Stanford

Teddy J. Akiki, MD

Clinical Assistant Professor, Psychiatry and Behavioral Sciences

CLINICAL OFFICE (PRIMARY)

- **Stanford Dept of Psychiatry and Behavioral Sciences**

  401 Quarry Rd

  MC 5718

  Stanford, CA 94305

  Tel (650) 498-9111 **Fax** (650) 498-4960

Bio

BIO

Teddy Akiki, MD, is a Clinical Assistant Professor in the Department of Psychiatry and Associate Director of Computational Neuroscience at the Center for Precision Mental Health at Stanford University. His research integrates artificial intelligence, multimodal neuroimaging, and clinical neuroscience to develop novel approaches for psychiatric diagnosis and treatment selection. Dr. Akiki's work focuses on developing transformer-based foundation models for neuroimaging data analysis and multimodal connectomics to map neural circuits in stress-related disorders. His research has been published in NeuroImage, Scientific Reports, and Nature Reviews Neuroscience, with recognition from the NIMH and the Society of Biological Psychiatry.

As a board-certified psychiatrist with expertise in treatment-resistant depressive, anxiety, and trauma/stress-related disorders, Dr. Akiki applies principles of precision psychiatry in clinical care through the Stanford Precision Psychiatry Clinic, where he combines neuroimaging, cognitive testing, and pharmacogenomic data to enhance treatment selection.

Dr. Akiki's neurocomputational psychiatry program aims to advance precision approaches in mental health by identifying individual neurobiological profiles that can guide personalized interventions.

CLINICAL FOCUS

- Psychiatry
- Precision Medicine
- Neuroimaging
- Treatment-Resistant Depressive Disorders
- Trauma and Stressor Related Disorders

ACADEMIC APPOINTMENTS

- Clinical Assistant Professor, Psychiatry and Behavioral Sciences
- Member, Wu Tsai Human Performance Alliance

- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Faculty Affiliate, Institute for Human-Centered Artificial Intelligence (HAI), (2025- present)
- Faculty Affiliate, Center for Artificial Intelligence in Medicine and Imaging, (2025- present)
- Associate Director of Computational Neuroscience, Stanford Center for Precision Mental Health, (2025- present)
- Co-Director, Precision Psychiatry Clinic, (2025- present)
- Member, Major Laboratories and Clinical & Translational Neurosciences Incubator, (2023- present)

HONORS AND AWARDS

- Early Career Investigator Award, Society of Biological Psychiatry (2025)
- Outstanding Resident Award Program, National Institute of Mental Health (2021)
- Resident-Fellow Research Award, Ohio Psychiatric Physicians Foundation (2020)
- Alies Muskin Career Development Leadership Award, Anxiety and Depression Association of America (2019)
- New Investigator Award, International Society for CNS Clinical Trials and Methodology (2018)
- Young Investigator Award, American Society of Clinical Psychopharmacology (2018)
- Outstanding Contribution in Reviewing, Neuroscience Letters (2016)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Editorial Board Member, Frontiers in Psychiatry (2022 - present)
- Editorial Board Member, Chronic Stress (2022 - present)
- Section Editor, Psychiatry and Psychology, Data in Brief (Elsevier) (2018 - 2021)

PROFESSIONAL EDUCATION

- Medical Education: American University of Beirut School of Medicine (2016) Lebanon
- Board Certification, American Board of Psychiatry and Neurology (2023)
- Residency, Stanford University , Psychiatry and Behavioral Sciences (2023)
- Residency, Cleveland Clinic Foundation , Psychiatry (2022)
- Postdoctoral Fellowship, Yale University School of Medicine , Neuroimaging, Network Neuroscience, Psychopharmacology (2019)
- Postdoctoral Fellowship, National Center for PTSD – Clinical Neurosciences Division , Trauma- and Stress-Related Disorders; Rapid-Acting Antidepressants (2019)
- Doctor of Medicine, American University of Beirut , Medicine (2016)
- Bachelor of Science, American University of Beirut , Biology; Psychology (2012)

LINKS

- Center for Precision Mental Health: https://www.stanfordpmhw.com
- Google Scholar: https://scholar.google.com/citations?user=psQABWkAAAAJ

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Dr. Akiki's research focuses on advancing precision psychiatry through computational neuroscience approaches. His work centers on developing transformer-based foundation models for functional neuroimaging that can predict treatment responses and symptom trajectories in psychiatric disorders. Using multimodal connectomics (combining structural, functional, and diffusion MRI), he maps neural circuits underlying stress-related

conditions, with particular emphasis on identifying dysconnectivity patterns in PTSD and depression. Dr. Akiki develops novel analytical methods for neuroimaging data, including network-restricted metrics and community detection frameworks optimized for functional time series. His translational work includes neuroimaging-augmented clinical trials of novel therapeutics for treatment-resistant psychiatric disorders, with the goal of implementing data-driven, personalized interventions based on individual neurobiological profiles.

CLINICAL TRIALS

- Stratified Pharmacological Approaches for Regulating Circuit-Level Effects, Not Recruiting

Publications

PUBLICATIONS

- **Transforming psychiatry with computational and brain-based methods.** *Nature computational science*
  Akiki, T. J., Williams, L. M., Wolfers, T., Yang, Y., Stahl, D., Gillan, C. M.
  2025; 5 (10): 844-847

- **Developing Clinically Interpretable Neuroimaging Biotypes in Psychiatry.** *Biological psychiatry*
  Ahn, J., Foland-Ross, L., Akiki, T. J., Boyar, L., Wydler, I., Bostian, C., Zhang, X., Yang, H. J., Ellsay, A., Ma, E., Rajasekharan, D., Holtzheimer, P., Lim, et al
  2025

- **Functional connectome-based predictive modeling of suicidal ideation.** *Journal of affective disorders*
  Averill, L. A., Tamman, A. J., Fouda, S., Averill, C. L., Nemati, S., Ragnhildstveit, A., Gosnell, S., Akiki, T. J., Salas, R., Abdallah, C. G.
  2025: 119518

- **Transformer-Based Foundation Model for Functional Neuroimaging**
  Akiki, T., Tripathy, M., Zhang, X., Pines, A., Caro, J., Rizvi, S., Averill, C., van Dijk, D., Abdallah, C., Williams, L.
  ELSEVIER SCIENCE INC.2025

- **Neural circuit basis of pathological anxiety.** *Nature reviews. Neuroscience*
  Akiki, T. J., Jubeir, J., Bertrand, C., Tozzi, L., Williams, L. M.
  2024

- **Mapping the Depressed Brain Under Stress Using Multimodal Neuroimaging.** *The American journal of psychiatry*
  Akiki, T. J., Abdallah, C. G.
  2024; 181 (7): 578-580

- **Findings of PTSD-specific deficits in default mode network strength following a mild experimental stressor.** *NPP--Digital Psychiatry and Neuroscience*
  Averill, C. L., Averill, L. A., Akiki, T. J., Fouda, S., Krystal, J. H., Abdallah, C. G.
  2024; 2 (1): 9

- **Bibliometric Analysis of Academic Journal Articles Reporting Results of Psychedelic Clinical Studies** *JOURNAL OF PSYCHOACTIVE DRUGS*
  Weleff, J., Akiki, T. J., Barnett, B. S.
  2022: 1-11

- **At-home, sublingual ketamine telehealth is a safe and effective treatment for moderate to severe anxiety and depression: Findings from a large, prospective, open-label effectiveness trial.** *Journal of affective disorders*
  Hull, T. D., Malgaroli, M., Gazzaley, A., Akiki, T. J., Madan, A., Vando, L., Arden, K., Swain, J., Klotz, M., Paleos, C.
  2022; 314: 59-67

- **The State of the Catatonia Literature: Employing Bibliometric Analysis of Articles From 1965-2020 to Identify Current Research Gaps.** *Journal of the Academy of Consultation-Liaison Psychiatry*
  Weleff, J., Barnett, B. S., Park, D. Y., Akiki, T. J., Aftab, A.
  2022

- **Pretreatment Brain Connectome Fingerprint Predicts Treatment Response in Major Depressive Disorder.** *Chronic stress (Thousand Oaks, Calif.)*

Fan, S., Nemati, S., Akiki, T. J., Roscoe, J., Averill, C. L., Fouda, S., Averill, L. A., Abdallah, C. G.
2020; 4: 2470547020984726

- **A Shift in Executive Connectivity Predates and Predicts Response to Treatment in Major Depressive Disorder**
  Nemati, S., Akiki, T., Ju, Y., Averill, C., Fouda, S., Dutta, A., Mckie, S., Krystal, J., Deakin, B., Averill, L., Abdallah, C.
  ELSEVIER SCIENCE INC.2020: S107
- **A Unique Brain Connectome Fingerprint Predates and Predicts Response to Antidepressants** *ISCIENCE*
  Nemati, S., Akiki, T. J., Roscoe, J., Ju, Y., Averill, C. L., Fouda, S., Dutta, A., McKie, S., Krystal, J. H., Deakin, J., Averill, L. A., Abdallah, C. G.
  2020; 23 (1): 100800
- **Determining the Hierarchical Architecture of the Human Brain Using Subject-Level Clustering of Functional Networks** *SCIENTIFIC REPORTS*
  Akiki, T. J., Abdallah, C. G.
  2019; 9: 19290
- **Are There Effective Psychopharmacologic Treatments for PTSD?** *JOURNAL OF CLINICAL PSYCHIATRY*
  Akiki, T. J., Abdallah, C. G.
  2019; 80 (3)
- **The Neurobiology and Pharmacotherapy of Posttraumatic Stress Disorder** *ANNUAL REVIEW OF PHARMACOLOGY AND TOXICOLOGY, VOL 59*
  Abdallah, C. G., Averill, L. A., Akiki, T. J., Raza, M., Averill, C. L., Gomaa, H., Adikey, A., Krystal, J. H.
  edited by Insel, P. A.
  2019; 59: 171-189
- **Neurobiological studies of trauma-related psychopathology: a public health perspective** *EUROPEAN JOURNAL OF PSYCHOTRAUMATOLOGY*
  Akiki, T. J., Averill, L. A., Abdallah, C. G.
  2018; 9 (1): 1556554
- **Altered White Matter Diffusivity of the Cingulum Angular Bundle in Posttraumatic Stress Disorder.** *Molecular neuropsychiatry*
  Averill, C. L., Averill, L. A., Wrocklage, K. M., Scott, J. C., Akiki, T. J., Schweinsburg, B., Southwick, S. M., Krystal, J. H., Abdallah, C. G.
  2018; 4 (2): 75-82
- **Topology of brain functional connectivity networks in posttraumatic stress disorder** *DATA IN BRIEF*
  Akiki, T. J., Averill, C. L., Wrocklage, K. M., Scott, J., Averill, L. A., Schweinsburg, B., Alexander-Bloch, A., Martini, B., Southwick, S. M., Krystal, J. H., Abdallah, C. G.
  2018; 20: 1658-1675
- **Ketamine, but Not the NMDAR Antagonist Lanicemine, Increases Prefrontal Global Connectivity in Depressed Patients.** *Chronic stress (Thousand Oaks, Calif.)*
  Abdallah, C. G., Dutta, A., Averill, C. L., McKie, S., Akiki, T. J., Averill, L. A., Deakin, J. F.
  2018; 2
- **Default mode network abnormalities in posttraumatic stress disorder: A novel network-restricted topology approach** *NEUROIMAGE*
  Akiki, T. J., Averill, C. L., Wrocklage, K. M., Scott, J., Averill, L. A., Schweinsburg, B., Alexander-Bloch, A., Martini, B., Southwick, S. M., Krystal, J. H., Abdallah, C. G.
  2018; 176: 489-498
- **Determining Human Brain Modular Architecture Using Subject-Level Functional Multilayer Networks**
  Akiki, T., Abdallah, C.
  ELSEVIER SCIENCE INC.2018: S297
- **Posttraumatic Stress Disorder and Depression Symptom Severities Are Differentially Associated With Hippocampal Subfield Volume Loss in Combat Veterans.** *Chronic stress (Thousand Oaks, Calif.)*
  Averill, C. L., Satodiya, R. M., Scott, J. C., Wrocklage, K. M., Schweinsburg, B., Averill, L. A., Akiki, T. J., Amoroso, T., Southwick, S. M., Krystal, J. H., Abdallah, C. G.
  2017; 1

- **A Network-Based Neurobiological Model of PTSD: Evidence From Structural and Functional Neuroimaging Studies** *CURRENT PSYCHIATRY REPORTS*
  Akiki, T. J., Averill, C. L., Abdallah, C. G.
  2017; 19 (11): 81

- **The Default Mode Network in Posttraumatic Stress Disorder (PTSD): A Data-Driven Multimodal Approach**
  Akiki, T., Averill, C., Wrocklage, K., Scott, J., Alexander-Bloch, A., Southwick, S., Krystal, J., Abdallah, C.
  ELSEVIER SCIENCE INC.2017: S235

- **Anterior hippocampal dysconnectivity in posttraumatic stress disorder: a dimensional and multimodal approach** *TRANSLATIONAL PSYCHIATRY*
  Abdallah, C. G., Wrocklage, K. M., Averill, C. L., Akiki, T., Schweinsburg, B., Roy, A., Martini, B., Southwick, S. M., Krystal, J. H., Scott, J. C.
  2017; 7: e1045

- **The Association of PTSD Symptom Severity with Localized Hippocampus and Amygdala Abnormalities.** *Chronic stress (Thousand Oaks, Calif.)*
  Akiki, T. J., Averill, C. L., Wrocklage, K. M., Schweinsburg, B., Scott, J. C., Martini, B., Averill, L. A., Southwick, S. M., Krystal, J. H., Abdallah, C. G.
  2017; 1

- **Contrasting Non-Linear Dynamic Analyses of EEG in Alert and Sedated States**
  Akiki, T., Doumit, M., Zaylaa, A., Karameh, F., Nahas, Z.
  NATURE PUBLISHING GROUP.2015: S184