Audrey Effenberger

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Education

2019- Massachusetts Institute of Technology

Intended PhD in Brain & Cognitive Sciences. Advisor: Professor Li-Huei Tsai

2015–2019 Harvard College

AB in Neurobiology. Secondary field in Mathematical Sciences.

Research Experience

Jun 2018-May 2019 Biology R&D Intern, Cellino Biotech, Inc (Cambridge, MA)

Generation of neurons from human iPS cells using CRISPR activation and proprietary

laser-based intracellular delivery platform for cell therapy manufacturing

Jun-Aug 2017 Biopharmaceutics Intern, Biogen Inc (Cambridge, MA)

Design and validation of new in vitro assay to predict in vivo pharmacokinetics of oral

extended-release drugs for multiple sclerosis

Jun 2016-May 2017 Student Researcher, Z. He Lab, Harvard Medical School & Boston Children's Hospital

Microglial regulation of oligodendrocyte progenitor cell proliferation and differentiation

after optic nerve injury

Feb-May 2016 Student Researcher, O'Connell Lab, Harvard University

Toxin-binding proteins and dietary ecology in Malagasy poison frogs

Publications

LA Akay, AH Effenberger, LH Tsai. Cell of all trades: oligodendrocyte precursor cells in synaptic, vascular, and immune function. Accepted at *Genes & Development*.

NA Moskowitz et al. Seasonal changes in diet and toxicity in the Climbing Mantella frog (*Mantella laevigata*). *PLOS ONE*, 26 Dec 2018. doi: 10.1101/361998

Teaching

Spring 2020 TA, 9.013: Molecular and Cellular Neuroscience Core II (MIT)

Fall 2020 Head TA, MCB 60: Cellular Biology and Molecular Medicine (Harvard College)

Jan 2019–Jul 2020 Course Developer & Moderator, MCB80x: Fundamentals of Neuroscience (HarvardX)

MCB80.1x: The Electrical Properties of the Neuron, MCB80.2x: Neurons and Networks,

MCB80.3x: The Brain

Awards and Honors

2020-21	BCS Schoemaker Graduate Student Fellowship
2017	Finalist, Jacob Wendell Scholarship Prize
2016	Harvard College Scholar (top 10% of class)

Outreach and Service

Fall 2019– BCS Student-Run Application Assistance Program
Provided 1-on-1 mentorship to graduate program applicants from underrepresented groups

Sept 2020 Manchester, MA Neuroscience Society (IYNA), invited research talk

Delivered talk on gamma stimulation for Alzheimer's disease to high school students

Jul-Aug 2020 High School Summer Program, MIT Educational Studies Program

Co-taught 6-week course on neurological diseases to high school students via Zoom

Apr 2020- COVID-19 Urgent Resource Video Education (CURVE)

Massachusetts General Hospital (learn.partners.org/source/curve)

Produced videos on Emergency Medicine topics to educate clinicians on best practices

April–Jun 2020 Virtual Mentorship Program, CovEducation (coved.org)

Provided free 1-on-1 tutoring in biology & neuroscience to middle school students via Zoom

Mar–Jun 2020 COVID Student Response Taskforce, Harvard Medical School (covidstudentresponse.org)

Created informational graphics and data visualizations for lay audiences on COVID-19 safety precautions and scientific/clinical research. Produced graphics for collaborative projects with

teams at Beth Israel Deaconess Medical Center and Ariadne Labs

Professional Development

April 2020 Beyond TAing: Taking charge of teaching as a leader

Topics: Backwards Design, Planning and Facilitating a Class Session, Interactive Teaching

and Active Learning