



VERSION 2023.1.1 (MAY 2023)

NEW FEATURES AND ENHANCEMENTS

- Image registration (alignment) to a reference brain atlas has been completely re-engineered to include new Volume Registration tools and to make registration easier to use, more dynamic, and more robust. Highlights include:
 - Using the new *Register Volume* process, you can align 3D volumes, either from intact, unsectioned tissue (e.g., cleared tissue) or blockface images, to a reference-brain atlas.
 - Registering 3D serial-section reconstructions to an atlas using the *Register Sections* set of tools has been enhanced with updated registration algorithms
 - Registration-integrated 3D visualization makes it easier to register experimental images to an atlas.
 - Atlas calibration has been incorporated into the registration process, streamlining your work.
 - New *Map Atlas to Experiment* tool, in combination with the updated *Map Experiment to Atlas* tool provides the capability to bidirectionally map experimental and atlas information.
 - New ability to assign brain regions to the left or right hemisphere
 - New ability to create and edit groups of anatomical structures of interest that can be used across experiments.
 - Updated Waxholm rat-brain atlas included
- Faster *Assemble Serial Sections* workflow processing to obtain 3D reconstructions from serial-section image sets.
- Nikon ND2 and Olympus VSI image formats are now supported
- Improved handling of multiple image formats, including CZI and some TIFF file types
- New *Pipelines* ribbon houses features previously located in the *Automatic* section of the *Registration Ribbon*
- New *Batch Pipeline* enables easy-to-use batch image filtering of multiple images—find it on the *Pipelines* ribbon
- In the *Cell detection* workflow, the image source is now automatically updated based on the image modality selected

ISSUES RESOLVED

- Fixes to improve stability were made throughout NeuroInfo
- Improved detection and cropping functionality in the *Assemble Serial Sections* workflow (previously called the *BrainMaker* workflow)
- Fixed the display of error messages if they are encountered