GREGORY S. FITZGERALD, Ph.D. (ABD)

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PROFESSIONAL SUMMARY

Neuroscience researcher with 15 years of laboratory experience spanning primary cell culture, immunohistochemistry, and advanced microscopy. Published in Cell. Expertise in rodent models of neuropsychiatric and neurodegenerative disease, including stereotaxic surgery, behavioral assays, and tissue analysis. Strong quantitative background in R and Python supports data analysis needs. Track record managing multi-project lab environments and mentoring researchers.

CORE COMPETENCIES

• **Technical:** Primary Cell Culture | Immunohistochemistry | Western Blot | Confocal & Fluorescence Microscopy | Stereotaxic Surgery | Rodent Behavioral Assays | Colony Management | IACUC Protocol Development
• **Analytical:** R | Python | GraphPad Prism | SPSS | Meta-Analysis
• **Leadership:** Lab Management | Multi-Project Coordination | Undergraduate Mentorship | Scientific Writing | Regulatory Compliance

PROFESSIONAL EXPERIENCE

Doctoral Research Scientist | State University of New York at Albany | Aug 2016 - Present
• Designed and executed preclinical studies investigating metabolic factors in Alzheimer's disease using rat models (~200 animals)
• Performed intranasal drug administration, behavioral testing (inhibitory avoidance, fear conditioning, spontaneous alternation), and brain tissue analysis
• Co-authored IACUC protocols and maintained regulatory compliance for all animal research procedures
• Mentored 16 undergraduate researchers on experimental design, data analysis, and scientific writing

Laboratory Technician & Lab Manager | Cold Spring Harbor Laboratory, Osten Lab | Jun 2011 - Aug 2016
• Performed serial two-photon tomography (whole-brain imaging with single-cell resolution) contributing to Cell publication mapping GABAergic neuron distribution
• Conducted extensive fluorescence and confocal microscopy, immunohistochemistry, and antibody validation across mouse models of autism (CNTNAP2 KO)
• Performed stereotaxic viral injections and behavioral phenotyping (three-chamber social test, RotaRod) for neuropsychiatric drug candidate studies
• Managed all lab operations: purchase orders, reagent inventory, equipment calendars, mouse colony (500+ animals), and genotyping pipeline; promoted from Technician to Lab Manager
• Worked alongside PI's startup (Certerra) in shared lab space, gaining direct experience with industry research culture and results-driven timelines

Research Assistant | CUNY Graduate Center, Bodnar Lab | Jun 2009 - Dec 2011
• Performed c-fos immunohistochemistry to map brain activation patterns in mesocorticolimbic circuitry
• Co-authored 2 peer-reviewed publications on neuropharmacology of flavor conditioning

EDUCATION

Ph.D. in Behavioral Neuroscience (ABD) | State University of New York at Albany | Expected Spring 2026
Thesis: A Cross-Species Meta-Analysis of Environmental Enrichment Effects on Cognition
• Key finding: Documented 2.5x effect size gap between rodent and human studies, informing expectations for translating preclinical findings to clinical applications.

B.A. in Neuroscience, Magna Cum Laude | Queens College, CUNY | 2013

SELECTED PUBLICATIONS

• Kim Y, [...] **Fitzgerald** G, [...] Osten P. Brain-wide Maps Reveal Stereotyped Cell-Type-Based Cortical Architecture and Subcortical Sexual Dimorphism. Cell. 2017;171(2):456-469.
• **Fitzgerald** GS, Chuchta TG, McNay EC. Insulin-like growth factor-2 is a promising candidate for the treatment and prevention of Alzheimer's disease. CNS Neurosci Ther. 2023.
• Ralbovsky NM, **Fitzgerald** GS, McNay EC, Lednev IK. Raman spectroscopy and machine learning for Alzheimer's disease screening. Spectrochimica Acta A. 2021.