January 17, 2020

Business Address: Director, Neuropathology

Department of Pathology and Laboratory Medicine

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EDUCATION

Medical School Zagreb University School of Medicine, Zagreb, Croatia

MD, 1988

Advanced Degree Zagreb University School of Medicine, Zagreb, Croatia

Department of Anatomy

PhD, 1992

POSTGRADUATE TRAINING

Residency Massachusetts General Hospital, Boston, MA

Anatomic Pathology, 7/1997 - 6/1999

Fellowships Massachusetts General Hospital, Boston, MA

Research Fellow in Neurology, 10/1993 - 6/1997

Massachusetts General Hospital, Boston, MA Fellow in Neuropathology, 7/1999 - 6/2001

HONORS AND AWARDS

1987 Best Student at the School of Medicine

University of Zagreb, Croatia

Best Student Research Project ("Development of human substantia nigra")

University of Zagreb, Croatia

John Fogarty International Research Fellowship (declined)

PROFESSIONAL LICENSES AND BOARD CERTIFICATION

1996 Educational Commission for Foreign Medical Graduates

Certificate # 0-464-457-1

PROFESSIONAL LICENSES AND BOARD CERTIFICATION (continued)

2000	Massachusetts Medical License #207664
2001	Diplomate of American Board of Pathology Anatomic Pathology and Neuropathology
2019	Rhode Island Medical License #16831

ACADEMIC APPOINTMENTS

3/1992 - 10/1993	Assistant Professor, Zagreb University School of Medicine, Department of Anatomy Zagreb, Croatia
10/1993 - 6/1997	Research Fellow, Harvard Medical School, Department of Neurology, Boston, MA
7/1997 - 6/1999	Clinical Fellow, Harvard Medical School, Department of Pathology
7/2001 - 10/2004	Instructor, Harvard Medical School, Department of Pathology
11/2004 -6 /2010	Assistant Professor, Boston University School of Medicine, Department of Pathology and Laboratory Medicine
11/2004 -6 /2010	Assistant Professor, Boston University School of Medicine, Department of Neurology
7/2010 - present	Associate Professor, Boston University School of Medicine Department of Pathology and Laboratory Medicine
7/2010 - present	Associate Professor, Boston University School of Medicine Department of Neurology

HOSPITAL APPOINTMENTS

7/2001 - 6/2002	E.P. Richardson Fellow in Neuropathology, Massachusetts General Hospital
7/2001 - 8/2004	Graduate Assistant Neuroscience, Massachusetts General Hospital
1/2002 - present	Neuropathology Attending, Brigham and Women's Hospital, Department of Pathology, Boston, MA
1/2002 – present	Neuropathology Attending, Boston Children's Hospital, Department of Pathology

HOSPITAL APPOINTMENTS (Continued)

9/2004 - present	Neuropathologist, Boston Medical Center,
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Department of Pathology and Laboratory Medicine

2/2015 - present Consulting Staff, Dana-Farber Cancer Institute,

Department of Pathology

INTERNATIONAL COMMITTEES

2014 - 2015	Neurological Foundation of New Zealand Grant Review Board
2014 - 2015	Austrian Science Fund Grant Review Board
2015 – present	Partner, PsyCourse (http://www.psycourse.de)
2018 – present	Member, Advisory Board, Annual Next Generation Sequencing and
	Clinical Diagnostics & Single Cell Analysis Congress

NATIONAL COMMITTEES

2012 - 2014	American Association of Neuropathologists, Annual Meeting Award Committee
2014 - 2018	American Association of Neuropathologists, Annual Meeting Program Committee
2015 - 2017	Genome Science Institute Seed Grants, Boston University School of Medicine Grant Review Board
2018 - present	American Society for Investigative Pathology, Annual Meeting Program Committee
2019 – present	American Association of Neuropathologists, Education Committee

UNIVERSITY COMMITTEES

Boston University School of Medicine

2006 - 2010	Committee for Faculty Affairs, Member
2007 - 2010	Institutional Animal Care and Use Committee (IACUC), Member

Boston University School of Medicine (continued)

2012 - present Committee for MD-PhD Program Admissions, Member

2014 - present Committee for Professional Development, Member

MEMBERSHIPS IN SOCIETIES

1993 - present Society for Neuroscience, Member

2001 - present Genetic Society of America, Member

2003 - present American Association of Neuropathologists, Member

2005 - present College of American Pathologists, Fellow Member

2017 - present American Society for Investigative Pathology, Member

EDITORIAL BOARDS

2018 - present Associate Editor, Journal of Alzheimer's Disease

2019 - present Associate Editor, Cerebral Cortex Communications

AD HOC REVIEW BOARDS

2011 - present Journal of Neuropathology and Experimental Neurology

2012 - present PLoS One

2014 - present FASEB

2014 - present International Journal of Developmental Neuroscience

2014 - present Neuroscience

2014 - present Schizophrenia Bulletin

2016 - present American Journal of Medical Genetics Part B: Neuropsychiatric Genetics

2016 - present BMC Psychiatry

2016 - present Journal of the American Aging Association

2016 - present Molecular Psychiatry

AD HOC REVIEW BOARDS

2017 - present Brain, Behavior, and Immunity

2017 - present CNS Neuroscience and Therapeutics

2017 - present Journal of Histotechnology

2017 - present ncRNA

2017 - present Psychiatry Research

2018 - present Brain Pathology

PUBLICATIONS LIST

ORIGINAL PUBLICATIONS IN PEER-REVIEWED JOURNALS

- 1. Kostović I, Stefulj-Fucić A, Mrzljak L, Jukić S, **Delalle** I. Prenatal and perinatal development of the somatostatin-immunoreactive neurons in the human prefrontal cortex. Neurosci Lett. 1991 Apr 1;124(2):153-6. PMID: 1676833
- 2. Tsai LH, **Delalle** I, Caviness VS Jr, Chae T, Harlow E. p35 is a neural-specific regulatory subunit of cyclin-dependent kinase 5. Nature. 1994 Sep 29;371(6496):419-23. PMID: 8090221
- 3. **Delalle** I, Evers P, Kostović I, Uylings HB. Laminar distribution of neuropeptide Y-immunoreactive neurons in human prefrontal cortex during development. J Comp Neurol. 1997 Mar 24;379(4):515-22. PMID: 9067840
- 4. Uylings HB, **Delalle** I. Morphology of neuropeptide Y-immunoreactive neurons and fibers in human prefrontal cortex during prenatal and postnatal development. J Comp Neurol. 1997 Mar 24;379(4):523-40. PMID: 9067841
- 5. **Delalle** I, Bhide PG, Caviness VS Jr, Tsai LH. Temporal and spatial patterns of expression of p35, a regulatory subunit of cyclin-dependent kinase 5, in the nervous system of the mouse. J Neurocytol. 1997 May;26(5):283-96. PMID: 9192293
- 6. **Delalle** I, Takahashi T, Nowakowski RS, Tsai LH, Caviness VS Jr. Cyclin E-p27 opposition and regulation of the G1 phase of the cell cycle in the murine neocortical PVE: a quantitative analysis of mRNA in situ hybridization. Cereb Cortex. 1999 Dec;9(8):824-32. PMID: 10601001
- 7. Brouns MR, Matheson SF, Hu KQ, **Delalle** I, Caviness VS, Silver J, Bronson RT, Settleman J. The adhesion signaling molecule p190 RhoGAP is required for morphogenetic processes in neural development. Development. 2000 Nov;127(22):4891-903. PMID: 11044403

- 8. Alderson LM, **Delalle** I. Case records of the Massachusetts General Hospital. Weekly clinicopathological exercises. Case 10-2002. A 52-year-old woman with recurrent unsteadiness, slurred speech, and fatigue. N Engl J Med. 2002 Mar 28;346(13):1009-15. No abstract available. Erratum in: N Engl J Med 2002 Jun 6;346(23):1838. PMID: 11919311
- 9. Uylings H, B, M, **Delalle** I, Petanjek Z, Koenderink M, J, T. Structural and Immunocytochemical Differentiation of Neurons in Prenatal and Postnatal Human Prefrontal Cortex. Neuroembryology 2002;1:176-186. doi: 10.1159/000066268
- 10. **Delalle** I, Pfleger CM, Buff E, Lueras P, Hariharan IK. Mutations in the Drosophila orthologs of the F-actin capping protein alpha- and beta-subunits cause actin accumulation and subsequent retinal degeneration. Genetics. 2005 Dec;171(4):1757-65. Epub 2005 Sep 2. PMID: 16143599
- 11. Kim D, Nguyen MD, Dobbin MM, Fischer A, Sananbenesi F, Rodgers JT, **Delalle** I, Baur JA, Sui G, Armour SM, Puigserver P, Sinclair DA, Tsai LH. SIRT1 deacetylase protects against neurodegeneration in models for Alzheimer's disease and amyotrophic lateral sclerosis. EMBO J. 2007 Jul 11;26(13):3169-79. Epub 2007 Jun 21. PMID: 17581637
- 12. Saad AG, Jayarao M, Chin LS, **Delalle** I. Ganglioglioma associated with cerebral cortical dysplasia: an unusual case with extensive leptomeningeal involvement. Pediatr Dev Pathol. 2008 Nov-Dec;11(6):474-8. doi: 10.2350/07-10-0360.1. Epub 2008 Feb 25. PMID: 18338935
- 13. Saad A, Tuli S, Ali EN, Houtchens M, **Delalle** I, Kesari S. Pilocytic astrocytoma of the spinal cord in an adult. J Neurooncol. 2008 Jun;88(2):189-91. doi: 10.1007/s11060-008-9547-z. No abstract available. PMID: 18340405
- 14. Kim D, Frank CL, Dobbin MM, Tsunemoto RK, Tu W, Peng PL, Guan JS, Lee BH, Moy LY, Giusti P, Broodie N, Mazitschek R, **Delalle** I, Haggarty SJ, Neve RL, Lu Y, Tsai LH. Deregulation of HDAC1 by p25/Cdk5 in neurotoxicity. Neuron. 2008 Dec 10;60(5):803-17. doi: 10.1016/j.neuron.2008.10.015. PMID: 19081376
- 15. <u>Davis DA</u>, Wilson MH, Giraud J, Xie Z, Tseng HC, England C, Herscovitz H, Tsai LH, **Delalle** I. Capzb2 interacts with beta-tubulin to regulate growth cone morphology and neurite outgrowth. PLoS Biol. 2009 Oct;7(10):e1000208. doi: 10.1371/journal.pbio.1000208. Epub 2009 Oct 6. PMID: 19806181
- 16. Vanderburg CR, <u>Davis DA</u>, Diamond RE, <u>Kao PF</u>, **Delalle** I. Capzb2 protein expression in the brains of patients diagnosed with Alzheimer's Disease and Huntington's Disease. Transl Neurosci. 2010 Mar;1(1):55-58. doi: 10.2478/v10134-010-0008-9. Epub 2010 Oct 12. PMID: 29662700
- 17. <u>Kao PF</u>, <u>Davis DA</u>, Banigan MG, Vanderburg CR, Seshadri S, **Delalle** I. Modulators of cytoskeletal reorganization in CA1 hippocampal neurons show increased expression in patients at mid-stage Alzheimer's disease. PLoS One. 2010 Oct 13;5(10):e13337. doi: 10.1371/journal.pone.0013337. PMID: 20967212

- 18. Toshkezi G, Edalat F, O'Hara C, **Delalle** I, Chin LS. Primary intramedullary histiocytic sarcoma. World Neurosurg. 2010 Oct-Nov;74(4-5):523-7. doi: 10.1016/j.wneu.2010.07.002. Epub 2011 Jan 12. PMID: 21492606
- 19. Zovoilis A, Agbemenyah HY, Agis-Balboa RC, Stilling RM, Edbauer D, Rao P, Farinelli L, **Delalle** I, Schmitt A, Falkai P, Bahari-Javan S, Burkhardt S, Sananbenesi F, Fischer A. microRNA-34c is a novel target to treat dementias. EMBO J. 2011 Sep 23;30(20):4299-308. doi: 10.1038/emboj.2011.327. PMID: 21946562
- Stapleton CJ, Walcott BP, Kahle KT, Codd PJ, Nahed BV, Chen L, Robison NJ, **Delalle** I, Goumnerova LC, Jackson EM. Diffuse central neurocytoma with craniospinal dissemination. J Clin Neurosci. 2012 Jan;19(1):163-6. doi: 10.1016/j.jocn.2011.07.016. Epub 2011 Nov 15. PMID: 22088950
- 21. Gräff J, Rei D, Guan JS, Wang WY, Seo J, Hennig KM, Nieland TJ, Fass DM, <u>Kao PF</u>, Kahn M, Su SC, Samiei A, Joseph N, Haggarty SJ, **Delalle** I, Tsai LH. An epigenetic blockade of cognitive functions in the neurodegenerating brain. Nature. 2012 Feb 29;483(7388):222-6. doi: 10.1038/nature10849. PMID: 22388814
- 22. Bahari-Javan S, Maddalena A, Kerimoglu C, Wittnam J, Held T, Bähr M, Burkhardt S, **Delalle** I, Kügler S, Fischer A, Sananbenesi F. HDAC1 regulates fear extinction in mice. J Neurosci. 2012 Apr 11;32(15):5062-73. doi: 10.1523/JNEUROSCI.0079-12.2012. PMID: 22496552
- 23. <u>Kao PF</u>, Banigan MG, Vanderburg CR, McKee AC, Polgar PR, Seshadri S, **Delalle** I. Increased expression of TrkB and Capzb2 accompanies preserved cognitive status in early Alzheimer disease pathology. J Neuropathol Exp Neurol. 2012 Jul;71(7):654-64. doi: 10.1097/NEN.0b013e31825d06b7. PMID: 22710966
- 24. Banigan MG, <u>Kao PF</u>, Kozubek JA, Winslow AR, Medina J, Costa J, Schmitt A, Schneider A, Cabral H, Cagsal-Getkin O, Vanderburg CR, **Delalle** I. Differential expression of exosomal microRNAs in prefrontal cortices of schizophrenia and bipolar disorder patients. PLoS One. 2013;8(1):e48814. doi: 10.1371/journal.pone.0048814. Epub 2013 Jan 30. PMID: 23382797
- 25. Thaci B, Burns JD, **Delalle** I, Vu T, Davies KG. Intractable hiccups resolved after resection of a cavernous malformation of the medulla oblongata. Clin Neurol Neurosurg. 2013 Oct;115(10):2247-50. doi: 10.1016/j.clineuro.2013.07.005. Epub 2013 Aug 7. No abstract available. PMID: 23932467
- 26. Agbemenyah HY, Agis-Balboa RC, Burkhardt S, **Delalle** I, Fischer A. Insulin growth factor binding protein 7 is a novel target to treat dementia. Neurobiol Dis. 2014 Feb;62:135-43. doi: 10.1016/j.nbd.2013.09.011. Epub 2013 Sep 25. PMID: 24075854
- 27. Berkowitz AL, Sheu SH, Rose MF, **Delalle** I, Folkerth RD. Bilirubin labeling of borderzone and anterior cerebral artery territory infarction. Neurology. 2013 Oct 1;81(14):1272-3. doi: 10.1212/WNL.0b013e3182a6cbb2. No abstract available. PMID: 24081962

- 28. Qin B, Tabbara AK, **Delalle** I, Holsapple J, Hohler A. An enigmatic brainstem posterior fossa ganglioglioma in an adult. Int J Neurosci. 2014 Sep;124(9):704-6. doi: 10.3109/00207454.2013.877901. Epub 2014 Jan 29. PMID: 24405263
- 29. Seo J, Giusti-Rodríguez P, Zhou Y, Rudenko A, Cho S, Ota KT, Park C, Patzke H, Madabhushi R, Pan L, Mungenast AE, Guan JS, **Delalle** I, Tsai LH. Activity-dependent p25 generation regulates synaptic plasticity and Aβ-induced cognitive impairment. Cell. 2014 Apr 10;157(2):486-498. doi: 10.1016/j.cell.2014.01.065. PMID: 24725413
- 30. Olmos-Serrano JL, Kang HJ, Tyler WA, Silbereis JC, Cheng F, Zhu Y, Pletikos M, Jankovic-Rapan L, Cramer NP, Galdzicki Z, Goodliffe J, Peters A, Sethares C, **Delalle** I, Golden JA, Haydar TF, Sestan N. Down Syndrome Developmental Brain Transcriptome Reveals Defective Oligodendrocyte Differentiation and Myelination. Neuron. 2016 Mar 16;89(6):1208-1222. doi: 10.1016/j.neuron.2016.01.042. Epub 2016 Feb 25. PMID: 26924435
- 31. <u>Adams SL</u>, Tilton K, Kozubek JA, Seshadri S, **Delalle** I. Subcellular Changes in Bridging Integrator 1 Protein Expression in the Cerebral Cortex During the Progression of Alzheimer Disease Pathology. J Neuropathol Exp Neurol. 2016 Aug;75(8):779-790. Epub 2016 Jun 26. PMID: 27346750
- 32. Ramkissoon SH, Bandopadhayay P, Hwang J, Ramkissoon LA, Greenwald NF, Schumacher SE, O'Rourke R, Pinches N, Ho P, Malkin H, Sinai C, Filbin M, Plant A, Bi WL, Chang MS, Yang E, Wright KD, Manley PE, Ducar M, Alexandrescu S, Lidov H, **Delalle** I, Goumnerova LC, Church AJ, Janeway KA, Harris MH, MacConaill LE, Folkerth RD, Lindeman NI, Stiles CD, Kieran MW, Ligon AH, Santagata S, Dubuc AM, Chi SN, Beroukhim R, Ligon KL. Clinical targeted exome-based sequencing in combination with genome-wide copy number profiling: precision medicine analysis of 203 pediatric brain tumors. Neuro Oncol. 2017 Jul 1;19(7):986-996. doi: 10.1093/neuonc/now294. PMID: 28104717
- 33. <u>Choi JL</u>, <u>Kao PF</u>, Itriago E, Zhan Y, Kozubek JA, Hoss AG, Banigan MG, Vanderburg CR, Rezvani AH, Latourelle JC, Cabral H, **Delalle** I. miR-149 and miR-29c as candidates for bipolar disorder biomarkers. Am J Med Genet B Neuropsychiatr Genet. 2017 Apr;174(3):315-323. doi: 10.1002/ajmg.b.32518. Epub 2017 Feb 12. PMID: 28190298
- 34. Bahari-Javan S, Varbanov H, Halder R, Benito E, Kaurani L, Burkhardt S, Anderson-Schmidt H, Anghelescu I, Budde M, Stilling RM, Costa J, Medina J, Dietrich DE, Figge C, Folkerts H, Gade K, Heilbronner U, Koller M, Konrad C, Nussbeck SY, Scherk H, Spitzer C, Stierl S, Stöckel J, Thiel A, von Hagen M, Zimmermann J, Zitzelsberger A, Schulz S, Schmitt A, **Delalle** I, Falkai P, Schulze TG, Dityatev A, Sananbenesi F, Fischer A. HDAC1 links early life stress to schizophrenia-like phenotypes. Proc Natl Acad Sci U S A. 2017 Jun 6;114(23):E4686-E4694. doi: 10.1073/pnas.1613842114. Epub 2017 May 22. Erratum in: Proc Natl Acad Sci U S A. 2017 Jul 10. PMID: 28533418

- 35. Agís-Balboa RC, Pinheiro PS, Rebola N, Kerimoglu C, Benito E, Gertig M, Bahari-Javan S, Jain G, Burkhardt S, **Delalle** I, Jatzko A, Dettenhofer M, Zunszain PA, Schmitt A, Falkai P, Pape JC, Binder EB, Mulle C, Fischer A, Sananbenesi F. Formin 2 links neuropsychiatric phenotypes at young age to an increased risk for dementia. EMBO J. 2017 Oct 2;36(19):2815-2828. doi: 10.15252/embj.201796821. Epub 2017 Aug 2. PMID: 28768717
- 36. <u>Adams SL</u>, <u>Benayoun L</u>, Tilton K, Chavez OR, Himali JJ, Blusztajn JK, Seshadri S, **Delalle** I. Methionine Sulfoxide Reductase-B3 (MsrB3) Protein Associates with Synaptic Vesicles and its Expression Changes in the Hippocampi of Alzheimer's Disease Patients. J Alzheimers Dis. 2017;60(1):43-56. doi: 10.3233/JAD-170459. PMID: 28777754
- 37. <u>Adams SL</u>, <u>Benayoun L</u>, Tilton K, Mellott TJ, Seshadri S, Blusztajn JK, **Delalle** I. Immunohistochemical Analysis of Activin Receptor-Like Kinase 1 (ACVRL1/ALK1) Expression in the Rat and Human Hippocampus: Decline in CA3 During Progression of Alzheimer's Disease. J Alzheimers Dis. 2018;63(4):1433-1443. doi: 10.3233/JAD-171065. PMID: 29843236
- 38. Conner SC, <u>Benayoun L</u>, Himali JJ, <u>Adams SL</u>, Yang Q, DeCarli C, Blusztajn JK, Beiser A, Seshadri S, **Delalle I**. Methionine Sulfoxide Reductase-B3 Risk Allele Implicated in Alzheimer's Disease Associates with Increased Odds for Brain Infarcts. J Alzheimers Dis. 2019;68(1):357-365. doi: 10.3233/JAD-180977. PMID: 30775993
- 39. Cagney DN, Miller MB, Dubuc A, **Delalle I**, Ligon AH, Chukwueke U, Al-Mefty O, Aizer A, Ligon K, Wen P. Clinical Importance of CDKN2A Loss and Monosomy 10 in Pilocytic Astrocytoma. Cureus; 2019 May 23; 11(5):e4726. doi: 10.7759/cureus.4726. PMID: 31355086
- 40. Canter RG, Choi H, Huang W-C, Wang J, Watson LA, Yao CG, Abdurrob F, Bousleiman SM, Young JZ, Bennet DA, **Delalle I***, Chung K*, Tsai L-H* (*corresponding authors). 3D Mapping Reveals Network-specific Amyloid Progression and Subcortical Susceptibility. Commun Biol. 2019 Oct 4;2:360. doi: 10.1038/s42003-019-0599-8. PMID: 31602409
- 41. Jain G, Stündl A, Rao P, Berulava T, Pena Centeno T, Kaurani L, Burkhardt S, **Delalle I**, Kornhuber J, Hüll M, Maier W, Peters O, Esselmann H, Wiltfang J, Mollenhauer B, Maetzler W, Schneider A, Fischer A. A combined miRNA-piRNA signature to detect Alzheimer's disease. Transl Psychiatry. 2019 Oct 7;9(1):250. doi: 10.1038/s41398-019-0579-2. PMID: 31591382
 - **<u>Underlined</u> are PhD thesis students in Delalle lab, and medical and undergrad. students mentored

OTHER PEER-REVIEWED PUBLICATIONS

- 1. Kostovic I, Judas M, Kostovic-Knezevic L, Simic G, **Delalle** I, Chudy D, Sajin B, Petanjek Z. Zagreb research collection of human brains for developmental neurobiologists and clinical neuroscientists. Int J Dev Biol. 1991 Sep;35(3):215-30. PMID: 1687658
- 2. Caviness VS Jr, Takahashi T, Miyama S, Nowakowski RS, **Delalle** I. Regulation of normal proliferation in the developing cerebrum potential actions of trophic factors. Exp Neurol. 1996 Feb;137(2):357-66. Review. PMID: 8635552
- 3. **Delalle** I., <u>Kao PF</u>, <u>Choi J</u>. Deregulated microRNA expression in biospecimens from patients diagnosed with schizophrenia and bipolar disorder as a disease biomarker. Translat.Neurosci. (2014) 5: 173. https://doi.org/10.2478/s13380-014-0224-8
- 4. Šimić G, Babić Leko M, Wray S, Harrington C, **Delalle** I, Jovanov-Milošević N, Bažadona D, Buée L, de Silva R, Di Giovanni G, Wischik C, Hof PR. Tau Protein Hyperphosphorylation and Aggregation in Alzheimer's Disease and Other Tauopathies, and Possible Neuroprotective Strategies. Biomolecules. 2016 Jan 6;6(1):6. doi: 10.3390/biom6010006. Review. PMID: 26751493
- 5. Šimić G, Babić Leko M, Wray S, Harrington CR, **Delalle** I, Jovanov-Milošević N, Bažadona D, Buée L, de Silva R, Di Giovanni G, Wischik CM, Hof PR. Monoaminergic neuropathology in Alzheimer's disease. Prog Neurobiol. 2017 Apr;151:101-138. doi: 10.1016/j.pneurobio.2016.04.001. Epub 2016 Apr 12. Review. PMID: 27084356

BOOKS AND BOOK CHAPTERS

- 1. **Delalle** I. Brain Reserve Regulators in Alzheimer's Disease, in Neurodegenerative Diseases. Ed. Uday Kishore. IntechOpen.com. Chapt. 2, p151-163. 2013 May 15 doi: 10.5772/53658
- 2. Watanabe M, Thatcher J, Kimura Y, **Delalle** I, Frank S, Sakai O. Brain Aging and Degenerative Diseases of the Brain, in Magnetic Resonance Imaging Handbook. Ed. Saba L. CRC Press. Chapt. 20. 2016 ISBN 9781482216288

INVITED PRESENTATIONS

International

- 1. "Actin Capping Protein ß2 Subunit as an Inhibitor of Neurodegeneration," Laboratory for Aging and Cognitive Diseases, Max Planck Society, Goettingen, Germany, 2009.
- 2. "Actin Capping Protein ß2 Subunit in Development and Disease," Hospital La Salpetriere, Paris, France, 2010.
- 3. "Actin Capping Protein β2 interacts with β-tubulin to regulate neurite outgrowth," Institute of Neuropathology, University Hospital of Zurich, Switzerland, 2011.

International (continued)

- 4. "microRNA is preserved in laser-captured cells from human postmortem cortex," University Goettingen European Neuroscience Institute, Goettingen, Germany, 2012.
- 5. "Late effects of treatment for pediatric brain tumors," Department of Pediatrics, University Medical Center, Zagreb, Croatia, 2012.
- 6. "Exosomal miRNAs in prefrontal cortices of schizophrenia and bipolar disorder patients," University Goettingen European Neuroscience Institute, Goettingen, Germany, 2013.
- 7. "microRNAs as biomarkers for schizophrenia and bipolar disorder," Croatian Institute for Brain Research, Zagreb University, Zagreb, Croatia, 2014.
- 8. "Exosomal miR-149 and miR-29c as Candidates for Bipolar Disorder Biomarkers," International Symposium on Microgenomics, Paris, France, 2016.
- 9. "Subcellular changes in BIN1 protein expression in human cortex during the progression of Alzheimer's disease," European Neuropathology Conference, Bordeaux, France, 2016.
- 10. "Protein expression of Alzheimer's disease- and reduced hippocampal volume- risk genetic loci in human hippocampus," Croatian Institute for Brain Research, Zagreb, Croatia, 2017.
- 11. "Extracellular vesicles microRNA as bipolar disorder biomarkers," 3rd Annual Next Generation Sequencing & Single Cell Analysis Congress, Boston, MA, USA, 2017.
- 12. "Exosomal microRNA as biomarkers for neuropsychiatric diseases," Longwood Extracellular Vesicles Symposium (LExS), Boston, MA, USA, 2018.
- 13. "GWAS-identified Alzheimer's disease risk variants lessons from neuropathology", Presidential Symposium, 7th Croatian Neuroscience Meeting, Zadar, Croatia, 2019.

National

- 1. "Exosomal microRNA as biomarkers for neuropsychiatric diseases," Grand Rounds, Department of Pathology, UC Davis School of Medicine, Sacramento, CA, 2015.
- 2. "Exosomal microRNA as biomarkers for neuropsychiatric diseases," Grand Rounds, Department of Pathology, NYU School of Medicine, New York, NY, 2016.
- 3. "The expression of MSRB3, implicated in decreased hippocampal volume, changes in Alzheimer's disease and associates with synaptic vesicles", Annual American Association of Neuropathologists Meeting, Orange County, CA, 2017.
- 4. "Exosomal microRNA as Candidates for biomarkers of bipolar disorder and schizophrenia", Program in Genetic and Psychosis, University of Pittsburgh Medical Center, Pittsburgh, PA, 2018.

National (continued)

- 5. "Biomarkers for cognitive decline and mood disorders", Johns Hopkins School of Medicine, Baltimore, MD, 2018.
- 6. Methionine Sulfoxide Reductase-B3 risk allele implicated in Alzheimer's Disease affects odds for small covert brain infarcts", Annual American Association of Neuropathologists Meeting, Louisville, KY, 2018.
- 7. "Brain tissue biomarkers for Alzheimer's disease, Schizophrenia, and Bipolar Disorder", Glenn Biggs Institute for Alzheimer's & Neurodegenerative Diseases, University of Texas Health Sciences Center, San Antonio, TX, 2018.
- 8. "Biomarkers for cognitive decline and mood disorders", Department of Pathology and Laboratory Medicine, University of Rochester School of Medicine and Dentistry, Rochester, NY, 2018.

Regional

- Grand Rounds, Department of Pathology, Department of Neurology, Radiology, and Neurosurgery, Department of Rheumatology, Boston Medical Center, 2006 - 2019.
- 2. Neurovascular lectures and case presentations, Department of Neurology, Boston Medical Center, 2014-2019.
- 3. "Exosomal microRNA as biomarkers for neuropsychiatric diseases," Robbins Lecture, New England Society of Pathologists, Cambridge, MA, 2015.

GRANTS

2001 - 2006 Past	"Analysis of retinal degeneration in <i>Drosophila</i> " NIH KO8 EY13639 Total costs: \$666,126 Role: Principal Investigator
2010 - 2013 Past	"Exosomal and cell-class specific miRNA profiles in bipolar disorder and schizophrenia" NIH R21 MH086079 Total costs: \$457,393 Role: Principal Investigator
2011 - 2014 Past	"The Epigenetics of Alzheimer's Disease" NIH R01 NS078839 Total costs for BU sub-award: \$60,000

Role: Sub-award Principal Investigator

GRANTS (continued)

Under Revision

2015 - 2017 "AD Gene discovery exome Chip, new endophenotypes and functional

studies in CHARGE" **Past**

NIH R01AG033193 Total costs: \$1.684.362 Role: Co-investigator

2016 - 2019 "BMP9 as a juvenile protective factor in cognitive aging"

NIH R01AG045031 *Current

> Total costs: \$1,332,272 Role: Co-investigator

2017 - 2018 "Identifying Risk & Protective SNV for AD in ADSP Case-control Sample"

NIH 1U01 AG049505 **Past**

Total costs: \$2.093,205 Role: Co-investigator

2017 "Lithium response in mood disorders: multimodal biomarker profiling for

future clinical applications to enhance recovery" Under Review

Deutsche Forschungsgemeinschaft, Germany WP B05

Total costs: EUR 500,000 Role: Co-investigator

2018 "Exploration of BIN1 and APOE function: Genotype based phenotyping *Current

and characterization in iPSC derived neurons and oligodendrocytes from

Framingham Heart Study participants"

Genome Science Institute, Boston University Medical Campus seed grant

Total costs: \$25,000

Role: Principal Investigator

2019 "Exploration of BIN1 and APOE function: Genotype Based Phenotyping

and Characterization in iPSC derived neurons and oligodendrocytes from

Framingham Heart Study participants"

NIH R01 AG057520-01 Total costs: \$3,891,540 Role: Principal Investigator

2019 "Small RNA as diagnostic and predictive biomarker of Alzheimer's disease"

Under Revision NIH R01 (GRANT12919744, 04/01/2020 – 3/31/2025)

> Total costs: \$3,526,246 Role: Principal Investigator

UNIVERSITY MENTORING, ADVISING AND TEACHING ROLES

MENTORING

2006 - present Boston University School of Medicine, Graduate Medical Science

Neuropathology Laboratory

5/2006 - 7/2009

David A. Davis, Ph.D.

First Author PMID 19806181

National Presentation: Society for Neuroscience Meeting 2007 Current Position: Senior Manager, Brain Endowment Bank,

University of Miami, Miller School of Medicine

5/2009 - 7/2012

Patricia F. Kao, PhD

First author publications PMIDs: 20967212, 22710966, 23382797

Award: 2012 Henry I. Russek Student Achievement Award (Second Prize) National Presentations: Society for Neuroscience Meeting, 2010 and 2013 Current Position: Supervisor, Service Support, Life Sciences Solutions

Group, Thermo Fisher Scientific

8/2014 - 5/2017

Stephanie L. Adams, PhD

First Author Publication: PMID: 27346750, 28777754, 29843236

Award: 2017 Henry I. Russek Student Achievement Award (First Prize) National Presentations: American Association of Neuropathologists

Meetings, 2015 and 2016

Current Position: Optometry Student (OD/PhD program)

ADVISING

2014 - present Boston University School of Medicine, Graduate Medical Student Advisor

Program in Biomedical Sciences (PiBS) for 2-3 students per year

TEACHING

Zagreb University School of Medicine

1988 - 1993 Anatomy

320 hours, 20 first year medical students

1988 - 1993 Neuroanatomy

120 hours, 60 second year medical students

Harvard Medical School

1999 - 2002 HMS IN707.0, Human Nervous System and Behavior

40 hours, 30 second year students

Boston University School of Medicine

2004 - present GMS PA600 A1, Introduction to Pathology

3 hours, 85-140 graduate students

2008 - present Disease and Therapy Course (DrX)

Neuropathology Case Presentations

2 hours, 150-190 second year medical students and

24-33 physician's assistant students

2008, 2010 Neuropathology for USMLE, Review

2 hours, 60 second year medical students

2008 - present Neuropathology Elective

(Creator and Director)

60 hours on average, up to 10 medical students and pediatric neurology

residents per year

2011 GMS PA700 A1, Basic and Experimental Pathology

2 hours, 4-13 graduate students

2013 - 2016 GMS FC764, Professional Presentation Skills

10 hours, 20 graduate students

2015, 2017, 2019 GMS PA910 Human Biospecimens for Research

(Creator and Director)

100 hours

10 graduate students (2015), 9 graduate students (2017), 12 graduate students (2019)

Boston University School of Dental Medicine and Oral Health Sciences

2008 - present GMS OH700, General Pathology Course

2 hours, 103-115 first year dental medicine students

Boston University School of Medicine, Graduate School of Medical Sciences

2011 - present Qualifying Exam Committee Member

3-5 PhD students (depending on year)

Boston University School of Medicine, Graduate School of Medical Sciences (continued)

2011 - present PhD Thesis Defense Committee Member,

305 PhD Students (depending on year)

2016 PhD Thesis Defense Committee Chair, Jason Sutin

2017 Master Thesis First Reader, Pamela Yan

2018 PhD Thesis Defense Committee Chair, Ahmad Al-Moujahed

Massachusetts Institute of Technology, Department of Brain and Cognitive Sciences

2016 PhD Thesis Defense Committee Member, Rebecca G. Canter

HOSPITAL MENTORING, ADVISING AND TEACHING ROLES

FORMAL TEACHING OF RESIDENTS AND FELLOWS

Massachusetts General Hospital

1999 - 2003 Surgical Pathology (Neuropathology) Case Conference

5 hours, 30 pathology residents and fellows

Boston University Medical Center

2004 - present Didactic Neuropathology Case Conference

(around the microscope sessions),

4 hours, 5 anatomic pathology residents

2004 - present Didactic Neuropathology Lectures

4 hours, 5 anatomic pathology residents

2004 - 2016 Didactic Neuropathology lectures and brain autopsy conferences

10 hours, 30 neurology and anatomic pathology residents

Brigham and Women's Hospital

2007 - 2010 Didactic Neuropathology Lectures

1 hour, 10 neurosurgery residents

2014 - present Didactic Neuropathology Presentations

1 hour, 2-3 neuropathology fellows

CLINICAL SUPERVISORY AND TEACHING OF RESIDENTS AND FELLOWS

Brigham and Women's Hospital and Boston Children's Hospital

2001 - present Attending in Neuropathology

150-300 hours, 25 anatomic pathology residents

and 2 neuropathology fellows

Boston University Medical Center

2004 - present Attending in Neuropathology

150 hours, 5 anatomic pathology residents