**Katherine Turk**

150 South Huntington Avenue

Jamaica Plain, MA 02130

773-398-7553

kturk@bu.edu

 Katherine.turk3@va.gov

 Updated May 8, 2024

**Academic Training:**

6/2005 B.A. University of Chicago, Chicago, IL, Biology with specialization in Neuroscience

6/2011 M.D. Tufts University School of Medicine, Boston, MA

**Additional Training:**

6/2012 University of Washington, Internal Medicine Internship, Seattle, WA

7/2011- 6/2015 University of Washington, Neurology Residency, Seattle, WA

9/2015- 2/2018 VA Boston/Boston University, Fellowship in Behavioral Neurology

**Academic Appointments**

1/2016-11/2018 Instructor of Neurology, Boston University School of Medicine

11/2018-present Assistant Professor of Neurology, Boston University School of Medicine

**Other Positions:**

2/21/18-7/1/2020 Boston Medical Center Neurology Program Education Site Director VA Boston

2/21/18-7/1/2020 Medical Director, Boston Polytrauma/TBI Clinic, VA Boston Healthcare System

12/1/18-8/1/2020 Associate Program Director, Cognitive and Behavioral Neurology Fellowship, VA Boston

5/2019- present Boston University Alzheimer’s Disease Research Center, Co-Leader Outreach

 Recruitment and Engagement Core

**Hospital Appointments:**

2/21/18-present Behavioral Neurologist, VA Boston Healthcare System

**Honors:**

2001-2005  University of Chicago Dean's List

2007-2009 Preclinical Honors in Neuroscience and Cell and Tissue Biology

2008-2011 Joseph Collins Foundation Scholarship for students interested in Neurology

2009-2011 Clinical Honors in Psychiatry, Adult Neurology, Pediatric Neurology and Rheumatology

May 2013 Alpha Omega Alpha National Medical Honor Society

2013-2015 Resident Member of Neurology Residency Curriculum Committee

2022 Hemara Contemplative Fellowship Award to support meditation retreat for professionals

2021 Doris Duke Foundation, Award to retain physician scientists during COVID19

**Licenses and Certification:**

11/2017-present DEA license

9/2015-present Massachusetts Medical License #264212

9/2015- present ABPN board licensed Neurologist

12/2022-present Mindfulness Based Stress Reduction Certification Course, Brown University

**Department and University Committees:**

10/2012-7/2015 University of Washington Neurology Residency Curriculum Committee, Seattle, WA

7/1/2020-present US Department of Veterans Affairs, Dementia Steering Committee Member

7/1/2020-present US Department of Veterans Affairs, Field Advisory Board, Dementia advisor

**Other Professional Activities:**

**Professional Societies: Memberships, Offices, and Committee Assignments:**

2012-present Member, American Academy of Neurology

2015-present Member, Society of Cognitive and Behavioral Neurology

 **Current Grant Support**

7/1/2022-6/30/2024 co-PI, Investigator Initiated Industry Award, VoxNeuro

 ERPs in the diagnosis of Alzheimer’s disease and Traumatic Brain Injury, $500,000

7/1/2021-6/30/2026 PI, VA Career Development Award-2, $1,800,000

Project: Contribution of mild traumatic brain injury to neurodegeneration due to Alzheimer’s disease and Chronic Traumatic Encephalopathy.

 **Prior Grant Support**

2/1/2021-1/30/2023 PI, Alzheimer’s Association RAPID Funding Award, $50,000

Event-Related Potentials and Social Isolation during the COVID 19 Pandemic

4/1/2022-6/30/2023 Doris Duke Foundation, Award to retain physician scientists during COVID19 pandemic, $45,000

1/2017-12/2020 PI, Alzheimer’s Association International Clinical Research Award, $175,000

 Project: Diagnosis of Alzheimer’s Disease Using Event Related Potentials

 **Conference and Poster presentations:**

**National:**

February 2005Botulinum toxin type A inhibits calcitonin gene-related peptide release from isolated rat bladder.

 National Bladder Foundation, International Bladder Symposium, 2005; AUA North Central

 Section, 79th Annual Meeting.

March 2006Automatic repositioning of CSI grids in longitudinal 1H MRS studies: impact on reproducibility of metabolite concentration measurements. International Society of Magnetic Resonance in Medicine Meeting, 2006. Seattle, WA.

March 2013 Pneumoarachis and Pneumomediastinum following weight lifting: a case report. American Academy of Neurology Meeting, San Diego, CA.

June 2014 Psychosis in Spinocerebellar Ataxias. University of Washington Research Symposium, Seattle

April 2016 Data Blitz Presentation “Utility of EEG/ERP in the Diagnosis of Alzheimer’s Disease” Park City Winter Conference on the Neurobiology of Learning and Memory

October 2019 Junior Investigator Data Blitz Presentation “P50 latency predicts TBI status in older veterans with memory loss” ADRC Fall Meeting, St. Louis, MO.

**International:**

June 2008Molecular Characterization of oligoclonal antibodies in MS patients. Meeting: Multiple Sclerosis: From Pathogenesis to Therapy. Espace Charles-Louis-Havas, Paris, France.

April, 2016Psychosis in Spinocerebellar Ataxias. American Academy of Neurology Meeting. Vancouver, BC, Canada.

July 2017Utility of Event Related Potentials in a Memory Disorders Clinic. Alzheimer’s Association International Conference. London, England.

July 2018 Utility of Event Related Potentials in a Memory Disorders Clinic. Alzheimer’s Association International Conference. Chicago, IL.

July 2019 Utility of Event Related Potentials in a Memory Disorders Clinic. Alzheimer’s Association International Conference. Los Angeles, CA. (co-chair of AAIC EEG platform session, invited scientific talk)

July 2019 P50 latency increases predict history of TBI in older veterans with cognitive impairment, Alzheimer’s Association International Conference. Los Angeles, CA (poster presentation)

July 2021 Comparison of cerebrospinal fluid in post-mortem Chronic Traumatic Encephalopathy and Alzheimer’s disease (AAIC, virtual poster presentation)

April 2022 Marin A., Schiloski K.,Vives Rodriguez A., DeCaro R., Budson A., Turk K.W. Event-related potentials as biomarkers of cognitive performance in Alzheimer’s disease patients with cardiovascular risk factors. (American Academy of Neurology, Seattle, 2022)

July 2022 Amyloid PET ordering practices in a memory disorders clinic (Alzheimer’s Association International Conference (AAIC), San Diego, CA)

July 2023 ERPs as a predictor of amyloid positivity in Alzheimer’s disease (Alzheimer’s Association International Conference (AAIC), Amsterdam)

July 2023 Feasability of implementing wearable technologies for in-home assessment of behavioral and event-related potential responses after sleep and wakefulness in Alzheimer’s disease (Alzheimer’s Association International Conference (AAIC), Amsterdam)

October 2023 Impact of mindfulness interventions for consciousness in Alzheimer’s disease (Mindfulness Mechanisms Conference, St. Louis, MO)

April 2024 An interdisciplinary group for implementation of disease modifying therapies in Alzheimer’s disease (American Academy of Neurology Conference, Denver, CO)

**Bibliography:**

**Original, Peer Reviewed Articles:**

1. N. Rønsted, E. Yektaei-Karin**, K. Turk**, J. M. Clarkson, M. W. Chase. Species-level phylogenetics of large genera: prospects of studying co-evolution and polyploidy. T. Hodkinson & J. Parnell (eds.). Reconstructing the tree of life: taxonomy and systematics of species rich taxa. Systematic Association Special Series. CRC Press. October 27, 2005.
2. Rapp D, **Turk K**, Bales G, Cook S.  Botulinum toxin type A inhibits calcitonin gene-related peptide release from isolated rat bladder. Journal of Urology. 2006;175(3 Pt 1):1138-42.
3. Ratai EM, Hancu I, Blezek DJ, **Turk K**, Halpern E, González RG. Automatic repositioning of CSI grids in longitudinal 1H MRS studies: impact on reproducibility of metabolite concentration measurements. Journal of Magnetic Resonance Imaging. Magn Reson Imaging. 2008; 27(5):1188-93.
4. Ratai EM, Pilkenton SJ, Greco JB, Lentz MR, Bombardier JP, **Turk K**, He J, Joo CG, Lee V, Westmoreland S, Halpern E, Lackner AA,González RG.In vivo proton magnetic resonance spectroscopy reveals region specific metabolic responses to SIV infection in the macaque brain. BMC Neurosci. 2009 22;10:63.
5. Obermeier B, Lovato L, Mentele R, Brück W, Forne I, Imhof A, Lottspeich F, **Turk KW**, Willis SN, Wekerle H, Hohlfeld R, Hafler DA, O'Connor KC, Dornmair K. Related B cell clones that populate CSF and CNS of patients with multiple sclerosis produce CSF immunoglobulin. J Neuroimmunol. 2011 Apr;233(1-2):245-8.
6. Gallagher LG, Ilango S, Wundes A, Stobbe GA, **Turk KW**, MD, Franklin GM, Linet MS, Freedman DM, Alexander BH, and Harvey Checkoway H. Lifetime Exposure to Ultraviolet Radiation and the Risk of Multiple Sclerosis in the U.S. Radiologic Technologists Cohort Study. Multiple Sclerosis Journal May 2018.
7. **Turk KW**, Flanagan M, Josephson JR, Keene CD, Jayadev S and Bird T. Psychosis in Spinocerebellar Ataxias: A case series and study of Tyrosine Hydroxylase in Substantia Nigra. The Cerebellum, 2018 August 17(2): 143-151.
8. **KW Turk**, AA Elshaar, RG Deason, NC Heyworth, C Nagle, B Frustace, S Flannery, A Zumwaltand AE Budson. Late positive component event-related potential amplitude predicts long-term classroom-based learning. Journal of Cognitive Neuroscience, 2018 September; 30 (9): 1323-1329.
9. **Turk KW**, Palumbo R, Deason RG, Marin A, Elshaar A, Gosselin E, O’Connor M, Tripodis Y, and Budson AE. False memories: the other side of forgetting. Journal of International Neuropsychological Society, 2020 July 26(6):545-556.
10. Malone C, **Turk KW**, Palumbo R, Budson AE. The effectiveness of item-specific encoding and conservative responding to reduce false memories in patients with Mild Cognitive Impairment and Mild Alzheimer’s Disease Dementia. J Int Neuropsychol Soc. 2020 Aug:1-12. doi:10.1017/S1355617720000715.
11. **Turk, K. W**., A. Marin, K. A. Schiloski, A. L. Vives-Rodriguez, P. Uppal, C. Suh, B. Dwyer, R. Palumbo and A. E. Budson (2021). "Head Injury Exposure in Veterans Presenting to Memory Disorders Clinic: An Observational Study of Clinical Characteristics and Relationship of Event-Related Potentials and Imaging Markers." Frontiers in Neurology.
12. Tao, Q., Ang, T.F.A., Akhter-Khan, S.C., Itchapurapu, I.S., Killiany, R., Zhang, X., Budson, A.E., **Turk, K.W**., Goldstein, L., Mez, J. and Alosco, M.L., 2021. Impact of C-Reactive Protein on Cognition and Alzheimer Disease Biomarkers in Homozygous APOE ɛ4 Carriers. *Neurology*, *97*(12), pp.e1243-e1252.
13. Frank, B.E., Ally, M., Brekke, B., Zetterberg, H., Blennow, K., Sugarman, M., Ashton, N.J., Karikari, T.K., Tripodis, Y., McKee, A.C., Stein, T.D., Martin, B.M., Palmisano, J., Steinberg, E., Simkin, I., **Turk, K.W**., Budson, A., O'Connor, M.K., Au, R., Qiu, W., Goldstein, L.E., Killiany, R.J., Kowall, N.W., Mez, J., Stern, R.A. and Alosco, M.L. (2021), Plasma P-tau181 and NfL are central nodes in a network of diagnostic, biomarker, and demographic data. Alzheimer's Dement., 17: e052669. <https://doi.org/10.1002/alz.052669>

https://doi.org/10.3389/fneur.2021.626767

1. **Turk, KW\***, Geada A\*, Alvarez VE, Xia W, Cherry JD, Nicks R, Meng G, Daley S, Tripodis Y, Huber BR, Budson AE, Dwyer B, Kowall NW, Cantu RC, Goldstein LE, Katz DI, Stern RA, Alosco ML, Mez JM, McKee AC, Stein TD. A comparison between tau and amyloid-β cerebrospinal fluid biomarkers in Chronic Traumatic and Alzheimer’s Disease.Alzheimer’s Research and Therapy, February 2022*.* 10.1186/s13195-022-00976-y \*both authors contributed equally
2. Price, A. M., Palumbo, R., Marin, A., Uppal, P., Suh, C., Budson, A. E., & **Turk, K. W**. Distinguishing Between Genuine and Feigned Dementia Using Event-related Potentials. (2022) *Cognitive and Behavioral Neurology*, 10-1097.
3. **Turk, K. W.,** Vives‐Rodriguez, A., Schiloski, K. A., Marin, A., Wang, R., Singh, P., ... & Budson, A. E. (2022). Amyloid PET ordering practices in a memory disorders clinic. *Alzheimer's & Dementia: Translational Research & Clinical Interventions*, *8*(1), e12333.
4. Vives‐Rodriguez, A. L., Schiloski, K. A., Marin, A., Wang, R., Hajos, G. P., Powsner, R., ... & **Turk, K. W**. (2022). Impact of amyloid PET in the clinical care of veterans in a tertiary memory disorders clinic. *Alzheimer's & Dementia: Translational Research & Clinical Interventions*, *8*(1), e12320.
5. Marin, A., DeCaro, R., Schiloski, K., Elshaar, A. A., Dwyer, B., Vives-Rodriguez, A., Palumbo, R., **Turk, K.** & Budson, A. (2022). Home-Based Electronic Cognitive Therapy in Patients With Alzheimer Disease: Feasibility Randomized Controlled Trial. JMIR Formative Research, 6(9), e34450.
6. Madeline S Morrison, Hugo J Aparicio, Kaj Blennow, Henrik Zetterberg, Nicholas J Ashton, Thomas K Karikari, Yorghos Tripodis, Brett Martin, Joseph N Palmisano, Michael A Sugarman, Brandon Frank, Eric G Steinberg, **Katherine W Turk**, Andrew E Budson, Rhoda Au, Lee E Goldstein, Gyungah R Jun, Neil W Kowall, Ronald Killiany, Wei Qiao Qiu, Robert A Stern, Jesse Mez, Ann C McKee, Thor D Stein, Michael L Alosco, Ante-mortem plasma phosphorylated tau (181) predicts Alzheimer’s disease neuropathology and regional tau at autopsy, Brain, 2022; awac175, <https://doi.org/10.1093/brain/awac175>
7. Frank, B., Ally, M., Brekke, B., Zetterberg, H., Blennow, K., Sugarman, M. A., Ashton, N. J., Karikari, T. K., Tripodis, Y., Martin, B., Palmisano, J. N., Steinberg, E. G., Simkina, I., **Turk, K**. W., Budson, A. E., O'Connor, M. K., Au, R., Goldstein, L. E., Jun, G. R., Kowall, N. W., … Alosco, M. L. (2022). Plasma p-tau181 shows stronger network association to Alzheimer's disease dementia than neurofilament light and total tau. *Alzheimer's & dementia : the journal of the Alzheimer's Association*, *18*(8), 1523–1536. <https://doi.org/10.1002/alz.12508>
8. Frank, B., M. Ally, Y. Tripodis, C. Puzo, C. Labriolo, L. Hurley, B. Martin, J. Palmisano, L. Chan, E. Steinberg, **K. Turk**, A. Budson, M. O’Connor, R. Au, W. Q. Qiu, L. Goldstein, W. Kukull, N. Kowall, R. Killiany, R. Stern, T. Stein, A. McKee, J. Mez and M. Alosco (2022). "Trajectories of Cognitive Decline in Brain Donors With Autopsy-Confirmed Alzheimer Disease and Cerebrovascular Disease." Neurology **98**(24): e2454-e2464.
9. Friedman, G., **Turk, K.W**. & Budson, A.E. The Current of Consciousness: Neural Correlates and Clinical Aspects. *Curr Neurol Neurosci Rep* **23**, 345–352 (2023). https://doi.org/10.1007/s11910-023-01276-0
10. Diana C. Anderson, Renée E. DeCaro, Myna Chadalavada, Anna Marin, Adolfo Di Crosta, Irene Ceccato, Pasquale La Malva, Nicola Mammarella, Alberto Di Domenico, **Katherine W. Turk**, Rocco Palumbo & Andrew E. Budson (2023) Characteristics of Home and Neighborhood Built Environments During COVID-19 for Older Adults in the United States and Italy, Journal of Aging and Environment, DOI: [10.1080/26892618.2023.2269552](https://doi.org/10.1080/26892618.2023.2269552)
11. Ally M, Sugarman MA, Zetterberg H, Blennow K, Ashton N, Karikari T, Aparicio H, Frank B, Tripodis Y, Martin B, Palmisano J, Steinberg E, Simkin I, Farrer L, Jun G, **Turk KW,** et al. Cross-sectional and longitudinal evaluation of plasma glial fibrillary acidic protein to detect and predict clinical syndromes of Alzheimer's disease. *Alzheimer's Dement*. 2023; 15:e12492. <https://doi.org/10.1002/dad2.12492>
12. Ally M, Sugarman MA, Zetterberg H, Blennow K, Ashton N, Karikari T, Aparicio H, Sugarman M, Frank B, Tripodis Y, McKee A, Stein T, Martin B, Palmisano J, Steinberg E, Simkin I, Farrer L, Jun G, **Turk KW,** et al.  “4 Evaluating Plasma GFAP for the Detection of Alzheimer’s Disease Dementia.” *Journal of the International Neuropsychological Society* 29, no. s1 (2023): 408–9. <https://doi.org/10.1017/S1355617723005428>.
13. Campbell B, **Turk KW**, Budson AE. The major challenges with pharmacologic management of chronic traumatic encephalopathy. Expert Review of Neurotherapeutics. In Press. May 2024
14. **Turk, KW**, Knobel M, et al. An interdisciplinary team for Alzheimer’s disease modifying therapy implementation. In Press. Neurology Clinical Practice. May 20204.
15. **Turk KW,** Marin A, Budson AE. Event-Related potentials as markers of Alzheimer’s disease in a Memory Disorders clinic. *Under Review*. May 2024.
16. Marin A, Vives-Rodriguez A, DeCaro R, **Turk KW** and Budson AE. A randomized controlled trial of social intervention for cognition in older adults during the COVID-19 Pandemic. *Under Review. May 2024.*
17. SmithA, MarinA, DeCaroR, FeinnR, WackA, HughesG, RivardN, UmashankarA, **TurkKW**, and Budson AE. New Approach to Enhancing Long-Term Memory in Alzheimer’s Disease: The Efficacy of Algorithmic Spaced Retrieval. Under Review. May 2024
18. O’Connor MK, Frank B, DeCaro, R, Vives-Rodriguez A, Hurley L, **Turk KW**, and Budson AE. Pseudobulbar Affect in Alzheimer’s disease. Under Review. May 2024
19. DeCaro R, Marin A, Waskow E, Vives-Rodriguez A, **Turk KW**, Palumbo R, and Budson AE. Older adults with cognitive impairment can correct health-related misconceptions. Under Review. May 2024.

**Case Reports, Reviews, Chapters, and Editorials:**

1. N. Rønsted, E. Yektaei-Karin, **K. Turk**, J. M. Clarkson, M. W. Chase. Species-level phylogenetics of large genera: prospects of studying co-evolution and polyploidy. T. Hodkinson & J. Parnell (eds.). *Reconstructing the* tree of life: taxonomy and systematics of species rich taxa. Systematic Association Special Series. CRC Press. October 27, 2005.
2. **K. Turk**, J.B. Leverenz.Cognitive Impairment in Parkinson’s Disease:Biomarkers, neuroimaging, and genetics will play a vital role in helping to understand the origins of Parkinson disease and treating cognitive impairment in patients with the disease. Federal Practitioner. 2014 Jun 31(S5); 20S-23S.
3. **Turk KW** and Budson AE. Dementia, In: The Brigham Intensive Review of Internal Medicine. Third Edition. 2016.
4. **Turk KW** and Budson AE. Chronic Traumatic Encephalopathy Review. Continuum. 2019 February; 25(1): 187-207.
5. Ana Vives-Rodriguez, **Katherine W. Turk**, Elizabeth A. Vassey, Tarun Singhal, Charles H. Cho, Andrew E. Budson. Neurol Clin Pract May 2020.

**Course Organization:**

Solomon Carter Fuller Appreciation Day, February, 2022 Boston University School of Medicine

Boston University CTE course, 2021-2024, course organizer and speaker

AAN Annual meeting Behavioral Neurology Section Organizer and session moderator, 2022-2024

**Invited Didactic and Course Teaching:**

HSS Psychiatry Program, 2016-2024 Dementia presenting as a neuropsychiatric disorder

BU Neurology Residency Program 2022, Amyloid PET ordering in a Memory Disorders clinic

Science of Alzheimer’s disease course (BU Behavioral Neuroscience graduate program) May 2024, Pharmacological and non-pharmacological interventions for cognition in Alzheimer’s disease

Non-Alzheimer’s dementias (BU Behavioral Neuroscience graduate program) 2023 and 2024

**Invited Talks:**

Standish Village Brockton October 2021, “Alzheimer’s disease and dementia”

Union Capital Boston, October 2022 “Alzheimer’s disease and dementia”

Standish Village, Dorchester 11/2022, “Alzheimer’s disease and dementia”

Boston Public Library, Roslindale Branch 1/2023, “Alzheimer’s disease and dementia”

Union Capital Boston, 2/2023 “Alzheimer’s disease and dementia”

Boston Public Library, Jamaica Plain Branch 2/2023, “Alzheimer’s disease and dementia”

Milton Council on Aging, June 2023, “Alzheimer’s disease and dementia”

Boston Public Library, Dorchester Branch 6/2023, “Alzheimer’s disease and dementia”

Memory and Aging Café, City of Boston, 8/2023 “Alzheimer’s disease and dementia”

University of Massachusetts Lowell, 9/2023, “Chronic Traumatic Encephalopathy and Veterans”

Hyde Park Community Center Line Dancing Memory Event, 9/2023 “Alzheimer’s disease and dementia”

Massachusetts Council on Aging, Foxboro, 11/2023 “Alzheimer’s disease and dementia”

**Mentees**

1. Prayerna Uppal, undergraduate research assistant, 2016-2017 currently medical student at George Washington University
2. Minny Suh, research assistant 2016-2017, current clinical project manager Akili interactive
3. Anna Marin, research assistant 2017-2018 and former graduate student Boston University Behavioral Neuroscience doctoral program, defended Spring 2023, current postdoctoral research fellow, Mt. Sinai
4. Kylie Schilosky, research assistant 2018-2022, graduate student Brandeis University psychology doctoral program
5. August Price, Psychology doctoral student senior thesis, William James College, 2017-2020 current post-doctoral candidate UT Southwestern
6. Ana Vives-Rodriguez, MD, former Behavioral Neurology clinical fellow, currently faculty, Yale School of Medicine
7. Chad Lane, MD, Behavioral Neurology clinical fellow, currently faculty UTSW
8. Tala Tahir, Psychology doctoral student senior thesis, William James College, 2020-2022
9. Matthew Veale, summer medical student, 2022
10. Meltem Karaca, PhD Post-doctoral fellow 2022-8/2024, accepted tenure track faculty position, Assumptuon University
11. Kristina Morreale, Research Assistant, 2022-current
12. Myna Chadalavada, Research Assistant, 2022-current
13. Brenna Hagan, graduate student, behavioral Neuroscience doctoral program, Boston University, 2022-present
14. Andrea Ruff, psychology doctoral student, 2023-present