20th PUBLIC DATA RELEASE BY ALLEN INSTITUTE FOR BRAIN SCIENCE INCLUDES ALLEN HUMAN BRAIN ATLAS ENHANCEMENTS AND TWO NEW ONLINE RESOURCES

Human glioblastoma and brain development atlases join the Allen Human Brain Atlas to provide researchers with a trio of public online resources for exploring genes at work in the human brain

SEATTLE, Wash.—November 2, 2010—The Allen Institute for Brain Science (www.alleninstitute.org) announced today its twentieth public data release, which includes new data and tools for exploring genes at work in the human brain. In addition to expanding and enhancing the Allen Human Brain Atlas, the Allen Institute launched two new human brain resources: the Ivy Glioblastoma Atlas Project and the NIMH Transcriptional Atlas of Human Brain Development.

“Few researchers have the opportunity to study the human brain itself,” said Allan Jones, Ph.D., chief executive officer of the Allen Institute for Brain Science. “We are delighted that our online resources make data from the human brain readily available to the global research community.”

ALLEN Human Brain Atlas
The Allen Human Brain Atlas is a unique multi-modal, three-dimensional map of the human brain that integrates anatomical and gene expression data. The latest release expands the scope and usability of this public resource and includes:

• Gene expression data from two donor brains each for the "all genes, all structures" microarray survey (approximately 1,000 discrete anatomic samples from one brain and an initial 450 samples from a second brain) and for the more focused in situ hybridization study of subcortical brain regions; and

• New features for browsing and searching the gene expression data, including an interactive heat map viewer for exploring the extensive microarray data, NeuroBlast search to identify genes with similar expression throughout the brain, and tools for comparing gene expression between brain regions or donors.

Additional data and more sophisticated visualization, navigation and mining tools will be available in subsequent releases. The next update is planned for March 2011.

Ivy Glioblastoma Atlas Project
The Ivy Glioblastoma Atlas Project is a collaborative partnership between the Ben and Catherine Ivy Foundation, the Allen Institute for Brain Science and the Ben and Catherine Ivy Center for Advanced Brain Tumor Treatment at the Swedish Neuroscience Institute. The goal of the project is to map the cellular and genetic makeup of the most aggressive type of brain tumor—glioblastoma—and make the data publicly available online for the global scientific and medical community. Funded by the Ben and Catherine Ivy Foundation, this resource has the potential to help match patients to the best therapies and accelerate discovery of new brain cancer treatments.

This initial public data release by the Allen Institute includes cellular resolution image data mapping gene expression using in situ hybridization in human glioblastoma from eight patients, associated histological data for neuropathological examination, and basic data search and viewing tools.
NIMH Transcriptional Atlas of Human Brain Development

The NIMH Transcriptional Atlas of Human Brain Development is a unique online public resource for studying human brain development. The atlas is being developed by a consortium consisting of the Allen Institute for Brain Science; Yale University; the University of Southern California; Massachusetts General Hospital, Harvard-MIT Health Sciences and Technology, Athinoula A. Martinos Center for Biomedical Imaging; and the University of California, Los Angeles, with strong collaborative support from the Genes, Cognition and Psychosis Program, which is part of the Intramural Research Program of NIMH, NIH.

This initial public release includes cellular resolution in situ hybridization image data detailing gene expression in the postnatal developing and adult human brain. These data focus on brain regions, developmental periods and genes that are important for a variety of human neurodevelopmental disorders. Upon completion in 2011, the atlas will provide a broad and detailed anatomical analysis of gene expression across human brain development, comprising in situ hybridization, RNA-sequencing and microarray approaches, along with supporting neuroanatomical reference content.

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ALLEN Brain Atlas

Since the completion of the Allen Institute’s first project, the Allen Mouse Brain Atlas, in 2006, the Allen Institute has expanded its collection of online public resources. All openly available via the Allen Brain Atlas data portal (www.brain-map.org), these resources now also include atlases of the mouse spinal cord, developing mouse brain and human brain, providing neuroscientists with detailed, anatomical maps showing which genes are turned on where in the nervous system. Each month, these resources are accessed by approximately 20,000 users worldwide.

About the Allen Institute for Brain Science

Launched in 2003, the Seattle-based Allen Institute for Brain Science is an independent, 501(c)(3) nonprofit medical research organization dedicated to advancing brain research. Started with $100 million in seed money from philanthropist Paul G. Allen, the Institute takes on projects at the leading edge of science—far-reaching projects at the intersection of biology and technology. The resulting data create publicly available resources that fuel discovery for countless other researchers worldwide. The Institute’s data and tools are available on the Web at www.alleninstitute.org.

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