




## Faculty Details proforma for DU Web-site

(PLEASE FILL THIS IN AND Email it to [websiteDU@du.ac.in](mailto:websiteDU@du.ac.in) and  
cc: [director@ducc.du.ac.in](mailto:director@ducc.du.ac.in))

Title	Dr.	First Name	Swati	Last Name	Saha	Photograph
Designation	Professor					
Address	Department of Microbiology University of Delhi South Campus New Delhi-110021					
Phone No	Office	24157380				
	Residence	-				
	Mobile	9911156268				
Email	ss5gp@yahoo.co.in					
Web-Page	microbio.du.ac.in					
Educational Qualifications						
Degree	Institution				Year	
Ph.D.	Indian Institute of Science, Bangalore				1997	
M.Phil. / M.Tech.	-					
PG	Sri Venkateswara University, Tirupati				1991	
UG	Sathya Sai Institute of Higher Learning, Anantapur				1989	
Any other qualification						
Career Profile						
<b>October 2011 – present:</b> Professor, University of Delhi, South Campus, New Delhi, INDIA. Research area: DNA replication and chromatin modifications in <i>Leishmania donovani</i> .						
<b>April 2008 – September 2011:</b> Associate Professor, University of Delhi, South Campus, New Delhi, INDIA. Research area: DNA replication and chromatin modifications in <i>Leishmania donovani</i> .						
<b>April 2005 – March 2008:</b> Reader, University of Delhi, South Campus, New Delhi, INDIA. Research area: DNA replication in <i>Leishmania</i> .						
<b>Nov. 2000-July 2004:</b> Postdoctoral Fellow/Research Associate, Dept. of Biochemistry & Molecular Genetics, University of Virginia, Charlottesville, Virginia, USA. Advisor: Joyce Hamlin, Ph.D. Research topic: The modulation of DNA replication by transcription, using the CHO DHFR origin as a model system.						

**Nov 1997 to Oct. 2000:**

Postdoctoral Fellow/Research Associate, Dept. of Medical Biochemistry & Genetics, Texas A & M University, College Station, Texas, USA.

Advisor: Geoffrey Kapler, Ph.D.

Research topic: The identification of proteins involved in DNA replication in the ciliate protozoan *Tetrahymena thermophila*.

**Nov 1991- May 1997:**

Graduate student, Department of Biochemistry, Indian Institute of Science, Bangalore, INDIA.

Graduate Advisor: D N Rao, Ph.D.

Thesis topic: Elucidation of the mechanism of action of the Type III restriction enzyme R.EcoPI.

## Administrative Assignments

**Member, Departmental Research Committee**

**Member, Board of Research Studies**

**Member, Faculty of Interdisciplinary and Applied Sciences**

**Member, CIF Committee, UDSC**

**Member, Institutional Biosafety Committee**

**Member, Institutional Animal Ethics Committee**

**Chairperson, Management Committee, Geetanjali Hostel**

**Coordinator, BioNEST-UDSC**

## Areas of Interest / Specialization

**Molecular Biology: DNA replication and chromatin modifications**

## Subjects Taught

**Recombinant DNA Technology**

**Microbial Genetics**

## Research Guidance

- |  |       |
|--|-------|
| 1. Supervision of awarded Doctoral Thesis              | Seven |
| 2. Supervision of Doctoral Thesis, under progress      | Seven |
| 3. Supervision of awarded M.Phil dissertations         | None  |
| 4. Supervision of M.Phil dissertations, under progress | None  |

## Publications Profile

**Saha, S.** (2020). Histone modifications and other facets of epigenetic regulation in trypanosomatids: leaving their mark. *mBio* 11:e01079-20. Impact factor: 7.76

Yadav, A, Sharma, V, Pal, J, Gulati, P, Goel, M, Chandra, U, Bansal, N, **Saha, S.** (2020). DNA replication protein Cdc45 directly interacts with PCNA via its PIP box in *Leishmania donovani* and the Cdc45 PIP box is essential for cell survival. *PLoS Pathog.* May 15;16(5):e1008190. Impact factor: 7.46

Chandra U, Yadav A, Kumar D, **Saha S** (2017). Cell cycle stage-specific transcriptional activation of cyclins mediated by HAT2-dependent H4K10 acetylation of promoters in *Leishmania donovani*.

*PLoS Pathog.* Sep 22;13(9):e1006615. Impact factor: 7.46

Yadav, A, Chandra, U, & **Saha, S.** (2016). Histone acetyltransferase HAT4 modulates navigation across G2/M and re-entry into G1 in *Leishmania donovani*. *Scientific Reports* **6**: 27510 DOI: 10.1038/srep27510. Impact factor: 4.99

Kumar, D, & **Saha, S.** (2015). HAT3-mediated acetylation of PCNA precedes PCNA monoubiquitination following exposure to UV radiation in *Leishmania donovani*. *Nucleic Acids Res.* doi: 10.1093/nar/gkv431. Impact factor: 19.18

Goswami, K, Arora, J, & **Saha, S.** (2015). Characterization of the MCM homo-hexamers from the thermophilic euryarchaeon *Picrophilus torridus*. *Scientific Reports* **5**: 9057 DOI: 10.1038/srep0907. Impact factor: 4.99

Arora, J, Goswami, K, & **Saha, S.** (2014). Characterization of the replication initiator Orc1/Cdc6 from the archaeon *Picrophilus torridus*. *J Bacteriol.* **196**: 276-286. Impact factor: 3.47

Kumar, D, Kumar D & **Saha, S.** (2012). A highly basic monopartite sequence at the N-terminal region is essential for targeting the DNA replication protein ORC1 to the nucleus in *Leishmania donovani*. *Microbiology.* **158**: 1775-1782. Impact factor: 2.96

Kumar, D, Minocha, M, Rajanala, K, & **Saha, S.** (2012). The histone H4 lysine 14 acetylation in *Leishmania donovani* is mediated by the MYST family protein HAT4. *Microbiology.* **158**: 328-337. Impact factor: 2.96

Minocha, N, Kumar, D, Rajanala, K, & **Saha, S.** (2011). Characterization of *Leishmania donovani* MCM4: expression patterns and interaction with PCNA. *PLoS One* **6** (7): e23107. Impact factor: 3.75

Minocha, N, Kumar, D, Rajanala, K, & **Saha, S.** (2011). Kinetoplast morphology and segregation pattern as a marker for cell cycle progression in *Leishmania donovani*. *J. Euk. Microbiol.* **58** (3): 249-253. Impact factor: 3.88

Kumar, D, Minocha, N, Rajanala, K, and Saha, S. (2009). The distribution pattern of proliferating cell nuclear antigen in the nuclei of *Leishmania donovani*. *Microbiology.* **155**, 3748-3757. Impact factor: 2.96

Kumar, D, Mukherji, A & Saha, S. (2008). Expression and subcellular localization of ORC1 in *Leishmania major*. *Biochem Biophys Res Commun.* **375**, 74-79. Impact factor: 3.32

Saha S, Shan Y, Mesner LD, Hamlin JL. (2004) The promoter of the Chinese hamster ovary dihydrofolate reductase gene regulates the activity of the local origin and helps define its boundaries. *Genes Dev.* **18**, 397-410. Impact factor: 12.89

Saha, S, Nicholson, A & Kapler, G.M. ( 2001). Cloning and biochemical analysis of the Tetrahymena origin binding protein TIF1. Competitive DNA binding in vitro and in vivo to critical rDNA replication determinants. *J. Biol. Chem.* **276**, 45417-45426. Impact factor: 5.48

Rao, D. N., Saha, S. & Krishnamurthy, V. (2000). ATP-dependent Restriction Enzymes. *Progress in Nucleic Acid Research and Molecular Biology.* **64**, 1-63.

Mohammad, M., Saha, S. & Kapler, G. M. (2000). Three different proteins recognize a multifunctional determinant that controls replication initiation, fork arrest and transcription in Tetrahymena. *Nucleic Acids Res.* **28**, 843-851. Impact factor: 19.18

Saha, S. & Kapler, G. M. (2000). Allele-specific protein-DNA interactions between the single stranded DNA-binding protein, ssA-TIBF, and DNA replication determinants in Tetrahymena. *J. Mol. Biol.* **295**, 423-439. Impact factor: 6.15

Saha, S., Ahmad, I., Reddy, Y. V., Krishnamurthy, V. & Rao D. N. (1998). Functional analysis of conserved motifs in type III restriction-modification enzymes. *Biol. Chem.* **379**, 511-517. Impact factor: 4.7

Saha, S. & Rao, D. N. (1997). Mutations in the Res subunit of EcoPI restriction enzyme that affect ATP-dependent reactions. *J. Mol. Biol.* **269**, 342-354. Impact factor: 6.15

Saha, S. & Rao, D. N. (1995). ATP hydrolysis is required for DNA cleavage by EcoPI restriction enzyme. *J. Mol. Biol.* **247**, 559-567. Impact factor: 6.15

#### Conferences and presentations:

Swati Saha (2021). Investigating epigenetic regulatory mechanisms in *Leishmania donovani*. Invited lecture given at the BC International Centenary Conference: a celebration of excellence in research and teaching, Indian Institute of Science, Bangalore, India (December, 2021).

Swati Saha (2021). Towards unravelling epigenetic mechanisms of regulation in *Leishmania donovani*. Invited lecture given at the International Symposium on Epigenetics and regulation of gene expression in kinetoplastid protozoa 2021, University of Glasgow, UK (July, 2021, online mode).

Swati Saha (2021). DNA replication in *Leishmania donovani*: towards finding new solutions to Leishmaniasis. Invited lecture given at the International Symposium on Sustainable Health 2021, SSSIHL, Prashanthi Nilayam (March, 2021, online mode)

Swati Saha (2020). DNA replication protein Cdc45: uncovering new facets in *Leishmania donovani*. Invited lecture given at the National Conference on Frontiers in Biotechnology and Bioengineering 2020, JNTU, Hyderabad (July, 2020)

Swati Saha (2019). The role of Cdc45 in *Leishmania* DNA replication. Invited lecture given at the 60<sup>th</sup> Annual Conference of Association of Microbiologists of India, Mahendragarh, India (December, 2019).

Swati Saha (2018). H4K10 acetylation mediated by histone acetyltransferase HAT2 regulates transcriptional activation at different cell cycle stages. Invited lecture given at the 59<sup>th</sup> Annual Conference of Association of Microbiologists of India & International Symposium on Host-Pathogen Interactions, Hyderabad, India (9<sup>th</sup> – 12<sup>th</sup> December, 2018).

Swati Saha (2018). HAT2-dependent H4K10 acetylation modulates transcriptional activation in cell cycle stage-dependent manner. Invited lecture given at International Conference on Innovations for the Elimination and Control of Visceral Leishmaniasis, New Delhi, India (28<sup>th</sup> – 30<sup>th</sup> November, 2018).

Swati Saha (2018). Transcriptional activation mediated by HAT2-dependent H4K10 acetylation in cell cycle stage-linked manner in *Leishmania donovani*. Invited lecture given at Genome Biology 2018: Mechanisms in health and disease, Bangalore, India (13<sup>th</sup> – 14<sup>th</sup> July, 2018).

#### Research Projects (Major Grants)

S.No.	Project Title	Funding agency	Amount	Sanction date and Duration
1.	Investigating cell cycle dependent gene expression in the protozoan parasite <i>Leishmania donovani</i> : a genome-wide study	DBT	~82.6 lakhs	2019-2022
2.	Characterization of the SET domain proteins SET2 and SET3 in <i>Leishmania donovani</i>	SERB	~ 58.1 lakhs	2020-2023

#### Awards and Distinctions

**2021: elected Fellow of the National Academy of Sciences, India.**  
**1998: Giri Memorial Award for the Best Thesis of the Year 1997.**  
**1989: Gold-medallist in B.Sc., SSSIHL, Anantapur.**

#### Association With Professional Bodies

1. *Editing*
2. *Reviewing*  
*Nucleic Acids Research, Cell Reports, Nature Communications, PLoS journals, BMC journals.*
3. *Advisory Committees and Boards*  
  
*Research Council, IMTech, Chandigarh*  
*Scientific Advisory Committee, NCCS, Pune*

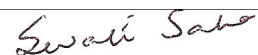
*PG Board of Studies in Microbiology, Maharshi Dayanand University, Rohtak*  
*PG Board of Studies in Bioinformatics and Computational Biology, Pondicherry University, Puducherry*

4. *Memberships*

Association of Microbiologists of India  
Society of Biological Chemists of india  
International Society of Protistologists

5. *Office Bearer*

Other Activities



Signature of Faculty Member