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Gabriel Koch Ocker*, Allen Institute for Brain Science, 615 Westlake Ave N, Seattle, WA 98109, and **Ramakrishnan Iyer** (rami@alleninstitute.org), Allen Institute for Brain Science, 615 Westlake Ave N, Seattle, WA 98109. *An overview of Allen Institute for Brain Science data.*

The Allen Institute for Brain Science provides an open-source platform for large scale, standardized experimental datasets concerning the structure, composition and activity of the mouse and human nervous systems. Current freely available resources focus on gene expression, mesoscopic connectivity, neuronal morphology and activity both in slice and in vivo (www.brain-map.org). We present an overview of these datasets, focusing on two recently released datasets of high-throughput recordings of neural activity - the Allen Brain Observatory and the Allen Cell Types Database.

The Allen Brain Observatory is comprised of high-throughput recordings of populations of neurons, with cellular resolution, in visual areas of the awake mouse. The Allen Cell Types Database, on the other hand, contains (among other data) the responses of individual neurons from brain slices to different types of current injection in the soma. We discuss our efforts to understand the dimensionality of in vivo activity and relate population activity to external sensory stimuli and internal states, as well as our efforts to characterize and constrain dynamical single-cell models. (Received February 28, 2017)