *Leishmania donovani* Acetyl CoA synthetase (AceCS) enzyme.” I. Sravan Kumar, Ankita Giri, Raju K, and **Sushma Singh** presented at the 80<sup>th</sup> Annual Meeting of the Society of Biological Chemists (SBC), held at CSIR-CIMAP, Lucknow, during 12<sup>th</sup>- 15<sup>th</sup> November, 2011.

### **Gene Sequence Depositions:**

Dinesh, N., Dheeraj Sree Ram, P., Soumya, N. and **Singh, S.** 2012. *Leishmania donovani* strain MHOM/80/IN/Dd8. 3-hydroxy-3-methylglutaryl-CoA reductase gene, complete cds. GenBank Accession No. JX036280.

Soumya, N., Giri, A. and **Singh, S.** 2011. *Leishmania donovani* strain MHOM/80/IN/Dd8 ribose 5-phosphate isomerase B gene, complete cds. GenBank Accession No. JN882262.

I. Sravan Kumar and **Singh, S.** 2010. *Leishmania donovani* strain MHOM/80/IN/Dd8 acetyl CoA synthetase mRNA, complete cds GenBank Accession No HQ424458.

Maharjan, M., **Singh, S.**, Chatterjee, M. and Madhubala, R.2008 *Leishmania donovani* strain 2001-S aquaglyceroporin (AQP1) gene, complete cds. GenBank Accession No EF600686.

Maharjan, M., **Singh, S.**, Chatterjee,M. and Madhubala, R.2008. *Leishmania donovani* strain GE1-R aquaglyceroporin gene, complete cds GenBank Accession No EU191226

**Singh, S.** and Madhubala, R., 2007. *Leishmania donovani* deoxyhypusine synthase gene, complete cds. GenBank Accession No EF512031

**Singh, S.** and Madhubala, R, 2007. *Leishmania donovani* eukaryotic initiation factor 5a gene, complete cds GenBank Accession No EF439707.

### **MEMBERSHIP OF PROFESSIONAL BODIES**

1. **Life Member** of Indian Society of Parasitology since October, 2010

### **INVITED LECTURES**

Invited to deliver a talk on ‘**Cell Culture: Alternatives to Animal Experimentation**’ in the National Symposium cum Workshop on Experimental Research and Alternatives (NSWERA) held in PGIMER, Chandigarh on 3<sup>rd</sup> March, 2012.