Alexandros Poulopoulos, PhD
Associate Professor, Dept. of Pharmacology and Physiology
University of Maryland School of Medicine

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Contact Information

Business Address:	Department of Pharmacology and Physiology 670 W Baltimore St, HSF3, 9-178 Baltimore, MD 21201
Business Phone Number:	410-706-7540
Email:	apoulopoulos@som.umaryland.edu
Foreign Languages:	Greek (native), French (working knowledge), German (working knowledge)

Education

1998 - 2003	Diploma, Biology, University of Athens, Greece
2003 - 2008	PhD, Neuroscience, University of Göttingen, Germany; Advisor: Nils Brose "Mechanisms of Neuroligin Function in Inhibitory Postsynaptic Differentiation"

Post Graduate Education and Training

2008 - 2009	Postdoc, Brose Lab, Department of Molecular Neurobiology, Max Planck Institute of Experimental Medicine
2010 - 2012	Postdoc, Macklis Lab, Department of Neurosurgery, Massachusetts General Hospital
2012 - 2015	Postdoc, Macklis Lab, Department of Stem Cell and Regenerative Biology, Harvard University

Employment History

Academic Appointments

2015-2016	Research Associate, Department of Stem Cell and Regenerative Biology, Harvard University
2017-2025	Assistant Professor, Department of Pharmacology, UMSOM
2017-2025	Associate Professor, Department of Pharmacology and Physiology, UMSOM

Other Employment (*paid* employment)

2015-2016	Teaching Assistant, Faculty of Arts and Sciences, Harvard University

Honors and Awards

1998 Excellence Award, Greek State Scholarships Foundation, awarded for highest nation-wide entrance examination to the Biology Department of the University of Athens
2009 Otto Hahn Medal, Max Planck Society, awarded "for the elucidation of the molecular mechanism responsible for the formation of inhibitory synapses in the brain."
2011 Postdoctoral fellowship, European Molecular Biology Organization (EMBO)
2012 Postdoctoral fellowship, Human Frontier Science Program (HFSP)
2015 Certificate of Distinction in Teaching, Harvard University, awarded for excellent student evaluations in undergraduate teaching of Life Sciences-1A at Harvard College.
2019 NIH Director's New Innovator Award, National Institutes of Health, awarded for successful application to the NIH High-Risk, High-Reward Research Program.
2020 Teacher of the Year, Graduate Program in Life Sciences, UMSOM, awarded after nomination for teaching excellence in graduate education.
2023 Teaching Commendation, Office of Medical Education, UMSOM, awarded for excellent student evaluations in teaching Foundations to 1st-year medical students. 3 years in a row

Professional Society Memberships

2009-present Member, Chapter President '24-'25, Society for Neuroscience (SfN)
2024-present Member, American Society for Cell and Gene Therapy (ASCGT)

Administrative Service

Institutional Service

UMSOM

2018-present Dept Representative, SOM Council
2019 Pharmacology Dept Faculty Search Committee (recruit Steffen Wolff)
2021 Pharmacology Dept Faculty Search Committee (recruit Christina Ferrer, Min Yu)
2021-2022 Psychiatry Dept Faculty Search Committee (recruit Maged Harraz)
2023-present CRISPR Service Advisory Committee,
Center for Innovative Biomedical Resources (CIBR)
2023-present Confocal Microscopy Core Advisory Committee, CIBR
2023-present Member, Office of Postdoctoral Scholars Advisory Committee
2023-present Member, School of Medicine Research Council (SRC)

UMSOM-Graduate education

2017 Reviewer, GPILS Awards Selection Committee
2017-2021 Reviewer, PIN Seminar Selection Committee
2017-2022 Reviewer, PIN Admissions Committee
2017-present Organizer, nqσ (N-Q-sigma) Lecture Series
2017-present Interviewer, PIN Admissions
2018-2020 Reviewer, T32 Cancer Biology Selection Committee

2019 Member, PIN Curriculum Renewal Committee
2019 Reviewer, MolMed Admissions Committee
2019 Reviewer, NRSA mock study sections
2019-present Interviewer, MolMed Admissions
2020 Member, PIN Curriculum Review
2020-2021 Reviewer, STAR-PREP Admissions Committee
2021-2023 Reviewer, Nathan Schnaper Intern Program (NSIP) Admissions Committee
2024-present Interviewer, Program in Biochem & MolBio Admissions

UMSOM-Medical education service

2018 Interviewer, MD/PhD Admissions
2018-2020 Pharmacology liaison, Pre-Clerkship Committee (PCC; subcommittee of CCC)
2018-2020 Member, Renaissance Curriculum Reform committee
2019-present Reviewer, Departmental Medical Graduate Award (Pharmacology, Carr Award)
2020-2023 Member, Curriculum Coordination Committee (CCC)
2020-present Ad hoc reviewer, Assessment Review Committee (ARC, subcommittee of CCC)
2020-present Voting Member, Academic Advancement Committee (AAC)
2020-present Vice-chair, PCC (subcommittee of CCC)
2021-present Co-Founder, Embedded Content Lead,
Longitudinal Integration of the Curriculum (LINCC, subcommittee of CCC)
2022-present Member, Core Educator - Director of Longitudinal Thread,
SOM Medical Education Leadership Academy (MELA)
2022-2023 Member, Education 2 Subcommittee, LCME Self-Study Process
2023 Member, Education Subcommittee, UMSOM Strategic Plan Committee
2023-present Member, Medical Education Continuous Quality Improvement (MECQI)
2024 Reviewer, Trianial Course Review, Curriculum Review Committee (CRC)
2024 Primary Point-Person, Junior Faculty Session, LCME Survey-Visit

UMSOM-Diversity Equity, Inclusion (DEI) and Antiracism Awareness

2021-2023 Panel speaker, Leading a Diverse and Inclusive Lab,
Center for Advanced Research Training and Innovation (CARTI)

Local Service

2022 Reviewer, MPOWER Seed grant review
2024-2025 President, Greater Baltimore Chapter, Society for Neuroscience

National Service

2010-2016 Mentored co-reviewer: *Neuron* (3), *PNAS* (2), *Journal of Neuroscience* (1)
2017-present Reviewer (reviews, total): *Science* (1), *Nature* (1), *Cell* (2), *eLife* (2), *Molecular Psychiatry* (1), *European Journal of Neuroscience* (2), *European Neuropsychopharmacology* (1), *Scientific Reports* (1), *Brain Research* (1), *Neurobiology of Aging* (1),
2017-present Editor, *Methods in Molecular Biology* (39)

2019-2020	Ad hoc Member, NIH Study Section, Somatosensory and Chemosensory Systems (SPS)
2023	Reviewer, W. M. Keck Foundation Research Grants
2024	Ad hoc Member, NIH Study Section, Molecular Neurogenetics (MNG)
2025	Reviewer, NIH Special Emphasis Panel, BRAIN Initiative: Research Resource Grants for Technology Integration and Dissemination U24 (ZNS1 SRB-S 29)

International Service

2007	Organizer, "Neurozons" International Conference on the Neurosciences, Germany
2010-2022	Associate faculty member, Neurodevelopment, *Faculty Opinions* (former *f1000*)
2020	Session chair, Federation of European Neurosci Societies, Annual meeting, UK
2022-present	Faculty member, Neurodevelopment, *Faculty Opinions*
2023	Reviewer, UK Research and Innovation, Biotechnology and Biological Sciences Research Council (BBSRC)

Teaching Service

Undergraduate Student Teaching/Mentoring/Advising

2010-2011	Mentor and Judge, Boston Public Schools, Science Fair: 1 student mentorship over 1 semester, 10 students judging, 1 semester total,
2013-2016	Teaching Assistant, Harvard University, SCRB180 "Regeneration and Repair in the Mammalian Brain", 20 undergrad students per year, 1h per week + grading for 1 semester per year. 3 years.
2014-2015	Instructor, Science Clubs Mexico, University of Guanajuato and Autonomous University of Oaxaca. "Neurocucaracha" Curriculum design, 15 undergrad students, lectures 25h/year, labs 15h/year. 2 years.
2014-2016	Teaching Assistant, Harvard University, LS1a "Introduction to Life Sciences: Integrated Chemistry, Molecular Biology, and Cell Biology", Direct supervision of 20 undergrads per year; 2h/week teaching for 1 semester, 3h/week lab for 1 semester, 1h/week office hours for 1 semester. 2 years.
2017-present	Undergrad advisor, UMSOM 3 Nathan Schnaper Interns, 3 months each 1 ASCEND Scholar, 2 years (URM program) 2 summer interns, 2 months each

Graduate / Post-Graduate Mentoring/Advising

2008-2016	Lab Mentor, as postdoc at Max Planck and Harvard 2 PhD students (daily mentorship, 2 years and 4 years respectively) 2 Undergrad (daily mentorship, 1 year each)
2017-present	Advisory committee member, UMSOM 3 First year advisory committee 13 Qualifying exam committee (2h oral exam and written assessment each)

17 Thesis committee (10 PIN, 6 MolMed, 1 Biochem. ~2h each per semester)

2017-present Advisor, UMSOM
5 Postdocs (2 on T32)
5 PhD students (1 on T32; 3 graduated, 2 current)
5 Postbac students, (STAR-PREP URM program, 9 training years total)
9 Undergrad students (3 Schnapper program, 1 ASCEND Scholar, 1 UMD honor's program, 2 UM Scholar, 1 international)

Graduate Student Teaching

2006-2008 Teaching Assistant, “Signal Transduction”, International Max Planck Research School, 20 PhD students per year, 3h total tutoring per year.
2007-2009 Lab Instructor, "Molecular Physiology of the Brain", University of Göttingen, 6 PhD students per year, 9h total lab course per year.
2017-present Lecturer, "Core Course" (GPILS 601), UMSOM, 60 PhD students per year, 6-8h lectures + 3h tutoring per year (Binding, CRISPR, Golgi, Trafficking)
2017-2020 Lecturer, "Cellular Basis of Synaptic Physiology and Pharmacology" (GPILS 620), UMSOM PIN, 10 PhD students 2h lecture (synapse dev) per year.
2017-2020 Lecturer, "Systems Neuroscience" (GPILS 641), UMSOM PIN, 10 PhD students 2h lecture (Cortex, sensory systems) per year.
2018 Guest Lecturer, Weil Cornell Medicine, "Current Topics in Neurodevelopment", 15 graduate students, 2h lecture, New York, NY.
2019-present Lecturer, "Cell & Systems Physiology" (GPILS 645), UMSOM MolMed, 15 PhD students per year, 2h lecture (Neurophysiology) per year.
2019-present Lecturer, "Molecular Neuroscience and Biophysics" (GPILS 691), UMSOM PIN, 10 PhD students 2h lecture (developing new approaches) per year.
2021-present Lecturer, "Advanced Neuroscience Investigations" (GPILS 655), UMSOM PIN, 15 PhD students per year, 10h lectures (Developmental Neurosci) per year.

Medical Student Teaching

2018-2020 Lecturer, "Foundations of Disease" (MSPR 523), UMSOM
170 2nd year med students – 6 hours/year (principles of pharmacology)
2018-2020 Assistant Course Director for Pharm., Pathophysiology & Therapeutics I (MSPR 521), weekly focus groups for pharmacology content with 20 med students
2018-2020 Co-Course Director, Pathophysiology & Therapeutics II (MSPR 522), weekly focus groups for pharmacology content with 20 med students
2020-2023 Lecturer, Brain & Behavior (MEDS 513), UMSOM
170 1st-year medical students – 3 hours/year (cerebral cortex)
2020-present Lecturer, "Foundations" (MEDS 511), UMSOM, 170 2nd-year med students – 6 hours/year (principles of pharmacology).
2021-2023 Lecturer, "Molecules to Medicine" (MSTP 500), UMSOM, 15 MD/PhD students 2h lecture, 2h workshop per year.

Research Activities

Research Interest: Neurodevelopment, CRISPR, genome therapeutics.

Molecular neurodevelopment research, including synaptogenesis, brain wiring, autism, and epilepsy. Synthetic biology research, including development of CRISPR technologies for in vivo genome editing applications and precision medicine therapeutics.

Research Grants Awarded as PI

01/2027 – 12/2028	PI, 7% "*Validation of Cas9-RCs: Licensable Precision CRISPR Agents for iPSC Editing and Genome Therapeutics*" 2027-MSCRFV-6968 Total Direct Costs: $250,000
08/2026 – 08/2027	Multi-PI, 5% (Poulopoulos, Blanpied, Mathur, Wolff, McCarthy) "*Integrating Neuroscience Technologies Across Scales for Autism Research*" 2026-UMB-PPRG Total Direct Costs: $250,000
06/2026 – 06/2027	PI "*MIND X-CHANGE: CRISPR Infrastructure for Advanced Knockin Services*" 2026-UMB-RIIG Total Direct Costs: $50,000
10/2024 – 10/2026	PI, 10% "*iPSC Platforms to Develop Genome Restoration Strategies Using Cas9-RC*" MSCRF 2025-MSCRFL-0008 Total Direct Costs: $303,520
07/02/18 – 07/01/20	Multi-PI (Poulopoulos, Ament, Hong) "*Convergent Neuroscience of Processing Speed Deficits in Severe Mental Illness*" ACCEL-Med Dean's Challenge Award Total Direct Costs: $160,000
09/30/2019 – 05/31/2024	PI, 40% *"Untangling the biology of brain wiring: high-throughput innovations for molecular screening and functional targeting of circuit development in vivo"* NIH DP2 MH122398 Total Direct Costs: $1,500,000

03/01/21– 02/28/22 Multi-PI (Poulopoulos, Mathur, Spear, Singer)
"*Genomic and Proteomic Analysis of Circuits Mediating Light-dependent Behaviors in Aging*"
MPower Brain Health and Human Performance seed grant
Total Direct Costs: $25,000

Patents, Inventions and Copyrights

1. Macklis JD, **Poulopoulos A**, Murphy AJ, inventors (Harvard), "RNA and Protein Networks that Locally Control Brain Wiring During Development", International patent application PCT/US2016/030465 and WO/2016/176687
2. **Poulopoulos A**, copyright (UMSOM) pegassist.app
3. Richardson RR, Robertson CD, **Poulopoulos A**, inventors (UMSOM) "Compositions and Methods for Enhanced Genome Editing using Cas9 Fusion Proteins", International patent application PCT/US2024/060720

Publications

Peer-reviewed journal articles

1. Poulopoulou C, Markakis I, Davaki P, Nikolaou C, **Poulopoulos A**, Raptis E, Vassilopoulos D. Modulation of voltage-gated potassium channels in human T lymphocytes by extracellular glutamate. *Mol Pharmacol* 67(3):856-67 (2005).
2. Fotinopoulou A, Tsachaki M, Vlavaki M, **Poulopoulos A**, Rostagno A, Frangione B, Ghiso J, Efthimiopoulos S. BRI2 interacts with amyloid precursor protein (APP) and regulates amyloid beta (Abeta) production. *J Biol Chem* 280(35):30768-72 (2005).
3. **Poulopoulos A**, Aramuni G, Meyer G, Soykan T, Hoon M, Papadopoulos T, Zhang M, Paarmann I, Fuchs C, Harvey K, Jedlicka P, Schwarzacher SW, Betz H, Harvey RJ, Brose N, Zhang W*, Varoqueaux F*. Neuroligin 2 drives postsynaptic assembly at perisomatic inhibitory synapses through gephyrin and collybistin. *Neuron* 63(5):628-42 (2009). Evaluated by *faculty of 1000.*
4. Jedlicka P, Hoon M, Papadopoulos T, Vlachos A, Winkels R, **Poulopoulos A**, Betz H, Deller T, Brose N, Varoqueaux F, Schwarzacher SW. Increased dentate gyrus excitability in neuroligin-2-deficient mice in vivo. *Cereb Cortex* 21(2):357-67 (2011).
5. **Poulopoulos A**, Soykan T, Tuffy LP, Hammer M, Varoqueaux F, Brose N. Homodimerization and isoform-specific heterodimerization of neuroligins. *Biochem J*.446(2):321-30 (2012).
6. Soykan T, Schneeberger D, Tria G, Buechner C, Bader N, Svergun D, Tessmer I, **Poulopoulos A**, Papadopoulos T, Varoqueaux F, Schindelin H, Brose N. A conformational switch in collybistin determines the differentiation of inhibitory postsynapses. *EMBO J* 33(18):2113-33 (2014).

7. Qadir H, Krimmel SR, Mu C, **Poulopoulos A**, Seminowicz DA, Brian N Mathur. Structural connectivity of the anterior cingulate cortex, claustrum, and the anterior insula of the mouse. *Front Neuroanat* 10.3389/fnana.2018.00100 (2018).
8. **Poulopoulos A**, Murphy AJ, Ozkan A, Davis P, Hatch J, Kirchner R, Macklis JD. Subcellular transcriptomes and proteomes of developing axon projections in the cerebral cortex. *Nature* 565(7739):356-360 (2019). Evaluated by *faculty of 1000.*
9. Engmann AK, Hatch JJ, Nanda P, Veeraraghavan P, Ozkan A, **Poulopoulos A**, Murphy AJ, Macklis JD. Neuronal subtype-specific growth cone and soma purification from mammalian CNS via fractionation and fluorescent sorting for subcellular analyses and spatial mapping of local transcriptomes and proteomes. *Nature Protocols* 17:222–251 (2022).
10. Iffland PH, Everett ME, Cobb-Pitstick KM, Bowser LE, Barnes AE, Babus JK, Romanowski AJ, Baybis M, Elziny S, Puffenberger EG, Gonzaga-Jauregui C, **Poulopoulos A**, Carson VJ, Crino PB. "NPRL3 loss alters neuronal morphology, mTOR localization, cortical lamination and seizure threshold". *Brain.* 2022, 145(11):3872-3885. doi: 10.1093/brain/awac044. PMID: 35136953.
11. Altas B, Romanowski AJ, Bunce GW, **Poulopoulos A**. Neuronal mTOR Outposts: Implications for Translation, Signaling, and Plasticity. *Front Cell Neurosci.* 2022, 10.3389/fncel.2022.853634. PMID: 35465614.
12. Richardson RR, Steyert M, Khim SN, Crutcher GW, Brandenburg C, Robertson CD, Romanowski AJ, Inen J, Altas B, **Poulopoulos A**. "Enhancing precision and efficiency of Cas9-mediated knockin through combinatorial fusions of DNA repair proteins". *CRISPR J* 2023, 6(5):447-46. PMID: 37713292 (cover).
13. Blatt GJ, Brandenburg C, **Poulopoulos A**. India ink to 3D imaging: The legacy of Dr. Deepak "Dee" N. Pandya and his influence on generations of neuroanatomists. *J Comp Neurol*. 2023, 531(18):1875-1882. doi: 10.1002/cne.25551. PMID: 37916788 (cover).
14. Altas B, Rhee HJ, Ju A, Solís HC, Karaca S, Winchenbach J, Kaplan-Arabaci O, Schwark M, Ambrozkiewicz MC, Lee C, Spieth L, Wieser GL, Chaugule VK, Majoul I, Hassan MA, Goel R, Wojcik SM, Koganezawa N, Hanamura K, Rotin D, Pichler A, Mitkovski M, de Hoz L, **Poulopoulos A**, Urlaub H, Jahn O, Saher G, Brose N, Rhee J, Kawabe H. "Nedd4-2-dependent regulation of astrocytic Kir4.1 and Connexin43 controls neuronal network activity. *J Cell Biol*. 2024, 1;223(1):e201902050. PMID: 38032389.
15. Altas B, Tuffy LP, Patrizi A, Dimova K, Soykan T, Brandenburg C, Romanowski AJ, Whitten JR, Robertson CD, Khim SN, Crutcher GW, et al., Brose N, **Poulopoulos A**. Region-Specific Phosphorylation Determines Neuroligin-3 Localization to Excitatory versus Inhibitory Synapses. *Biol Psychiatry*. 2024, 96(10):815-828. doi: 10.1016/j.biopsych.2023.12.020. PMID: 38154503 (cover).
16. Greig LC, Woodworth MB, **Poulopoulos A**, Lim S, Macklis JD. BEAM: A combinatorial recombinase toolbox for binary gene expression and mosaic genetic analysis. Cell Rep. 2024, 43(8):114650. doi: 10.1016/j.celrep.2024.114650. PMID: 39159043.
17. Kwak G, Angad Grewal A, Mess G, Li H, Kwatra M, **Poulopoulos A**, Woodworth GF, Eberhart CG, Ko H, Manbachi A, Caplan J, Price RJ, Tyler B, Suk JS. Brain Nucleic Acid Delivery and Genome Editing via Focused Ultrasound-Mediated Blood-Brain Barrier

Opening and Long-Circulating Nanoparticles. *ACS Nano*. 2024, 18(35):24139-24153. doi: 10.1021/acsnano.4c05270. PMID: 39172436.

Submitted or In-Revision Peer-reviewed journal manuscripts

1. Robertson CD, Davis P, Richardson RR, Iffland PH, Vieira DO, Steyert M, McKeon PN, Romanowski AJ, Crutcher G, Jasarevic E, Wolff SBE, Mathur BN, Crino PB, Bale TL, Dick IE, **Poulopoulos A**. Rapid modeling of an ultra-rare epilepsy variant in wild-type mice by in utero prime editing. *Nature Comms,* PMID: 38106154 [preprint], (In Revision).
2. Romanowski AJ, Tolga Soykan T, Ryan R Richardson RR, **Poulopoulos A**. Protein labeling in its native context: comparing tags by CRISPR/Cas9-RC knockin in the brain. *Mol Cell Neurosci* (In Revision).
3. **Poulopoulos A**, Davis P, Brandenburg C, Itoh Y, Galazo MJ, Greig LC, Romanowski AJ, Budnik B, Macklis JD. Symmetry in levels of axon-axon homophilic adhesion establishes topography in the corpus callosum and development of connectivity between brain hemispheres. *Neuron,* PMID: 38585721 [Preprint], (In Revision).
4. Brandenburg C, Crutcher GW, Romanowski AJ, Donofrio SG, Duraine LR, Owusu-Mensah RNA, Sugihara I, Blatt GJ, Sillitoe RV, **Poulopoulos A**. Developmental transformations of Purkinje cells tracked by DNA electrokinetic mobility. *Cell Rep Methods,* doi: 10.1101/2024.08.29.610366 (In Revision).

Invited non peer-reviewed journal articles

1. **Poulopoulos A**. 'Holistic' synaptogenesis. *Biochem Soc Trans*. 2010, 38(2):511-5. PMID: 20298212
2. Itoh Y, **Poulopoulos A**, Macklis JD. Unfolding the Folding Problem of the Cerebral Cortex: Movin' and Groovin'. *Dev Cell*. 2017, 41(4):332-334. PMID: 28535368.
3. Ament SA, **Poulopoulos A**. The brain's dark transcriptome: Sequencing RNA in distal compartments of neurons and glia. *Curr Opin Neurobiol*. 2023, 81:102725. PMID: 37196598
4. Romanowski AJ, Richardson RR, Plachez C, Erzurumlu RS, and **Poulopoulos A**. Gene Knockout in the Developing Brain of Wild-Type Rodents by CRISPR In Utero Electroporation. *Methods Mol Biol.* 2025, 2910:221-238. PMID: 40220102
5. Brandenburg C and **Poulopoulos A**. Sparse Labeling, Rapid Clearing, and Native Fluorescence Light Sheet Imaging in the Developing Rodent Cerebellum. *Methods Mol Biol.* 2025, 2910:263-276. PMID: 40220105
6. Robertson CD, Richardson RR, Steyert M, Martin CA, Flynn C, and **Poulopoulos A**. Prime Editing of Mouse Primary Neurons. *Methods Mol Biol*. 2025, 2910:69-84. PMID: 40220094
7. Haynes KA, Adebowale K, Akpa BS, Bader JS, Bansal T, Breunig J, Brosh R, Bugaj LJ, Burslem GM, Chadha A, Das M, Deans T, DeForest CA, Dooling LJ, Gartner Z, Heiser LM, Hughes A, Kemp ML, Korolev KS, Lin C, Lionnet T, Lu X, McGuigan AP, Mirzaei HR, Nirmal AJ, Pasca di Magliano M, **Poulopoulos A**, Rai K, Reyes J, Segal D, Sewell-Loftin MK, Shmeleva EV, Stevens A, Subramanian S, Tlsty T, Totonchy J, Vlahos A, Wang P,

Zervantonakis IK, Zhao Y, Chuang JH. Integrating Technologies for Synthetic, Systems, and Spatial Approaches in Cancer Research. *ACS Synthetic Biology* (2026) doi: 10.1021/acssynbio.6c00339.

Books

1. **Poulopoulos A** (editor). Synapse Development. *Methods Mol Biol*. 2017, vol. 1538.
2. Soykan T, **Poulopoulos A** (editors). Synapse Development, 2nd ed. *Methods Mol Biol*. 2025, vol. 2910.

Published Multimedia (including software, audio, video, etc.)

1. pegassist.app [internet web application].

Major Invited Speeches

Local

1. Poulopoulos A. “Finding the Wiring Defects Behind Mental Illness”, Eastern Regional Meeting of the Human Anatomy and Physiology Society, Howard Community College, Columbia, MD, 2018
2. Poulopoulos A. "Acute Genome Editing in the Brain for Patient-Specific Disease Models and Therapeutics", Neurosurgery Grand Rounds, UMSOM, Baltimore MD, 2022
3. Poulopoulos A. "Genome Editing & Genome Dosing the Developing Brain: 3 critical techs illuminate neurotypical and atypical brain wiring" Research Seminar, Lieber Institute for Brain Development, Baltimore MD, 2022
4. Poulopoulos A. "Schizophrenia Risk Gene Homologues Alter Cortical Wiring in Rodents" Conte Center Seminar, MPRC, Catonsville MD, 2022
5. Poulopoulos A. "Bedside-to-bench in utero CRISPR models: precision medicine for individual epilepsy patients", Pediatrics Research Seminar, UMSOM, Baltimore MD, 2024
6. Poulopoulos A. “Developing precision editors into next-gen CRISPR therapeutics”, CRISPR seminar series, UMSOM, Baltimore MD, 2024
7. Poulopoulos A. “In Vivo Genome Editing in the Brain”, NIDA/NIA Research Symposium, NIDA, Baltimore, MD, 2025

National

8. Poulopoulos A. “Functional specificity and structural interactions of Neuroligins at the inhibitory synapse”. Cold Spring Harbor Laboratory meeting “Synapses: from molecules to circuits and behavior”. Cold Spring Harbor NY, 2007
9. Poulopoulos A. “The protein machinery driving postsynaptic differentiation at perisomatic inhibitory synapses”. Society for Neuroscience annual meeting, Chicago, IL, 2009

10. Poulopoulos A. “Molecularly diverse growth cones at the helm of circuit development”, 11th Annual Christopher Reeve Hot Topics in Stem Cell Biology, Washington D.C., 2014
11. Poulopoulos A. “Subcellular Transcriptome-Proteome Mapping Reveals mTOR Accumulation at Axon Growth Cones”, Cold Spring Harbor Laboratory meeting “Axon guidance, synapse formation and regeneration”, Cold Spring Harbor NY, 2016
12. Poulopoulos A. “Wiring across hemispheres: New approaches to study how brain circuits form”, Neuroscience Seminar Series, St. Mary’s College of Maryland, St. Mary’s City MD, 2017
13. Poulopoulos A. “Wiring across hemispheres: New approaches to study how brain circuits form”, Biology Seminar Series, University of Dayton, Dayton OH, 2017
14. Poulopoulos A. “Untangling brain circuit development with subcellular proteomics and in situ genome engineering” Neuroscience Seminar Series, Albert Einstein College of Medicine, New York NY, 2019
15. Poulopoulos A. “Untangling circuit development with subcellular proteomics and in situ genome engineering in the brain” Neuroscience Seminar Series, Cold Spring Harbor Laboratory, Cold Spring Harbor NY, 2019
16. Poulopoulos A. “Neuroligin-3 localizes to distinct synapse types via brain-region-specific phosphorylation” Society for Neuroscience annual meeting, San Diego CA, 2019
17. Poulopoulos A. “Reciprocal axon interactions establish corticotopic pre-patterning of the developing corpus callosum” Society for Neuroscience annual meeting, San Diego CA, 2019
18. Poulopoulos A. “Personalized patient models of neurodevelopmental disorders using single-cell genome editing in the mouse brain”, Neuroscience Seminar Series, Oakland University, Rochester MI [virtual], 2023
19. Poulopoulos A. “Personalized patient models of neurodevelopmental disorders using single-cell genome editing in the mouse brain” Neurology Grand Rounds, Boston Children’s Hospital & Harvard Medical School, Boston MA, 2023
20. Poulopoulos A. “Personalized patient models of neurodevelopmental disorders using single-cell genome editing in the mouse brain” Neurons, Brains, and Behavior Seminar Series, NIH, Bethesda MD, 2023
21. Poulopoulos A. “Editing the Developing Brain”, Biochemistry Seminar Series, University of Buffalo, Buffalo, NY, 2026
22. Poulopoulos A. “The Promise of Precision in Somatic Cell Genome Editing In Vivo”, High Risk, High Reward Research Symposium, NIH, Bethesda, MD, 2026

<u>International</u>

23. Poulopoulos A. “Neuroligins interact with the inhibitory scaffolding protein gephyrin”. Gephyrin International Meeting, Lausanne Switzerland, 2007
24. Poulopoulos A. “Mechanisms of Neuroligin Function in Inhibitory Postsynaptic Differentiation” German Primate Center Lecture Series, Göttingen Germany, 2008

25. Poulopoulos A. “The subcellular transcriptomes and proteomes that execute brain wiring”. Invited Seminar, Neurocoloquium Seminar Series, Berlin Germany, 2015
26. Poulopoulos A. “Projection-specific proteomes and the miswired circuitry of mental disorders” Federation of European Neuroscience Societies Forum, Edinburgh UK [virtual], 2022
27. Poulopoulos A. “Personalized medicine of brain wiring? In utero CRISPR technologies for rapid modeling of individual patients” 15th Meeting of the German Neuroscience Society, Göttingen Germany, 2023
28. Poulopoulos A. "Editing the Developing Brain: in utero CRISPR knockins and broadly-accessible personalized patient models" Center for Developmental Neurology Seminar, Kings College, London UK, 2023
29. Poulopoulos A. "Editing the Developing Brain: from in utero CRISPR knockins to broadly-accessible personalized patient models" Neuroscience Guest Speaker, Oxford University, Oxford UK, 2023
30. Poulopoulos A. "Axonal Degeneration and Regeneration" EMBO - The Company of Biologists Workshop, Okinawa Institute of Science and Technology, Okinawa Japan, 2024
31. Poulopoulos A. "The CRISPR Toolkit in a Nutshell: From Basic Research to Genome Therapeutics" Cold Spring Harbor Asia, Suzhou, China, 2025
32. Poulopoulos A. "Genome Editing the Embryonic Brain" 16th International Conference on Genomics and Systems Biology of Human Disease and Aging, Sissi, Greece, 2026