Dhananjay Huilgol, Ph.D.
Post-doctoral fellow
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Research Interest
Identifying novel developmental phenomena and understanding their relevance to the evolution and functioning of the brain

Education
2004-2012: Integrated Masters of Science and PhD
Tata Institute of Fundamental Research (TIFR), Mumbai, India
2001-2004: Bachelor of Science (Honours) (Biomedical Science)
University of Delhi, New Delhi, India

Relevant Research Experience
2013-present: Post-doctoral fellow
Understanding the role of cortical progenitors in the specification of projection neuron cell type diversity.
Mentor: Prof. Z Josh Huang
Cold Spring Harbor Laboratory, New York, USA

2004-2012: PhD student and Research Associate
Novel migrations in the developing rodent olfactory system
Mentor: Prof. Shubha Tole
Tata Institute of Fundamental Research, Mumbai, India

Fellowships and Research Support
1. **NARSAD Young Investigator grant** (2018-2020)
Brain and Behavior Research Foundation
2. **Long term Postdoctoral fellowship**
Human Frontiers Science Programme Organization (HFSPO) (2014-2017)
3. **Kishore Vaigyanik Protsahan Yojana (KVPY) fellowship**
Department of Science and Technology, Govt. of India (2001-2004)

Publications
Research Articles
1. Lateral Thalamic Eminence: A Novel Origin for mGluR1/Lot Cells.
Ruiz-Reig N, Andrés B, **Huilgol D**, Grove EA, Tissir F, Tole S, Theil T, Herrera E, Fairén A.
Cerebral Cortex (2016) May 13. pii: bhw126
2. Seizure evoked regulation of LIM genes in the postnatal and adult hippocampus
Lakhina V, Subramanian L, **Huilgol D**, Shetty A, Vaidya VA and Tole S.
F1000Research (2): 205 (2013).
3. Dual origins of the mammalian accessory olfactory bulb revealed by an evolutionarily conserved novel migratory stream.

Huilgol D, Udin S, Shimogori T, Saha B, Roy A, Aizawa S, Hevner RF, Meyer G, Ohshima T, Pleasure SJ, Zhao Y, Tole S.
Nature Neuroscience (16): 157-165 (2013).
4. A stream of cells from the caudal telencephalon reveals a link between the amygdala and neocortex.
Remedios R, **Huilgol D**, Saha B, Hari P, Bhatnagar L, Kowalczyk T, Hevner RF, Suda Y, Aizawa S, Ohshima T, Stoykova A, Tole S.
Nature Neuroscience (9): 1141-50 (2007).
5. Dual role for LIM-HD gene Lhx2 in the formation of the lateral olfactory tract (LOT). Saha B, Hari P, **Huilgol D**, Tole S.
Journal of Neuroscience (27): 2290-2297 (2007).

Reviews

6. Cell migration in the developing rodent olfactory system.
Huilgol D, Tole S.
Cellular and Molecular Life Sciences (73): 2467-90 (2016).
7. Building the Body, Building the Brain.
Chatterjee M, **Huilgol D**, Tole S.
Journal of Indian Institute of Science (92:4): 369-375 (Oct-Dec 2012).

Recommendations/Opinions

8. F1000Prime Recommendation of [Nonaka-Kinoshita M et al., EMBO J 2013, 32(13):1817-28].
F1000Prime, 04 Oct 2013; DOI: 10.3410/f.718122719.793484550.
F1000Prime.com/718122719#eval793484550
Tole S, **Huilgol D**.

In preparation

1. Mechanisms not critical for the migration of accessory olfactory bulb projection neurons
Huilgol D, Tole S
2. Orderly production and deployment of cortical projection neuron types through intermediate progenitors
Huilgol D*, Levine JM*, He M, Wu P, Huang ZJ
(*equal contribution)
3. Differential/distinct roles of direct and indirect neurogenesis in the generation of glutamatergic projection neurons of the cerebral hemisphere
Levine JM*, **Huilgol D***, Huang ZJ
(*equal contribution)

Technical skills

- Designing constructs for targeting ES cells and generating mouse knock-in lines
- *In-vivo* viral injection and tracing – AAV, Rabies tracing
- *In-utero* and *In-vitro* electroporation of DNA into mouse embryos
- Rodent brain cultures – Organotypic cultures, Dissociated neuron cultures
- RNA in-situ hybridization – sections, explants and whole brain/embryo.
- Immunohistochemistry.
- Light sheet microscopy.

• Confocal microscopy.
• Routine molecular biology techniques.
• Computer knowledge – Adobe Photoshop, BLAST, basic Microsoft skills.

Honors and Awards

1. **Invited Panelist on Postdoc fellowship lunch panel**
Cold Spring Harbor Laboratory (2018)

2. **YI Speaker at Young Investigator Meeting**
YIM-Boston (2018)

3. **INSA medal for Young Scientists**
Indian National Science Academy (2018)

4. **Reviewer for the peer reviewed Society for Neuroscience journal "eNeuro"**
[http://www.eneuro.org/] (2017)

5. **Reviewer for the peer reviewed journal "Claustrum"**
[http://www.claustrumresearch.net/index.php/cla] (2016)

6. **Reviewer and member of the Editoral Board for the peer reviewed journal "Science Matters"** [https://sciencematters.io/help/about] (2016)

7. **Graded applications for the summer Undergraduate Research Program (URP)** at Cold Spring Harbor Laboratory (2016-present)

8. **Outstanding Post-doctoral Fellow Poster Prize**
XVIII Annual Symposium Cold Spring Harbor Laboratory (2016)

9. **Associate faculty member of F1000prime**
with Prof. Shubha Tole (2013-2016)

10. **D.M. Kar award for best oral presentation** -
Indian Academy of Neurosciences, Amritsar, India (2012)

11. **Travel awards to present a poster at the Gordon Research Conference (GRC)** titled
"Cell Biology of the Neuron", New Hampshire, USA (2012)
i. Council of Scientific and Industrial Research (CSIR),
ii. Centre for International Co-operation in Science (CICS)
iii. Department of Biotechnology (DBT), Government of India

12. **Selected for a workshop on "Principles and Practice of Light Microscopy"**

National Centre for Biological Sciences (NCBS-TIFR), Bangalore, India (2009)

13. **Travel awards to learn slice cultures and time lapse imaging**
Prof. Kazunori Nakajima's lab, Keio University, Japan (2007)
i. Asia-Pacific Developmental Biology Network (APDBN)
ii. "Sarojini Damodaran fellowship", TIFR Endowment fund

14. **Secured second position in the University of Delhi**, India
Bachelor of Science degree (under graduation) (2004)

Leadership Activities

1. **Elected member of the Post-Doctoral Liaison Committee**
Cold Spring Harbor Laboratory
(career development of post-doctoral fellows)
(represent the needs of the postdoc community to the management and faculty) (2015-2018)

2. **Organizing member of "Demystifying Science at CSHL"**
Seminar series in which postdocs receive training from fellow postdocs to communicate scientific topics to a lay audience, and to improve their organization and presentation skills. (2015)

3. **Student in-charge of "Causerie"**
Informal talks given by students and post docs about their experiments in our department at TIFR (2006-2009)

4. **Member of the student organizing committee**
National symposium on biotechnology,
Acharya Narendra Dev College, University of Delhi (2003)

Posters presented

1. *Molecular Mechanisms of Neuronal Connectivity*
Cold Spring Harbor Laboratory, USA (2018)
2. *Brain & Behavior: Order & Disorder in the Nervous System*
Cold Spring Harbor Laboratory, USA (2018)
3. *Wiring the brain*
Cold Spring Harbor Laboratory, USA (2017)
4. *Society for Neuroscience Annual Meeting*
San Diego, USA (2016)
5. *Big Questions in Neuroscience*
San Diego, USA (2016)
6. *Neuronal Circuits*
Cold Spring Harbor Laboratory, USA (2016)
7. *Cell Biology of the Neuron*
Gordon Research Conference, New Hampshire, USA (2012)
8. *International Society for Developmental Neuroscience (ISDN)*

TIFR, Mumbai, India (2012)
9. *Model Organisms and Stem Cells in Development, Regeneration and Disease*
NCBS-TIFR, Bangalore, India (2008)
10. *Society for Neuroscience Annual Meeting*
Washington DC, US (2008)
11. *Advances in Neurosciences: Molecular and Cellular Basis of Brain Functions and Disorders*
Indian Academy of Neurosciences, Varanasi, India (2007)

Teaching/Mentoring

Teaching Assistant

• *Scientific Reasoning and Logic (SRL) Module: Neuroscience*
Graduate level course (Tutor)
Instructor: Prof. Bo Li, CSHL, USA (2018)

• *Molecular and Cellular Neuroscience*
Graduate level advance course
Instructor: Prof. Vidita Vaidya, TIFR, Mumbai, India (2009)

• *Developmental Neuroscience*
Graduate level course
Instructor: Prof. Shubha Tole, TIFR, Mumbai, India (2007-2008)

• *International Brain Research Organization (IBRO)*
Laboratory series
Asia-Pacific School at TIFR, Mumbai, India (2006)

Invited instructor

• *Scientific Communication and Grant Writing*
Instructors: Prof. Vidita Vaidya (TIFR, India)
Prof. Pankaj Seth (NBRC, India)
Workshop at the Indian Academy of Neurosciences, Amritsar, India (2012)

• *Model systems for developmental genetics*
Graduate level lectures
Center for Excellence in Basic Sciences (CBS),
University of Mumbai, India (2009)

• *Principles of gene cloning*
Graduate level lectures (Research Methodology course)
TIFR, Mumbai, India (2006-2008)

Science Outreach

• *Volunteer scientist at the BioBase*
Teaching science to underprivileged school students
New York City, USA (2015-2017)

• *Brain Development and Neurodevelopmental disorders*
Lecture for school students
Rural parts of the state of Maharashtra, India (2011)

• *Brain Development and Neurodevelopmental disorders*
Lecture for school students
Rotary Club of Dombivali, India (2011)

• *Olfactory perception*
Speaker for public outreach program for X grade students
TIFR, Mumbai, India (2010)

• *Olfactory perception*
Speaker for “Chai and Why?”
[similar to "Cafe Scientifique" in Europe and "Science Cafe" in USA] (2010)

• *Multiple Sclerosis*
Speaker at “Brain Awareness Week” organized by
IBRO at TIFR, Mumbai, India (2006)