

## Curriculum Vitae

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**Name:** Surajit Sarkar  
**Designation:** Professor  
**Institution:** University of Delhi (South Campus), India  
**Address:** Department of Genetics  
University of Delhi South Campus  
Benito Juarez Road  
New Delhi-110 021  
India  
**Telephone:** +91-11- 24112503 (Ext. 325) Lab  
**Fax:** +91-11-24112761  
**Email:** [sarkar@south.du.ac.in](mailto:sarkar@south.du.ac.in); [sarkar.surajit@gmail.com](mailto:sarkar.surajit@gmail.com)

### Education:

Degree	Year	Institution	Division	Subjects
B.Sc. (Hons)	1999	Banaras Hindu University	First	Botany (Hons.) Industrial microbiology Chemistry
M.Sc.	2001	Banaras Hindu University	First	Molecular and Human Genetics
Ph.D	2007	Banaras Hindu University	<b>Thesis title:</b> Studies on the role of <i>Hsp60C</i> in development and fertility in <i>Drosophila melanogaster</i> . (Area: Developmental Genetics, Broad Subject: Zoology)	

### Career profile:

Organization	Designation	Duration
Professor	University of Delhi (South Campus)	2022 - continuing
Associate Professor	University of Delhi (South Campus)	2019 - 2022
Visiting Associate	California Institute of Technology (Caltech), California, USA	2010 - 2011
Assistant Professor	University of Delhi (South Campus)	2007 - 2019

### **Academic/research awards:**

1. Excellence Award for In-Service Teachers of University of Delhi -2019.
2. Innovative Young Biotechnologist Award-2017 (IYBA-2017), Department of Biotechnology (DBT), Government of India, New Delhi.
3. DST-BOYSCAST Fellow (2009-10), Department of Science and Technology (DST), Government of India, New Delhi.
4. Young Scientist Award (2009), Department of Science and Technology (DST), Government of India, New Delhi.
5. Junior/Senior Research Fellowship Award (2002-07), (CSIR-NET) Council of Scientific and Industrial Research (CSIR), Government of India, New Delhi.

### **Research publications:**

1. Nisha, Sarkar S. (2022) Downregulation of *glob1* mitigates human tau mediated neurotoxicity by restricting heterochromatin loss and elevating the autophagic response in *Drosophila*. Mol Biol Rep. 49:6581-6590. doi: 10.1007/s11033-022-07498-8. (Impact factor: 2.742)
2. Aggarwal P, Thapliyal D, Sarkar S. (2022) The past and present of *Drosophila* models of traumatic brain injury. J Neurosci Methods. 371:109533. doi: 10.1016/j.jneumeth.2022.109533. (Impact factor: 2.987)
3. Nisha, Sarkar S. (2021) Downregulation of *glob1* suppresses pathogenesis of human neuronal tauopathies in *Drosophila* by regulating tau phosphorylation and ROS generation. Neurochem Int. 146:105040. doi: 10.1016/j.neuint.2021.105040. (Impact factor: 4.297)
4. Pragati, Sarkar S. (2021) Shaggy functions downstream of dMyc and their concurrent downregulation confers additive rescue against tau toxicity in *Drosophila*. Biofactors 47:461-477. doi: 10.1002/biof.1721. (Impact factor: 6.438)
5. Tandon S, Sarkar S. (2021) The S6k/4E-BP mediated growth promoting sub-pathway of insulin signalling cascade is essential to restrict pathogenesis of poly(Q) disorders in *Drosophila*. Life Sci. 275:119358. doi: 10.1016/j.lfs.2021.119358. (Impact factor: 6.78)
6. Tandon S, Aggarwal P, Sarkar S. (2021) Applications of electron microscopy in *Drosophila* neurobiology research. Indian J Biochem Biophys. 58: 334-343. (Impact factor: 1.476)
7. Aqsa, Sarkar S. (2021) Age dependent trans-cellular propagation of human tau aggregates in *Drosophila* disease models. Brain Res. 1751:147207. doi: 10.1016/j.brainres.2020.147207. (Impact factor: 3.61)
8. Klionsky DJ,...Sarkar S...et al. (2021) Guidelines for the use and interpretation of assays for monitoring autophagy (4<sup>th</sup> edition). Autophagy. 17:1-382. (International

Autophagy Consortium) doi: 10.1080/15548627.2020.1797280.  
(Impact factor: 16.016)

9. Pragati, Chanu SI, Sarkar S. (2020) Reduced expression of dMyc mitigates TauV337M mediated neurotoxicity by preventing the Tau hyperphosphorylation and inducing autophagy in *Drosophila*. *Neurosci Lett.* 715:134622. doi: 10.1016/j.neulet.2019.134622. (Impact factor: 3.197)
10. Nisha, Aggarwal P, Sarkar S. (2019) Adequate expression of Globin1 is required for development and maintenance of nervous system in *Drosophila*. *Mol Cell Neurosci.* 100:103398. doi: 10.1016/j.mcn.2019.103398. (Impact factor: 4.626)
11. Raj K, Sarkar S. (2019) Tissue-specific upregulation of *Drosophila* insulin receptor (InR) mitigates poly(Q)-mediated neurotoxicity by restoration of cellular transcription machinery. *Mol Neurobiol.* 56:1310-1329. doi: 10.1007/s12035-018-1160-3. (Impact factor: 5.682)
12. Yadav R, Nisha, Sarkar S. (2018) *Drosophila* globin1 is required for maintenance of the integrity of F-actin based cytoskeleton during development. *Exp Cell Res.* 366:16-23. (Cover page article) doi: 10.1016/j.yexcr.2018.03.005. (Impact factor: 4.145)
13. Sarkar S. (2018) Neurofibrillary tangles mediated human neuronal tauopathies: insights from fly models. *J. Genet.* 97:783-793. doi: <https://doi.org/10.1007/s12041-018-0962-4> (Impact factor: 1.508)
14. Chanu SI, Sarkar S. (2017) Targeted downregulation of dMyc restricts neurofibrillary tangles mediated pathogenesis of human neuronal tauopathies in *Drosophila*. *Biochim Biophys Acta Mol Basis Dis.* 1863:2111-2119. doi: 10.1016/j.bbadis.2017.05.017. (Impact factor: 6.633)
15. Raj K, Sarkar S. (2017) Transactivation domain of human c-Myc is essential to alleviate poly(Q)-mediated neurotoxicity in *Drosophila* disease models. *J Mol Neurosci.* 62:55-66. doi: 10.1007/s12031-017-0910-4. (Impact factor: 2.866)
16. Chanu SI, Sarkar S. (2017) Targeted downregulation of dMyc suppresses pathogenesis of human neuronal tauopathies in *Drosophila* by limiting heterochromatin relaxation and tau hyperphosphorylation. *Mol Neurobiol.* 54:2706-2719. doi: 10.1007/s12035-016-9858-6. (Impact factor: 5.682)
17. Yadav R, Sarkar S. (2016) *Drosophila* glob1 is required for the maintenance of cytoskeletal integrity during oogenesis. *Dev Dyn.* 245:1048-1065. doi: 10.1002/dvdy.24436. (Impact factor: 2.842)
18. Yadav R, Kundu S, Sarkar S. (2015) *Drosophila* glob1 expresses dynamically and is required for development and oxidative stress response. *Genesis* 53:719-737. (Cover page article) doi: 10.1002/dvg.22902. (Impact factor: 2.389)
19. Singh MD, Raj K, Sarkar S. (2014) *Drosophila* Myc, a novel modifier suppresses the poly(Q) toxicity by modulating the level of CREB binding protein and histone acetylation. *Neurobiol. Dis.* 63:48-61. doi: 10.1016/j.nbd.2013.11.015. (Impact factor: 7.046)

20. Gupta R, Sarkar S, Srivastava S. (2014) In vivo toxicity assessment of antimicrobial peptides (AMPs LR14) derived from *Lactobacillus plantarum* strain LR/14 in *Drosophila melanogaster*. *Probiotics Antimicrob Proteins*. 6:59-67. doi: 10.1007/s12602-013-9154-y. (Impact factor: 5.265)
21. Sarkar S, Singh MD, Yadav R, Pittman GW. (2011) Heat shock proteins: molecules with assorted functions. *Front. Biol.* 6:312-327. doi: <https://doi.org/10.1007/s11515-011-1080-3>
22. Sarkar S, Lakhotia SC. (2008) Hsp60C is required in follicle as well as germline cells during oogenesis in *Drosophila melanogaster*. *Dev Dyn*. 237:1334-1347. (Cover page article) doi: 10.1002/dvdy.21524. (Impact factor: 2.842)
23. **Sarkar S**, Lakhotia SC. (2005) The Hsp60C gene in the 25F cytogenetic region in *Drosophila melanogaster* is essential for tracheal development and fertility. *J. Genet.* 84: 265-281. doi: 10.1007/BF02715797. (Impact factor: 1.508)

### Book chapters:

1. Pragati, Tandon S, Aqsa, Aggarwal P, **Sarkar S**. (2022) *Drosophila melanogaster*: An immaculate model for glial research. In: *The Biology of Glial Cells: Recent Advances*. Eds. Patro et al. Springer Nature Publication (ISBN 978-981-16-8312-1).
2. Aggarwal P, **Sarkar S**. (2021) A rapid assessment of neuromuscular performance of *Drosophila* larvae. In: *Experiments with Drosophila for Biology Courses*. Eds. Lakhotia, SC. Ranganath, HA. Published by Indian Academy of Sciences, Bangalore. (ISBN 978-81-13-950664-2-1).
3. Nisha, Raj K, Pragati, Tandon S, Chanu SI, Aggarwal P, **Sarkar S**. (2020) Aging: reading, reasoning and resolving using *Drosophila* as a model system. In: *Models, Molecules and Mechanisms in Biogerontology*. Eds. Rath, PC. Springer Nature Publication (ISBN 978-981-13-3585-3).
4. Nisha, Pragati, Tandon S, Aqsa, Aggarwal P, **Sarkar S**. (2019) Tau, tangles and tauopathies: Insights from *Drosophila* disease models. In: *Insights into Human Neurodegeneration: Lessons Learnt from Drosophila*. Eds. Mutsuddi M., and Mukherjee, A., Springer Nature Publication (ISBN 978-981-13-2217-4).
5. Yadav R, Chanu SI, Raj K, Nisha, **Sarkar S**. (2016) *Drosophila melanogaster*: A prime experimental model system for aging studies. In: *Topics in Biomedical Gerontology*; Eds. P.C. Rath, R. Sharma, S. Prasad. Springer Nature Publication. (ISBN- 978-981-10-2154-1).
6. **Sarkar S**, Arya R, Lakhotia SC. (2006) Chaperonins: in life and death. In: *Stress Responses: A Molecular Biology Approach*. Eds. Sreedhar AS, Srinivas UK. Research Signpost Publication. (ISBN: 81-308-0109-4).

### Other published popular articles:

1. **Sarkar S.** (2008). Stem Cell research in *Drosophila*. Cell Biology Newsletter, 28:13-15. (ISSN No. 2349-8307)
2. Raj K and **Sarkar S.** (2013) A fruitful approach in fruit fly: Modelling human neurodegenerative disorders in *Drosophila*. Cell Biology Newsletter 32:11-16. (ISSN No. 2349-8307)

### Patent filed:

1. **Sarkar S**, Nisha, Pragati, Tandon S, Aggarwal P., and Department of Biotechnology, and University of Delhi (2021) *Drosophila* based method for screening compounds that restrict trans-cellular propagation of neurotoxic tau aggregates (patent application filed with complete technical specifications: (Ref no.- TEMP/E-1/19325/2021-DEL, dated: 14.04.2021)

### Papers presented/published in conferences/symposia:

1. Pragati, **Surajit Sarkar** (2022) Exploring the role of shaggy and *dmyc* in development of combination therapy against human neuronal tauopathies in *Drosophila*. 63<sup>rd</sup> *Drosophila* Research Conference, Genetics Society of America (GSA), April 6-10, 2022, at San Diego, USA. Poster abstract no. 982C. (Pragati Received Travel grants form DST and DBT to attend the conference).
2. Perna Aggarwal, **Surajit Sarkar** (2021) The role of *Drosophila* Toll-mediated immune pathway in mitigating tauopathy (Abstract no. P85). Indian *Drosophila* research meeting (InDRC 2021), IISER, Kolkata, India. 13-17 December, 2021.
3. Shweta Tandon, **Surajit Sarkar** (2021) The growth promoting branch of insulin signalling pathway, mediated by S6k/4E-BP, plays the major role in mitigating the poly(Q) pathogenesis in *Drosophila* models (Abstract no. P83). Indian *Drosophila* research meeting (InDRC 2021), IISER, Kolkata, India. 13-17 December, 2021.
4. Nisha, **Surajit Sarkar** (2021) Downregulation of *glob1* attenuates pathogenesis of human neuronal tauopathies in *Drosophila* by regulating tau phosphorylation and ROS generation (Abstract no. P44). Indian *Drosophila* research meeting (InDRC 2021), IISER, Kolkata, India. 13-17 December, 2021.
5. Pragati, Aqsa, **Surajit Sarkar** (2020) Tau, tangles and neurodegeneration: Insights from *Drosophila*. (Abstract no. P153). 5<sup>th</sup> Asia Pacific *Drosophila* Research Conference and 4<sup>th</sup> Indian *Drosophila* Research Conference. 6-10 January 2020. IISER, Pune, India.
6. Pragati, **Surajit Sarkar** (2020) Exploring the role of shaggy and *dmyc* in development of combination therapy against human neuronal tauopathies. National Science Day Symposium -2020. UDSC. (**Pragati won the best platform presentation award**)

7. Aqsa, **Surajit Sarkar** (2019) Studies on the in-depths of the pathogenesis of tauopathies in *Drosophila* disease model. (Abs no. P013) XLIII All India Cell Biology Conference 2019. 19-21 December, 2019. IISER Mohali (Punjab).
8. Prerna Aggarwal, Nisha, **Surajit Sarkar** (2019) Role of *Drosophila* globin1 in development and maintenance of nervous system. (Abs no. P089) XLIII All India Cell Biology Conference 2019. 19-21 December, 2019. IISER Mohali (Punjab). (*Ms. Prerna Aggarwal won Prof. Mansi Ram Award for Best Poster Presentation*).
9. Shweta Tandon, **Surajit Sarkar** (2019) The growth promoting property of insulin signalling pathway is essential to restrict the poly(Q) induced neurodegeneration in *Drosophila*. (Abstract no. BGP 6). 19th Biennial Conference of the Association of Gerontology (India) & Multi-Disciplinary Workshops on Emerging Scenario of Population Ageing, AIIMS, New Delhi. (*Ms. Shweta Tandon won the best poster award of the conference*).
10. **Surajit Sarkar** (2019) Reduced level of Myc suppresses Neurofibrillary tangles (NFTs) mediated pathogenesis of human neurodegenerative tauopathies in *Drosophila*. Regional Young Investigator Meeting (R-YIM), NIPGR, New Delhi. (Abstract no. 15). Date 6-7 August, 2019.
11. Nisha and **Surajit Sarkar** (2018) *Drosophila glob1* is essential for development of nervous system. 60<sup>th</sup> Annual *Drosophila* Research Conference of Genetics Society of America (March 27–31, 2019), Dallas, Texas, USA. (Abstract No. 669)
12. Nisha and **Surajit Sarkar** (2018) Indispensable role of globin1 in development and maintenance of the nervous system in *Drosophila*. XLII All India Cell Biology Conference and 2nd International Conference on Trends in Cell and Molecular Biology (December 21-23, 2018), BITS-Pilani, Goa Campus. (Oral presentation Abs. No. 4) (*Nisha won Prof. A. S. Mukherjee award for best platform presentation*).
13. Shweta Tandon and **Surajit Sarkar** (2018) the growth promoting activity of Inr is essential for the tissue specific suppression of poly(Q) induced toxicity in *Drosophila*. XLII All India Cell Biology Conference and 2nd International Conference on Trends in Cell and Molecular Biology (December 21-23, 2018), BITS-Pilani, Goa Campus. (Abs. No. P038).
14. Pragati and **Surajit Sarkar** (2018) Deciphering the role of Shaggy in DMyc mediated mitigation of human neuronal tauopathies in *Drosophila*. XLII All India Cell Biology Conference and 2nd International Conference on Trends in Cell and Molecular Biology (December 21-23, 2018), BITS-Pilani, Goa Campus. (Abs. No. P037).
15. **Surajit Sarkar** (2018) Neurofibrillary tangles (NFTs) mediated conserved mechanism of the pathogenesis of neuronal tauopathies in human and *Drosophila*. 10th Young Investigators' Meetin-2018 (YIM-2018), 5<sup>th</sup> to 8<sup>th</sup> March 2018; Thiruvananthapuram.
16. Nisha and **Surajit Sarkar** (2018) *Drosophila glob1* is required for the development of nervous system. (Abstract No. P526-20180565-S; 27-31 January, 2018; International Congress of Cell Biology, 2018-CCMB)

17. Pragati, Soram Idiyasan Chanu and **Surajit Sarkar** (2018) Neurofibrillary Tangles (NFTs) mediated pathogenesis of human neuronal tauopathies in *Drosophila* could be restricted by tissue specific downregulation of dMyc. (P285 – 20180566 -S; 27-31 January, 2018; International Congress of Cell Biology 2018-CCMB).
18. Kritika Raj and **Surajit Sarkar** (2016) Tissue specific overexpression of c-myc mitigates human poly(Q) induced neurodegeneration in *Drosophila* disease model. (July 13-17, 2016), The Allied Genetics Conference (Genetics Society of America), Orlando World Center Marriott, Florida, USA. (Abstract no. D1380B) (*Ms. Kritika received prestigious TAGC Gates Foundation Travel Award-2016, and DST-travel award to attend and present the poster in the conference*)
19. Soram Idiyasan Chanu and **Surajit Sarkar** (2015) Human Tau-mediated neurodegeneration in *Drosophila* in caused neurofibrillary tangles which could be alleviated by downregulation of dMyc. (21-23 December 2015, IIT-Kanpur, India) (Abstract no. P-45).
20. Kritika Raj and **Surajit Sarkar** (2015) Targeted upregulation of human c-Myc alleviates poly(Q) mediated neurotoxicity in *Drosophila* disease model (21-23 December 2015, IIT-Kanpur, India) (Abstract no. P-45).
21. Nisha and **Surajit Sarkar** (2015) *Drosophila* globin: a novel suppressor of human Tau mediated neurodegeneration and cellular toxicity. The XXXIX All India Cell Biology Conference on cellular organization and dynamics. (6-8 December, 2015, IISR-Trivandrum, India) (Abstract No. -056).
22. M. Dhruva Singh, Kritika Raj and **Surajit Sarkar** (2015) Myc proto-oncogene, a novel genetic modifier suppresses human poly(Q) induced neurotoxicity by modulating the level of global histone acetylation in *Drosophila*. DBT-Young Investigator meeting (from 27.03.2015 to 01.04.2015), Srinagar, Jammu & Kashmir, India. (Abs no. 108).
23. M. Dhruva Singh and **Surajit Sarkar** (2014) Myc proto-oncogene: A Novel suppressor of Human poly(Q) disorders. XXXVIII All India cell Biology Conference (December 10-12, 2014), CDRI, Lucknow. (Abstract no. P041).
24. Soram Idiyasan Chanu and **Surajit Sarkar** (2014) A Novel approach to suppress human Tauopathies in *Drosophila* disease model. XXXVIII All India cell Biology Conference (December 10-12, 2014), CDRI, Lucknow. (Abstract no. P026).
25. Renu Yadav and **Surajit Sarkar** (2014) Decoding the functional significance of Hemoglobin1 (glob1) in *Drosophila*. XXXVIII All India cell Biology Conference (December 10-12, 2014), CDRI, Lucknow. (Abstract no. P025).
26. Kritika Raj and **Surajit Sarkar** (2014) Modulation of insulin signalling alleviates poly(Q) mediated neurotoxicity in *Drosophila*. XXXVIII All India cell Biology Conference (December 10-12, 2014), CDRI, Lucknow. (Abstract no. P024).
27. Renu Yadav, Suman Kundu and **Surajit Sarkar** (2014) Deciphering the role of multiple globin1 in *Drosophila*. XVIII International meeting “Oxygen-binding and sensing proteins”. 6-10 July 2014, University of Sheffield, Sheffield, UK. (Abstract no. P24).

28. Soram Idiyasan Chanu and **Surajit Sarkar** (2013) Identification of *Drosophila myc* (a human homolog of c-myc) as a novel genetic modifier of human Tauopathies. 37<sup>th</sup> All India Cell Biology Conference and Symposium on Cell dynamics and Cell fate, Indian Institute of Science, Bangalore. (Abstract no. P48).
29. Soram Idiyasan Chanu and **Surajit Sarkar** (2013) Identification of *Drosophila myc* (a human homolog of c-myc) as a novel genetic modifier of human Tauopathies. SYSCON-2013, AIIMS, New Delhi. (Abstract no. P16).
30. **Surajit Sarkar**, Goeff W. Pittman and Bruce A. Hay (2011) Engineering the Medea element: A Synthetic Maternal-Effect Selfish Genetic Element that Drives Population Replacement (Abs. no. 91) XXXV All India Cell Biology Conference and Symposium on Membrane Dynamics & Disease-2011. NISER, Bhubneswar, Orrisa.
31. M. Dhruva Singh and **Surajit Sarkar** (2009) Studies on the role of Fork Head Transcription Factor (dFoxO) in neurogenesis in *Drosophila*. (Abs. no. P137) 32<sup>nd</sup> All India Cell Biology Conference-2009.

**Symposium/training courses organized/ co-organized:**

1. Co-organizer, Indian *Drosophila* research meeting (InDRC-2021), IISER-Kolkata, India. 13-17 December, 2021.
2. Co-organizer, symposium on “Frontiers in Biology” 16<sup>th</sup> of March, 2012, University of Delhi, South Campus, New Delhi-110021.
3. Convener: Refresher Course on Life Sciences (2013), University of Delhi, South Campus, New Delhi-110021.
4. International Symposium and Training Course on Spectral Laser Scanning Confocal Microscopy (Sponsored by Leica Microsystems, USA), 2009-10, CIF-Biotech Centre, University of Delhi, South Campus, New Delhi-110021, India

**Invited lectures/ chairing/co-chairing scientific sessions:**

1. Chaired a session “Signalling in Development and Diseases” in Indian *Drosophila* Research meeting-2021 (13-17 December, 2021), organised by Indian Institute of Science Education and Research, Kolkata.
2. Invited talk in Indian Academy of Neurosciences (IAN) Society Meeting (December 16 –19, 2021). Title: Excavating trans-cellular propagation of human tau aggregates in *Drosophila* disease models. Indian Institute of Science Education and Research, Kolkata.
3. Invited talk in Bethun College, Kolkata on the occasion of the 'World Creativity and Innovation Day' 21<sup>st</sup> April 2021.
4. Invited talk at XLIII All India Cell Biology Conference 2019, IISER Mohali. Title: Novel strategies to mitigate human poly(Q) mediated neurotoxicity in *Drosophila* disease models. Date 21.12.2019.

5. Invited talk at 19th Biennial Conference of the Association of Gerontology (India) & Multi-Disciplinary Workshops on Emerging Scenario of Population Ageing, AIIMS, New Delhi. Title- Finding novel approaches to restrict the pathogenesis of age-onset human poly(Q) disorders in *Drosophila* disease models. Date 18.08.2019.
6. Invited talk in 3<sup>rd</sup> Madras Medical Mission (MMM) Genetics Meeting (3MGM2018), The Madras Medical Mission, Chennai, India (07.09.2018) (Title of the talk: Excavating pragmatic drug targets to suppress the pathogenesis of poly(Q) mediated neurodegenerative disorders).
7. Invited Talk, Refresher Course in Basic Sciences (Interdisciplinary), Jamia Milia Islamia University, New Delhi. (27.09.2018). (Title of the talk: Screening and characterization of drug targets to mitigate the pathogenesis of human poly(Q) neurodegenerative disorders)
8. Invited talk, International Congress of Cell Biology (27-31 January, 2018) - CCMB, Hyderabad, Title of the talk: Tau, tangles, and tauopathies in *Drosophila* disease models.
9. Invited talk in 3<sup>rd</sup> Indian *Drosophila* research Conference (6 to 9 December 2017; Indian Institute of Science Education & Research (IISER), Bhopal.
10. Invited talk in National symposium sum Bioinformatic workshop current trends in Proteomics and Bioinformatics (March 16, 17, 2017) at Aligarh Muslim University (AMU) (Title of the talk- *c-myc* proto-oncogene, a novel target to mitigate the pathogenesis of human poly(Q) disorders).
11. Invited talk in Symposium on Gene-Environment Interaction in disease, development and evolution (March, 5-6, 2017) at Banaras Hindu University. (Title of the talk- Excavating amicable molecular targets to curb Neurofibrillary Tangles (NFT) mediated pathogenesis of human neuronal tauopathies in *Drosophila*).
12. Invited talk in brain storming session on Glial Cells in Health and disease (2-3 February, 2017) at School of Studies in Neuroscience, Jiwaji University, Gwalior-474011) Title of the talk- “Studies on the role of glial cells in progression of human neurodegenerative disorders and aging mediated neuronal impairments in *Drosophila*”.
13. Invited talk in XIXth International meeting on Oxygen binding and sensing proteins (XIXth O2BIP) during 11.09.2016 to 14.09.2016 at University of Hamburg, Hamburg, Germany. (Title of the talk-*Drosophila* glob1 is required for development and oxidative stress response)
14. Invited talk in workshop on “Confocal Microscopy and Live Cell Imaging” held on 11th - 12th August, 2016 in Advanced Instrumentation Research Facility (AIRF) Centre, Jawaharlal Nehru University, New Delhi, on 11<sup>th</sup> August, 2016.
15. Invited talk at Faculty of Life Sciences and Biotechnology, South Asian University, New Delhi, on January 19, 2016.

16. Invited lecture in Biennial Indian *Drosophila* Research Conference (20-23 December 2015, IIT-Kanpur, India. Abstract no. S23. (Title of the talk: It is not over with Oxygen: Excavating the role of *Drosophila* glob1 beyond oxygen management)
17. Invited lecture in DBT Star college symposium at Department of Zoology, Hansraj College (DU), Delhi.
18. Invited lecture in DBT Star college symposium at Department of Botany, Ramjas College (DU), Delhi.
19. Invited lecture in UGC sponsored Refresher Course in life sciences (05.02.2015) organized by Academic Staff College, Jawaharlal Nehru University (JNU), New Delhi.
20. Invited lecture in “Fly Meeting-2014” at Banaras Hindu University, Varanasi (on 12 and 13 March, 2014)
21. Invited lecture in workshop organized by Advanced Instrumentation Research Facility during 27.01.2014 to 29.01.2014 at Jawaharlal Nehru University (JNU), on New Delhi.
22. Invited lecture in UGC sponsored Refresher Course in life sciences (13.01.2014-07.02.2014) organized by Academic Staff College, Jawaharlal Nehru University (JNU), New Delhi.
23. Invited lecture in International Symposium on Karyotype to Haplotype and Beyond - Banaras Hindu University, Varanasi, 8-10 December, 2013.
24. Invited Lecture in “Biospark 2009” at Jawahar Lal Nehru University (JNU), New Delhi, India.

**Administrative experience/university services:**

1. Served as warden, Aravali Men’s P. G Hostel, University of Delhi, South Campus, New Delhi-110 021. (2015-2019).
2. Served as warden, Saramati Men’s P. G Hostel, University of Delhi, South Campus, New Delhi-110 021. (2018-2019).
3. Served as resident tutor, Aravali Men’s P. G Hostel, University of Delhi, South Campus, New Delhi-110 021. (2012-2015).
4. Served as resident tutor, Aravali Men’s P. G Hostel, University of Delhi, South Campus, New Delhi-110 021. (2009-2010).
5. Served as Chancellor’s Nominee in selection committee for university teaching posts in Department of Genetics, Maharshi Dayanand University, Rohtak, Haryana.
6. Served as a Member of Selection/interview Committee for selection of teaching posts in University and several affiliated colleges.
7. Served as a Member, Committee to design and implement guidelines/proforma for promotion/recruitments under Carrier Advancement Scheme-2010 (CAS-2010), University of Delhi.

8. Served as a member of Monitoring Committee (2017) for pursuance of the recommendations of the Parliamentary Committee, University of Delhi.
9. Served as a member of Departmental Promotion Committee for preparation of the panel of Group B (Ministerial/Secretarial staffs), University of Delhi.
10. Member (2010-2013), BRS, Faculty of Inter-Disciplinary and Applied Sciences, University of Delhi, South Campus, New Delhi.
11. Member, Grievance Redressal Committee of South Campus Colleges, University of Delhi, Delhi-110007.
12. Member, Committee to streamline the process of Centralized Hostel Admissions.
13. Served as coordinator of the flying squad during (2015-16) to prevent usages of unfair means during undergraduate semester examination in DU-South Campus colleges.
14. Member, South Campus Central Instrumentation Facility (CIF) management committee.
15. Teacher in-charge, Confocal Microscopy facility at University of Delhi South Campus Central Instrumentation Facility.
16. Served/serving as centre observer for online examination of National DBT-Junior Research Fellowship (JRF) award examination, Department of Biotechnology, Government of India.
17. Member, interview committee for final selection of students under “Kishore Vaigyanik Protsahan Yojana”- (2018), Ministry of Science and Technology, Government of India.
18. Member, National Committees to design curriculum for master courses in Medical Biotechnology and Molecular and Human Genetics for Indian institutions (2017), Department of Biotechnology, Government of India.
19. Member, Selection Committee (2018), DBT- Newton- Bhabha Indo-UK PhD-placement programme. Department of Biotechnology, Government of India.
20. Member, Committee for selection of “DBT- Biotechnology Career Advancement and Re-orientation Programme (Bio-CARe)”-2018, Department of Biotechnology, Government of India.
21. Member, Committee for CSIR/UGC-National Eligibility Test (NET-LS/JRF)-2019, Council of Scientific and Industrial Research (CSIR), Government of India.
22. Member, Committee for setting-up question paper for National DBT-Junior Research Fellowship (JRF) award examination-2019, Department of Biotechnology (DBT), Government of India.
23. Special Invite as a member of the Second meeting of the Technical Expert Committee (TEC) on Chronic Disease Biology (CDB) on 26<sup>th</sup> to 28<sup>th</sup> August 2019, Department of Biotechnology (DBT), Government of India, New Delhi.

24. Member, Committee for setting-up question paper for National DBT - Biotech Industrial Training Programme (BITP) 2019-20, on 21<sup>st</sup> to 23<sup>rd</sup> August, 2019, Department of Biotechnology (DBT), Government of India.
25. Serving as member BRS (2019-continuing), Faculty of Inter-Disciplinary and Applied Sciences, University of Delhi, South Campus, New Delhi.
26. Members, Committee for selection of students under “Kishore Vaigyanik Protsahan Yojna (KVPY)”, (2018, 2019), Ministry of Science and Technology, Government of India, New Delhi.
27. Member, National committees to design curriculum for Master’s courses (.M.Sc) in Medical Biotechnology and Molecular and Human Genetics for Indian institutions (2017), Department of Biotechnology (DBT), Government of India, New Delhi.
28. Member, Neurobiology Task force- Department of Biotechnology (DBT), Government of India, New Delhi (2018-20).
29. Member, task force for selection of DBT-Star College, Department of Biotechnology (DBT), Government of India, New Delhi (2019-).
30. Expert member, CSIR-National Eligibility Test (CSIR-NET JRF/LS) in Life Sciences subject, Council of Scientific and Industrial Research (CSIR), New Delhi (2018-).

**Professional affiliations:**

- Executive member: Indian Society of Cell Biology (2019- present)
- Served as Treasurer: Indian Society of Cell Biology (2017- 2019)
- Life member: Indian Society of Cell Biology.
- Member: Indian Society of Developmental Biologists.
- Life member: Indian Society of Translational Research.

**Research interests:**

Our research interest is primarily focused on to unravel the cellular and molecular basis of human neurodegenerative disorders such as Huntington’s disease, Alzheimer’s disease, Parkinson’s diseases, Spinocerebellar ataxia etc. by utilizing *Drosophila* disease models. We also utilize the fly models of human neurodegenerative disorders to identify druggable genetic target(s) and drug molecules which could efficiently restrict pathogenesis these devastating human illnesses. In addition, we are also interested to study the developmental relevance of the multiple *globin* genes in *Drosophila*.

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