Stanford

Elizabeth Beam

- Affiliate, Dean's Office Operations - Dean Other
- Resident in Psychiatry and Behavioral Sciences

Bio

BIO

As an MD/PhD candidate at Stanford, Ellie Beam was awarded F30 grant funding by the NIMH to undertake specialized training in computational psychiatry, and she defended a PhD thesis in the Neurosciences within three years. Her thesis synthesized the texts and data of nearly 20,000 neuroimaging articles into a data-driven ontology of human brain function, forming the basis for a US patent and a first-author article in Nature Neuroscience. The idea of mapping brain function from the neuroimaging literature had been sparked a decade earlier when working directly with Professor Scott Huettel as an undergraduate at Duke to map the semantic structure of cognitive neuroscience through network analyses of article texts. Her undergraduate thesis was published as a first-author article in the Journal of Cognitive Neuroscience and merited Graduation with Distinction in Neuroscience. She then dedicated two post-undergraduate years to full-time research in the lab of Professor Randy Buckner at Harvard and MGH, leading a project that related executive functioning deficits to frontoparietal network disruption in young adults at risk for depression. Her predoctoral work in neuroscience and psychiatry was recognized by the Leah J. Dickstein Medical Student Award, Angier B. Duke Memorial Scholarship and Research Fellowship, and Cleveland Technical Societies Scholarship.

CLINICAL FOCUS

- Residency

HONORS AND AWARDS

- Angier B. Duke Full Tuition Merit Scholarship, Duke University (2009 - 2013)
- Graduation with Distinction in English & Neuroscience, Duke University (2013)
- Summa Cum Laude, Duke University (2013)
- Leah J. Dickstein Medical Student Award, Association of Women Psychiatrists (2017)
- Ruth L. Kirschstein National Research Service Award (F30), National Institute of Mental Health (2020 - 2024)

PATENTS

- Amit Etkin, Elizabeth Beam. "United States Patent 16/888,530 Machine learning based generation of ontology for structural and functional mapping", Leland Stanford Junior University, Dec 24, 0020

Publications

PUBLICATIONS

- **Neurocysticercosis**
  Tu, J., Tran, D., Beam, E.
  RSNA Case Collection.
  2022

- **A data-driven framework for mapping domains of human neurobiology** *Nature Neuroscience*

  Beam, E., Potts, C., Poldrack, R. A., Etkin, A.

  2021

- **Registration-free analysis of diffusion MRI tractography data across subjects through the human lifespan.** *NeuroImage*

  Siless, V., Davidow, J. Y., Nielsen, J., Fan, Q., Hedden, T., Hollinshead, M., Beam, E., Vidal Bustamante, C. M., Garrad, M. C., Santillana, R., Smith, E. E., Hamadeh, A., Snyder, et al

  2020: 116703

- **Mapping Rhetorical Topologies in Cognitive Neuroscience** *TOPOLOGIES AS TECHNIQUES FOR A POST-CRITICAL RHETORIC*

  Jack, J. L., Appelbaum, G., Beam, E. H., Moody, J., Huettel, S. A.

  Palgrave Macmillan.2017: 125–150

- **Mapping the Semantic Structure of Cognitive Neuroscience** *JOURNAL OF COGNITIVE NEUROSCIENCE*

  Beam, E., Appelbaum, L. G., Jack, J., Moody, J., Huettel, S. A.

  2014; 26 (9): 1949-1965