CURRICULUM VITAE

VASILEIOS "BASILIS" ZIKOPOULOS, MS, PhD

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Areas of specialization: Systems neuroscience, neuroanatomy, neuropathology, neuroimaging, computational neuroscience, mental health, psychiatric and neurodegenerative disorders.

Technical expertise: I use a variety of molecular, neurochemical, circuit-tracing, imaging, and computational approaches to investigate the organization of cortical and subcortical circuits in non-human primates and humans and their disruption in brain disorders. I have expertise in the following areas: Neuroanatomical tract-tracing; Brain mapping; Surgical procedures; Histopathology; Molecular biomarkers; Microscopy (light-sheet, correlated light, confocal-laser, and electron microscopy); Imaging; 3D-reconstruction of brain areas, pathways, circuits, and synapses; Computational modeling; Neural network simulations; Machine learning; Convolutional neural networks; Artificial Intelligence.

1. Education

Institution And Location	Degree	Year(s)	Field Of Study
University of Crete, Greece	BS	1991 - 1996	Biology
University of Crete, Greece	MS	1996 - 1998	Biology
University of Crete, Greece	PhD	1998 – 2004*	Neurobiology

** Leave for mandatory national service in armed forces, Air Force (2001 – 2003)*

2. Academic & Professional Appointments

2026 – 2028 **Chair *ad Interim***, Department of Health Sciences, College of Health & Rehabilitation Sciences: Sargent College, Boston University

2021 – **Associate Professor** (tenured), Department of Health Sciences, College of Health & Rehabilitation Sciences: Sargent College, Boston University

2021 – **Associate Professor** *(secondary appointment)*, Department of Anatomy and Neurobiology, Boston University Chobanian and Avedisian School of Medicine

2019 – **Director, PhD Program in Human Physiology**, Department of Health Sciences, College of Health & Rehabilitation Sciences: Sargent College, Boston University (06/25/2019)

Faculty, Center for Systems Neuroscience (CSN), Boston University

2019 – 2020 **Assistant Professor** *(secondary appointment)*, Department of Anatomy and Neurobiology, Boston University Chobanian and Avedisian School of Medicine

2016 – 2018	**Faculty**, Center for Research in Sensory Communication and Emerging Neural Technology (CRESCENT), Boston University
2015 –	**Faculty/Training Faculty**, Graduate Program in Neuroscience (GPN), Boston University **Faculty/Training Faculty**, Program in Neuroscience (PIN), Boston University
2015 – 2020	**Assistant Professor**, Department of Health Sciences, College of Health & Rehabilitation Sciences: Sargent College, Boston University
2009 – 2016	**Faculty**, Center of Excellence for Learning in Education, Science, and Technology (CELEST), Boston University
2008 – 2014	**Research Assistant Professor**, Department of Health Sciences, College of Health & Rehabilitation Sciences: Sargent College, Boston University
2004 – 2008	**Post-doctoral Research Associate**, College of Health & Rehabilitation Sciences: Sargent College, Boston University
2003 – 2004	**Instructor**, Department of Biology, University of Crete, Greece
1996 – 2004	**Research Fellow**, Department of Biology, University of Crete, Greece
1996 – 1998	**Research Fellow**, Institute of Marine Biology of Crete, Greece

3. Scholarship and Creative Activities

3A. RESEARCH SUPPORT (FUNDED GRANTS AND FELLOWSHIPS)

Overview: I have successfully obtained $13 Million of funding as PI for NIH R01 and Foundation grants. Moreover, I have been a co-investigator in five other proposals with collaborators securing additional federal funding.

Active Research Funding as Principal Investigator

- **NIH/NIMH, R01 MH118500** **02/15/2019 – 06/30/2029 (renewed in 2024)**

"Organization and circuit interactions of thalamocortical attentional networks in health and disease"
Role: MPI (*Contact PI) Zikopoulos*, Yazdanbakhsh (MPI)
Total Budget: $3,933,576 (2024-2029) and $2,373,013 (2019-2024)
The goal is to investigate the organization and circuit interactions of thalamic networks that have significantly expanded and specialized in parallel with the cortex in primates and model their typical function and disruption in disorders.

- **NIH/NIMH, R01 MH136013** **04/01/2024 – 03/31/2029**

"Primate inhibitory neurons in hippocampal CA3-CA1 intrinsic circuits"
Role: MPI Zikopoulos, Barbas, Medalla (MPI)
Total Budget: $3,962,278
The goal is to investigate the organization, physiology, morphology, and synaptic interactions of hippocampal inhibitory neurons in primates.

Active Research Funding as Co – Investigator

- **NIH/NIMH R01 MH117785** **07/01/1987 – 07/31/2026**

"Prefrontal anatomic pathways in executive control"
Role: Co-Investigator Barbas (PI, Boston University)

Total Budget: $3,219,932
The goal is to identify pathways through which prefrontal cortices exercise excitatory and inhibitory control within functionally related prefrontal cortices, and in their projection to temporal cortices at the level of systems and at the ultrastructural level.

Pending Research Funding

- **Medical Research Council (MRC), UK Anderson (PI, Cambridge University, UK) 2026 – 2031**

"Grounding the Treatment of Intrusive Thinking in the Neurobiology of Inhibitory Control"
Role: Consultant – Project Partner
The goal is to study brain control circuits and mechanisms that healthy individuals use to suppress intrusive thoughts and blunt their affective impact, in order to develop thought suppression training protocols that can be used as a therapeutic intervention in disorders like anxiety, depression, and PTSD.

Completed Research Support

- **Simons Foundation Autism Research Initiative (SFARI) #946867, Zikopoulos (PI), 09/01/2022 – 06/30/2025**

"Short- and long-range cortical pathway and axon pathology in autism: High resolution microscopic histopathology combined with machine learning and deep neural network analyses"
Role: PI Total: $697,809
The goal is to apply machine learning and deep neural network computational approaches to systematically investigate pathway and axon pathology in autism, at very high resolution, using post-mortem human brain tissue.

- **NIH/NIMH R01 MH101209 Zikopoulos (PI) 04/04/2014 – 01/31/2020**

"Organization of Excitatory and Inhibitory Circuits in ASD"
Role: PI Total: $2,018,222
The goal is to investigate the structural and molecular organization and features of neurons in the grey matter and their axons in the white matter that underlie excitatory and inhibitory control within functionally relevant prefrontal networks in children with autism.

- **NIH/NIMH R01 MH057414 Barbas (PI, Boston University) 04/10/1999 – 03/31/2022**

"Organization of prefrontal feedback circuits"
Role: Co-Investigator
The goal is to study the structural organization of a massive feedback system originating from prefrontal cortices and distributed to excitatory and inhibitory systems in the amygdala and the thalamus at the level of systems and at the ultrastructural level.

- **NIH/NIA R01 AG075963 Wainford (PI, Boston University) 04/10/1999 – 03/31/2022**

"Age-related Hypertension and Vascular Cognitive Impairment"
Role: Co-Investigator
The goal is to test whether normal aging evokes sex-dependent hypertension that drives central microvascular injury and neuroinflammation to cause vascular cognitive impairment which can be ameliorated by Angiotensin II Type 1 receptor antagonism.

- **NIH/NIMH R01 MH105608 Berretta (PI, McLean Hospital, Harvard University) 09/01/2015 – 06/30/2019**

"Thalamic axonal pathways and extracellular matrix abnormalities in schizophrenia"
Role: Co-Investigator

The goal is to study structural and molecular features of pathways linking the thalamus and the frontal cortex and their dysregulation in schizophrenia. The focus is on the expression of chondroitin sulfate proteoglycans in oligodendrocytes and axonal coats and whether changes in their levels are associated with white matter abnormalities and dysregulation of molecular pathways related to myelin biosynthesis in schizophrenia.

- **Mentor-based Fellowship (#2156) Zikopoulos (PI) Period: 2008 – 2011**

"Architecture of prefrontal white matter".
Principal Investigator / Award Grantee: Vasileios Zikopoulos Mentor: Helen Barbas Total: $30,000
Agency: Autism Speaks (www.autismspeaks.org)
The goal was to investigate the largely unexplored issue of prefrontal white matter structure and pathways that exercise central executive control and are especially affected in autism.

- **NSF, CELEST (Center of Excellence for Learning in Education, Science, and Technology - 0835976). Period: 2009 – 2016**

Role: Faculty member; Principal Investigator: Barbara Shinn-Cunningham, Department of Biomedical Engineering, Boston University
Agency: National Science Foundation (NSF)
CELEST is an NSF Science of Learning Center (SLC) comprised of neuroscientists, educators, and engineers at several Boston-area universities, including Boston University, Harvard University, and MIT. The project's central goals are to understand brain mechanisms of learning, with particular emphasis on the role of dynamical interactions within and between brain regions. The project includes specific multidisciplinary collaborations that bridge efforts across all CELEST pillars: education, science, and technology.

3B. PUBLICATIONS

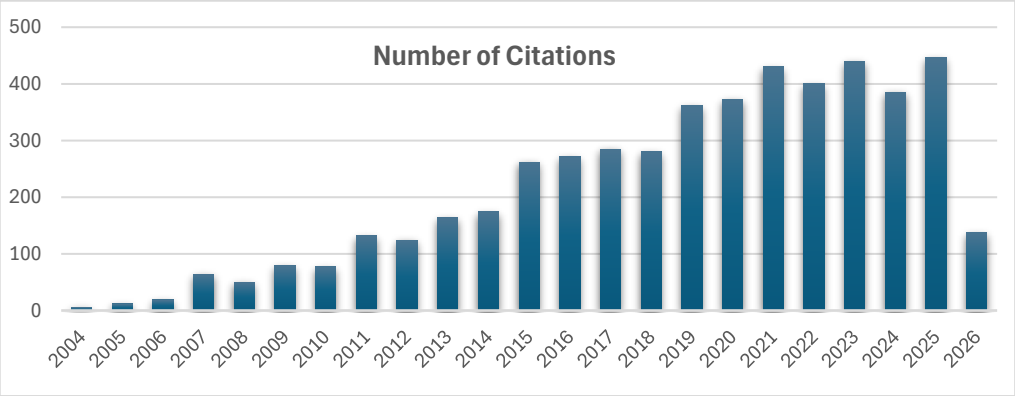
Overview: I have published 56 original research articles, including a book chapter and commentaries, and 68 abstracts. Since my application for promotion and tenure in 2020, I have published 23 peer-reviewed original research articles and commentaries, and 22 abstracts. I have been senior or corresponding author in 29/56 articles (52%) and first author in 16/56 articles (29%). Overall, 19/56 articles (34%) and 28/68 abstracts (41%) included students as co-authors. My published work largely follows the themes listed below:

- Cortical, thalamic, hippocampal, and amygdalar circuits to flexibly guide attention and behavior, through the interaction of cognitive and emotional processes
- Circuit mechanisms for inhibitory control in perception and cognitive-emotional interactions
- Comparative studies of brain networks in non-human primates and humans: a template for study of disorders
- Neuropathology and biomarkers of Autism Spectrum Disorders
- Mechanisms of disruption and biomarkers of schizophrenia
- Mechanisms of disruption and biomarkers of neurodegenerative disorders
- Artificial Intelligence and Machine Learning for the study of Mental and Neurological Disorders

In the lists below, articles after black border line were published before tenure application.

Citation Indices		
	All	Since 2021
Citations	**5041**	**2252**
h-index	**31**	**26**
I10-index	**39**	**34**

Summary from Google Scholar (April 2026)



Book Chapters (peer-reviewed) (1)

1. Barbas H and **Zikopoulos B** (2007). Sequential and parallel circuits for emotional processing in primate orbitofrontal cortex. *In: The Orbitofrontal Cortex (edited by David Zald and Scott Rauch)*, pp57-92. New York: Oxford UP. Link for *chapter-4*

Pre-prints currently under review (4)

ᵻᵻ *student co-author* *(*) corresponding, or senior author*

1. Bao CW ᵻᵻ, Martin E, **Zikopoulos B***, Yazdanbakhsh A. The rotating tilted lines illusion for the evaluation of cognitive abnormalities. ***bioRxiv*** [Preprint]. 2026 March 9:2026.03.05.709956; doi: 10.64898/2026.03.05.709956. *Under Review*
2. **Zikopoulos B***, Matuk N ᵻᵻ, Romanova I ᵻᵻ, Yazdanbakhsh A. Biophysical Modeling of Thalamocortical Circuit Dynamics: Species-Specific Insights into Neural Synchrony, Sleep Spindles, and Mechanisms of Neuropsychiatric Disorders. ***bioRxiv*** [Preprint]. 2026 Feb 3:2026.02.01.703170. doi: 10.64898/2026.02.01.703170. PMID: 41676473; PMCID: PMC12889456. *Under Review (Revision submitted)*
3. Moroze E ᵻᵻ, **Zikopoulos B***, Yazdanbakhsh A. Explainable 3D CNNs link regional and network level disruption in early Parkinson's MRIs to symptom progression. ***bioRxiv*** [Preprint]. 2025 Dec 3:2025.11.17.688918. doi: 10.1101/2025.11.17.688918. PMID: 41383753; PMCID: PMC12694578. *Under Review (Revision submitted)*
4. Lokray S ᵻᵻ, **Zikopoulos B***, Yazdanbakhsh A. Structural changes in autism reflect atypical brain network organization and phenotypical heterogeneity: a hybrid deep network approach. ***bioRxiv*** [Preprint]. 2025 Dec 3:2025.11.02.686152. doi: 10.1101/2025.11.02.686152. PMID: 41377502; PMCID: PMC12687778. *Under Review*

Pre-prints that have been published after peer-review (7)

ᵻᵻ *student co-author* *(*) corresponding, or senior author*

1. Yazdanbakhsh A, Dang K ᵻᵻ, Kuang K ᵻᵻ, Lian T ᵻᵻ, Liu X, Xie S ᵻᵻ, **Zikopoulos B***. Artificial intelligence networks combining histopathology and machine learning can extract axon pathology in autism spectrum disorder. ***bioRxiv***. 2024 October; :2024.10.25.620308. doi: 10.1101/2024.10.25.620308.

2. Barbas H, Garcia-Cabezas MA, John YJ, Bautista J ⁋, McKee AC, and **Zikopoulos B***. Cortical circuit principles predict patterns of trauma induced tauopathy in humans. ***bioRxiv*** [Preprint]. 2024.05.02.592271; doi: https://doi.org/10.1101/2024.05.02.592271
3. Dugan C ⁋, **Zikopoulos B***, Yazdanbakhsh A. A neural modeling approach to study mechanisms underlying the heterogeneity of visual spatial frequency sensitivity in schizophrenia. bioRxiv [Preprint]. 2023 Oct 21:2023.10.18.563001. doi: 10.1101/2023.10.18.563001. PMID: 37904992; PMCID: PMC10614973.
4. Zhu J, **Zikopoulos B***, Yazdanbakhsh A. A neural model of modified excitation/inhibition and feedback levels in schizophrenia. bioRxiv [Preprint]. 2023 Apr 28:2023.04.24.538166. doi: 10.1101/2023.04.24.538166. Update in: This article has been published with doi: 10.3389/fpsyt.2023.1199690. PMID: 37162902; PMCID: PMC10168241.
5. Yazdanbakhsh A, Barbas H, and **Zikopoulos B***. (2022). Sleep spindles in primates: modelling the effects of distinct laminar thalamocortical connectivity in core, matrix, and reticular thalamic circuits. ***bioRxiv*** 2022.04.27.489802; doi: https://doi.org/10.1101/2022.04.27.489802
6. John YJ, **Zikopoulos B**, García-Cabezas MÁ, and Barbas H. (2022). The Cortical Spectrum: a robust structural continuum in primate cerebral cortex revealed by histological staining and magnetic resonance imaging. ***bioRxiv*** 2021.09.09.459678; doi: https://doi.org/10.1101/2021.09.09.459678
7. Liu X, Bautista J ⁋, Liu E ⁋, **Zikopoulos B***. Imbalance of laminar-specific excitatory and inhibitory circuits of the orbitofrontal cortex in autism. ***Research Square*** 2020 (preprint under consideration at ***Molecular Autism***): DOI: 10.21203/rs.3.rs-29733/v1.

Editorials – Invited Commentaries (reviewed) (5)

1. Ricard C, Alonso-Nanclares L, **Zikopoulos B**, Oheim M. Editorial: Methods and applications in frontiers in neuroanatomy. ***Front Neuroanat.*** 2023 Aug 29;17:1256867. doi: 10.3389/fnana.2023.1256867. PMID: 37711586; PMCID: PMC10497858.
2. Medalla M, **Zikopoulos B**. Laminar Excitatory Inputs to the Dorsolateral Prefrontal Cortex: Implications for Periadolescent Synaptic Plasticity and Circuit Pathology. ***Biol Psychiatry.*** 2023 Aug 15;94(4):280-282. doi: 10.1016/j.biopsych.2023.06.005. PMID: 37495330.
3. Hilgetag CC, **Zikopoulos B**. (2022). The highways and byways of the brain. ***PLoS Biology***. 2022 Mar 31;20(3):e3001612. doi: 10.1371/journal.pbio.3001612. PMID: 35358176; PMCID: PMC9004754.
4. García-Cabezas MÁ, **Zikopoulos B**. (2019) Evolution, development, and organization of the cortical connectome. ***PLoS Biology***. *May 10;17(5):e3000259. doi: 10.1371/journal.pbio.3000259. eCollection 2019 May*.
5. Barbas H and **Zikopoulos B** (2014). Towards patient-specific targeting and parameter setting of deep brain stimulation for relief of depression. ***Biological Psychiatry***. 76(12):914-6.

Peer-reviewed articles (46)

⁋ *student co-author (*) corresponding, or senior author*

1. Yazdanbakhsh A, Dang KTM ⁋, Kuang K ⁋, Lian T ⁋, Liu X, Xie S ⁋, **Zikopoulos B***. Artificial Intelligence Networks Combining Histopathology and Machine Learning Can Extract Axon Pathology in Autism Spectrum Disorder. ***Autism Res.*** 2025 Nov;18(11):2210-2230. doi: 10.1002/aur.70135. Epub 2025 Nov 3. PMID: 41178535; PMCID: PMC12661275.

2. Barbas H, Garcia-Cabezas MÁ, John Y, Bautista J [ff], McKee A, **Zikopoulos B***. Cortical circuit principles predict patterns of trauma induced tauopathy in humans. ***Cereb Cortex***. 2025 Aug 1;35(8):bhaf209. doi: 10.1093/cercor/bhaf209. PMID: 40817910; PMCID: PMC12357493.
3. Barbas H, **Zikopoulos B***. The Cortical Structural Model Extends to Thalamocortical Connections. ***Eur J Neurosci.*** 2025 Jun;61(12):e70167. doi: 10.1111/ejn.70167. PMID: 40542691; PMCID: PMC12723798.
4. Dugan C [ff], **Zikopoulos B***, Yazdanbakhsh A. A neural modeling approach to study mechanisms underlying the heterogeneity of visual spatial frequency sensitivity in schizophrenia. ***Schizophrenia (Heidelb).*** 2024 Jul 16;10(1):63. doi: 10.1038/s41537-024-00480-2. PMID: 39013944; PMCID: PMC11252134.
5. Bautista J [ff], García-Cabezas MÁ, Medalla M, Rosene DL, **Zikopoulos B**, Barbas H. Pattern of ventral temporal lobe interconnections in rhesus macaques. ***J Comp Neurol.*** 2023 Dec;531(18):1963-1986. doi: 10.1002/cne.25550. Epub 2023 Nov 2. PMID: 37919833.
6. Zhu J, **Zikopoulos B***, Yazdanbakhsh A. A neural model of modified excitation/inhibition and feedback levels in schizophrenia. ***Front Psychiatry.*** 2023 Aug 15;14:1199690. doi: 10.3389/fpsyt.2023.1199690. PMID: 37900297; PMCID: PMC10600455.
7. Yazdanbakhsh A, Barbas H, **Zikopoulos B***. Sleep spindles in primates: Modeling the effects of distinct laminar thalamocortical connectivity in core, matrix, and reticular thalamic circuits. ***Netw Neurosci.*** 2023 Jun 30;7(2):743-768. doi: 10.1162/netn_a_00311. PMID: 37397882; PMCID: PMC10312265.
8. Barbas H, **Zikopoulos B***, John YJ. The inevitable inequality of cortical columns. ***Front Syst Neurosci.*** 2022 Sep 20;16:921468. doi: 10.3389/fnsys.2022.921468. PMID: 36203745; PMCID: PMC9532056.
9. John YJ, **Zikopoulos B**, García-Cabezas MÁ, Barbas H. The cortical spectrum: A robust structural continuum in primate cerebral cortex revealed by histological staining and magnetic resonance imaging. ***Front Neuroanat.*** 2022 Sep 9;16:897237. doi: 10.3389/fnana.2022.897237. PMID: 36157324; PMCID: PMC9501703.
10. García-Cabezas MÁ, Hacker JL [ff], **Zikopoulos B***. Homology of neocortical areas in rats and primates based on cortical type analysis: an update of the Hypothesis on the Dual Origin of the Neocortex. ***Brain Struct Funct.*** 2022 Aug 12. doi: 10.1007/s00429-022-02548-0. Epub ahead of print. PMID: 35962240.
11. Park S [ff], **Zikopoulos B***, Yazdanbakhsh A. (2022). Visual illusion susceptibility in autism: A neural model. ***European Journal of Neuroscience***, 1-20. 2022 Jun 14. doi: 10.1111/ejn.15739. PMID: 35701859.
12. Pantazopoulos H, Hossain NM [ff], Chelini G, Durning P, Barbas H, **Zikopoulos B**, and Berretta S. (2022). Chondroitin Sulphate Proteoglycan Axonal Coats in the Human Mediodorsal Thalamic Nucleus. ***Frontiers in Integrative Neuroscience***, 06 July 2022. https://doi.org/10.3389/fnint.2022.934764
13. Wang Y [ff], Taylor E, **Zikopoulos B**, Seta F, Huang N, Hamilton J, Kantak KM, Morgan K. (2021). Aging-induced vascular damage of the mouse thalamus is associated with sensorimotor and memory defects. ***Neurobiology of Aging***. 2021 Apr;100:39-47. doi: 10.1016/j.neurobiolaging.2020.11.017. PubMed PMID: 33477010.
14. Liu X, Bautista J [ff], Liu E [ff], **Zikopoulos B***. (2020). Imbalance of laminar-specific excitatory and inhibitory circuits of the orbitofrontal cortex in autism. ***Molecular Autism*** 2020 Oct 20;11(1):83. doi: 10.1186/s13229-020-00390-x. PMID: 33081829; PMCID: PMC7574354.
15. García-Cabezas MÁ, Hacker JL [ff], and **Zikopoulos B***. (2020). A protocol for cortical type analysis of the human neocortex applied on histological samples, the Atlas of von Economo and Koskinas, and Magnetic Resonance Imaging. ***Frontiers in Neuroanatomy*** 2020. 14:576015. doi: 10.3389/fnana.2020.576015 PMID: 33364924; PubMed Central PMCID: PMC7750391
16. Timbie C [ff #], García-Cabezas MÁ[#], **Zikopoulos B[#]**, Barbas H. (2020). Organization of primate amygdalar–thalamic pathways for emotions. ***PLoS Biology*** 2020 18(2): e3000639. doi.org/10.1371/journal.pbio.3000639. **([#] co-first authors)**

17. Trutzer IM ⁋, García-Cabezas MÁ, **Zikopoulos B***. (2019) Postnatal development and maturation of layer 1 in the lateral prefrontal cortex and its disruption in autism. ***Acta Neuropathologica Communications.*** *Mar 13;7(1):40. doi: 10.1186/s40478-019-0684-8*.
18. García-Cabezas MÁ, **Zikopoulos B**, Barbas H. (2019) The Structural Model: a theory linking connections, plasticity, pathology, development and evolution of the cerebral cortex. ***Brain Structure and Function.*** Feb 9. doi: 10.1007/s00429-019-01841-9. PMID: 30739157.
19. **Zikopoulos B***, Liu X, Tepe J ⁋, Trutzer I ⁋, John YJ, Barbas H. (2018) Opposite development of short- and long-range anterior cingulate pathways in autism. ***Acta Neuropathologica.*** Sep 6. doi: 10.1007/s00401-018-1904-1. PubMed PMID: 30191402; PubMed Central PMCID: PMC6208731.
20. John YJ, **Zikopoulos B**, Bullock D and Barbas H (2018) Visual Attention Deficits in Schizophrenia Can Arise from Inhibitory Dysfunction in Thalamus or Cortex. ***Computational Psychiatry***. 2, 223–257. https://doi.org/10.1162/cpsy_a_00023. PubMed PMID: 30627672; PubMed Central PMCID: PMC6317791.
21. García-Cabezas MÁ, Barbas H, **Zikopoulos B***. (2018) Parallel Development of Chromatin Patterns, Neuron Morphology, and Connections: Potential for Disruption in Autism. ***Frontiers in Neuroanatomy***. 12: 70. https://doi.org/10.3389/fnana.2018.00070. PubMed PMID: 30174592; PubMed Central PMCID: PMC6107687.
22. **Zikopoulos B***, García-Cabezas MÁ, Barbas H. (2018) Parallel trends in cortical gray and white matter architecture and connections in primates allow fine study of pathways in humans and reveal network disruptions in autism. ***PLoS Biology***. Feb 5;16(2):e2004559. doi: 10.1371/journal.pbio.2004559. PubMed PMID: 29401206; PubMed Central PMCID: PMC5814101.
23. García-Cabezas MA, Joyce MKP ⁋, John YJ, **Zikopoulos B**, and Barbas H (2017) Mirror trends of plasticity and stability indicators in primate prefrontal cortex. ***European Journal of Neuroscience.*** 2017 Oct;46 (8):2392-2405. PubMed PMID: 28921934; PubMed Central PMCID: PMC5656436.
24. **Zikopoulos B***, Hoistad M, John YJ, Barbas H. (2017) Posterior orbitofrontal and anterior cingulate cortices target inhibitory and excitatory systems with opposite functions in the amygdala. ***Journal of Neuroscience.*** Apr 14. pii: 3940-16. PubMed PMID: 28411274; PubMed Central PMCID: PMC5444191.
25. García-Cabezas MA, John YJ, Barbas H and **Zikopoulos B*** (2016) Distinction of neurons, glia and endothelial cells in the cerebral cortex: an algorithm based on cytological features. ***Frontiers in Neuroanatomy.*** Nov 1;10:107. eCollection 2016. PubMed PMID: 27847469; PubMed Central PMCID: PMC5088408.
26. **Zikopoulos B***, John YJ, García-Cabezas MA, Bunce JG and Barbas H (2016) The intercalated nuclear complex of the primate amygdala. ***Neuroscience.*** 330:267-290. PubMed PMID: 27256508; PubMed Central PMCID: PMC4928580.
27. John YJ#, **Zikopoulos B#**, Bullock D and Barbas H (2016) The Emotional Gatekeeper: A computational model of attentional selection and suppression through the projection from the amygdala to the thalamic reticular nucleus. ***PLoS Comput Biol.*** 12(2): e1004722. doi:10.1371/journal.pcbi.1004722 **(# co-first authors)**. PubMed PMID: 26828203; PubMed Central PMCID: PMC4734702.
28. Halassa MM, Chen Z, Wimmer RD, Brunetti PM, Zhao S, **Zikopoulos B**, Wang F, Brown EN and Wilson MA (2014). State-dependent architecture of thalamic reticular subnetworks. ***Cell.*** 158(4):808-21. PubMedCentral PMCID: PMC4205482.
29. **Zikopoulos B***, Barbas H (2013). Altered neural connectivity in excitatory and inhibitory cortical circuits in autism. ***Frontiers in Human Neuroscience***. 7:609. doi: 10.3389/fnhum.2013.00609. eCollection 2013. PubMed PMID: 24098278; PubMedCentral PMCID: PMC3784686.
30. Bunce JG, **Zikopoulos B**, Feinberg M, and Barbas H (2013). Parallel prefrontal pathways reach distinct excitatory and inhibitory systems in memory-related rhinal cortices. ***Journal of Comparative Neurology.*** Dec 15;521(18):4260-83. doi: 10.1002/cne.23413. PubMed PMID: 23839697; PubMed Central PMCID: PMC3881238.

31. John YJ, Bullock D, **Zikopoulos B**, Barbas H (2013). Anatomy and computational modeling of networks underlying cognitive-emotional interaction. ***Frontiers in Human Neuroscience***. 7:101. doi: 10.3389/fnhum.2013.00101. PubMed Central PMCID: PMC3613599.
32. Barbas H, García-Cabezas MA, and **Zikopoulos B** (2013). Frontal-thalamic circuits associated with language. ***Brain and Language***. Jul; 126(1):49-61. doi: 10.1016/j.bandl.2012.10.001. Epub 2012 Dec 1. PubMed Central PMCID: PMC3615046.
33. **Zikopoulos B*** and Barbas H (2012). Pathways for emotions and attention converge on the thalamic reticular nucleus in primates. ***Journal of Neuroscience***. 32(15): 5338-5350.
34. Barbas H, **Zikopoulos B**, and Timbie C[ff] (2011). Sensory pathways and emotional context for action in primate prefrontal cortex. ***Biological Psychiatry***. 69(12): 1133-1139.
35. **Zikopoulos B*** and Barbas H (2010). Changes in prefrontal axons may disrupt the network in autism. ***Journal of Neuroscience***. 30(44): 14595-609.
36. Xiao D, **Zikopoulos B**, and Barbas H (2009). Laminar and modular organization of prefrontal projections to multiple thalamic nuclei. ***Neuroscience***. 161(4): 1067-1081.
37. **Zikopoulos B*** and Barbas H (2007). Parallel Driving and Modulatory Pathways Link the Prefrontal Cortex and Thalamus. ***PLoS ONE*** 2(9): e848. doi:10.1371/journal.pone.0000848.
38. Barbas H and **Zikopoulos B*** (2007). The prefrontal cortex and flexible behavior. ***The Neuroscientist***. 13(5): 532-545.
39. **Zikopoulos B*** and Barbas H (2007). Circuits for multisensory integration and attentional modulation through the prefrontal cortex and the thalamic reticular nucleus in primates. ***Reviews in the Neurosciences.*** 18(6): 417-438.
40. **Zikopoulos B** and Barbas H (2006). Prefrontal projections to the thalamic reticular nucleus form a unique circuit for attentional mechanisms. ***Journal of Neuroscience.*** 26(28): 7348-7361.
41. Nikolakopoulou AM, Parpas A, Panagis L, **Zikopoulos B**, and Dermon CR (2006). Early post-hatching sex differences in cell proliferation and survival in the quail telencephalic ventricular zone and intermediate medial mesopallium. ***Brain Research Bulletin.*** 70(2): 107-116.
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45. **Zikopoulos B**, Kentouri M, and Dermon CR (2001). Cell genesis in the hypothalamus is associated to the sexual phase of a hermaphrodite teleost. ***Neuroreport.*** 12(11): 2477-2481.
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Complete List of Published Work in My Bibliography:

https://www.ncbi.nlm.nih.gov/myncbi/vasileios.zikopoulos.1/bibliography/public/

Published Abstracts presented in national and international meetings (68)

ᵻᵻ *student co-author*

1. Son J ᵻᵻ, Liu X, Matuk N ᵻᵻ, Barbas H, and **Zikopoulos B**. Topographical core and matrix innervation of the thalamic reticular nucleus in human and non-human primates. Society for Neuroscience, San Diego CA. November 15-19, 2025.
2. Xie S ᵻᵻ, Kuang K ᵻᵻ, Stackpole M ᵻᵻ, Liu X, Yazdanbakhsh A, **Zikopoulos B**. Machine learning assisted identification of frontotemporal pathway pathology in autism. Society for Neuroscience, San Diego CA. November 15-19, 2025.
3. Verma V, **Zikopoulos B**, Barbas H. Inhibitory neuronal subpopulations in the hippocampus in rhesus monkeys. Society for Neuroscience, San Diego CA. November 15-19, 2025.
4. Kuang K ᵻᵻ, Liu X, Stackpole M ᵻᵻ, Xie S ᵻᵻ, **Zikopoulos B**, Yazdanbakhsh A. Machine learning approaches to systematically study short- and long-range cortical pathways and identify axon pathology in autism. Simons Foundation Autism Research Initiative (SFARI) Annual Meeting. March 24-26, 2025. New York City, NY.
5. Xie S ᵻᵻ, Stackpole M ᵻᵻ, Dang K ᵻᵻ, Kuang K ᵻᵻ, Liu X, Yazdanbakhsh A, and **Zikopoulos B**. Characterizing and visualizing axon pathology in the uncinate fasciculus in autism spectrum disorder by high-resolution microscopy and machine learning approaches. Society for Neuroscience, Chicago IL. October 5-9, 2024.
6. Yazdanbakhsh A, Dang K ᵻᵻ, Kuang K ᵻᵻ, Liu X, Xie S ᵻᵻ, Al-Shanniek S ᵻᵻ, and **Zikopoulos B**. Machine learning approaches to study and visualize axon pathology in short- and long-range pathways of the cortical white matter in autism. Society for Neuroscience, Chicago IL. October 5-9, 2024.
7. Kirpalani M ᵻᵻ, **Zikopoulos B**, Anderson MC. The role of the Nucleus Reuniens in inhibitory control: prefrontal-thalamic pathways underlying inhibitory control over the hippocampus. Program No. PSTR423.08. 2024 Neuroscience Meeting Planner. Chicago, IL. : Society for Neuroscience, 2024. Online.
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9. Matuk N ᵻᵻ, Yazdanbakhsh A, and **Zikopoulos B**. (2023). Biophysical Neural Model of Core and Matrix Thalamocortical Systems in Rodents and Primates. Society for Neuroscience, Washington DC, November 11-15, 2023.
10. García-Cabezas MÁ, J Bautista J ᵻᵻ, Liu X, **Zikopoulos B**. Gradients of laminar complexification across the human orbitofrontal cortex. IBRO Neuroscience Reports, 15-S157, 2023 (2023/10/1).
11. Zaldivar-Diez J ᵻᵻ, Herrero Z ᵻᵻ, Gómez S, Fernández C, Barbero A, García M, **Zikopoulos B**, Barbas H, García-Cabezas MÁ. Serial reconstruction reveals complex synaptic architecture of the thalamic mediodorsal nucleus in primates. IBRO Neuroscience Reports, 15-S265-S266, 2023 (2023/10/1).
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14. Matuk N ᵻᵻ, **Zikopoulos B** and Yazdanbakhsh A. (2022). Biophysical neural model of thalamocortical circuits underlying sleep spindles. Society for Neuroscience, San Diego CA. Nov. 12-16, 2022.

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33. **Zikopoulos B**, John YJ, Tepe J ***ff***, and Barbas H (2015). Opposite development of short- and long-range anterior cingulate pathways in autism. Chicago, IL: Society for Neuroscience, 2015. Online.
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41. **Zikopoulos B** and Barbas H (2012). The intercalated nucleus of the primate amygdala. New Orleans: Society for Neuroscience, 2012. Online.
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47. **Zikopoulos B** and Barbas H (2011). Comparable organization of frontal white matter in human and non-human primates. Washington, DC: Society for Neuroscience, 2011.
48. **Zikopoulos B**, Potamias G, and Dermon CR (2011). Discriminant analysis of brain adrenoceptor profiles during adult sex reversal in hermaphrodite teleost fish. 8th IBRO World Congress of Neuroscience, 14-18 July 2011, Florence, Italy.
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52. **Zikopoulos B**, Hoistad M, and Barbas H (2008). Differential projections and synaptic interactions of posterior orbitofrontal and anterior cingulate cortices with the amygdala. Washington: Society for Neuroscience, 2008. Online.
53. **Zikopoulos B** and Barbas H (2007). Neurochemical specificity of parallel circuits linking prefrontal cortex with the thalamus. San Diego: Society for Neuroscience, 2007. Online.
54. **Zikopoulos B** and Barbas H (2006). Involvement of the ventral anterior thalamic nucleus in corticocortical communication. 10th International Conference on Cognitive and Neural Systems. Boston MA: May 17-20, 2006.
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57. **Zikopoulos B** and Dermon CR (2004). Noradrenergic system plasticity during adult development and sexual maturation in hermaphrodite teleosts. 4th Forum of European Neuroscience (FENS), 10-14 July 2004, Lisbon, Portugal.
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59. **Zikopoulos B,** Pavlidis M, and Dermon CR (2003). Cerebral alpha 2 and beta adrenoceptors mediate alterations in skin color of cultured *Pagrus pagrus* teleosts. 6th IBRO World Congress of Neuroscience, 10-15 July 2003, Prague, Czech Republic.
60. **Zikopoulos B**, Zampetaki M, Kentouri M, and Dermon CR (2002). Ontogenesis of prosencephalic alpha 2 noradrenergic receptors in hermaphrodite marine teleost species (*Pagrus pagrus*). 3rd Forum of European Neuroscience (FENS), 13-17 July 2002, Paris, France.
61. Dermon CR, Zampetaki M, **Zikopoulos B**, Panagis L, Kandarian S, and Barbas H (2002). Altered expression of alpha 2 and beta adrenoceptors in frontal and hippocampal areas in Spontaneously Hypertensive Rats. 3rd Forum of European Neuroscience (FENS), 13-17 July 2002, Paris, France.
62. **Zikopoulos B**, Panagis L, Dermon CR, Harrison E, Lancashire C, Mileusnic R, and Stewart MG (2001). Passive avoidance training enhances neurons proliferation in day-old chicks. Society for Neuroscience, 31st Annual Meeting, San Diego, USA.
63. **Zikopoulos B**, Kentouri M, and Dermon CR (2000). Proliferation zones in adult brain of the hermaphrodite teleost species *Sparus aurata*: evidence for sex differences in the hypothalamus. *Eur J Neurosci* 12 Supp 11, pp: 5, 2nd Forum of European Neuroscience (FENS), 24-28 June 2000, Brighton, U.K.
64. **Zikopoulos B**, Kentouri M, and Dermon CR (2000). Cell proliferation and migration in the sexually dimorphic dorsal hypothalamic area in a Sparidae teleost and its hybrids. 15th Meeting of the Hellenic Society for Neuroscience, 27-29 October 2000, Patra, Greece.
65. Panagis L, **Zikopoulos B**, Stewart MG, and Dermon CR (2000). Aversive learning enhances cell proliferation in day-old chicks. 15th Meeting of the Hellenic Society for Neuroscience, 27-29 October 2000, Patra, Greece.
66. **Zikopoulos B**, Panagis L, Dermon CR, Mileusnic R, and Stewart MG (1999). Cell proliferation in day-old chicks after passive avoidance training. Society for Neuroscience, 29th Annual meeting, Miami, USA.
67. Kallergi G, Stamatakis A, **Zikopoulos B**, Barbas H, and Dermon CR (1997). Ontogeny of proliferating cells during late embryonic brain histogenesis of japanese quail. Society for Neuroscience, 27th Annual meeting, Washington D.C., USA.

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3C. INVITED TALKS AND SEMINARS

- Thalamic Network Organization and Pathway Interactions: Insights into Brain Function and Dysfunction in Mental Disorders. Gordon Research Conference. Thalamocortical Interactions. The Social and Cognitive Thalamus. February 22-27, 2026. Tuscany, **Italy**.
- Organization of thalamic networks & mechanisms of dysfunction in schizophrenia & autism. University of Athens Graduate Program In Neuroscience – November 3, 2025. Athens, **Greece**.
- Combined machine learning and histopathology approaches to systematically study cortical pathways and pathology in autism. 2025 Autism BrainNet All Staff Meeting, Simons Foundation, April 9-11, 2025, New York, NY, **USA**.
- A framework for the study of the brain connectome and disruptions in disease. 2023 Autism BrainNet All Staff Meeting, Simons Foundation, April 25-26, 2023, New York, NY, **USA**.
- Pathways for content, context, and emotions through the primate dorsal thalamus and the thalamic reticular nucleus. Federation of European Neuroscience Societies (FENS) 2022 Satellite Event: The Cognitive Thalamus. July 8, 2022, Paris, **France**.
- Brain development in autism: Clues from postnatal brain structure and connectivity disruptions. Il Symposium Fernando Reinoso Suárez. Brain Development: Current Understanding & Impact on Pathology. Fundacion Tatiana Perez De Guzman El Bueno, in collaboration with Universidad Autónoma de Madrid (Autonomous University of Madrid). October 22, 2021, Madrid, **Spain**.
- Cortical network pathology in children & adults with autism spectrum disorders. Neuroscience Seminar Series – University of Mississippi, September 14, 2021. **USA**.
- Autism Research with the Postmortem Human Brain. Expert Panelist, Special Interest Group – International Society for Autism Research (INSAR): INSAR Annual International Meeting, May 3-7, 2021, Boston, MA, **USA.**
- Structural and developmental basis for maldevelopment in disorders like autism. Special Topics In Neuroscience Seminar Series. Graduate Program in Neuroscience, School of Medicine, Universidad Autónoma de Madrid (Autonomous University of Madrid). September 3, 2020, Madrid, **Spain**.
- Pathology of orbitofrontal cortices in ASD. Datablitz Presentation Session and Discussion session: The future of post-mortem brain research in autism. Special Interest Group – International Society for Autism Research (INSAR) 2020 Virtual SIG (Webinar): Autism Research with the Postmortem Human Brain. July 23, 2020.
- Cortical network architecture: Development, Connectivity, and Clinical Relevance. NeuroFrontiers'2020 – Simulating Brain Circuits. June 15-17, 2020 (cancelled due to CoVid19 pandemic), SEU-Allen Joint Center, Nanjing, Jiangsu Province, 210096, **China**.
- Organization of the cortical connectome and disruptions in psychiatric disorders. Research on Tap: Innovations in Brain Research. Boston University Office of the Vice President and Associate Provost for Research. February 20, 2020, Boston MA, **USA**.
- Postnatal development of prefrontal cortical network disruptions in autism. Centro de Tecnologia Biomedica Universidad Politecnica de Madrid. June 4, 2019, Madrid, **Spain**.

- A framework for the study of the organization, connections, and pathology of the cortex. Department of Anatomy, Histology and Neuroscience, School of Medicine, Universidad Autónoma de Madrid (Autonomous University of Madrid). June 7, 2019, Madrid, **Spain**.
- Development of cortical network pathology in autism. Department of Anatomy and Neurobiology, Boston University School of Medicine. January 10, 2019, Boston MA, **USA**.
- Development of network disruptions in autism. Research on Tap: Current Research on Autism at Boston University: From Cells to Society. Boston University Office of the Vice President and Associate Provost for Research. November 1, 2018, Boston MA, **USA**.
- Development of excitatory and inhibitory cortical network disruption in autism. Sargent College Research Seminar Series, Boston University, October 3, 2018, Boston MA, **USA**.
- Computational modeling of biologically realistic neural circuits. Department of Psychological & Brain Sciences, Boston University, Boston MA. May, 2018, **USA**.
- From circuit models to computational models. Principles and Methods of Cognitive and Neural Modeling. Department of Psychological & Brain Sciences, Boston University, Boston MA. November 15, 2016, **USA**.
- Development of focal changes in prefrontal axons that disrupt the network in autism. Center for Computational Neuroscience and Neural Technology, Department of Psychological & Brain Sciences, Boston University. February 25, 2016, **USA**.
- Human systems neuroscience. Spring Cross Program Meeting, College of Health & Rehabilitation Sciences: Sargent College. February 10, 2016, Boston MA, **USA**.
- Attention Spectrum Disorders: brain communication networks need our attention. Health Matters – A Virtual Conference. College of Health & Rehabilitation Sciences: Sargent College. September 17, 2015, Boston MA, **USA**.
- From brain networks to neurons and their synaptic and molecular interactions in health and disease. Dean's Advisory Board meeting, College of Health & Rehabilitation Sciences: Sargent College. September 19, 2014, Boston MA, **USA**.
- Circuits for attention to emotions through the thalamic reticular nucleus. Computational and Systems Neuroscience Meeting (COSYNE). *Workshop - Thalamic reticular microcircuits: from structure to function.* February 28 –March 5, 2013, Snowbird, Utah, **USA**.
- A biological circuit model for attention to emotional stimuli in primates. 16th International Conference on Cognitive and Neural Systems. May 30-June 1, 2012, Boston MA, **USA**.
- The neuropathology of autism. Graduate Seminar Series. April 18, 2011. Sargent College of Health and Rehabilitation Sciences, Boston University, MA, **USA**.
- Neuroanatomical Methods in Neuroscience. Graduate Seminar Series. April 14, 2011. Department of Anatomy and Neurobiology, Boston University School of Medicine, MA, **USA**.
- Corticothalamic Communications. Graduate Seminar Series. March 23, 2011. Sargent College of Health and Rehabilitation Sciences, Boston University, MA, **USA**.
- Imaging the brain. Methods in Neuroscience. Graduate Seminar Series (Models of visual perception). March 3, 2011. Department of Cognitive and Neural Systems, Boston University, MA, **USA**.
- Changes in prefrontal axons may disrupt the network in autism. Research Seminar Series, Sargent College, Boston University. December 6, 2010, Boston MA, **USA**.

- Prefrontal white matter structure in autism. Research Seminar Series, Department of Cognitive and Neural Systems, Boston University. November 2, 2010, Boston MA, **USA**.
- Pathways for attentional processes through the prefrontal cortex and the thalamus. CELEST Workshop: Hardware and software of functional connections. Department of Cognitive and Neural Systems, Boston University. October 22, 2010, Boston MA, **USA**.
- Prefrontal contributions to visual perception: Circuits for multisensory integration and attentional modulation through the prefrontal cortex and the thalamic reticular nucleus. Computational and Systems Neuroscience Meeting (COSYNE). February 26 –March 3, 2009, Snowbird, Utah, **USA**.
- 3D-Reconstruction: From brain areas and pathways to neurons and synapses. Marine Biological Laboratory, Woods Hole. August 15 – 30, 2009, Woods Hole, MA, **USA**.

4. Teaching and Mentoring

Interests: Organization and dynamics of brain circuits from the molecular to the systems level; Neurobiology of mental disorders; Neuroanatomy and Neurophysiology.

4A. TEACHING EXPERIENCE, UNDERGRADUATE AND GRADUATE LEVEL COURSES:

Regular teaching as a primary instructor or frequent lecturer

Program in Human Physiology, Boston University

1.	Neuroanatomy / Neurophysiology HS370 and HS582	2017 – 2022
2.	Mechanisms of disruption in brain disorders HS549	2024 – present
3.	Methods in experimental physiology HS729	2026 – present
4.	Neural Systems HS550	2013
5.	Readings in Neuroscience HS755	2008 – 2014

Teaching as a guest lecturer

Graduate Program in Neuroscience, Boston University

6.	Frontiers in Neuroscience NE500	2015 – present
7.	Laboratory Rotations NE800	2015
8.	Tools of the Trade	2015 – present

Dept of Cognitive and Neural Systems and Dept of Psychological and Brain Sciences, Boston University

9.	Neural/Computational models of recognition, memory, and attention CN550	2012 – 2013
10.	Models of Visual Perception CN730	2005 – 2011
11.	Neural and Computational Models of Vision CN530	2018 – present
12.	Topics in Cognitive and Neural Systems CN810	2005 – 2011

Department of Anatomy and Neurobiology, Boston University School of Medicine

13.	Methods in Neuroscience GMS AN718	2011 – 2013, 2015

Marine Biological Institute in Woods Hole, MA, USA

14.	Neuroinformatics (graduate)	2008 – 2011

Department of Biology, University of Crete, Greece

15.	Computational Applications and Image Analysis in Biology	2003 – 2004

Primary Instructor **Spring Semester 2024 – Present**

SAR HS 549: Mechanisms of disruption in brain disorders (4 credits)

This graduate-level course (open to advanced undergraduates with instructor approval) that I developed and have been teaching since 2024, explores the organization and function of key brain networks, involving the cortex, thalamus, amygdala, hippocampus, and basal ganglia, with an emphasis on understanding how circuits are disrupted in psychiatric disorders such as autism, schizophrenia, and depression, as well as neurodegenerative and traumatic conditions including Alzheimer's disease and Parkinson's disease. Using a multidisciplinary approach that draws on post-mortem tissue analysis, animal models, neuroimaging, neurophysiology, and computational modeling, students critically engage with current literature, through a simulated peer-review process, develop an understanding of the molecular, biochemical, and epigenetic mechanisms underlying pathology, and collaborate in small groups to design, write, present, and defend an original research proposal.

Primary Instructor **Spring Semester 2017 – Spring Semester 2022**

SAR HS 370 / HS 582: Neuroanatomy and Neurophysiology (4 credits)

This is a required course, part of the core curriculum of the Human Physiology Program, offered at both undergraduate (HS370) and graduate (HS582) levels. Lecture and laboratory examining the structure and function of the human nervous system, including the study of development and pathological deficits of the peripheral and central nervous system in humans. Students develop an in-depth knowledge of the gross anatomy of the brain and spinal cord, basic Neurocytology, including the morphology and functional roles of neurons and glial cells, and core principles of neurophysiology, encompassing the ionic mechanisms of membrane potentials, action potential generation and propagation, and synaptic transmission. Building from these cellular and molecular foundations, the course addresses the embryological principles guiding nervous system development, the anatomical organization of major sensory and motor systems, and the structure and function of the autonomic nervous system. Higher-order topics include synaptic plasticity as it relates to learning and memory, and the neural basis of emotion, cognition, language, and attention. Throughout, students are introduced to the pathophysiological basis of sensory, motor, developmental, and cognitive neurological disorders, connecting foundational neuroscience to clinical application. Learning is assessed through lecture quizzes, laboratory applications, and formal examinations that include both standard and case study-based questions, requiring students to integrate and apply knowledge across domains in a manner reflective of real-world clinical reasoning.

Primary Instructor **Spring Semester 2013**

SAR HS 550: Neural Systems (4 credits)

I taught this graduate-level course (open to advanced undergraduates with instructor approval) for one semester and provided guest lectures from 2008 - 2018. Students explore mechanisms of signal transduction, communication, and integration in the nervous system. The approach is multidisciplinary, drawing upon fundamental concepts of the neuroanatomy, neurochemistry, and physiology of the nervous system. Lectures focus on patterns of processing in unimodal sensory, polymodal, motor, and limbic cortices. Methods used to investigate the nervous system are described and illustrated to facilitate comprehension of the current literature.

Co-Primary Instructor **Spring Semester 2026 – Present**

SAR HS 729: Methods in experimental physiology (2 credits)

This graduate-level course that I co-developed and started teaching this year (2026), provides a comprehensive overview of experimental techniques used in physiology and biomedical research. Students will develop expertise in experimental design, cutting-edge laboratory methods, and data analysis. Topics include microscopy (light, fluorescence, confocal, and electron), histology and immunohistochemistry, stem cell culture, protein and gene expression techniques, flow cytometry, sequencing technologies (RNA-seq, ATAC-seq, WGS), spatial transcriptomics, and bioinformatics. Instruction includes lectures, discussions, and hands-on lab work led by a multidisciplinary team.

4B. MENTORING:

Junior Faculty: 4 faculty

Postdoctoral Fellows: 7 scholars

MD/PhD: 4 graduate students

PhD: 15 graduate students

MS: 21 graduate students

Undergraduate Research Fellows and Interns in the lab: 112 students
Formal Academic Advising: approximately 50 students per semester

Junior Faculty

Name	Title	Year
Jesse Moreira-Bouchard	Clinical Assistant Professor	2023 – Present
Arash Yazdanbakhsh	Research Assistant Professor	2019 – Present
Miguel Angel Garcia Cabezas	Research Assistant Professor	2015 – 2019
Yohan John	Research Assistant Professor	2021 – 2024

Post-doctoral Fellows

Name	Degree	Role	Year
Xuefeng Liu	PhD	Primary mentor	2017 – Present
Vijaya Verma	PhD	Co-mentor (with H. Barbas)	2025 – Present
Mary Kate Joyce	PhD	Co-mentor (Primary mentor H. Barbas)	2024 – 2025
Yohan John	PhD	Co-mentor (Primary mentor H. Barbas)	2012 – 2020
Miguel Angel Garcia Cabezas	MD/PhD	Co-mentor (Primary mentor H. Barbas)	2007 – 2014
Jamie Bunce	PhD	Co-mentor (Primary mentor H. Barbas)	2011 – 2015
Malin Hoistad	PhD	Co-mentor (Primary mentor H. Barbas)	2007 – 2009

Doctoral Students (MD/PhD)

Name	Program	Role	Title	Graduation Year
Iris Trutzer	Graduate Program in Neuroscience (MD/PhD)	1st Reader, Primary Mentor	Postnatal development of excitatory and inhibitory prefrontal cortical circuits and their disruption in autism	2019

Clare Timbie	Anatomy & Neurobiology (MD/PhD)	3rd Reader (also mentored for work in my lab)	Circuitry of emotion: integration in orbitofrontal cortex	2014
Benjamin Snyder	Anatomy & Neurobiology (MD/PhD)	Qualifying Exams Committee	Multimodal Profiling of GABAergic Circuits Within Anterior Cingulate and Lateral Prefrontal Cortex of Rhesus Monkeys	2026
Julied Bautista	Human Physiology (MD/PhD)	2nd Reader (also mentored for work in my lab)	Subgenual cingulate and entorhinal areas after repetitive head injuries	2026

Doctoral Students, PhD

Name	Program	Role	Title	Graduation Year
Jillianne Son	Anatomy & Neurobiology	1st Reader, Primary Mentor	TBD	TBD (~2027)
Songlin Xie	Human Physiology	1st Reader, Primary Mentor	TBD	TBD (~2027)
Natalia Matuk	Human Physiology	1st Reader, Primary Mentor	TBD	TBD (~2027)
Gengchen Wei	Human Physiology	1st Reader, Primary Mentor	TBD	TBD (~2029)
Ezekiel Moroze	Human Physiology	1st Reader, Primary Mentor	TBD	TBD (~2030)
Emma Myers	School of Medicine	Chair	Molecular neuroanatomy: mouse-human homologies and the landscape of genes implicated in language disorders	2017
Mary Katherine Patricia Joyce	School of Medicine	2nd Reader (also mentored for work in my lab)	The Cortical Connections of Area 25 and Its Interactions with Areas Involved in Emotion and Cognition	2020
Jingyi Wang	Human Physiology	2nd Reader (also mentored for work in my lab)	Pathways Linking Amygdala, Hippocampus and Anterior Cingulate Cortex in Emotion, Cognition and Memory	2020
Jesse Moreira	Human Physiology	Chair	Neural mechanisms promoting G-alpha-i2 protein dependent salt sensitive hypertension in the Sprague-Dawley rat	2021
Isabel Perez Santos	School of Medicine, Autonomous University of Madrid, Spain	3rd Reader	Noradrenaline in the primate thalamus: Axon and receptor distributions in macaques and humans	2021
Shi Su	Human Physiology	Chair	Role of impaired lipid metabolism and immune dysregulation in the pathogenesis of cardiovascular disease	2022

Yi Xing	Human Physiology	Chair	Regulation of vascular smooth muscle: calponin 3 contributes to phorbol ester-induced cell contraction and is critical for cell proliferation and migration	2025
Ryan McCann	Graduate Program in Neuroscience	Chair	An extracellular vesicle therapeutic attenuates inflammation and damage in a rhesus monkey model of cortical injury	2025
Yuxin Zhou	Anatomy & Neurobiology	3rd Reader	TBD	TBD (~2026)
Amber Normann	Human Physiology	Chair	TBD	TBD (~2026)

Master's Students

Name	Program	Role	Title	Year
Joy Ismail	Human Physiology	1st Reader, Primary Mentor	Excitatory and inhibitory synapse density in the primate dorsolateral prefrontal cortex	2015
Kevin Pruna	Human Physiology	1st Reader, Primary Mentor	Development of excitatory and inhibitory cortical features	2016
Nayeem Hossain	Human Physiology	2nd Reader and co-mentor	The pattern of perineuronal net elements in the mediodorsal thalamus	2017
Julied Bautista	Human Physiology	1st Reader, Primary Mentor	Quantitative Cytoarchitecture and Distribution of Inhibitory Neurons in the Posterior Orbitofrontal Cortex of the Human Brain	2018
Yandan Wang	Human Physiology	2nd Reader	Aging-dependent vascular dementia in the mouse brain	2018
Julia Hacker	Human Physiology	1st Reader, Primary Mentor	Qualitative and Quantitative Analysis of Cortical Type Gradients in the Human Prefrontal Cortex	2019
Elva House	Anatomy & Neurobiology	2nd Reader	Study of inhibitory neurons in Broca's area in autism	2020
Hailey Moreira		1st Reader, Primary Mentor	Inhibitory circuits in the primate cortex and their disruption in autism, schizophrenia, and other affective disorders	2021
Jillianne Son	Human Physiology	1st Reader, Primary Mentor	Core and Matrix Innervation of Thalamic Reticular Nucleus in Primates	2022
Sophie Struble	Human Physiology	1st Reader, Primary Mentor	Analysis of Laminar Postnatal Development and Adult Chromatin Transcription Patterns in the Human Cerebral Cortex: An Expansion on LeRoy Conel	2022
Songlin Xie	Human Physiology	2nd Reader	An investigation of the relationship between neuroinflammation and aging-induced cerebral microbleeds	2022
Brandon Coughlin	Human Physiology	1st Reader, Primary Mentor	Characterization of Neuronal Cell Types Within the Thalamic Reticular Nucleus and Their Potential Disruptions in Schizophrenia	2023
Natalia Matuk	Human Physiology	1st Reader, Primary Mentor	Biophysical model of core & matrix thalamocortical circuitry in rodents & primates	2023

Rebecca Johnson	Human Physiology	1st Reader, Primary Mentor	Characterization of synaptic connections in the thalamic reticular nucleus of primates	2023
Melinda Stackpole	Human Physiology	1st Reader, Primary Mentor	Axon morphology in the uncinate fasciculus: a post-mortem analysis of white matter microstructure	2024
Phoebe Kozlov	Human Physiology	2nd Reader	Neural architecture of Area 25 of the anterior cingulate cortex and its potential disruption in stage II chronic traumatic encephalopathy	2024
Gengchen Wei	Human Physiology	1st Reader, Primary Mentor	Mapping of excitatory/inhibitory synaptic ratio in the lateral geniculate and mediodorsal thalamic nuclei	2025
So Wing Lum	Human Physiology	1st Reader, Primary Mentor	Core and Matrix Thalamocortical Connections in dorsolateral prefrontal cortex in schizophrenia	2026
Reeju Bhowmick	Human Physiology	1st Reader, Primary Mentor	Inhibitory Interneurons in the primate CA1	TBD
Irina Romanova	Human Physiology	1st Reader, Primary Mentor	TBD	TBD (~2027)
Emilee Jun Carleton	Human Physiology	1st Reader, Primary Mentor	TBD	TBD (~2027)

Undergraduate Students

Senior Thesis, Honors Thesis, Thesis for Distinction: 11

Name	Major	Role	Title	Year
Mahdi Khemakhem	Neuroscience	Co-mentor	A biophysical model of thalamocortical loop: the role of neural connections between thalamus, thalamic reticular nucleus and cortex, and neurotransmitter and voltage gated channels in generating spindles	2020
Natalia Matuk	Neuroscience	Co-mentor	Biophysical Neural Model of The Thalamocortical Loop in Schizophrenia	2021
Pooja Sonikar	Human Physiology	Co-mentor	Comparing Motor Behavior of Children and Toddlers with and without Autism Spectrum Disorders: Development and Implementation of a New Coding Scheme	2021
Sangwook Park	Neuroscience	Co-mentor	Visual Illusion Susceptibility in Autism: a neural model	2021
Caroline Dugan	Neuroscience	Co-mentor	A Neural Model of Spatial Frequency Sensitivity in Schizophrenia	2021
Daryna Shnitser	Human Physiology	Co-mentor	The Effect of α-MSH on Innate Immune Memory	2023
Sophia Yuan	Biology	Mentor	Quantitative Distribution of Inhibitory Interneurons in the Primate Thalamus	2024
Maxine Hsiung	Neuroscience	Co-mentor	Regional Distribution of Presynaptic Neuromodulatory Receptors in Primate Anterior Cingulate Cortex	2024
Madeline Cole-Short	Neuroscience	Co-mentor	Modeling network-level dysfunction via synaptic reweighting in Parkinson's disease	2025
Ezekiel Moroze	Neuroscience	Co-mentor	Interneuron deficits in dorsolateral Prefrontal Cortex shape atypical attention in Autism Spectrum Disorder	2026

Alexia El Hajal	Neuroscience	Co-mentor	Biophysical Modeling of Glutamatergic Shifts in the Mesocorticolimbic Pathway Under Acute Cocaine Exposure	2026

UROP and STARS Awards: 18

Name	Major	Role	Title	Year
Justin Tepe	Biochemistry & Molecular Biology	Mentor	Axon Structure of Superficial White Matter in the Anterior Cingulate Cortex in Autistic and Typically Developing Children	2014
Rebecca Salamone	Neuroscience	Mentor	Synaptic density in the primate prefrontal cortex	2016
Antonio Lopez	Neuroscience	Mentor	Characterizing the Hippocampal Pathway to the Thalamic Reticular Nucleus	2018
Edward Liu	Human Physiology	Mentor	Inhibition in the Orbitofrontal Cortex in Autism Spectrum Disorder	2018
Justin Luh	Human Physiology	Mentor	Distribution of Neuron Types in The Primate Thalamic Reticular Nucleus	2018
Eugenia Angelopoulos	Biomedical Engineering	Mentor	Stereological and Topographical Comparison of Neurons and Connections Across the Inhibitory Thalamic Reticular Nucleus (TRN) in Primate Brains	2019
Najila Zaman	Biology	Mentor	Feedforward and Feedback Orbitofrontal Cortical Pathways in Autism	2019
Uma Khermaj	Human Physiology	Mentor	Systematic Variation of Epigenetic Chromatin Modifications in the Human Cortex	2019
Komal Wasif	Human Physiology	Mentor	Stereological and topographical Analysis of Inhibitory and Excitatory Neurons in Medial Dorsal Thalamus (MD) Circuits in Primate Brains	2020
Julie Ngo	Neuroscience	Mentor	Density of Excitatory and Inhibitory Populations of Neurons In First and High Order Thalamic Nuclei (LGN and MD) in Neurotypical Primate Brains	2021
Iris Chun	Human Physiology	Mentor	Characterization of synaptic inputs on inhibitory neurons in thalamic reticular nucleus	2022
Tingru Lian	Computer Engineering & Psychology	Co-Mentor	Using machine learning for classifying and analyzing microscopy sections of brain areas in autism spectrum disorder	2022
Kelvin Kuang	Computer Science & Neuroscience	Co-Mentor	Feature extraction and classification of autism spectrum disorder through vision transformers	2023
Nina Velu	Human Physiology	Mentor	Differences in the Uncinate Fasciculus in Neurotypical and Neurodivergent Populations	2023
Ezekiel Moroze	Neuroscience	Co-Mentor	A Biophysical Model of the Lateral Prefrontal Cortex to Show Neurological Mechanisms of. Attentional Dysfunction in ASD	2024
Irina Romanova	Neuroscience	Co-Mentor	Understanding Neural Mechanisms of Autism Spectrum Disorder, and Schizophrenia, and their Comorbidities through the Examination of Thalamocortical Loop and its Dysfunctions	2024
Maya Jusuf	Human Physiology	Mentor	Structural Differences in Axons in the Internal Capsule between Control and Patients with Autism	2024
Aiyang Jiang	Human Physiology	Mentor	Density of Distinct Inhibitory Interneurons in Temporal Cortical Area 28 in Autism	2025

Internship in the Human Physiology Laboratory (SAR HS 410-412): 12

Name	Major	Role	Year
Anna Streifel	Human Physiology	Mentor	2019
Samuel Han	Human Physiology	Mentor	2020
Austin Liu	Human Physiology	Mentor	2021
Su Htwe	Human Physiology	Mentor	2021
Brooklynn Earls	Human Physiology	Mentor	2021
Chloe Cho	Human Physiology	Mentor	2022
Mitsu Philogene	Human Physiology	Mentor	2023
Kidus Efrem	Human Physiology	Mentor	2024
Tess Graham	Human Physiology	Mentor	2024
Aiyang Yang	Human Physiology	Mentor	2025
Thomas Youngen	Nutrition and Health	Mentor	2026
Joseph Oliveira	Human Physiology	Mentor	2026

Research Volunteers and Research For Credit (SAR HS 495) since 2015: 71 *(about 50% from Human Physiology and the rest from* Neuroscience, Biology, Biomedical Engineering, Health Sciences, Computer Sciences, Mathematics, and Psychology)

Name	Name	Name	Name
Rebecca Housh	Roopali Kehra	Megan Qin Deng	Adline Juste
Dimitri Mabarak	Caitlin Yam	Cameron Silva	Utsav Rana
Priya Desai	Ekaterina Murzin	Yixiang Liu	Abraham Ha
Aworanti Eunice	Nisrine Rahmaoui	Thomas Heerema	Julia Rosario
Hannah Hollow	Maya Jusuf	Neal Bangerter	Grace Lei
Ismail Joy	Sophia Izidoro	Ava Farnan	Justin Kim
Justin Luh	Zixian He	Tran My Kim Dang	Lily Travis
Tyler Jensen	Julia Rojas Doupovec	Cici Chen	Eugenia Angelopoulos
Edward Liu	Easton Pransky	Alexander Li	Sofia Konstantinidou
Douglas Benishek	Changhong Chen	Irina Romanova	Maria Karanasos
Uma Khemraj	Alexia Koulikourdis	Siddharth Lokray	Clemence Shi
Brooklynn Earls	Mahek Hassanali	Sia Sharma	Alexander Li
Komal Wasif	Seheni Kariyawasan	Ryan Thomas	Konrad Skubritz
Sussan Al-Shanniek	Haley Leung	Petter Christopher	Tate Higashihara
Shimrani Banik	Clarissa Fomunung	Laima Ozola-Szoke	Najila Zaman
Jeremy Pan	Mya Leidl	Jacob Labovitz	Nina Velu
Iris Chun	Julie Ngo	Momo Koide	Yi - Hsi Huang
Sophia Karpouzas			

4C. ADVISING:

PhD Program in Human Physiology

All PhD students in the program, total of 10 — 2015 – Present

MS Program in Human Physiology

On average 3 MS thesis students per semester — 2015 – Present

Program in Human Physiology (undergraduates)
Approximately 50 undergraduate students per semester 2015 – Present

16. Professional Service, Memberships, & Other Experience

5A. INTERNATIONAL

2025 **UK Research and Innovation Funding Service (UKRI),** *Ad Hoc* Reviewer for Future Leaders Fellowships (FLF) proposals

2021 – **Director of Communications,** Circle of Hellenic Academics in Boston
Member, Organization for Human Brain Mapping (OHBM)

2020 – **Member,** Circle of Hellenic Academics in Boston
Member, International Society for Autism Research (INSAR)
Member, Special Interest Group – International Society for Autism Research (INSAR): Autism Research with the Postmortem Human Brain. *Participate in discussions that bring together neuroanatomists, neuropathologists, geneticists, immunologists and others to foster postmortem brain research of Autism Spectrum Disorder. Group activities are an introduction to this area of research for trainees and mature scientists alike.*

2020 **Book Review,** Prepublication review and commenting on book chapter entitled: The Alerting System. In Neurofeedback and ADHD by Dr. Sidiropoulos K. Springer Verlag 2021.

2019 – **Member,** Hellenic Bioscientific Association in the USA.

2019 – **Review Editor,** Editorial Board of Frontiers in Integrative Neuroscience.

2018 – **Associate Editor,** Editorial Board of Frontiers in Neuroanatomy.

2018 **Grant Review,** Medical Research Council (MRC), UK Research & Innovation (UKRI) and the Japan Society for the Promotion of Science (JSPS) Joint Call.

2016 – 2018 **Review Editor,** Editorial Board of Frontiers in Neuroanatomy.

2016 – **Member,** Circle of Hellenic Academics in Boston

2005 – **Reviewer for journals**: Autism Research, Acta Neuropathologica, Biological Psychiatry, Brain Structure and Function, Cerebral Cortex, Cortex, European Journal of Neuroscience, Frontiers in Neuroanatomy, Frontiers in Neuroinformatics, Hippocampus, Journal of Comparative Neurology, Journal of Neurophysiology, Journal of Neuroscience, Journal of Neuroscience Methods, Molecular Autism, Nature, Nature Neuroscience, Neuroimage, Neuroscience, PLoS Biology, PNAS, Schizophrenia Bulletin, Scientific Reports, Translational Neuroscience, Human Brain Mapping.

2001 – 2003 **Senior Airman,** Special Security Forces – Military Police, Greek Air Force and NATO Command (Obligatory Military Service).

1999 – 2000 **Consultant**, *University Press, Foundation for Research and Technology, Heraklion, Crete, GREECE*. Reviewed and corrected the following Greek translations of scientific textbooks:
1. Robert M. Berne and Matthew N. Levy. Principles of Physiology, edited by Mosby-Year Book Inc., 1996.
2. Eric R. Kandel, James H. Schwartz and Thomas M. Jessel. Essentials of Neural Science and Behavior, edited by Appleton & Lange, 1995.

1996 – **Member**, Hellenic Society for Neuroscience.
Member, Federation of European Neuroscience Societies.

1992 – 2004 **President and board member, Photographic Society of the University of Crete** *(FOPK, http://fopk.culture.uoc.gr/)*, organizing and conducting worldwide seminars on the art and techniques of photography, cultural events and photographic exhibitions.

5B. NATIONAL

2026	**Organizing Committee, Hellenic-American Meeting of Early-Career Researchers (HAMER) Symposium,** Boston MA, May 8-9, 2026
2025 – 2026	**NIH Special Emphasis Panel/Scientific Review Group 2026/01 ZRG1 ICN-P (90) S,** *Ad Hoc* Reviewer
2025	**Organizing Committee, Hellenic-American Meeting of Early-Career Researchers (HAMER) Symposium,** Boston MA, May 10, 2025
2025 –	**NIH LMDN Study Section,** Reviewer
2022	**NIH NPAS Study Section,** Reviewer
2021 –	**Member,** External Feasibility Committee National Disease Research Interchange (NDRI)
2020	**University of California, Davis, Department of Psychiatry and Behavioral Sciences,** Provided external evaluation for faculty promotion
2018 – 2018	**Grant Review,** Department of Defense Congressionally Directed Medical Research Programs (CDMRP), Idea Development (ID) peer review panel of the FY18 Autism Research Program (ARP).
2009 – 2016	**Visiting Scientist**, Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, MA, USA.
2004 –	**Member**, Society for Neuroscience.

5C. BOSTON UNIVERSITY

2026 – 2028	**Chair *ad Interim*,** Department of Health Sciences, Boston University
2025 –	**Core Advisory Committee,** Oversee core facilities across Boston University and the medical campus.
2019 –	**PhD Program Director,** Human Physiology PhD Program Director, Department of Health Sciences, Boston University.
2018 – 2019	**Search Committee,** Clinical-track Assistant Professor faculty position and Human Physiology Program Director, Department of Health Sciences, Boston University.
2018 – 2025	**Faculty Member/Reviewer,** Dudley Allen Sargent Research Fund
2017 –	**Faculty Member,** Center for Research in Sensory Communication and Emerging Neural Technology (CReSCENT), Boston University
2017	**Chair,** Sargent College Graduate Education Committee
2015 –	**Faculty Member,** Sargent College Graduate Education Committee **Search Committee,** Tenure-track faculty position in cardiovascular science, Department of Health Sciences, Boston University. **Faculty member**, Graduate Program in Neuroscience, Boston University.
2014	**Session Chair**, NeuroHAM (Neural processing in humans, animals, and machines). CELEST and BU Center for Computational Neuroscience and Neural Technology. June 10 – 12, 2015. Boston, MA, USA.
2009 – 2016	**Faculty member**, Center of Excellence for Learning in Education, Science and Technology (CELEST), Boston University, MA, USA.

17. Honors, Awards, Publicity

- **Invited discussant in Conference on "The Brain Economy for One Health",** (September 18, 2024) *UN Science Summit at the 79th United Nations General Assembly*

- **Invited discussant in UN Brain Days series on "Neuroscience and Society: A Life Course Approach to Brain Health",** (September 19-20, 2024) *UN Science Summit at the 79th United Nations General Assembly*
- **Sigma Xi,** Member, 2024 – present
- **Invited discussant, in Conference on "Brain Health and Research",** (September 18, 2023) *Global Partnerships in Brain Research Science Summit at the 78th United Nations General Assembly*
- **Ranked within top 10% of papers published during 2022** – *European Journal of Neuroscience for Park S, Zikopoulos B, Yazdanbakhsh A. Visual illusion susceptibility in autism: A neural model. Eur J Neurosci. 2022 Aug;56(3):4246-4265. doi: 10.1111/ejn.15739. PMID: 35701859; PMCID: PMC9541695.*
- **Simons Foundation – SFARI Investigator Award** (2022) *Use of post-mortem human brain tissue in ASD research*
- **Roundtable discussant,** (September 26, 2022) *Global Partnerships in Brain Research Science Summit at the 77th United Nations General Assembly*
- **Featured Article, PLoS Biology,** (2/2020), *Conveying emotions (https://journals.plos.org/plosbiology).*
- **Supervisor of the Year Award Nomination,** (2019), *Boston University Student Employment Office*
- **2019 - Top 2% most downloaded article for all Frontiers journals.** *Zikopoulos B, Barbas H. Altered neural connectivity in excitatory and inhibitory cortical circuits in autism.* ***Frontiers in Human Neuroscience****. 2013 Sep 27;7:609.*
- **2019 - Top 4% most viewed and downloaded article for all Frontiers journals.** *García-Cabezas MÁ, John YJ, Barbas H, Zikopoulos B. Distinction of Neurons, Glia and Endothelial Cells in the Cerebral Cortex: An Algorithm Based on Cytological Features.* ***Frontiers in Neuroanatomy****. 2016 Nov 1;10:107.*
- **2019 - Top 5% most downloaded article for all Frontiers journals.** *John YJ, Bullock D, Zikopoulos B, Barbas H (2013). Anatomy and computational modeling of networks underlying cognitive-emotional interaction.* ***Frontiers in Human Neuroscience****. 7:101.*
- **Top 10% most cited PLOS Biology papers published in 2018.** *Zikopoulos B, García-Cabezas MÁ, Barbas H. Parallel trends in cortical gray and white matter architecture and connections in primates allow fine study of pathways in humans and reveal network disruptions in autism.* ***PLoS Biology****, 2018 Feb 5;16(2):e2004559. doi: 10.1371/journal.pbio.2004559. https://collections.plos.org/collection/biotop10/#2018*
- **Featured Article, PLoS Biology,** (2018), *Organization of the primate cortex (https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.2004559).*
- **Featured Article, Journal of Neuroscience, Society for Neuroscience, USA,** (2017), *Primate pOFC Projects Densely to Amygdala Intercalated Masses (http://www.jneurosci.org/content/37/20/i).*
- **Featured Article, PLoS Biology,** (2016), *Seven Glimpses into the Emotional Brain (https://doi.org/10.1371/journal.pbio.2001633).*
- **The Washington Post – Feature,** (August 14, 2014), Speaking about Science – A switchboard in the brain could unlock treatments for autism and schizophrenia. https://www.washingtonpost.com/news/speaking-of-science/wp/2014/08/14/a-switchboard-in-the-brain-could-unlock-treatments-for-autism-and-schizophrenia/
- **Featured Article,** EurekAlert! a global news service by AAAS – Scientists use lasers to control mouse brain switchboard (http://www.eurekalert.org/pub_releases/2014-08/nion-sul081114.php)
- **Featured Article,** MedicalXpress – Researchers identify a brain 'switchboard' important in attention and sleep (http://medicalxpress.com/news/2014-08-brain-switchboard-important-attention.html)

- **Science News – Feature,** (April 10, 2012), Why emotions are attention getters. https://www.sciencenews.org/article/why-emotions-are-attention-getters
- **Featured Article, Journal of Neuroscience, Society for Neuroscience, USA,** (2012), *New projection from amygdala discovered (http://www.jneurosci.org/content/32/15/i).*
- **IACC – Guided strategic plan,** (2011), Interagency Autism Coordinating Committee Strategic Plan for Autism Spectrum Disorder Research – 2011 (http://iacc.hhs.gov/strategic-plan/2011/references.shtml)
- **Autism Speaks – Feature,** (2010), Autism Speaks Official Blog – What lies beneath: differences in brain connections (http://blog.autismspeaks.org/2010/11/11/what-lies-beneath-brain-connections/)
- **IACC – Guided strategic plan,** (2010), Interagency Autism Coordinating Committee Strategic Plan for Autism Spectrum Disorder Research – 2010 (http://iacc.hhs.gov/events/2010/full-committee-mtg-minutes-dec14.shtml)
- **NIMH – Feature,** (December 23, 2010), The Director's Blog: NIMH's Top 10 research events and advances of 2010, by T. Insel. *https://www.nimh.nih.gov/about/directors/thomas-insel/blog/2010/nimhs-top-10-research-events-and-advances-of-2010.shtml*
- **Cover Article, Journal of Neuroscience, Society for Neuroscience, USA,** (2010), *Axon changes in autism (http://www.jneurosci.org/content/30/44.cover-expansion)).*
- **Mentor-based Fellowship / Award,** (2008 – 2011), *Autism Speaks.*
- **Cover Article, The Neuroscientist,** (2007), *Prefrontal cortex and flexible behavior.*
- **HNS Research Achievement/Presentation Award,** (2003), *Hellenic Neuroscience Society*.
- **IBRO Travel Grant Award,** (2003), *Federation of European Neuroscience Societies (FENS).*
- **Research Fellowship,** (2000), *GGSRT, The British Council, and Department of Biology, Open University, Milton Keynes, UK*.
- **Research Fellowship,** (1998), *University of Crete – Aristotle's University of Thessaloniki, Greece, and European Union*.
- **Summa Cum Laude,** (1998), *MS in Biology*.
- **Research Scholarship,** (1996), *Institute of Marine Biology of Crete, and Department of Biology, University of Crete, Greece*.
- **ERASMUS Scholarship,** (1994), *Greek State Scholarship Foundation and European Union. For a **Research Fellowship** in the Laboratory of Neuropharmacology, Department of Physiology and Pharmacology, School of Biological Sciences, University of Manchester, UK*.