

ANINDITA BOSE, PhD

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[LinkedIn](#) | [Website](#)

Neuroscientist with a PhD and 8 years of experience developing human iPSC-derived neuronal models, functional cell assays, and high-content imaging workflows for neurodegeneration research. Skilled in iPSC-based CNS systems, immunocytochemistry, quantitative imaging, and synaptic/glial phenotyping, with a strong record leading collaborative research programs and translational mindset to build complex *in-vitro* models and functional assays that inform neurodegenerative disease mechanisms and therapeutic discovery.

CORE TECHNICAL EXPERTISE

- Human iPSC-derived neuronal systems: dopaminergic and cortical neuron differentiation, CRISPR KO/KI neuronal models
- Neuronal assay development: immunocytochemistry, high-content imaging, calcium imaging, multiplexing strategies
- Antibody validation: IHC, ICC, target specificity testing, assay optimization and troubleshooting in primary and iPSC-derived neurons
- Synaptic, glial, and neurodegeneration biology: Parkinson's disease, Alzheimer's disease, dopaminergic and cortical targets
- Primary rodent neuron culture and functional assays; in-vivo mouse behavioral assays, perfusion, tissue processing
- Biomarker assay development (Tau ELISA, A β MSD); quantitative image analysis and mechanistic assay development
- Molecular biology: Western blotting, PCR, cloning, RNA/DNA isolation, mutagenesis, transfections, stable cell lines
- Data analysis tools: GraphPad Prism, Excel; quantitative image analysis pipelines;
- Project management: multi-project coordination, vendor negotiation, cross-functional stakeholder communication, budget management

PROFESSIONAL EXPERIENCE

Senior Scientist, Biomarker Strategy & Assay Development — Veravas

Jun 2024 – Nov 2024

- Led development and validation of translational biomarker assays (Tau ELISA, A β MSD), including optimization of antibody reagent performance across sample matrices.
- Designed and implemented strategies to improve assay specificity, reproducibility, and signal-to-noise, directly relevant to antibody panel QC workflows.
- Built automated experimental workflows that increased throughput and reduced turnaround time for assay iterations.

Research Scientist — Harvard Medical School | Brigham and Women's Hospital

Dec 2023 – Mar 2024

- Developed and refined antibody-based biomarker assays supporting translational neurology programs, working across multiple target classes relevant to neurodegeneration.

Research Fellow — Harvard Medical School | Brigham and Women's Hospital

May 2019 – Jan 2023

- Established a new translational neuroscience lab from the ground up: selected equipment, contracted vendors, and managed budget
- Designed and executed *in-vitro* neuronal studies investigating caspase-1 nanoparticle LNPs as a Parkinson's disease therapeutic; generated mechanistic insights into target engagement and pathway modulation in SHSY5Y-cells.
- Coordinated multi-program translational portfolio: managed lab operations, procurement, vendor negotiations, and project timelines across parallel studies.
- Built and maintained collaborations with clinicians, formulation scientists, and external industry partners; prepared data summaries and progress reports for leadership decision-making.

Postdoctoral Associate — Weill Cornell Medicine

2014 – 2018

- Established a new translational neuroscience lab from the ground up: selected equipment, contracted vendors, and managed budget to support iPSC-based disease modeling programs.
- Led iPSC-derived neuronal cultures for Parkinson's and Alzheimer's disease models; performed immunocytochemistry, high-content imaging, biochemical assays, and quantitative image analysis.
- Secured ESCRO approval enabling human cell studies; established quality control and data integrity standards adopted across the lab.

- Mentored graduate and undergraduate researchers; organized lab meetings and contributed to scientific writing for grants and publications.

ADDITIONAL RESEARCH EXPERIENCE

- Postdoctoral Associate — Parkinson's × Alzheimer's double-cross mouse model (2011–2012)
- Yale University — Electrophysiology in mouse slice cultures (2013–2014)
- University of Minnesota — Manganese toxicity in Parkinson's models (2012–2013)
- Karolinska Institute — Quantitative analysis of A β -cleaving enzymes (2010–2011)
- Roche Internship — Developed quantitative ELISA systems for Alzheimer's biomarkers (2010–2011)

EDUCATION

PhD, Neuroscience — Inserm / University of Paris 7, France (2007–2010)

MSc, Biotechnology — Bangalore University, India (1999–2001)

BSc (Hons), Zoology — Calcutta University, India (1996–1999)

HONORS & AWARDS

- Marie Curie Fellowship (2007–2010) — Top 10 worldwide
- Alzheimer's Drug Discovery Foundation Young Investigator Scholarship (2008) — Top 10 worldwide
- Parkinson's Action Network Award (2014)
- ICAD Fellowship (2009)

PUBLICATIONS

<https://pubmed.ncbi.nlm.nih.gov/?term=Anindita+Bose&sort=date>

SELECT TALKS

- Alzheimer's Research Update, Baltimore (2008) — PKR and GSK-3 β interactions in Alzheimer's disease
- Society for Neuroscience Annual Meeting (2015) — Parkinson's disease and melanoma mechanistic links

SELECT POSTERS

- Parkinson's Action Network Meeting (2014)
- Gordon Research Conference — Parkinson's Disease (2015, 2017)
- Keystone Symposium — Common Mechanisms of Neurodegeneration (2016)
- Society for Neuroscience (2019)

CERTIFICATION

1. McKinsey Forward Program Certification 2026- Completed

2. National institute of Health: Clinical Research Education & Collaboration Outreach

- Ethical and Regulatory Aspects of Clinical Research (Live) 2026: September 2026–November 2026
- Principles of Clinical Pharmacology 2026–2027- September 2026- July 2007
- Introduction to the Principles and Practice of Clinical Research 2026–2027 : September 2026- July 2007

CONTINUOUS LEARNING PROGRAMS

- CS50's Introduction to Programming with Python — HarvardX (ends Dec 2026)
- Using Python for Research — HarvardX (ends July 2026)
- CS50's Introduction to Databases with SQL — HarvardX (ends Dec 2026)
- Quantitative Methods for Biology — HarvardX (ends May 2026)

INTERESTS

Swimming | Painting | Spending time with family and friends