

**JOHN EDWARD DONAHUE, M.D.**  
**CURRICULUM VITAE**  
**November 1, 2022**

**CONTACT INFORMATION**

Rhode Island Hospital, Division of Neuropathology, Dept. of Pathology,  
593 Eddy Street (POB 322), Providence, RI 02903

Phone: (401) 444-7968

Fax: (401) 444-9319

E-mail: [JDonahue3@Lifespan.org](mailto:JDonahue3@Lifespan.org)

**EDUCATION**

**Undergraduate (1984-1988)**

B.S. in Mathematics, Tufts University, Medford, MA

Honors: Summa Cum Laude, Phi Beta Kappa (elected as a junior), Dean's List (every semester)

**Medical School (1988-1992)**

M.D., Tufts University School of Medicine, Boston, MA

Honors: David L. Kasdon (M'71) Prize (presented to a senior student who has shown interest and outstanding achievement in the neurosciences)

**POSTGRADUATE TRAINING**

**Intern in Internal Medicine (1992-1993)**

St. Elizabeth's Hospital of Boston (now Caritas-St. Elizabeth's Medical Center), 736  
Cambridge St., Boston, MA 02135

**Resident in Neurology (1993-1996)**

Tufts-New England Medical Center (now Tufts Medical Center), 750 Washington St.,  
Boston, MA 02111

**Fellow in Neuropathology (1996-1999)**

Rhode Island Hospital, 593 Eddy St., Providence, RI 02903 (includes one year of  
Anatomic Pathology)

**POSTGRADUATE HONORS AND AWARDS**

Second place, 1997 Gustaf Retzius Neuroanatomy Competition (East Coast), 4/4/1997

Second place, 1998 Gustaf Retzius Neuroanatomy Competition (East Coast), 4/1/1998

CHAMPION, 1999 Gustaf Retzius Neuroanatomy Competition (East Coast), 4/9/1999

Dean's Teaching Excellence Award for outstanding teaching in Bio 186 (General Pathology) at Brown Medical School: 2004-2006

Dean's Teaching Excellence Award for outstanding teaching in Bio 3640D (IMS I: General Pathology) at the Warren Alpert Medical School of Brown University: 2007-2008, 2013, 2016

Certificate of Recognition for exemplary teaching in the pathology lab, Bio 3653 (IMS II: Micro/ID): 2009-2012

Dean's Teaching Excellence Award for outstanding teaching in Bio 3652 (IMS II: Brain Sciences): 2010, 2012, 2014, 2015, 2016, 2017, 2018, 2020, 2021, 2022; certificates of recognition: 2011, 2013, 2015, 2016, 2017, 2018, 2019, 2020.

Dean's Teaching Excellence Award for outstanding teaching in Pathology 6150: Neuropathology (elective for 3<sup>rd</sup>-and 4<sup>th</sup>-year medical students): 2021.

"Positive Champion of the Learning Environment" at Alpert Medical School (1/23/2018, 7/1/2021; nomination for demonstrating exemplary behaviors that promote a positive learning environment for students).

## **PROFESSIONAL LICENSES AND BOARD CERTIFICATION**

Medical License, Rhode Island Board of Medical Licensure and Discipline, License #MD09362 (active 1997-1999, inactive 1999-2003, active 2003-present)

Medical License, New Jersey State Board of Medical Examiners, License #MA68874 (active 1999-2005; inactive as of 7/1/2005)

Diplomate, National Board of Medical Examiners, Parts I-III, #410070 (1993)

Diplomate, American Board of Psychiatry and Neurology (Neurology), #44059 (1997; recertified in 2007 and 2017)

Diplomate, American Board of Pathology (Neuropathology), #S-99-380 (1999)

## **ACADEMIC APPOINTMENTS**

Teaching Fellow in Neuropathology, Dept. of Pathology and Laboratory Medicine, Rhode Island Hospital and Brown Medical School, Providence, RI (1996-1997, 1998-1999)

Teaching Fellow in Pathology, Dept. of Pathology and Laboratory Medicine, Brown Medical School (1997-1998)

Assistant Professor of Neuroscience, Seton Hall University School of Graduate Medical Education, South Orange, NJ (1999-2003)

Assistant Professor, Dept. of Pathology and Laboratory Medicine, Rhode Island Hospital and the Warren Alpert Medical School of Brown University, Providence, RI (2003-2008)

Assistant Professor, Dept. of Pathology and Laboratory Medicine and Neurology, Rhode Island Hospital and the Warren Alpert Medical School of Brown University, Providence, RI (2008-2011)

Associate Professor, Dept. of Pathology and Laboratory Medicine and Neurology, Rhode Island Hospital and the Warren Alpert Medical School of Brown University, Providence, RI (2011-present)

## **HOSPITAL APPOINTMENTS**

Lifespan Animal Welfare Committee (IACUC), 2006-2011

Judge, Young Investigator's Award Competition, Research Celebration Planning Committee, 14<sup>th</sup>, 15<sup>th</sup>, 16<sup>th</sup>, 17<sup>th</sup>, 18<sup>th</sup>, 19<sup>th</sup>, and 20<sup>th</sup> Annual Lifespan Hospital Research Celebrations: 2006-2012

Interim Director of Electron Microscopy, 2014-2017

## **OTHER APPOINTMENTS**

Editorial Board member, *Journal of Neuropathology and Experimental Neuropathology* (July 1, 2007 – Present).

Reviewer, Alzheimer's Association Research Grant Program, 2008-2012.

Mail Reviewer, Center for Scientific Review Special Emphasis Panel, "Drug Discovery for the Nervous System," ZRG1 MNPS-C (09), Agenda Seq Num 203809, 10/16-10/17/2008.

Reviewer, Center for Scientific Review Special Emphasis Panel, "Drug Discovery for Neurodegenerative Diseases," ZRG1 MDCN-B 91 S, 2/19-2/20/2009.

Reviewer, Dutch Internationale Stichting Alzheimer Onderzoek (ISAO) grant program, 2009.

Reviewer, Center for Scientific Review Special Emphasis Panel, "Drug Discovery for Neurodegenerative Diseases and Drug Abuse," ZRG1 MDCN-B 91 S, 11/3-11/4/2009.

Awards Committee, 86<sup>th</sup> Annual American Association of Neuropathologists Annual Meeting, Philadelphia, PA (6/2010).

Awards Committee, 87<sup>th</sup> Annual American Association of Neuropathologists Annual Meeting, Seattle, WA (6/2011).

Member, Medical Faculty Executive Committee, Warren Alpert Medical School of Brown University, 2011-2014

Editorial Board member, *Clinical Neurology and Neurosurgery*, 2014-present.

Reviewer, University of Missouri Research Board, 2016.

Member, Summer Assistantship Review Committee, Warren Alpert Medical School of Brown University, 2017-present (reviewing student research project applications for summer funding).

Reviewer, Medical Research Council (MRC) Research Grant Program, United Kingdom, 2017.

Website Committee, American Association of Neuropathologists, 12/2018-present.

Program Directors' Committee, American Association of Neuropathologists, 1/2019-present.

Awards Committee, 96<sup>th</sup> Annual American Association of Neuropathologists Annual Meeting, virtual (6/2020)

Awards Committee, 97<sup>th</sup> Annual American Association of Neuropathologists Annual Meeting, St. Louis, MO/virtual hybrid (6/2021).

Education Committee, American Association of Neuropathologists, 8/2020-present. (Subcommittee for AANP Teaching Rounds, 8/2021-present.)

**AD HOC JOURNAL REVIEWS** (in chronologic order from date of first invite, indexed for Medline)

*Pharmacotherapy* (1995)

*Journal of Neuropathology and Experimental Neurology* (2001, 2005-2022)

*Frontiers in Bioscience* (2003)

*Neurosurgery* (2005, 2010, 2011, 2019)

*Alzheimer's and Dementia* (2007, 2010, 2017, 2020)

*Cerebrospinal Fluid Research* (2007, 2010)

*Dementia and Geriatric Cognitive Disorders* (2007-2010, 2012-2013, 2015)

*Acta Neuropathologica* (2008, 2009, 2010)

*Brain Research* (2008)

*Vascular Health and Risk Management* (2008)

*Journal of Cellular and Molecular Medicine* (2008)

*Key Opinions: Current Opinion in Investigational Drugs* (2009)

*International Journal of Neuroscience* (2009, 2010)

*Current Alzheimer Research* (2009)

*Neuroscience Letters* (2009, 2010)

*Journal of Alzheimer's disease* (2010, 2011)

*Neurobiology of Aging* (2011, 2013)

*Brain Pathology* (2011)

*New England Journal of Medicine* (2012)

*Clinical Neurology and Neurosurgery* (2013-2014, 2016-2022)

*Journal of Child Neurology* (2013)

*Expert Opinion on Investigational Drugs* (2014, 2016)

*Neurological Research* (2016)

*BMC Neurology* (2018)  
*World Neurosurgery* (2020)  
*Modern Pathology* (2021)  
*Clinical Lymphoma, Myeloma, and Leukemia* (2021)  
*The Journal of Pathology: Clinical Research* (2022)

**AD HOC JOURNAL REVIEWS** (in chronologic order from date of first invite, not indexed for Medline)

*Interdisciplinary Neurosurgery: Advanced Techniques and Case Management* (2018-2020)  
*Alzheimer's and Dementia: Translational Research & Clinical Interventions* (2018)  
*Human Pathology: Case Reports* (2018, 2019)  
*Aging and Disease* (2020)  
*Alzheimer's and Dementia: Diagnosis, Assessment & Disease Monitoring* (2021)

**PROFESSIONAL SOCIETY MEMBERSHIPS** (in chronologic order from date joined)

Massachusetts Medical Society (1988-present)  
American Medical Association (1988-2001)  
American Academy of Neurology (1994-present, current Active Member)  
American Association of Neuropathologists (1998-present, current Active Member)  
International Society of Neuropathology (1998-present)  
College of American Pathologists (1998-2005)  
Neuroplex, Inc. (New York Society of Neuropathologists) (2000-present)  
Society for Neuroscience (2000-present, current Regular Member)  
American Association for the Advancement of Science (2005-present, current Professional Member)  
New York Academy of Sciences (2006-2013)  
Brown Brain Science Program/Brown-Carney Institute for Brain Science (2006-present)  
Children's Oncology Group (COG) (2007-present)  
International Society to Advance Alzheimer Research and Treatment (2008-present, current Professional Member)  
Rhode Island Neurological Society (2009-present)  
Rhode Island Pathological Society (2009-present)

**ORIGINAL PUBLICATIONS (1,447 citations and h-index 15 as of 11/1/2022)**

1. **Donahue JE**, Raynor EM, Rutkove SB, "Forearm velocity in carpal tunnel syndrome: when is slow too slow?" *Arch Phys Med Rehabil* 1998; 79: 181-183. (Published erratum appears on p. 723.)
2. **Donahue JE**, Khurana JS, Adelman LS, "Intracerebral hemorrhage in two patients with Down's syndrome and cerebral amyloid angiopathy," *Acta Neuropathol (Berl)* 1998; 95: 213-216.
3. Tabamo REJ, **Donahue JE**, "Eastern equine encephalitis: case report and literature review," *Med Health R I* 1999; 82: 23-26.

4. **Donahue JE**, Berzin TM, Rafii MS, Glass DJ, Yancopoulos GD, Fallon JR, Stopa EG, "Agrin in Alzheimer's disease: altered solubility and abnormal distribution within microvasculature and brain parenchyma," *Proc Natl Acad Sci U S A* 1999; 96: 6468-6472.
5. **Donahue JE**, Stopa EG, "Multiple neurofibromas in severe neurofibromatosis type 1," *Arch Pathol Lab Med* 1999; 123: 644-645.
6. **Donahue JE**, Stopa EG, "Benign meningioma," *Arch Pathol Lab Med* 1999; 123: 855.
7. **Donahue JE**, Stopa EG, Chorsky RL, King JC, Schipper HM, Tobet SA, Blaustein JD, Reichlin S, "Cells containing immunoreactive estrogen receptor-alpha in the human basal forebrain," *Brain Res* 2000; 856: 142-151.
8. **Donahue JE**, Hanna PA, Hariharan S, "Autopsy-proven Creutzfeldt-Jakob disease in a patient with a negative 14-3-3 assay and nonspecific EEG and MRI," *Neurol Sci* 2004; 24: 411-413.
9. Hariharan S, Zhu J, Nadkarni MA, **Donahue JE**, "Metastatic lung cancer in the cerebellopontine angles mimicking bilateral acoustic neuroma," *J Clin Neurosci* 2005; 12: 184-186.
10. Fischer SA, **Donahue J**, "Pachymeningitis in a Mexican immigrant," *Med Health R I* 2005; 88: 236.
11. Abubakr A, Wambacq I, **Donahue JE**, Zappulla R, "The presence of polyglucosan bodies in temporal lobe epilepsy: its role and significance," *J Clin Neurosci* 2005; 12: 911-914. Epub 2005 Oct 24.
12. Park MC, Weaver CE Jr, **Donahue JE**, Sampath P, "Intracavitary chemotherapy (Gliadel®) for recurrent esthesioneuroblastoma: case report and review of the literature," *J Neurooncol* 2006; 77: 47-51. Epub 2005 Sep 2.
13. Johanson CE, **Donahue JE**, Spangenberg A, Stopa EG, Duncan JA, Sharma HS, "Atrial natriuretic peptide: its putative role in modulating the choroid plexus-CSF system for intracranial pressure regulation," *Acta Neurochir Suppl* 2006; 96: 451-456.
14. Hariharan S, **Donahue JE**, Garre C, Origone P, Grewal R, "Clinicopathologic and genetic analysis of siblings with NF1 and adult-onset gliomas," *J Neurol Sci* 2006; 247:105-108. Epub 2006 May 23.
15. **Donahue JE**, Flaherty SL, Johanson CE, Duncan JA III, Silverberg GD, Miller MC, Tavares R, Yang W, Wu Q, Sabo E, Hovanesian V, Stopa EG, "RAGE, LRP-1, and amyloid-beta protein in Alzheimer's disease," *Acta Neuropathol (Berl)* 2006; 112: 405-415. Epub 2006 Jul 25.
16. Blum A, Tremont G, **Donahue J**, Tung G, Duncan JA, Buchbinder B, Gascon G, "Landau-Kleffner syndrome with lateral temporal focal cortical dysplasia and

- mesial temporal sclerosis: a 30-year follow-up," *Epilepsy Behav* 2007; 10: 495-503. Epub 2007 Mar 7.
17. Bagdasaryan R, **Donahue JE**, "Granulomatous myositis in association with chronic graft vs. host disease," *Med Health R I* 2007; 90: 287.
  18. Park MC, Goldman MA, **Donahue JE**, Tung GA, Goel R, Sampath P, "Endonasal ethmoidectomy and bifrontal craniotomy with craniofacial approach for resection of frontal ethmoidal osteoma causing tension pneumocephalus," *Skull Base* 2008; 18: 67-72.
  19. Mayrin JV, **Donahue JE**, Laufgraben MJ, "Visual vignette. Prolactinoma," *Endocr Pract* 2008; 14: 256.
  20. **Donahue JE**, Johanson CE, "Apolipoprotein E, amyloid- $\beta$ , and blood-brain barrier permeability in Alzheimer disease," *J Neuropathol Exp Neurol* 2008; 67: 261-270. (Published erratum appears on p. 634.) [Cover story of April 2008 issue.]
  21. Aboagye-Kumi M, Yango A Jr, Fischer S, **Donahue J**, Morrissey P, Taylor N, Gautam A, Mendonca C, Kumar S, Gohh R, "Acute disseminated encephalomyelitis in a renal transplant recipient: case report," *Transplant Proc* 2008; 40: 1751-1753.
  22. Miller MC, Tavares R, Johanson CE, Hovanesian V, **Donahue JE**, Gonzalez L, Silverberg GD, Stopa EG, "Hippocampal RAGE immunoreactivity in early and advanced Alzheimer's disease," *Brain Res* 2008; 1230C: 273-280. Epub 2008 July 14.
  23. Davis JD, Podolanczuk A, **Donahue JE**, Stopa E, Hennessey JV, Luo LG, Lim Y-P, Stern RA, "Thyroid hormone levels in the prefrontal cortex of post-mortem brains of Alzheimer's disease patients," *Curr Aging Sci* 2008; 1: 175-181.
  24. Chang HJ, **Donahue JE**, Sciandra KT, Evangelista PT, "Best cases from the AFIP: juvenile ossifying fibroma of the calvaria," *Radiographics* 2009; 29: 1195-1199.
  25. Dewan S, Alvarez VE, **Donahue JE**, Cielo D, "Intracranial collision metastases of prostate and esophageal carcinoma," *J Neurooncol* 2009; 95: 147-150. Epub 2009 May 10.
  26. Silverberg GD, Miller MC, Messier AA, Majmudar S, Machan JT, **Donahue JE**, Stopa EG, Johanson CE, "Amyloid deposition and influx transporter expression at the blood-brain barrier increase in normal aging," *J Neuropathol Exp Neurol* 2010; 69: 98-108.
  27. Ott BR, Cohen RA, Gongvatana A, Okonkwo OC, Johanson CE, Stopa EG, **Donahue JE**, Silverberg GD, and the Alzheimer's Disease Neuroimaging Initiative, "Brain ventricular volume and cerebrospinal fluid biomarkers of Alzheimer's disease," *J Alzheimers Dis* 2010; 20: 647-657. Epub 2010 Feb 24.

28. Brown WD, Bearer EL, **Donahue JE**, "Chronic active herpes simplex type 2 encephalitis in an asymptomatic immunocompetent child," *J Child Neurol* 2010; 25: 901-908. Epub 2010 Feb 22.
29. Boxerman JL, Rogg JM, **Donahue JE**, Machan JT, Goldman MA, Doberstein C, "Preoperative MRI evaluation of pituitary macroadenoma: imaging features predictive of successful transsphenoidal surgery," *AJR* 2010; 195: 720-728.
30. Silverberg GD, Messier AA, Miller MC, Machan JT, Majmudar S, Stopa EG, **Donahue JE**, Johanson CE, "Blood-brain barrier amyloid transporter expression decreases as amyloid increases in normal aging," *J Neuropathol Exp Neurol* 2010; 69: 1034-1043.
31. Gonzalez AM, Podvin S, Lin SY, Miller MC, Botfield H, Leadbeater W, Robertson A, Dang X, Knowling S, Cardenas-Galindo E, **Donahue JE**, Stopa EG, Johanson CE, Coimbra R, Eliceiri B, Baird A, "ECRG4 expression and its product augurin in the choroid plexus: impact on fetal brain development, cerebrospinal fluid homeostasis and neuroprogenitor cell response to CNS injury," *Fluids Barriers CNS* 2011 Jan 18; 8(1): 6.
32. Harris T, Shur N, **Donahue JE**, Tung G, "Case 168: rhabdoid predisposition syndrome—familial cancer syndromes in children," *Radiology* 2011; 259: 298-302.
33. Podvin S, Gonzalez AM, Miller MC, Dang X, Botfield H, **Donahue JE**, Kurabi A, Boissaud-Cooke M, Rossi R, Leadbeater WE, Johanson CE, Coimbra R, Stopa EG, Eliceiri BP, Baird A, "Esophageal cancer related gene-4 is a choroid plexus-derived injury response gene: evidence for a biphasic response in early and late brain injury," *PLoS ONE* 2011; 6: e24609. Epub 2011 Sep 14.
34. **Donahue JE**, "Normal' and pathological changes with age in the brain," *Med Health R I* 2012; 95(3): 75-76.
35. Miller MC, Lambert-Messerlian, GM, Eklund EE, Heath NL, **Donahue JE**, Stopa EG, "Expression of inhibin/activin proteins and receptors in the human hypothalamus and basal forebrain," *J Neuroendocrinol* 2012; 24: 962-972. Epub 2012 Feb 1.
36. Gaitanis JN, **Donahue J**, "Focal cortical dysplasia," *Pediatr Neurol* 2013; 49: 79-87.
37. Jeyapalan S, Boxerman J, **Donahue J**, Goldman M, Kinsella T, DiPetrillo T, Evans D, Elinzano H, Constantinou M, Stopa E, Puthawala Y, Cielo D, Santaniello A, Oyelese A, Mantripragada K, Rosati K, Isdale D, Safran H, "Paclitaxel poliglumex, temozolomide, and radiation for newly-diagnosed high-grade glioma: a Brown University Oncology Group study," *Am J Clin Oncol* 2014; 37: 444-449. Epub 2014 Feb 5.
38. Punsoni M, **Donahue JE**, Elinzano HD, Kinsella T, "Updates in molecular pathology of central nervous system gliomas in adults," *Med Health R I* 2015; 98(11): 16-18.



39. Dibble EH, Boxerman JL, Baird GL, **Donahue JE**, Rogg JM, "Toxoplasmosis versus lymphoma: cerebral lesion characterization using DSC-MRI revisited," *Clin Neurol Neurosurg* 2017; 152: 84-89. Epub 2016 Dec 2.
40. Chen X, Hovanesian V, Naqvi S, Lim YP, Tucker R, **Donahue JE**, Stopa EG, Stonestreet BS, "Systemic infusions of anti-interleukin-1 $\beta$  neutralizing antibodies reduce short-term brain injury after cerebral ischemia in the ovine fetus," *Brain Behav Immun* 2018; 67: 24-35. Epub 2017 Aug 2.
41. **Donahue JE**, Yakirevich E, Zhong S, Treaba DO, Lakis NS, Ali SM, de la Monte SM, Mangray S, "Primary spinal epidural *CIC-DUX4* undifferentiated sarcoma in a child," *Pediatr Dev Pathol* 2018; 21: 411-417. Epub 2017 Jan 1.
42. Elinzano H, Glantz M, Mrugala M, Kesari S, Piccioni DE, Kim L, Pan E, Yunus S, Coyle T, Timothy K, Evans D, Mantripragada K, Boxerman J, DiPetrillo T, **Donahue JE**, Hebda N, Mitchell KM, Rosati KL, Safran H, "PPX and concurrent radiation for newly diagnosed glioblastoma without MGMT methylation: a randomized Phase II study: BrUOG 244," *Am J Clin Oncol* 2018; 41: 159-162. Epub 2015 Dec.
43. Stopa EG, Tanis KQ, Miller MC, Nikonova EV, Podtelezchnikov AA, Finney EM, Stone DJ, Camargo LM, Parker L, Verma A, Baird A, **Donahue JE**, Torabi T, Eliceiri BP, Silverberg GD, Johanson CE, "Comparative transcriptomics of choroid plexus in Alzheimer's Disease, frontotemporal dementia and Huntington's disease: implications for CSF homeostasis," *Fluids Barriers CNS* 2018 May 31; 15(1): 18.
44. Chen X, Nakada S, **Donahue JE**, Chen RH, Tucker R, Qiu J, Lim Y-P, Stopa EG, Stonestreet BS, "Neuroprotective effects of inter-alpha inhibitor proteins after hypoxic-ischemic brain injury in neonatal rats," *Exp Neurol* 2019; 317: 244-259 [Epub 2019 Mar 23].
45. Telfeian AE, Doberstein C, Oyelese AA, Fridley J, **Donahue JE**, Gokaslan Z, "A transforaminal endoscopic approach for treatment of a lumbar perineural cyst: technical note," *World Neurosurg* 2019; 127: 85-91. [Epub 2019 Apr 4].
46. Punsoni M, Friedman JH, Resnick M, **Donahue JE**, Yang D, Stopa EG, "Enteric pathologic manifestations of alpha-synucleinopathies," *Appl Immunohistochem Mol Morphol* 2019; 27: 543-548. [Epub 2017 Nov 20].
47. Klinge P, McElroy A, **Donahue J**, Brinker T, Gokaslan Z, Beland M, "Abnormal spinal cord motion at the craniocervical junction in hypermobile Ehlers Danlos patients," *J Neurosurg Spine* 2021; 21: 1-7.
48. McElroy A, Klinge PM, Sledge D, **Donahue JE**, Glabman RA, Rashmir A, "Evaluation of the filum terminale in hereditary equine regional dermal asthenia," *Vet Pathol* 2021; 58: 1100-1106 [Epub 2021 May 31].
49. Shao B, Hagan MJ, Sastry RA, Kritselis M, **Donahue JE**, Toms SA, "An instructive case of cerebral mucormycosis," *R I Med J (2013)* 2022; 105: 8-12.

50. Klinge PM, Srivastava V, McElroy A, Leary OP, Ahmed Z, **Donahue JE**, Brinker T, De Vloo P, Gokaslan ZL, "Diseased filum terminale as a cause of tethered cord syndrome in Ehlers-Danlos syndrome: histopathology, biomechanics, clinical presentation, and outcome of filum excision," *World Neurosurg* 2022; 162: e492-e502. [Epub 2022 Mar 17.]
51. Klinge PM, McElroy A, Leary OP, **Donahue JE**, Mumford A, Brinker T, Gokaslan ZL, "Not just an anchor: the human filum terminale contains stretch sensitive and nociceptive nerve endings and responds to electrical stimulation with paraspinal muscle activation," *Neurosurgery* 2022; 91: 618-624. [Epub 2022 Jul 21.]
52. Alexander AL, Lim SY, Massingham LJ, Phillips O, Chambers MK, **Donahue JE**, "Pathologic Alexander disease with normal GFAP sequencing: an autopsy case report and literature review," *J Neuropathol Exp Neurol* 2022 Sep 22 [Epub ahead of print].
53. Tubre T, Hacking S, Alexander A, Brickman A, Delalle I, Elinzano H, **Donahue JE**, "Prostate-specific membrane antigen expression in meningioma: a promising theranostic target," *J Neuropathol Exp Neurol* 2022 Sep 30 [Epub ahead of print].

## ORIGINAL PUBLICATIONS NOT INDEXED BY MEDLINE

1. Podvin S, Miller M, Rossi R, Chukwueke J, **Donahue J**, Johanson C, Baird A, Stopa E, "The orphan c2orf40 gene is a neuroimmune factor in Alzheimer's disease," *JSM Alzheimer's Dis Related Dementia* 2016; 3(1): 1020. Epub 2016 Apr 1.
2. Lew K, Mewada N, Ramanujam S, Hassanzadeh B, **Donahue JE**, Peddareddygar LR, Moser R, Kososky C, Grewal RP, "Role of therapeutic plasma exchange in treatment of tumefactive multiple sclerosis-associated low CD4 and CD8 levels," *Case Rep Neurol* 2016; 8: 179-184.
3. Vafea MT, Cao W, Olszewski AS, **Donahue JE**, Farmakiotis D, "Fatal mucormycosis and aspergillosis in an atypical host: What do we know about mixed invasive mold infections?" *Case Rep Infect Dis* 2020 Aug 25; 2020: 8812528.
4. Seddon JE, Jayarao M, **Donahue JE**, Toms SA, "Brain metastasis secondary to hepatoid adenocarcinoma of the lung," *Interdiscip Neurosurg* 2021 June; 24: 101085.
5. Poggi J, Barber S, Guglielmo M, Bhatt R, Rogg J, **Donahue JE**, Gokaslan ZL, Klinge PM, "Surgical management of non-dysraphic cervical intramedullary lipoma: a report of two cases," *Interdiscip Neurosurg* 2021 Sept; 25: 101210.

## EDITORIALS AND COMMENTARY

**Donahue JE**, "Commentary: Post-treatment antiplatelet therapy reduces risk for delayed cerebral ischemia due to aneurysmal subarachnoid hemorrhage," *Neurosurgery* 2019; 85: E1110.

**Donahue JE**, "Scientific community needs to financially support human brain tissue research and brain banks," *J Neurol Neurosurg Psychiatry* 2021; 92: 3 [Epub 2020 Nov 4].

## BOOK CHAPTERS

1. Stopa EG, Zipser BD, **Donahue JE**, "Vascular Basement Membrane Abnormalities and Alzheimer's Disease." In: Paul R, Cohen R, Ott B, Salloway S (eds.), "Vascular Dementia: Cerebrovascular Mechanisms and Clinical Management." Totowa, NJ: Humana Press, Inc., 2005, pp. 257-265.
2. Johanson CE, Silverberg GD, **Donahue JE**, Duncan JA, Stopa EG, "Choroid Plexus and CSF in Alzheimer's Disease: Altered Expression and Transport of Proteins and Peptides." In: Zheng W, Chodobski A (eds.), "The Blood-Cerebrospinal Fluid Barrier." Boca Raton, FL: CRC Press, 2005, pp. 311-343.
3. Johanson CE, **Donahue JE**, Stopa EG, Baird A, "Fibroblast Growth Factor and the Blood-Brain Barrier." In: Kastin AJ (ed.), "Handbook of Biologically Active Peptides." Burlington, MA: Elsevier Academic Press, 2006, pp. 1449-1454.
4. Chisholm KA, Gilchrist JM, **Donahue JE**, "Immunologic Disorders of the Neuromuscular Junction and Muscle." In: Rizvi SA, Coyle PK (eds.), "Clinical Neuroimmunology: Multiple Sclerosis and Related Disorders." New York: Humana Press, 2011, pp. 333-348.
5. Gilchrist JM, **Donahue JE**, "Immunologic Disorders of the Neuromuscular Junction and Muscle." In: Rizvi SA, Cahill J, Coyle PK (eds.), "Clinical Neuroimmunology: Multiple Sclerosis and Related Disorders, 2<sup>nd</sup> Edition." Springer Nature Switzerland, 2020, pp. 285-298.

## ABSTRACTS

1. **Donahue JE**, Raynor EM, Rutkove SB, "Forearm slowing in median neuropathy at the wrist: when is slow too slow?" Platform Presentation, Stanley Cobb Assembly, Boston Society of Neurology and Psychiatry (4/18/96); Platform Presentation, New England Medical Center Neuroscience Residents' Research Day (5/23/96); Poster Presentation, American Association of Electrodiagnostic Medicine annual meeting, Minneapolis, MN (10/4/96).
2. **Donahue JE**, Khurana J, Adelman L, "Cerebral amyloid angiopathy and intracerebral hemorrhage in two patients with Down's syndrome." Platform Presentation, New England Medical Center Neuroscience Residents' Research Day (5/23/96).
3. Intal J, Salloway S, Stopa E, **Donahue J**, "MRI-autopsy correlation of signal hyperintensities in leukoencephalopathy," *Soc Neurosci Abstr* 1997; 23: 325.10, p. 833 (Poster Presentation).

4. **Donahue JE**, Berzin TM, Rafii MS, Glass DJ, Yancopoulos GD, Fallon JR, Stopa EG, "Agrin in Alzheimer's disease: altered solubility and abnormal distribution within microvasculature and brain parenchyma." *Soc Neurosci Abstr* 1999; 25: 718.1, p. 1800 (Poster Presentation); *J Neuropathol Exp Neurol* 1999; 58: 534. (Poster Presentation, 75<sup>th</sup> American Association of Neuropathologists annual meeting, Portland, OR, 6/18/99).
5. **Donahue JE**, Pinar H, Singer DB, "Intracerebral hemorrhage *in utero*: risk factors and associated conditions in a large autopsy series." Platform Presentation, Northeast Pediatric Pathology Club (Spring Meeting), Baystate Medical Center, Springfield, MA (5/22/99); *J Neuropathol Exp Neurol* 2000; 59: 434. (Platform Presentation, 76<sup>th</sup> American Association of Neuropathologists annual meeting, Atlanta, GA, 6/9/00).
6. Gur TL, Berzin TM, **Donahue JE**, Zipser BD, Hovanesian V, Fallon JR, Glass DJ, Hulette C, Rosenberg C, Kuo-LeBlanc V, Vitek MP, Stopa EG, "Effect of ApoE genotype on basement membrane agrin and IC3B levels in Alzheimer's disease," *Soc Neurosci Abstr* 2000; 26: 201.4, p. 537 (Platform Presentation).
7. McMillan PN, **Donahue JE**, Stopa EG, Johanson CE, "Lectin-binding analyses of differences in glycoconjugate expression in rat, pig, and human choroid plexus membranes," *Soc Neurosci Abstr* 2001; 27: 527.17 (Poster Presentation).
8. Butala P, Salloway S, Johanson CE, Gonzalez L, Tavares R, Hovanesian V, **Donahue JE**, Hulette C, Vitek MP, Stopa EG, "Microvascular damage in Alzheimer's disease." *Soc Neurosci Abstr* 2002; 28: 328.1 (Platform Presentation); *Neurobiolol Aging* 2004; 25: S408. (Poster Presentation, 9<sup>th</sup> International conference on Alzheimer's Disease and Related Disorders, Philadelphia, PA, 7/04).
9. Abubakr A, **Donahue JE**, Zappulla R, "Surgical outcome of temporal lobe epilepsy of non-mesial temporal sclerosis." Abstracts from the 25th International Epilepsy Congress. Lisbon, Portugal, 12-16 October 2003. *Epilepsia* 2003; 44 Suppl 8: 1-223 (Poster Presentation P266).
10. Wu Q, **Donahue JE**, Chan C, Tavares R, Stopa E, "Expression of the neural RNA-binding protein, Musashi 1, in human embryonal tumors in the central nervous system." *J Neuropathol Exp Neurol* 2004; 63: 541. (Poster Presentation, 80<sup>th</sup> American Association of Neuropathologists Annual Meeting, Cleveland, OH, 6/04).
11. **Donahue JE**, Johanson CE, Duncan JA III, Silverberg GD, Tavares R, Hovanesian V, Stopa EG, "RAGE, LRP-1, and Vascular Amyloid in Alzheimer's Disease." *Soc Neurosci Abstr* 2004; 30: 255.12 (Platform Presentation); Platform Presentation, 80<sup>th</sup> American Association of Neuropathologists Annual Meeting, Cleveland, OH (6/26/04); *Neurobiol Aging* 2004; 25: S9. (Platform Presentation, 9<sup>th</sup> International Conference on Alzheimer's Disease and Related Disorders, Philadelphia, PA, #O1-01-04, 7/18/04).
12. **Donahue JE**, Jackson C, Wu Q, Brown WD, "Chronic Active Herpes Simplex Encephalitis in an Asymptomatic Pediatric Patient: Case Report." *J Neuropathol*

- Exp Neurol* 2005; 64: 472. (Platform Presentation, 81<sup>st</sup> American Association of Neuropathologists Annual Meeting, Arlington, VA, 6/11/05).
13. Miller MC, Tavares R, Johanson C, **Donahue J**, Hovanesian V, Gonzalez ML, Stopa E, "RAGE Immunoreactivity in Early and Advanced Alzheimer's Disease." Poster Presentation, 13<sup>th</sup> Annual Lifespan Hospital Research Celebration, #50 (9/29/05).
  14. Flaherty S, Soltman S, Messier A, Miller M, Vasudevan K, Stopa E, **Donahue J**, Johanson C, Duncan J, Silverberg G, "Altered Clearance Pathways for Amyloid-Beta Peptide as a Function of Age in Brown Norway/Fischer Rats." Poster Presentation, 13<sup>th</sup> Annual Lifespan Hospital Research Celebration, #51 (9/29/05); New England Science Symposium, Harvard Medical School, Boston, MA (3/12/06).
  15. Boxerman JL, Rogg J, **Donahue JE**, Goldman M, Duncan J, "Evaluation of MRI Criteria for Predicting Surgical Success of Transsphenoidal Pituitary Macroadenoma Resection: Tumor ADC Relates Significantly with Inadequate Resection." Poster Presentation, American Society of Neuroradiology 44<sup>th</sup> Annual Meeting, San Diego, CA, 2006 (Abstract #1472).
  16. Johanson C, Duncan J, Klinge P, **Donahue J**, Stopa E, Silverberg G, "CNS Retention of Beta-Amyloid in Aging and Alzheimer's Disease Is Exacerbated by Compromised Blood-CSF and Blood-Brain Barriers." The Global College of Neuroprotection and Neuroregeneration 3<sup>rd</sup> Annual Conference, Uppsala, Sweden, 2006.
  17. **Donahue JE**, Zipser BD, Johanson CE, Gonzalez L, Tavares R, Hulette CM, Vitek MP, Hovanesian V, Stopa EG, "Cerebral Amyloid Angiopathy and Microvascular Protein Leakage in Alzheimer's Disease." *Brain Pathol* 2006; 16: S80. (Platform Presentation, 16<sup>th</sup> International Congress of Neuropathology, San Francisco, CA, 9/12/06).
  18. Johanson C, Klinge P, **Donahue J**, Stopa E, Duncan J, Silverberg G, "Normal Pressure Hydrocephalus: Is It Part of the Continuum from Aging to Alzheimer's Disease?" Platform Presentation, Fourth Annual Meeting of the Global College of Neuroprotection and Neuroregeneration, Garmisch-Partenkirchen, Germany, March 14-16, 2007.
  19. Johanson C, Stopa E, Duncan J, **Donahue J**, Silverberg G, "A-Beta Clearance from CNS in Aging, NPH and Alzheimer's: Differences in LRP-1 Expression in the Blood-CSF vs. Blood-Brain Barriers." Poster Presentation, 13<sup>th</sup> Annual Blood-Brain Barrier Consortium Meeting ("*Strategies for Advancing Brain Barriers Translational Research*"), Stevenson, WA, March 22-24, 2007.
  20. **Donahue JE**, Coffin D, Johanson CE, Van Nostrand WE, Vitek MP, Blay E Jr, Miller MC, Monfils P, McMillan P, Stopa EG, "Effects of FGF-2 Overexpression in the Dutch/Iowa APP transgenic mouse." *Soc Neurosci Abstr* 2007; 33: 888.23 (Poster Presentation); Poster Presentation, 15<sup>th</sup> Annual Lifespan Hospital Research Celebration, #43 (11/13/07); Poster Presentation, 84<sup>th</sup> American Association of Neuropathologists Annual Meeting (in conjunction with

- Experimental Biology 2008), San Diego, CA (4/6/08, Program #707.4, Poster #A48).
21. Stopa EG, Johanson CE, **Donahue JE**, Chaudhry H, Miller M, Fallon J, Reugg M, Rauch SM, Burgess RW, "Altering Agrin Expression Influences A $\beta$  Deposition in APP(Swe)/PS1(ex9) Transgenic Mice." Poster Presentation, 15<sup>th</sup> Annual Lifespan Hospital Research Celebration, #46 (11/13/07); *J Neuropathol Exp Neurol* 2008; 67: 511 [Poster Presentation, 84<sup>th</sup> American Association of Neuropathologists Annual Meeting (in conjunction with Experimental Biology 2008), San Diego, CA (4/6/08, Program #707.5, Poster #A49)].
  22. Johanson CE, Slone S, Messier A, Miller M, Kenney E, Majmudar S, Saul T, Stopa E, **Donahue J**, Duncan J, and Silverberg G, "Amyloid increase in the aging rat brain: association with decreased expression of the LRP-1 and P-gp transporters at the blood-brain barrier in cortex and hippocampus." *5th Congress of the Global College of Neuroprotection and Neuroregeneration*, Bucharest, Romania (March, 2008).
  23. Grzybowski D, Allred C, **Donahue JE**, Glimcher S, Johanson CE, Stopa EG. "Amyloid- $\beta$  and Glaucoma: The Retinal Ganglion Cell-Neurotoxic Connection." Poster Presentation, 2008 Annual Meeting of the North American Neuro-Ophthalmology Society, Orlando, FL (3/11/08).
  24. **Donahue JE**, Meitner PA, Tavares R, Vitek MP, Jackson CL, "Apolipoprotein E4 Genotype Influences RAGE and LRP-1 Expression." Platform Presentation, 84<sup>th</sup> American Association of Neuropathologists Annual Meeting (in conjunction with Experimental Biology 2008), San Diego, CA (4/6/08, Program #167.5).
  25. Miller SC, Ott BR, Salloway S, Tremont G, Malloy P, Stopa E, **Donahue J**, Amick M, Grace J, Maguire D. "The Brown University Dementia Data Repository." Brown University Public Health Program Research Day, 4/8/08.
  26. Stopa E, Miller M, Blay E, McMillan P, Coffin D, Baird A, **Donahue J**, Johanson C. "Altered Ependyma and Leptomeninges in Transgenic Mice that Overexpress FGF-2 and Amyloid Precursor Protein: Evidence for Early Hydrocephalus." Platform Presentation, 52<sup>nd</sup> Annual Scientific Meeting, Society for Research into Hydrocephalus and Spina Bifida, Providence, RI (6/12/08, Paper #1).
  27. Miller MC, Stopa EG, **Donahue JE**, Lambert-Messerlian GM. "Expression of the Inhibin/Activin Family of Proteins in the Human Brain." Poster Presentation, The Endocrine Society's 90<sup>th</sup> Annual Meeting, San Francisco, CA (6/17/08, Poster #P3-69).
  28. Long AC, Grzybowski DM, Allred CW, Holman DW, **Donahue JE**, Glimcher SA, Johanson C, Stopa E, Lubow M. "Active Transport of Amyloid-Beta in Human Arachnoid Membrane." Poster Presentation, 11<sup>th</sup> International Conference on Alzheimer's Disease and Related Disorders, Chicago, IL (7/27/08, #P1-145).
  29. Johanson C, Miller M, Messier A, Pascale C, **Donahue J**, Kenney E, Stopa E, Silverberg G. "Enhanced Expression of RAGE at the Blood-Brain Barrier:

- Congruence between Alzheimer's Disease and the Aging Rat Model." Poster Presentation, ADPD 2009, Prague, Czech Republic, 3/09.
30. Cardillo L, Peter S, Heath N, **Donahue JE**, Stopa E. "Advantages of Muscle Fiber Typing by Immunohistochemistry." Poster Presentation, 2009 Region I Histotechnology Conference & Symposium, Newport, RI, 4/16-4/18/09.
  31. Johanson C, Messier A, Miller M, Pascale C, Vasudevan K, **Donahue J**, Stopa E, Sabo I, Caralopoulos I, Klinge P, Brinker T, Silverberg G. "Periventricular Destabilization and Ventriculomegaly in Aging Rats: Implications for Reduced Neurogenesis and Cognition." *Cerebrospinal Fluid Res* 2009 Nov 27; 6 Suppl 2: S16. 53<sup>rd</sup> Annual Scientific Meeting, Society for Research into Hydrocephalus and Spina Bifida, Belfast, Northern Ireland, 6/09.
  32. Duncan J III, Noren G, Caralopoulos I, Stopa E, Silverberg G, Klinge P, **Donahue J**, Park M, Miller M, and Johanson C. "A Porcine Model of Hydrocephalus Induced by Gamma Knife Irradiation." *Cerebrospinal Fluid Res* 2009 Nov 27; 6 Suppl 2: S40. 53<sup>rd</sup> Annual Scientific Meeting, Society for Research into Hydrocephalus and Spina Bifida, Belfast, Northern Ireland, 6/09.
  33. **Donahue JE**, Duffy AM, Lim JA, Miller MC, Stopa EG, "Influence of Apolipoprotein E Genotype on RAGE Expression in Alzheimer's Disease." *J Neuropathol Exp Neurol* 2009; 68: 571. (Poster Presentation, 85<sup>th</sup> American Association of Neuropathologists Annual Meeting, San Antonio, TX, 6/09, Poster 74.)
  34. Johanson C, Miller M, Vasudevan K, Messier A, **Donahue J**, Silverberg G, Stopa E. "Aging Rat Dentate Gyrus: Amyloid Retention, Inflammatory Reaction, and Gliosis in Relation to Reduced Neural Stem Cell Activity and Poorer Water Maze Performance." 12<sup>th</sup> International Conference on Alzheimer's Disease and Related Disorders, Vienna, Austria, 7/09.
  35. Ott BR, Cohen RA, Okonkwo OC, Johanson CE, Stopa EG, **Donahue JE**, Silverberg GD. "The Relationship between Brain Ventricular Volume and Cerebrospinal Fluid Levels of A-Beta and Tau in Apolipoprotein E4 Positive Normal Controls and Patients with Alzheimer's Disease." 12<sup>th</sup> International Conference on Alzheimer's disease and Related Disorders, Vienna, Austria, 7/09.
  36. **Donahue JE**, Stopa E, Johanson C, Klinge P, Salloway S, Ott B, Mernoff S, Stoukides J, de la Monte S, Miller M, Geller M, Alvarez V, Silverberg G. "Cognitive Improvement after Ventriculo-Peritoneal (VP) Shunt Placement in Alzheimer's Disease (AD) and non-AD Dementias." Platform Presentation, Hydrocephalus 2009, Baltimore, MD (9/17/09; Abstract B-17, Oral 2-B: NPH I). *J Neuropathol Exp Neurol* 2010; 69: 551. [Poster Presentation, 86<sup>th</sup> Annual American Association of Neuropathologists Annual Meeting, Philadelphia, PA (6/12/10, Poster 115).]
  37. **Donahue JE**, Miller MC, Breese V, Podvin S, Eliceiri B, Jackson CL, Johanson CE, Stopa EG, Gonzalez AM, Baird A. "ECRG-4 Expression in Normal and Neoplastic Choroid Plexus." *J Neuropathol Exp Neurol* 2010; 69: 537. [Poster

- Presentation, 86<sup>th</sup> Annual American Association of Neuropathologists Annual Meeting, Philadelphia, PA (6/11/10, Poster 63)]. Platform Presentation, Society for Research into Hydrocephalus and Spina Bifida 54<sup>th</sup> Annual Meeting, Vancouver, BC, Canada (7/9/10, Paper 28). Poster Presentation, 18<sup>th</sup> Annual Lifespan Hospital Research Celebration, #47 (10/21/10).
38. Stopa EG, Nikonova EV, Tanis KQ, Podtelezhnikov AA, Finney EM, Stone DJ, Camargo LM, Parker L, Verma A, Baird A, Miller MC, **Donahue JE**, Gonzalez AM, Eliceiri B, Silverberg GD, Klinge PM, Johanson CE. "Gene Expression Profiling of Choroid Plexus in Alzheimer's Disease Reveals Important Implications for CSF Dynamics." Platform Presentation, 5<sup>th</sup> International Workshop in Hydrocephalus, Crete (5/22/10; Paper O19, Session V). Poster Presentation, Society for Research into Hydrocephalus and Spina Bifida 54<sup>th</sup> Annual Meeting, Vancouver, BC (7/9/10, Poster 2).
  39. Jeyapalan S, Goldman M, Boxerman J, **Donahue J**, Elinzano H, Evans D, O'Connor B, Puthawala MY, Oyelese A, Cielo D, Blitstein M, Dargush M, Santaniello A, Constantinou M, Dipetrillo T, Safran H, "Paclitaxel Poliglumex (PPX), Temozolamide (TMZ), and Radiation (RT) for Newly-Diagnosed High-Grade Gliomas: A Brown University Oncology Group (BrUOG) Phase II Study." Poster Presentation, 15<sup>th</sup> Annual Society for Neuro-Oncology (SNO) Scientific Meeting, Montreal, QC (Nov. 2010).
  40. **Donahue J**, Kim J, Dennis J, Reyzer M, Caprioli R, "Relationship between Apolipoprotein E Genotype and Blood-Brain Barrier Permeability." *J Neuropathol Exp Neurol* 2011; 70: 502. [Platform Presentation, 87<sup>th</sup> Annual American Association of Neuropathologists Annual Meeting, Seattle, WA (6/24/11), #16.]
  41. **Donahue J**, Jeyapalan S, Goldman M, Elinzano H, Boxerman J, DiPetrillo T, Safran H, "Pathology of 'Pseudoprogression' in a Phase II Study of PPX, TMZ, and RT for Newly-Diagnosed High-Grade Gliomas." *J Neuropathol Exp Neurol* 2011; 70: 511-512. [Poster Presentation, 87<sup>th</sup> Annual American Association of Neuropathologists Annual Meeting, Seattle, WA (6/24/11), Abstract #52.] Poster Presentation, 19<sup>th</sup> Annual Lifespan Hospital Research Celebration, #52 (10/27/11). Poster Presentation, Mind Brain Research Day 2014 at Brown University, Providence, RI, 3/25/14.
  42. Miller MC, Rossi R, Chukwueke J, Salloum I, Podvin S, **Donahue JE**, Dang X, Gonzalez AM, Eliceiri BP, Johanson CE, Baird A, Stopa EG, "Expression of Esophageal Cancer-Related Gene-4 (ECRG-4) and Its Product Augurin in the Human Choroid Plexus and Hypothalamus: Implications for Cerebrospinal Fluid Homeostasis and Fluid Balance." *Soc Neurosci Abstr* 37: 599.16/RR16, 11/15/11 (Poster Presentation). *J Neuropathol Exp Neurol* 2012; 71: 585. [Poster Presentation, 88<sup>th</sup> American Association of Neuropathologists Annual Meeting, Chicago, IL (6/23/12), Abstract #139.]
  43. Jeyapalan S, Goldman M, Boxerman J, **Donahue J**, Elinzano H, Evans D, O'Connor B, Puthawala MY, Oyelese A, Cielo D, Blitstein M, Dargush M, Santaniello A, Constantinou M, Dipetrillo T, Safran H, "Paclitaxel Poliglumex (PPX), Temozolamide (TMZ), and Radiation (RT) for Newly-Diagnosed High-Grade Gliomas: A Brown University Oncology Group (BrUOG) Phase II Study."



- Poster Presentation, Society for NeuroOncology 16<sup>th</sup> Annual Meeting, Anaheim, CA (11/17-11/20/11).
44. Bearer EL, Woltjer R, **Donahue JE**, Kilpatrick K, "Subacute Herpes Simplex Virus Encephalitis and Abeta Plaque Formation: A Report from Two Cases." International Herpesvirus Workshop 2012, Calgary, AB, Canada.
  45. Zhang J, Spasova MS, Sadowska GB, Chen X, Bodge CA, Kim JE, **Donahue JE**, Stopa EG, Lim YP, Stonestreet BS, "Inter-Alpha Inhibitor Proteins Attenuate Ischemic Brain Damage in the Ovine Fetus." Platform Presentation, Pediatric Academic Societies' Annual Meeting, Washington, DC, 5/5/13 (Publication Number 2710.7).
  46. **Donahue JE**, Mahboob M, Rogg JM, Elinzano H, "Astroblastoma with Malignant Degeneration Developing Twenty-Six Years after Radiation Treatment for Low-Grade Glioma." *J Neuropathol Exp Neurol* 2013; 72: 567. [Poster Presentation, 89<sup>th</sup> American Association of Neuropathologists Annual Meeting, Charleston, SC (6/21/13), Abstract #101.]
  47. Podvin S, Miller MC, Rossi R, Chukwueke J, Lee J, **Donahue J**, Johanson C, Eliceiri B, Baird A, Stopa EG, "White Matter Injury and the Orphan c2orf40 Gene Encoding ECRG-4 in Alzheimer's Disease." *Soc Neurosci Abstr* 39: 116.01, 11/10/13 (Platform Presentation). *Alzheimers Dement* 2013; 9(4) Supplement, P352-P353 (Poster Presentation, P2-023).
  48. Sturla L, Culhane JJ, **Donahue J**, Jeyapalan S, "The Role of Natural Killer (NK) Cells in Predicting Pseudo-Progression (PsdPG) vs. True Progression (TP) in High-Grade Gliomas." Poster Presentation, 4<sup>th</sup> Quadrennial Meeting of the World Federation of Neuro-Oncology/2013 Scientific Meeting and Education Day of the Society for Neuro-Oncology, San Francisco, CA, 11/22/13, #NO-128.
  49. Elinzano H, Kadivar F, Yadav PO, Breese VL, Jackson CL, **Donahue JE**, Boxerman JL, "Analysis of Perfusion and Volumetric MRI in Progressive Glioblastoma Patients Treated with Continuous Dose-Intense Temozolomide." 4<sup>th</sup> Quadrennial Meeting of the World Federation of Neuro-Oncology/2013 Scientific Meeting and Education Day of the Society for Neuro-Oncology, San Francisco, CA, 11/23/13, #RA-015.
  50. Sturla LM, **Donahue JE**, Machan JT, de la Monte S, Jeyapalan S, "Pseudo-progression (PsdPg) is a harbinger of a more effective anti-tumor response." Poster Presentation, 2014 Annual Society for Neuro-Oncology Scientific Meeting, Miami, FL, Nov., 2014, #IB-11.
  51. Chen X, Naqvi S, Meng S, Sadowska G, Zhang J, Donahue JE, Stopa EG, Qiu J, Lim YP, Stonestreet BS, "Neuroprotective Effects of Inter-Alpha Inhibitor Proteins after Hypoxic-Ischemic Brain Injury in Neonatal Rats." Poster Presentation, 2015 Pediatric Academic Societies Annual Meeting, San Diego, CA, 4/28/15 (publication number 4133.245).
  52. Dibble E, Rogg J, **Donahue J**, Boxerman J, "Toxoplasmosis vs. Lymphoma: Cerebral Lesion Characterization Using Dynamic Susceptibility Contrast MRI and

- Relative Cerebral Blood Volume Estimates.” Platform Presentation, American Society of Neuroradiology 53<sup>rd</sup> Annual Meeting, Chicago, IL, 4/28/15; #O-173.
53. Punsoni M, Julian J, Moldovan K, Choi DB, Jolly G, Boxerman JL, **Donahue JE**, Stopa EG, Chopra P, Klinge PM, “Filum Pathology of Occult Tethered Cord Syndrome in Ehlers Danlos Patients.” [Poster Presentation, United States & Canadian Academy of Pathology (USCAP) meeting, Seattle, WA (3/16), Abstract #21524, Poster #264.]
  54. Lombardo K, Somers GR, Lu S, Shillingford N, Patel N, Chen S, **Donahue J**, Matoso A, Resnick MB, Yakirevich E, Mangray S, “NKX2.2, WT-1 and CD99 Immunohistochemistry in EWS-Negative Ewing-like and Ewing sarcomas for Triaging of Molecular Testing.” [Platform Presentation, United States & Canadian Academy of Pathology (USCAP) meeting, Seattle, WA (3/16).]
  55. Chen X, **Donahue JE**, Stopa EG, Lim Y-P, Stonestreet BS, “Delayed Treatment with Inter-Alpha Inhibitor Proteins (IAIPs) is Neuroprotective after Hypoxic-Ischemic (HI) Brain Injury in Male Neonatal Rats.” [Abstract #752290, 2016 Pediatric Academic Societies’ (PAS) Annual Meeting, Baltimore, MD (Poster Presentation).]
  56. Chen X, Hovanesian V, Naqvi SS, Sadowska GB, Zhang J, **Donahue JE**, Stopa EG, Stonestreet BS, “Systemic Infusions of Anti-Interleukin-1 $\beta$  (IL-1 $\beta$ ) Neutralizing Antibodies (mAb) Reduce Hypoxic-Ischemic (HI) Injury in Fetal Brain.” [Abstract #752316, 2016 Pediatric Academic Societies’ (PAS) Annual Meeting, Baltimore, MD (Platform Presentation).]
  57. Stopa EG, Miller MC, **Donahue JE**, Johanson C, DePaepe M, Eliceiri B, Podvin S, Gonzalez AM, Baird A, “Developmental Expression of ECRG-4 in Human Fetal Brain.” Poster Presentation, 21<sup>st</sup> Biennial Meeting of the International Society for Developmental Neuroscience, Antibes-Juan les Pins, France, 5/16.
  58. Punsoni M, Friedman JH, Resnick M, **Donahue JE**, Yang D, Stopa EG, “Enteric Manifestations of Alpha-Synucleinopathies.” *J Neuropathol Exp Neurol* 2016; 75: 598-599. [Platform Presentation, 92<sup>nd</sup> American Association of Neuropathologists Annual Meeting, Baltimore, MD, #114 (6/8/16).]
  59. Chen X, **Donahue JE**, Stopa EG, Lim YP, Stonestreet BS, “Delayed Treatment with Inter-Alpha Inhibitor Proteins (IAIPs) Is Neuroprotective after Hypoxic-Ischemic (HI) Brain Injury in Male Neonatal Rats.” Poster Presentation, International Stroke Conference 2017, Houston, TX (2/17).
  60. Groh D, Jolly G, **Donahue J**, “Correlation of intraepidermal nerve fiber area in formalin-fixed skin tissue with small unmyelinated fibers on sural nerve biopsy.” *J Neuropathol Exp Neurol* 2017; 76: 507-508. [Poster Presentation, 93<sup>rd</sup> American Association of Neuropathologists Annual Meeting, Garden Grove, CA, #66 (6/17).]
  61. Astafiev S, **Donahue J**, Stopa E, Klinge P, “Occult Tethered Cord Syndrome: A Histopathological Characterization in Ehlers-Danlos and non-Ehlers-Danlos

- Patients.” The Warren Alpert Medical School of Brown University Summer Research Showcase, 2017. Brown Digital Repository. Brown University Library. <https://repository.library.brown.edu/studio/item/bdr:698146/> (Poster Presentation.)
62. Jang J, Harikrashna B, **Donahue JE**, “An indolent case of TSH-secreting pituitary adenoma.” Poster Presentation, ENDO 2018 (Endocrine Society), Chicago, IL, 3/2018.
  63. Stonebridge R, **Donahue J**, Stopa E, “Inflammatory myofibroblastic tumor of the right tentorium.” *J Neuropathol Exp Neurol* 2019; 78: 566. [Poster Presentation, 96<sup>th</sup> American Association of Neuropathologists Annual Meeting, Atlanta, GA, #181 (6/19).]
  64. Vafea-Tsikala M, Cao W, Olszewski AJ, **Donahue J**, Farmakiotis D, “Fatal Mucormycosis and Aspergillosis in an Atypical Host: What Do We Know about Mixed Invasive Mold Infections?” [Poster Presentation, 9<sup>th</sup> Advances against Aspergillosis and Mucormycosis, Lugano, Switzerland, 2/27-29, 2020—selected as one of the outstanding posters displayed at the conference.]
  65. Hagan M, Leary OP, McElroy A, Liu DD, Fridley JS, Telfeian AE, Alexios G, Carayannopoulos DO, **Donahue JE**, Gokaslan ZL, Oyelese AA, Klinge PM, “Adult-Onset Tethered Cord Syndrome: Spinal Pathology, Clinical and Histological Characteristics and Post-Operative Outcomes.” E-poster presentation, virtual AANS 2020.
  66. Tubre T, **Donahue J**, “Mixed Intramedullary Ependymoma and Hemangioblastoma of the Spinal Cord,” *J Neuropathol Exp Neurol* 2021; 80: 604-605 (abstract 181). [Poster Presentation, 97<sup>th</sup> Annual Meeting of the American-Association-of-Neuropathologists-Inc, JUN 10-13, 2021, St. Louis, MO (hybrid meeting).]
  67. Alexander A, Massingham L, Lim S, Phillips O, Chambers M-K, **Donahue J**, “Pathologic Alexander Disease with Normal GFAP Sequencing,” *J Neuropathol Exp Neurol* 2021; 80: 565 (abstract 28). [Platform Presentation, 97<sup>th</sup> Annual Meeting of the American-Association-of-Neuropathologists-Inc, JUN 10-13, 2021, St. Louis, MO (hybrid meeting).]
  68. Tubre T, Hacking S, Alexander A, Brickman A, Delalle I, Elinzano H, **Donahue J**, “Prostate-Specific Membrane Antigen (PSMA) expression in meningiomas increases with grade and recurrence,” *J Neuropathol Exp Neurol* 2022; 81: 494 (abstract 196). [Poster Presentation, 98<sup>th</sup> Annual Meeting of the American-Association-of-Neuropathologists-Inc, JUN 9-12, 2022, Bonita Springs, FL (hybrid meeting).]
  69. Abdulrazeq H, Tang OY, Leary OP, Ayala C, Najib H, **Donahue JE**, Gokaslan Z, Klinge PM, “Analysis of the Filum Terminale Obtained During Tethered Cord Release: An Under-Appreciated Pathological Specimen.” Platform Presentation, New England Neurosurgical Society, 6/22.

70. Alexander A, Jackson D, **Donahue J**, Banerjee P, Chirkov A, “Bing-Neel Syndrome: A Rare Contributing Factor of Psychosis and Suicidality.” National Association of Medical Examiner’s Annual Meeting, Dallas, TX (10/22; received “John Smialek Best Resident Paper” award).

## SCHOLARLY WORK PUBLISHED IN OTHER MEDIA

Gilchrist JM, **Donahue JE**, “Peripheral Nerve Tumors.” In: *UpToDate*, Rose BD (ed.), *UpToDate*, Waltham, MA [1/25/11].

## BOOK REVIEWS

**Donahue JE**, “Brain Tumors’ by Richard Prayson, Bette K. Kleinschmidt-DeMasters, and Mark L. Cohen, (series editor: David E. Elder, MB, ChB). 1<sup>st</sup> Edition. New York: demosMEDICAL, 2010. ISBN: 978-1-933864-69-3.” *Am J Surg Pathol* 2010; 34: 1889.

**Donahue JE**, “Modern Surgical Neuropathology’ by D.C. Miller. 1<sup>st</sup> Edition. New York: Cambridge University Press, 2009. ISBN: 978-0-521-86932-4.” *Am J Surg Pathol* 2012; 36: 161.

## INVITED PRESENTATIONS

### Regional:

1. “Seizure Disorders.” Massachusetts Association of Physician Assistants, *Focus on Primary Care—1995*, Hyannis, MA (10/12/1995).
2. “Overview of Degenerative Diseases of the Central Nervous System.” New Jersey Neuroscience Institute, J.F.K. Medical Center, Edison, NJ (7/31/1998).
3. “Neuropathology Slide Show.” Neurology Residents’ Conference, Rhode Island Hospital, Providence, RI (10/7/1998, 1/20/1999, 2/17/1999, *et al.*).
4. “CPC: Progressive Supranuclear Palsy.” Neurology CPC Conference, New England Medical Center, Boston, MA (2/17/1999).
5. “Intracranial Hemorrhage in the Fetus.” Perinatal Pathology Conference, Women & Infants’ Hospital, Providence, RI (3/16/1999).
6. “CPC: Progressive Bilateral Leg Pain.” Neuropathology Conference, New Jersey Medical School, University Hospital, Newark, NJ (10/11/2000).
7. “Clinical Vignettes: Spinal Cord GBM.” Medical Grand Rounds, J.F.K. Medical Center, Edison, NJ (12/21/2000).
8. “Neuropathology: Tumors of the Central Nervous System.” Tumor Registrars’ Association of New Jersey, *Continuing Seminars in Education*, Princeton, NJ (4/26/2001).

9. "Agrin in Development and Disease of the Nervous System." Dept. of Pathology, Rhode Island Hospital, Providence, RI (1/29/2003).
10. "Neuropathology Grand Rounds." Rhode Island Hospital, Providence, RI (2003-present; currently six per year; see "Hospital Teaching Roles" section).
11. "RAGE, LRP-1, and Vascular Amyloid in Alzheimer's Disease." Alzheimer's Disease Research Meeting, Memorial Hospital, Pawtucket, RI (10/1/2004); Neurology Grand Rounds, New Jersey Neuroscience Institute, Edison, NJ (4/13/05).
12. "The Role of Problem-Based Learning and the Teaching of Pathology." Teaching workshop for Bio 364 Section 4 pathology faculty, Brown Faculty Club, Providence, RI (10/10/2006).
13. "Blood-Brain Barrier and Neurodegenerative Diseases." Alzheimer's Disease and Memory Disorders Center conference, Rhode Island Hospital, Providence, RI (6/27/2007).
14. "Neuromuscular Histology 101." 2009 Region I Histotechnology Conference & Symposium, Newport, RI (4/17/2009).
15. "Relationship between Apolipoprotein E Genotype and Blood-Brain Barrier Permeability." Alzheimer's Disease and Memory Disorders Center conference, Rhode Island Hospital, Providence, RI (9/28/2011).
16. "'Normal' and Pathological Changes with Age." CME symposium on "The Aging Brain," sponsored by the Warren Alpert Medical School of Brown University Office of Continuing Medical Education, Providence RI (11/19/2011).
17. "Case Studies in Neuropathology." 2015 ASCLS-CNE Clinical Laboratory Science Convention, RI Convention Center, Providence, RI (4/28/2015).
18. "Case Studies in Neuropathology 2." 2016 ASCLS-CNE Clinical Laboratory Science Convention, RI Convention Center, Providence, RI (4/26/2016).
19. "Gamification: Integrating Active Learning into Medical Education Through the Use of Games" (with Emily P. Green, PhD, MA). Program in Educational Faculty Development, 2016-2017 series, Warren Alpert Medical School of Brown University, Providence, RI (1/30/2017).
20. "Turning Medical Education into Fun, Interactive Game Shows." 8<sup>th</sup> Annual MedEd Talks, Warren Alpert Medical School of Brown University, Providence, RI (11/1/2021).
21. "Bing-Neel Syndrome." Yale Neurology Grand Rounds, New Haven, CT (10/7/2022).

**National/International:**

1. "Peripheral Nerve: Ultrastructural Morphology and Diagnostic Applications." UltraPath XIX (The Society for Ultrastructural Pathology) international meeting, Newport, RI (6/27/2018).
2. "General Neuroanatomy/Staining: An Introduction to Neuropathology for Neuropathologists." American Association of Neuropathologists (AANP) Teaching Rounds (virtual with national/international audience, 5/23/2022).
3. "Introduction to Skeletal Muscle Pathology." Pathology residents' conference, University of Kansas Medical Center, Kansas City, KS (9/16/2022).
4. "Introduction to Skeletal Muscle Pathology." Pathology residents' conference, Creighton University School of Medicine, Omaha, NE (10/14/2022).
5. "Introduction to Skeletal Muscle Pathology." Neurology resident's conference, St. Luke's University Health Network, Bethlehem, PA (3/29/2023, scheduled)
6. "Neuropathology of Vascular Disease." AANP Teaching Rounds (virtual with national/international audience, 7/24/2023, scheduled).

## GRANTS AND CLINICAL TRIALS

1. *Title:* "Effects of ApoE Genotype on Blood-Brain Barrier Permeability and LRP-1 Expression"

*Principal Investigator:* John E. Donahue, M.D.

*Agency:* NIH/NIA

*Type:* K08 (Alzheimer's Disease Clinical Scientist Development Award)

*Number:* 1K08AG029147-01

*Term:* 9/30/06-7/31/09 [12-month, no-cost extension to 7/31/10]

*Direct Costs:* \$173,700/year

*Total Costs:* \$562,649

*Objectives:* 1) Quantitate BBB permeability in human apoE3/E4 and apoE KO transgenic mice utilizing the *in-situ* brain perfusion technique; 2) determine the distribution and quantity of A $\beta$  and its BBB transporters LRP-1 and RAGE in the cerebral microvasculature of those same transgenic mice utilizing immunohistochemistry, ELISA, Western blot, and PCR as appropriate

2. *Title:* "Age-Related Decrease in A-Beta Clearance Pathways: CSF and BBB"

*Principal Investigator:* Conrad E. Johanson, Ph.D.

*Co-Investigator:* John E. Donahue, M.D.

*Agency:* NIH/NIA

*Type:* R01

*Number:* 1R01AG027910-01

*Term:* 2/1/07-1/31/11

*Total Costs:* \$1,275,060

*Objectives:* 1) measure A $\beta$  in brain as a function of age and describe its spatial distribution in Brown-Norway/Fischer rats; 2) quantify the kinetics of clearance of tagged A $\beta$  from the choroid plexus-CSF in aging; and 3) characterize the age-modified expression of the A $\beta$  transporters, LRP-1 and RAGE, in the choroid plexus and BBB, as the CSF system continually deteriorates in senescence

3. *Title:* Quantification of Blood-Brain Barrier Permeability to Water with MRI: Validation of Intravascular Contrast Agent Technique in Transgenic Mouse Models of Altered Blood-Brain Barrier Permeability and Application to Human Neurodegenerative Disease

*Principal Investigator:* Jerrold L. Boxerman, M.D., Ph.D.

*Collaborator:* John E. Donahue, M.D.

*Agency:* Brown Dept. of Diagnostic Imaging

*Type:* Research Seed Grant

*Term:* 7/1/09-6/30/10

*Total Costs:* \$15,000

*Objectives:* 1) To implement intravascular steady-state (IVSS) MR techniques for quantifying blood-brain barrier permeability (BBBP) to water, and to validate these techniques in mouse models against a gold standard provided by the radioisotopic tracer analysis technique; and 2) To compare IVSS-based MR estimates of BBBP to water in individuals with mild cognitive impairment, moderate and advanced stage AD, and age matched controls using ROC analysis to determine whether these measures may serve as biomarkers for neurodegenerative disease

4. *Title:* "Multisite Validation and Application of a Consensus DRC-MRI Protocol"

*Principal Investigator:* C. Chad Quarles, Ph.D.

*Collaborator:* John E. Donahue, M.D.

*Agency:* NIH/NCI

*Type:* R01

*Number:* 1R01CA221938-01

*Term:* 2/1/18-1/31/21

*Direct Costs:* \$266,059

*Total Costs:* \$295,825

*Objectives:* The overall goal of this multi-site clinical trial is to validate and demonstrate the clinical utility of a standardized protocol for imaging brain tumor perfusion. Such validation will help to promote widespread adoption of the consensus protocol, thereby improving the reliability of perfusion imaging for response assessment of brain tumor patients in routine neuro-oncology practice and prospective clinical trials.

5. *Title:* "Establishing the Clinical Utility of a Consensus DRC-MRI Protocol"

*Principal Investigators:* Jerrold L. Boxerman M.D., Leland Hu M.D., C. Chad Quarles, Ph.D., Kathleen Marie Schmainda, Ph.D.

*Collaborator:* John E. Donahue, M.D.

*Agency:* NIH/NCI

*Type:* R01

*Number:* 1R01CA264992-01

*Term:* 4/1/22-3/31/27

*Direct Costs:* \$2,463,246

*Total Costs:* \$4,051,083

*Objectives:* The overall goal of this multi-site study is to refine a consensus protocol for imaging brain tumor perfusion and validate its clinical utility and value in patients with tumors. Such validation will help to promote widespread adoption of the consensus protocol and improve the management of patients with brain tumors.

6. Clinical trial: Central neuropathologist for Brown University Oncology Group (BrUOG) multicenter protocol 244: “PPX and Concurrent Radiation for Newly Diagnosed Glioblastoma without MGMT Methylation: A Randomized Phase II Study.” 2012-2014.

## **UNIVERSITY TEACHING ROLES: COURSES**

Bio 186 (General Pathology), Brown Medical School: Moderating small-group pathology laboratory sessions for first-year medical students (8-9 students/group), 2004-2006. Received **Dean’s Teaching Excellence Award** in 2004, 2005, and 2006.

Bio 195-196 (Independent Study), Brown University: Accepted two students (Amanda Duffy and Jane Lim) for the fall, 2008 and spring, 2009 semesters and one student (Junghyun “Marco” Kim) for the fall, 2009 and spring, 2010 semesters to do independent study lab research on apoE genotype and blood-brain barrier permeability. Techniques employed included extraction of RNA, DNA, and protein from brain tissues, DNase purification of RNA, cDNA synthesis for Q-PCR, immunohistochemistry, Western blotting, and tracer perfusion of transgenic mouse brains for imaging mass spectrometry analysis. Accepted one student (Jie “Jessica” Pan) for the fall, 2010 and spring, 2011 semesters to study the orbitomedial prefrontal cortex (OMPFC) in healthy young adults, healthy older adults, and Alzheimer disease patients, in conjunction with Dr. Brad Dickerson at Mass. General Hospital, using the FreeSurfer computer program. Also had two other students (Emily Fessler: spring, 2008; and Zachary Gordon: summer, 2008) as volunteers (nonacademic credit).

Bio 262 (Neurologic Pathophysiology), Brown Medical School: Moderating small-group neurology and neuropathology laboratory sessions for second-year medical students (10 students/group), 1998 (two dates in May) and 2004-2005. Helped select neuropathology images for student CD-ROM in 2004. Gave one lecture, “Metabolic Diseases and CNS Tumors” as a substitute for Dr. Stopa in spring, 2004. Revised neuropathology section of syllabus in summer of 2004. Submitted neuropathology exam questions, all years.

Bio 350 (Integrated Pathophysiology/Pharmacology: Neurologic Pathophysiology), Brown Medical School: Replacement for Bio 262 beginning in fall semester, 2006. Taught to second-year medical students in fall, 2006.

Bio 3645 (Integrated Medical Sciences I: General Pathology), Warren Alpert Medical School of Brown University: Replacement for Bio 186 beginning in fall semester, 2006. Taught to first-year medical students. Received **Dean’s Teaching Excellence Award** in 2006-7 and 2007-8. Introductory small groups reinstituted in 2009. Moderated small groups from 2006-2007 and 2009-2012.

Bio 3645 (IMS I: General Pathology): Lecture on “Introduction to Brain Cancer” (2008-2013).

Bio 3653 (Integrated Medical Sciences II: Micro/ID), Bio 3662 (IMS III: Cardiovascular), Bio 3663 (IMS III: Pulmonary), and Bio 3673 (IMS IV: Gastroenterology), Warren Alpert Medical School of Brown University: Moderating small-group pathology laboratory sessions for first-year (3653) and second-year (3662, 3663, 3673) medical students (8-9 students/group) from 2009-2013. Received **Certificate of Recognition** from 2009-2012 and **Dean’s Teaching Excellence Award** in 2013 and 2016. Relinquished small group



and started playing themed Jeopardy games with the entire class in fall of 2013, ~30-40 students per group, two or three games per date, until the end of 2018 and then restarting in 2021. (Jeopardy was canceled in 2019 due to hospital short-staffing and 2020 due to the COVID-19 pandemic.)

Bio 3665 (Integrated Medical Sciences II: Pathology of Supporting Structures): Lecture on “Diseases of Muscle” (2009-present).

**Co-Director, Bio 3650A/3652 (Integrated Medical Sciences II: Brain Sciences), Warren Alpert Medical School of Brown University:** Replacement for Bio 350 beginning in spring semester 2007 and taught to first-year medical students. Co-director beginning in spring semester 2008 with Drs. Edward Feldmann and Glenn Tung. Joined by Drs. N. Steven Potter and Julie Roth with the departure of Dr. Feldmann in 2010 and by Dr. Kara Stavros with the departure of Dr. Potter in 2017. Dr. Vincent Labarbera was added in 2021. Responsibilities as co-director: 1) Organize brain prosection anatomy lab; 2) Give lectures appropriate to expertise; 3) Solicit/rewrite all exam questions in standard, best answer, multiple-choice USMLE format; 4) Review exams after administration to determine if any questions were inappropriate; 5) Organize and present clinical-pathologic correlation (CPC) case conferences; 6) Attend lectures when other co-directors are unable to and whenever possible for quality control; 7) Assist with organizing schedule and recruiting lecturers; 8) Moderate small groups, reinstated in 2011. Received **Dean’s Teaching Excellence Award** in 2010, 2012, 2014, 2015, 2017, 2018, 2020, and 2022 and Certificates of Recognition in 2011, 2013, 2015, 2016, 2017, 2018, 2019, and 2020.

Brain Prosection Anatomy Labs: 2008-present

Lectures Given:

“CPC”: 2008-present

“CPC 2”: 2015-2019

“Principals of Neurologic Localization”: 2009-present

“Neuro-Oncology”: 2009, 2011-2019

“CNS Infections”: 2012-2013

“Neuroanatomy I: Gross Brain Structures 1”: 2018-present

“Neuroanatomy I: Gross Brain Structures 2”: 2018-present

“Neuroanatomy VI: Internal Brain Structures”: 2018-present

“Neuropathology of Demyelinating Diseases”: 2020-2022

“Neuropathology of Brain Tumors”: 2020-present

“Developmental Neuropathology”: 2020-present

“Toxic-Metabolic Disease”: 2020-2022

“Demyelinating and Toxic-Metabolic Disease”: scheduled for 2023

Small Groups: 2011-present

Brain Sciences Jeopardy: 2015-present

Bio 3653 (Integrated Medical Sciences II: Microbiology/Infectious Diseases): Lecture on “Neuropathology of CNS infections” (2020-2021)

## **UNIVERSITY TEACHING ROLES: ELECTIVES AND MISCELLANEOUS**

Thesis defense committee, Miles C. Miller, for degree of Master of Science, Division of Biology and Medicine, Brown University, 4/29/2010.

Thesis defense committee, Siddhant Jaitpal, for degree of Master of Science, Division of Biomedical Engineering, Brown University, 5/1/2015.

Bio 6658 (Medical Impact of Translational and Basic Science): served as a facilitator of discussion in a “journal club”-style format. Articles discussed:

Eckel-Passow JE, Lachance DH, Molinaro AM, *et al.*, “Glioma groups based on 1p/19q, *IDH*, and *TERT* promoter mutations in tumors,” *N Engl J Med* 2015; 372: 2499-2508 (9/28/2015).

Neumann JE, Dorostkar MM, Korshnov A, *et al.*, “Distinct histomorphology in molecular subgroups of glioblastomas in young patients,” *J Neuropathol Exp Neurol* 2016; 75: 408-414 (10/24/2016).

Mez J, Daneshvar DH, Kiernan PT, *et al.*, “Clinicopathological evaluation of chronic traumatic encephalopathy in players of American football,” *JAMA* 2017; 318: 360-370 (11/13/2017).

Director of Neuropathology Elective, Pathology 6150, at Alpert Medical School as of 5/2/2016. This is an elective for students who desire a refresher course in neuroanatomy and neuropathology and/or are pursuing careers in brain-related disciplines. Students will take part in the day-to-day activities of the neuropathology division, including brain cutting, surgical case sign-out, brain tumor boards, neuromuscular conference, didactic conference, consensus conference, Grand Rounds, and Journal Club. Received **Dean’s Teaching Excellence Award** in 2021.

CNS 5325 (Clerkship in Neurology), at Alpert Medical School. Had third-year students one morning or afternoon per week on the neuropathology service for their clinical longitudinal experience in the clerkship from May 2015 until March 2020.

ACM 3592 (Advanced Clinical Mentorship in Pathology), at Alpert Medical School. Mentored fourth-year student Andy Hoang from 1/2/2017-3/24/2017 one half-day per week in neuropathology.

Bio 6707 (Medical Terminology): gave a lecture on Latin- and Greek-derived neuroanatomic terms and structures (9/9/2019).

IS 7100 (Independent Study), at Alpert Medical School. Mentored fourth-year student Jennifer Grimes from 4/6/2020-5/1/2020 on a project to learn molecular integration in the diagnosis of brain tumors using the 2016 WHO brain tumor classification scheme and subsequent cIMPACT-NOW updates.

Johnson and Wales University: Annual brain cutting demonstration for PA students (2018-present).

## HOSPITAL TEACHING ROLES

Training neuropathology fellows to become attending neuropathologists (2/year), 2003-present.

Director of Neuropathology Rotation (as of 7/1/2005): teaching basics of neuropathology during clinical case signout, brain cutting, or conference sessions to

rotating pathology (1-5/year), neurology (3-4/year), and neurosurgery (1-2/year) residents, as well as residents from other services (e.g., psychiatry, radiology, neuropsychology, oncology, radiation oncology) who take a neuropathology elective. A handout is distributed to all rotators.

**Director of Neuropathology Fellowship Program** (as of 1/1/2019).

- Impart knowledge of clinical neuropathology and neuroanatomy during daily case signout and weekly brain cutting sessions.
- Distribute and discuss board-style, multiple-choice questions for intensive basic science and clinical neuropathology review.
- Created practical examinations to test fellows' clinical competency, with results documented in their permanent files (prior to national in-service exam).
- Developed new evaluation forms based on the ACGME core competencies and milestones that are used twice a year for fellow evaluation.
- Review fellows' Grand Rounds presentations/photographs/histories and make suggestions for improvement.
- Supervise and attend lectures fellows prepare to give to neurology/neurosurgery residents for quality control.
- Contribute questions to national neuropathology in-service examination beginning in 2012.
- Instituted journal club/curriculum didactic review conference beginning in 2014.
- Support fellow research projects.
- Prepare fellow service and on-call schedules.
- Prepare annual metrics report to be submitted to GME office and ACGME.

Active participant in and/or moderator of Neuropathology Grand Rounds (on the 2<sup>nd</sup> and 5<sup>th</sup> Wednesdays of each month, part of the Neurology Grand Rounds CME series, 2003-2018; 2<sup>nd</sup> Wednesday only from Jan.-July 2019; six times/year beginning Sept. 2019).

- Select cases (either autopsy or surgical) for presentation.
- Call patient's clinician(s) to ensure their presence at the conference.
- Either prepare clinical histories or review histories prepared by fellows and/or rotators.
- Either digitally photograph glass slides or review photographs taken by fellows, followed by insertion of photographs into a PowerPoint presentation.
- Either prepare short PowerPoint presentations on the relevant case topics or review presentations prepared by fellows and/or rotators.

Giving periodic lectures to all neurology residents as part of the residents' educational lecture series, including supervising neuropathology fellows when they give the lectures, 2003-present.

Giving periodic lectures to all pathology residents as part of the residents' educational lecture series and residents' hour, 2003-present.

Giving periodic lectures to all neurosurgery residents as part of the residents' educational lecture series, 2003-present.

Annual reviews of selected pediatric brain tumors to fellows in pediatric hematology-oncology, 2005-present.

Annual "Introduction to Neuropathology" lecture to neuropsychology fellows, 2006-2017.

Annual "Introduction to Neuropathology" lecture to psychiatry residents, 2011-present.

Review of pediatric neuropathology cases with the Women and Infants' pediatric pathology fellow during Rhode Island Hospital rotation (2014-2019).

Consultant to Rhode Island Medical Examiner's Office (1-2x/month on average). Interesting brains are cut with pathology not usually seen during autopsies in a hospital setting (e.g., acute trauma). Representative glass slides from those cases are subsequently examined. Fellows, rotators, medical students, and neuropsychology students/postdocs participate.

Consultant to Medical Examiner's offices in New Jersey (Bergen County, Union County, Morris County, and Regional Offices in Newark and Trenton).

Pathology presentations at Rhode Island Hospital Medical Grand Rounds (1/11/2005, 3/22/2005, 3/7/2006), The Miriam Hospital Medical Morbidity and Mortality Conference (11/2/2005, 4/4/2007, 3/2/2011, 3/30/2011), Hasbro Children's Hospital Pediatric CPC Conference (9/28/2005, 4/22/2011), and Women and Infants' Hospital Perinatal Management Conference (6/16/2004, 4/16/2008, 10/5/2016).