

## ALLEN INSTITUTE *for* BRAIN SCIENCE

### For Immediate Release

# ALLEN INSTITUTE FOR BRAIN SCIENCE LAUNCHES NEW OPEN RESOURCES FOR SCIENTIFIC COMMUNITY

**SEATTLE, WASH. — December 19, 2007 —** The Allen Institute for Brain Science today announced the launch of new open resources and tools for researchers, all freely available online to accelerate progress by scientists worldwide toward understanding the brain in health and disease. The resources include an expanded, now complete, image-based gene expression dataset from the Institute's federally-funded sleep study; an entirely new resource presenting the Institute's first human cortex gene expression data; and enhancements to the Allen Brain Atlas.

"Building on the success of the Allen Brain Atlas, which is used by thousands of scientists worldwide, we are expanding the menu of data and tools we provide to the research community," said Allan Jones, Ph.D., chief scientific officer of the Allen Institute for Brain Science. "We are particularly excited that the Allen Institute is now offering a variety of resources, including both massive-scale projects such as the Allen Brain Atlas and more thematically focused resources such as the sleep and human cortex studies."

### **Sleep Study Data Released**

The Allen Institute for Brain Science's Sleep Study, funded by an award from the U.S. Department of Defense, comprises a large collection of gene expression data with comprehensive coverage throughout the mouse brain across five different conditions of sleep and wakefulness. Readily available to the public at no cost, the online database is now complete, with image-based data for 224 genes associated with sleeping or waking conditions, and a new tool for 3D visualization of changes in gene activity across different conditions.

"The Sleep Study showcases the Institute's efficient and productive use of external funding to create unparalleled scientific resources that are global in reach and impact," said Elaine Jones, chief operating officer at the Allen Institute for Brain Science. "This is a great example of effective use of government funds and a corresponding value returned to the community. We look forward to future partnerships along these lines."

Generated in collaboration with leading sleep researchers at SRI International, this unique dataset holds promise for accelerating progress toward understanding and effective treatment of sleep disorders. In particular, it has potential to help researchers make critical inroads toward improved understanding and management of the adverse effects of sleep deprivation on brain function, including impaired memory, concentration, mood and coordination. These effects, which can compromise health, performance and safety, are common among those required to work to extended hours, including military personnel, and others suffering from chronic sleep loss.

### **First Human Cortex Data Available**

The Allen Institute for Brain Science has launched a new Web application featuring the first

installment of data on gene expression in the human cortex, an area of the brain of broad scientific and clinical interest. With this initial release, data is available for approximately 500 genes in two areas of the human cortex: the visual cortex and the temporal cortex. Future data releases will expand the existing dataset to include additional genes and additional cortical regions, and each gene will be characterized in multiple individuals.

### **Allen Brain Atlas Enhanced**

The Allen Brain Atlas, the Allen Institute's inaugural project, is an open access, Web-based, genome-wide map of gene expression throughout the mouse brain. Since its completion in September 2006, the Allen Institute has continued to enhance the atlas with additional features and tools to further increase its utility to the scientific community. Accessed by approximately 10,000 distinct users each month, researchers in academic, pharmaceutical, government and other labs worldwide are using the data to address a wide range of questions about the brain in health and disease.

Current updates to the Allen Brain Atlas include:

- **Anatomic Gene Expression Atlas (AGEA)**, a novel approach to understanding the functional organization and anatomy of the brain. AGEA is an interactive three-dimensional atlas that reveals the organization of the mouse brain as derived exclusively from gene expression patterns without reference to classical neuroanatomy.
- **Fine Structure Annotation** detail for eight additional brain structures. These manually curated gene lists, now available for a total of 66 brain structures, direct researchers immediately to the 50 genes most specific to a specific brain structure.

The Allen Institute's projects are publicly available at no cost at <http://alleninstitute.org/content/projects.htm>. Technical details of the latest release can be found by following the <More> link in the Announcements box on the Allen Brain Atlas start page at <http://www.brain-map.org>.

### **About the Allen Institute for Brain Science**

Located in Seattle, Washington, the Allen Institute for Brain Science, [www.alleninstitute.org](http://www.alleninstitute.org), is an independent, 501(c)(3) non-profit medical research organization dedicated to performing innovative brain research and disseminating its discoveries to researchers around the world. In doing so, the Institute aims to advance a new understanding of diseases that result from disorders of the brain. Founded in 2001 and launched in 2003 with a seed contribution from philanthropist Paul G. Allen, the Allen Institute seeks federal and state funds, along with private contributions and foundation awards, as part of an ongoing public-private partnership to sustain the organization. The Institute's first project, the Allen Brain Atlas, is available online at [www.brain-map.org](http://www.brain-map.org).

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