

## CURRICULUM VITAE

Anita Bhattacharyya

### Formal Education

1982-1986 B.S. Zoology, University of Wisconsin-Madison, Madison WI  
1989-1993 Ph.D. Anatomy and Cell Biology  
University of Cincinnati College of Medicine, Cincinnati OH  
1993-2000 Postdoctoral Fellow/Research Associate  
Dana-Farber Cancer Institute, Harvard Medical School, Boston MA

### Current Position

2023- Tenured Associate Professor, Cell and Regenerative Biology  
University of Wisconsin-Madison, Madison WI

### Past Positions

2017- 2023 Tenure Track Assistant Professor, Department of Cell and Regenerative Biology, School of Medicine and Public Health, University of Wisconsin-Madison, Madison WI  
2011-2017 Senior Scientist, Waisman Center, University of Wisconsin-Madison, Madison WI  
2008-2011 Associate Scientist, Waisman Center, University of Wisconsin-Madison, Madison WI  
2005-2008 Assistant Scientist, Waisman Center, University of Wisconsin-Madison, Madison WI

### Selected Honors and Awards

2024 Keynote speaker, Trisomy 21 Research Society International meeting, Rome, Italy  
2023- Standing Member, Neurogenesis and Cell Fate Study Section, U.S. National Institute of Health  
2023- Abstract Reviewer, International Society for Stem Cell Research annual meeting  
2022 Vilas Faculty Early-Career Investigator Award, University of Wisconsin-Madison  
Member, International Society for Stem Cell Research Task Force on Standards, Working Group on stem cell-derived model systems  
Chair, Scientific Advisory Board, WiCell  
2020 Co-Chair for basic science, NIH INCLUDE (INvestigation of Co-occurring conditions across the Lifespan to Understand Down syndromE) workshop  
2020- Member, Board of Directors, WiCell  
2018-2019 Chair of Scientific Program Committee, Trisomy 21 Research Society International meeting, Barcelona, Spain  
2018-2020 Trisomy 21 Research Society Preclinical Committee  
2018- Leader, NIH Intellectual and Developmental Disabilities Research Center network working group on human pluripotent stem cells  
2016- Chair, Stem Cell Oversight Committee, University of Wisconsin-Madison

### Representative Publications (out of 72)

1. **Bhattacharyya A** and Svendsen CN. (2003) Human neural stem cells: a new tool for studying cortical development in Down syndrome. *Genes, Brain and Behavior* 2 (3):179-186. PubMed PMID: [12931791](#).
2. **Bhattacharyya A**, McMillan E, Chen SI, Wallace K and Svendsen CN. (2009) A critical period in cortical interneuron neurogenesis in Down syndrome revealed by human neural progenitor cells *Dev Neurosci*; 31(6):497-510. PubMed PMID: [19738365](#); PubMed Central PMCID: [PMC2818457](#).
3. Weick JP, Held DL, Bonadurer G, Doers ME, Clark A, Maguire C, Musser M, Knackert JA, Molinarolo K, Lu J, Yin Y, Zhang Q, Zhang SC, **Bhattacharyya A**. (2013) Deficits in human trisomy 21 iPSCs and neurons. *PNAS* 110(24): 9962-7. PubMed PMID: [23716668](#); PubMed Central PMCID: [PMC3683748](#).
4. Weick JP, Kang H, Bonadurer GF 3rd, **Bhattacharyya A**. (2016) Gene Expression Studies on Human Trisomy 21 iPSCs and Neurons: Towards Mechanisms Underlying Down's Syndrome and Early Alzheimer's Disease-Like Pathologies. *Methods Mol Biol.* 2016;1303:247-65. PubMed PMID: [26235072](#).
5. Huo HQ, Qu ZY, Yuan F, Ma L, Yao L, Xu M, Hu Y, Ji J, **Bhattacharyya A**, Zhang SC, et al. (2018) Modeling Down Syndrome with Patient iPSCs Reveals Cellular and Migration Deficits of GABAergic Neurons. *Stem Cell Reports.* 2018 Apr 10;10(4):1251-1266. doi: 10.1016/j.stemcr.2018.02.001. Epub 2018 Mar 8. PubMed PMID: 29526735; PubMed Central PMCID: [PMC5998838](#). PMCID:[PMC5998838](#)
6. Mizuno GO, Wang Y, Shi G, Wang Y, Sun J, Papadopoulos S, Broussard GJ, Unger EK, Deng W, Weick J, **Bhattacharyya A**, Chen CY, Yu G, Looger LL, Tian L. (2018) Aberrant Calcium Signaling in Astrocytes Inhibits Neuronal Excitability in a Human Down Syndrome Stem Cell Model. (2018) *Cell Reports*, Jul 10;24(2):355-365. doi: 10.1016/j.celrep.2018.06.033. PubMed PMID: 29996097. PMCID:[PMC6631348](#)
7. Zhao X and **Bhattacharyya A** (2018). The need for human models to study human neurodevelopmental disorders. *AJHG* 103(6): 829-857. PMCID:[PMC6288051](#)

8. Dong Y, Xiong M, Chen Y, Tao Y, Li X, **Bhattacharyya A**, Zhang SC. Plasticity of Synaptic Transmission in Human Stem Cell-Derived Neural Networks. (2020) *iScience*. 2020 Jan 9;23(2):100829. doi: 10.1016/j.isci.2020.100829. [Epub ahead of print]. PMID:31981924; PMCID: [PMC6993006](#)
9. Tang XY, Xu L, Wang J, Hong Y, Wang Y, Zhu Q, Wang D, Zhang XY, Liu CY, Fang KH, Han X, Wang S, Wang X, Xu M, **Bhattacharyya A**, Guo X, Lin M, Liu Y. (2021) DSCAM/PAK1 pathway suppression reverses neurogenesis deficits in iPSC-derived cerebral organoids from patients with Down syndrome. *J Clin Invest*. 2021 Jun 15;131(12):e135763. doi: 10.1172/JCI135763. PMID: 33945512 PMCID: [PMC8203468](#)
10. Hendrix et al., Opportunities, barriers and recommendations in Down syndrome Research. (2021) *Translational Science of Rare Diseases*, vol. 5, no. 3-4, pp. 99-129, 2020. PMID: 34268067 PMCID: [PMC8279178](#)
11. Martinez JL, Zammit MD, West NR, Christian BT and **Bhattacharyya A** (2021) Basal Forebrain Cholinergic Neurons: Linking Down syndrome and Alzheimer's disease. *Frontiers in Aging Neuroscience* PMID: 34322015 PMCID: [PMC8311593](#)
12. Giffin-Rao Y, Sheng J, Strand B, Xu K, Huang L, Medo M, Risgaard KA, Dantine S, Mohan S, Keshan A, Daley RA Jr, Levesque B, Amundson L, Reese R, Sousa AMM, Tao Y, Wang D, Zhang SC, **Bhattacharyya A**. (2022) Altered patterning of trisomy 21 interneuron progenitors. *Stem Cell Reports*. 2022 May 17:S2213-6711(22)00209-0. doi: 10.1016/j.stemcr.2022.05.001. Epub ahead of print. PMID: 35623352; PMCID: [PMC9214050](#)
13. Wu Y, West NR, **Bhattacharyya A**, Wiseman FK. Cell models for Down syndrome-Alzheimer's disease research0 (2022). *Neuronal Signal*. 2022 Apr 8;6(1):NS20210054. doi: 10.1042/NS20210054. PMID: 35449591; PMCID: [PMC8996251](#)
14. Risgaard K, Sorci I, Mohan S, **Bhattacharyya A**. Meta-analysis of in vivo Down syndrome cortical development reveals underdeveloped state of the science. (2022) *Frontiers in Cellular Neuroscience* 2022 June 16. DOI=10.3389/fncel.2022.915272. PMID: 35769326; PMCID: [PMC9234119](#)
15. Martinez JL, Piciw JG, Crockett M, Sorci IA, Makwana N, Sirois CL, Giffin-Rao Y and **Bhattacharyya A** (2024) Transcriptional consequences of trisomy 21 on neural induction. *Front. Cell. Neurosci*. 18:1341141. doi: 10.3389/fncel.2024.134114
16. Jandy M, Hu H, Liu Y, and **Bhattacharyya A** (2025) Human models of Down syndrome. In *Genetic Models of Down syndrome* (eds: Ye, B and Reeves, R) Springer Nature Switzerland, 233-267. DOI: [10.1007/978-3-031-78611-2\\_7](#)
17. Russo ML, Sousa AMM, **Bhattacharyya A** (2024). Consequences of trisomy 21 for brain development in Down syndrome. *Nat Rev Neurosci*. 2024 Nov;25(11):740-755. doi: 10.1038/s41583-024-00866-2. Epub 2024 Oct 8. PMID: 39379691.
18. West NR, Arachchilage KH, Knaack S, MacGregor S, Hosseini M, Risgaard RD, Kumarage P, Martinez JL, Zhang SC, Wang D, Sousa AMM, **Bhattacharyya A** (2025). Single-nucleus analysis reveals oxidative stress in Down syndrome basal forebrain neurons at birth. *J Alzheimers Dement*. 2025 Jul;21(7):e70445. doi: 10.1002/alz.70445. PMID: 40667939; PMCID: [PMC12265022](#).
19. Risgaard RD, Arachchilage KH, Knaack SA, Hosseini M, Chen RJ, Kumarage P, Schmidt DK, Huang X, Sheng J, Wang CJ, Giusti E, Liu S, Zhang SC, Wang D, **Bhattacharyya A**, Sousa AMM. Molecular and cellular processes disrupted in the early postnatal Down syndrome prefrontal cortex. *bioRxiv* [Preprint]. 2025 Jul 4:2025.06.30.662385. doi: 10.1101/2025.06.30.662385. PMID: 40631309; PMCID: [PMC12236733](#).
20. **Bhattacharyya A**, de la Torre-Ubieta L, Zhu Y, Head E, Swarup V, Sousa AMM. Development of molecular neuropathology in Down syndrome across the lifespan. (*Journal of Neuroscience, in press*)

### Conference Publications

1. Reeves R.H., Delabar J., Potier M-C, **Bhattacharyya A**, Head E, Lemere C., Dekker A., De Deyn P., Caviedes P, Dierssen M., Busciglio J. (2019) Paving the Way for Therapy: The Second International Conference of the Trisomy 21 Research Society *Mol Syndromol* 9:279-286. PMCID:[PMC6381890](#)
2. Dierssen M, Hérault Y, Helguera P, Martínez de Lagran M, Vázquez A, Christian B, Carmona-Iragui M, Wiseman F, Mobley W, Fisher E, M, C, Brault V, Esbensen A, Jacola L, M, Potier M, C, Hamlett E, D, Abbeduto L, del Hoyo Soriano L, Busciglio J, Iulita M, F, Crispino J, Malinge S, Barone E, Perluigi M, Costanzo F, Delabar J, M, Bartesaghi R, Dekker A, D, De Deyn P, Fortea Ormaechea J, Shaw P, A, Haydar T, F, Sherman S, L, Strydom A, **Bhattacharyya A** (2021) Building the Future Therapies for Down Syndrome: The Third International Conference of the T21 Research Society. *Mol Syndromol* 2021. PMID: 34421499 PMCID: [PMC8339505](#)
3. Flores-Aguilar L, Hamlett ED, Araya P, Barone E, **Bhattacharyya A**, Carmona-Iragui M, Chan L, Christian B, Costa ACS, Costanzo F, Del Hoyo Soriano L, Dierssen M, Eichler EE, Fisher E, Galbraith M, Ghosh S, Gimenez S, Guedj F, Guidi S, Iulita MF, Mobley W, Pelleri MC, Potier MC, Rabin KR, Rachubinski A, Rebillat AS, Rubenstein E, Saternos H, Sordo L, Strydom A, Valle-Tamayo N, Waugh KA, Yu E, Zeldich E, Busciglio J, Head E. (2025) Imagine, Discover, Inspire: Proceedings of the 4th International Conference of the Trisomy 21 Research Society. *Neuromolecular Med*. 2025 Jan 5;27(1):5. doi: 10.1007/s12017-024-08824-y. PMID: 39756004; PMCID: [PMC11700910](#)