

Elsevier's BrainNavigator 3.0 reflects the next step in enhancing neurological research

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Elsevier today announced a new version of its online research tool BrainNavigator. The first version, introduced in 2008, was well received by the neuroscience researcher community and received the prestigious PROSE Award in 2009. In the updated version, BrainNavigator 3.0, Elsevier has added critical new content and functionality to give researchers additional tools to accelerate their research.

BrainNavigator now includes the Rhesus Monkey atlas, developed by Editors-in-Chief, Professors George Paxinos and Charles Watson of the University of New South Wales in collaboration with Michael Petrides from McGill University in Montreal. BrainNavigator 3.0 also features the Atlas of the Human Brain, developed by Dr. Paxinos, Prof. Jürgen Mai and Dr. Thomas Voss at the University of Düsseldorf in Germany.

BrainNavigator is an online, interactive, 3D software tool that extends and advances the application of brain atlases and maps images of brain anatomy, helping neuroscience researchers save time and improve the quality of their daily research. BrainNavigator helps locate the position of structures within the brain, making visualization and communication about scientific findings about the brain easier.

"With BrainNavigator 3.0 we've addressed the wish lists of neuroscience researchers," said Suzanne BeDell, Managing Director of Elsevier Science & Technology Books. "We've added even more cutting-edge content and functions that streamline the way researchers work—from conceptualizing their experiments to planning their surgeries to

publishing their findings—BrainNavigator is there every step of the way, speeding research and improving results."

In addition to providing significant new functionalities designed to further support the neuroscientist's workflow in the lab, the new version of BrainNavigator continues to integrate digitized versions of the leading atlases. Other new functions include:

- Linking to the Allen Mouse [Brain Atlas gene expression](#) database. The open online Allen Mouse Brain Atlas, created by the Allen Institute for Brain Science, is a critical go-to resource for neuroscientists. Based on the Allen Institute's public application programming interface (API), users can now readily access Atlas data from within BrainNavigator. BrainNavigator 3.0—both free and subscription versions—allows users to easily overlay this gene expression data with anatomical information, helping them visualize which genes are expressed in various regions of the brain and to plan their experiments with greater accuracy, efficiency and validity.
- Create and save a series of slices from 3D to 2D. BrainNavigator 3.0 includes an improved version of its virtual brain slicing feature. Researchers are now able to determine the angle of the cut and subsequently virtually create a series of slices from one end of the brain to the other automatically, at their desired thickness. This process closely approaches the process in the lab with a real brain. The series of images can also be saved for use in the 2D Navigator for precise annotation and documentation of their work.
- Inclusion of fiber tracts. Over 70 new structures have been added for each rodent atlas. They are available in the 2D browser and in

the 3D models. Fiber tracts are often used as landmarks in the brain, and when used with the injection planning tool, they allow users to plan so they can avoid penetrating certain areas as needed.

- Inclusion of the rat and mouse chemoarchitectonic atlases. The chemoarchitectonic images provide more accurate delineation of structures and having multiple sources to compare creates deeper understanding of the user's own research.

"Users of our open online Allen Mouse Brain Atlas have long asked to be able to view our gene expression data in the anatomic framework developed by George Paxinos and Charles Watson," said Allan Jones, Ph.D., chief executive officer of the Allen Institute for [Brain](#) Science. "Now, in both free and subscription-based versions, users can bring our data into the BrainNavigator environment and do just that."

Offering both free and subscription-based content, BrainNavigator is used by the National Institutes of Health (NIH), Massachusetts Institute of Technology (MIT), Stanford University and other leading research institutions. Nothing in this press release constitutes or should be inferred to be an endorsement or recommendation of any product, service, or enterprise by the National Institutes of Health, any other agency of the United States Government, or any employee of the United States Government.

More information: www.brainnav.com/info

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