

## Bhavana Muralidharan

Assistant Investigator (Professor)  
DBT/Wellcome Trust India Alliance  
Intermediate fellow

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### Professional Appointments

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October 2019 onwards	<b>Assistant Investigator</b> and DBT/Wellcome Trust India Alliance <b>Intermediate Career fellow</b> , Institute for Stem Cell Science and Regenerative Medicine (inStem)
2017- 2019	<b>Postdoctoral fellow</b> , Mentor: Prof Adrian Isaacs, UK-Dementia Research Institute at UCL, London
2010- 2017	<b>Postdoctoral fellow</b> and Wellcome Trust/DBT India Alliance Early Career fellow, Mentor: Prof Shubha Tole, TIFR, Mumbai, India

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### Educational qualifications

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2009	PhD, Advisor: Dr Vasudevan Seshadri, National Centre for Cell Science, Pune, India
2004	M.Tech, Biotechnology, Distinction, Gold Medalist, GGSIP University, Delhi, India
2003	B.Tech, Biotechnology, First Class, Silver Medalist, GGSIP University, Delhi, India

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### Awards/Honors

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2023	Interviewed as part of ' <a href="#">Transitions in Development</a> ' series of the journal " <b>Development</b> ", which aims to promote prominent, early-to-mid career level developmental biologists
2022	<b>Japanese Neuroscience Society Travel Award</b> to attend JNS 2022, Okinawa, Japan
2021	<b>Har Gobind Khorana- Innovative Young Biotechnologist Award</b> from Department of Biotechnology, Ministry of Science and Technology, Government of India
2016	<b>IBRO/SFN</b> travel award to attend SFN 2016, USA
2004	Gold Medalist, M.Tech, Biotechnology
2003	Silver Medalist, B.Tech, Biotechnology

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### Research grants and fellowships funded

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2021-2024	Har Gobind Khorana- Innovative Young Biotechnologist Award cum grant from DBT
2021-2022	Start-up Research grant from DST-SERB, PI
2020-2024	DBT/Wellcome Trust India Alliance Intermediate Career fellowship, PI
2020	EMBO and DBT/Wellcome Trust India Alliance funding for organizing 2023 India   EMBO Lecture Course on "Modeling development and disease with human tissue organoids" (co-organiser)
2011-2017	Wellcome Trust DBT India Alliance Early Career Fellowship (Independent postdoc grant),
2004-2009	Council for Scientific and Industrial Research (CSIR) PhD Scholarship

## Selected Talks and Posters – 2019 onwards

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- 04/2023 Invited speaker at the **International Genomics Analysis and Technology conference** at inStem, Bangalore, India
- 03/2023 Invited speaker at the Frontiers in Biology Symposia organized by IISER Trivandrum, India
- 02/2023 Oral talk at the **India EMBO lecture course** on Organoids, inStem, Bangalore, India
- 01/2023 Invited speaker at the Chromatin, RNA and Genome meeting at IISc, Bangalore, India
- 12/2022 Invited symposium talk (Symposium Topic “Multiple facets of Neurodevelopmental Disorders”) at the Annual Meeting of **Indian Academy of Neurosciences**, Shillong, Meghalaya, India
- 11/2022 Shortlisted oral talk at the **International EMBO workshop** on Neurodevelopmental disorders, JNCASR, Bangalore, India
- 07/2022 Shortlisted oral talk at the **Annual Meeting of the Japan Neuroscience Society**, Okinawa, Japan
- 03/2022 Virtual talk at the one-day symposium for brain awareness week organized by inStem
- 08/2021 Virtual talk at the **International Brain Research Organization - Asia Pacific Regional Committee (IBRO APRC) School**, Kathmandu, Nepal
- 01/2021 Virtual Talk at the **Project Encephalon** -international student run neuroscience interest group
- 12/2020 Science talk at the virtual “**Life Science Across the Globe seminar series**” organised by **HHMI, Janelia research campus**, USA
- 12/2019 Invited talk at the **Heidelberg University**, Germany

## Publications –2020 onwards as independent PI, \* Corresponding author

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1. D’Souza L<sup>#</sup>, Chanakkar, A<sup>#</sup>, **Muralidharan B\***. “Chromatin remodelling complexes in cerebral cortex development and neurodevelopmental disorders” (2021), **Neurochemistry International**, 147, 105055, Article type: Review <https://doi.org/10.1016/j.neuint.2021.105055>, <sup>#</sup> - equal contribution
2. **Muralidharan B\***. “Human *in-vitro* disease models to aid pathway and target discovery for neurological disorders” (2020) in **Translational Biotechnology: A Journey from Laboratory to Clinics**, Yasha Hasija (editor), **Elsevier press**, pp. 81-106, Article type: book chapter
3. **Muralidharan B\***. “Understanding brain development – Indian researchers’ past, present and growing contribution” (2020) **The International Journal of Developmental Biology**, 64: 123 – 132, Article type: Review/survey <http://www.ijdb.ehu.es/web/paper.php?doi=10.1387/ijdb.190204bm>

## Publications – from Postdoc and PhD

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4. Kinare V, Godbole G, Padmanabhan H, Khatri Z, Maheshwari U, **Muralidharan B**, Tole S. “ An evolutionarily conserved Lhx2-Ldb1 interaction regulates the acquisition of hippocampal cell fate and regional identity ” (2020) **Development**, October 19: 147 (20), dev187856, Article type: Research article
5. Wilson KM, **Muralidharan B**, Isaacs AM. “Relax, Don't RAN Translate It” (2019) **Neuron**, Dec 4;104(5):827-829, Article type: Preview article on Cheng et al., 2019, Neuron
6. Clayton EL, Milioto C, **Muralidharan B**, Norona FE, Edgar JR, Soriano A, Jafar-nejad P, Rigo F, Collinge J, Isaacs AM. “Frontotemporal dementia causative CHMP2B impairs neuronal endolysosomal trafficking- rescue by TMEM106B antisense oligonucleotides” (2018) **Brain**, Dec: 141(12):3428-3442, Article type: Research article
7. **Muralidharan B**, D’souza L, Tole S. “An efficient system for gene perturbation in embryonic hippocampal progenitors using ex vivo electroporation followed by in vitro dissociated cell culture” (2018) **Journal of Experimental Neuroscience**, 12: 1-9, Article type: Methods article

8. **Muralidharan B**, Keruzore M Pradhan S.J, Roy B, Shetty A.S, Kinare V, D'souza L, Maheshwari U Karmodiya K, Suresh A, Galande S, Bellefroid E, Tole, S. "Dmrt5, a novel neurogenic factor, reciprocally regulates Lhx2 to control the neuron-glia cell fate switch in the developing hippocampus" **(2017) Journal of Neuroscience**, 37(46):11245-11254, Article type: Research article
9. **Muralidharan B**, Khatri Z, Maheshwari U, Gupta R, Roy B, Pradhan S.J, Karmodiya K, Padmanabhan H, Shetty A, C. H. Balaji, Kolthur-Seetharam U, Macklis J.D, Galande S, Tole S. "Lhx2 interacts with the NuRD complex and regulates cortical neuron subtype determinants *Fezf2* and *Sox11*" **(2017) Journal of Neuroscience**, 37(1): 194-203, Article type: Research article
10. Shetty AS, Godbole G, Maheshwari U, Padmanabhan H, Chaudhary R, **Muralidharan B**, Hou P-S, Monuki ES, Kuo H-C, V Rema, Tole S. "Lhx2 regulates a cortex-specific mechanism for barrel formation" **(2013) PNAS**, 110(50), E4913–E4921, Article type: Research article
11. Subramanian L, Sarkar A, Ashwin S, **Muralidharan B**, Hari P, Piper M, Monuki ES, Bach I, Gronostajski R, Richards R, and Tole, S. "Transcription factor Lhx2 is necessary and sufficient to suppress astrogliogenesis and promote neurogenesis in the developing hippocampus" **(2011) PNAS**, 108 (27) 10937-10938, Article type: Research article
12. Kulkarni S<sup>#</sup>, **Muralidharan B**<sup>#</sup>, Panda A, Bakthavachalu B, Vindu A, Seshadri V. "Glucose Stimulated Translation regulation of insulin by the 5'UTR binding proteins" **(2011) JBC**, 286 (16), 14146-14156 <sup># equal contribution</sup>, Article type: Research article
13. Panda A, Kulkarni S, **Muralidharan B**, Bakthavachalu B, Seshadri V. "Novel splice variant of mouse insulin2 mRNA: Implications for insulin expression" **(2010) FEBS Letters**, 584, 1169-1173, Article type: Research article
14. **Muralidharan B**, Bakthavachalu B, Pathak A, Seshadri V. "A minimal element in 5' UTR of insulin mRNA mediates its translational regulation by glucose" **(2007) FEBS Letters**, 581, 4103-4108, Article type: Research article

## Professional affiliations

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2023- to present	Member of the International Society for Stem Cell Research
2022- to present	Member of The International Society of Neurochemistry
2021- to present	Member of Indian Society for Developmental Biology
2020- to present	Member of the Japanese Neuroscience Society, Japan
2019- to present	Member of the Indian Academy of Neurosciences, India
2016- to present	Member of Society for Neuroscience, USA