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November 3, 2016

To the Search Committee of the Department of Psychological & Brain Sciences:

Please find attached my application for consideration as a tenure-track assistant professor of Psychological & Brain Sciences at Boston University. I completed my Ph.D. in neuroscience at MIT under the supervision of Susumu Tonegawa and I am currently a Principle Investigator and Junior Fellow at Harvard University.

The mission of my laboratory is to understand the basic mechanisms governing memory formation and retrieval, and to leverage this knowledge to alleviate maladaptive states. My previous work identified specific cellular ensembles active during various mnemonic phases, genetically engineered these cells to respond to light, and optically activated or inhibited these cells while measuring the associated behavioral outputs. These projects focused on mapping out which brain regions were necessary and/or sufficient for memory recall, artificially creating false memories in the rodent brain, modulating the emotional strength associated with specific memories, and utilizing these aforementioned manipulations to reverse depression-like phenotypes in rodents. My future projects aim to use a multidisciplinary approach to study the brain-wide mechanisms supporting memory formation, to deconstruct memories into their circuit elements, and to artificially modulate memories to combat psychiatric disease-like states.

My substantial training in neuroscience and teaching has provided me with the comfort and leadership necessary to successfully organize and execute my proposed projects and classes. My areas of expertise include rodent behavioral neuroscience, optogenetics, chemogenetics, immunohistochemistry, and pharmacology. In terms of teaching, I have over 7 years of experience educating undergraduates, graduate students, and postdoctoral fellows. Fittingly, I am thrilled by the prospect of bringing my expertise in research and education to Boston University's vibrant neuroscience community.

In addition to my cover letter, my application package includes my C.V., research and teaching statements, reprints of published papers, and three letters of recommendation from the following:

Susumu Tonegawa
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Joshua Sanes
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Thank you for your consideration of this application; I am happy to provide any more information in the meantime at your convenience.

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