

Template generation

Multi-modal acquisition

Modalities

LSFM

FA

DWI

LSFM

MTR

ADC

Specimen 1

Specimen 2

Specimen 3

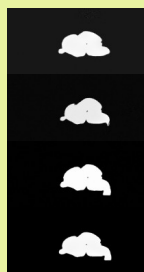
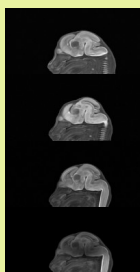
... Specimen

* E15.5 illustrated

Pre-processing

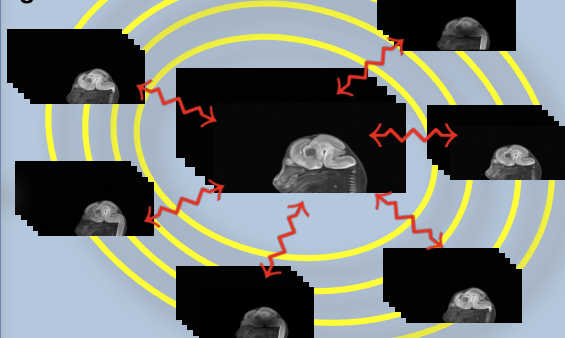
N4 + denoise

Brain extraction



ants.n4_bias_field_correction
ants.denoise_image
antspynet.mouse_brain_extraction

Multi-modal template generation



ants.build_template

Template-based applications

Template gene expression mapping

Original

Invert

B-spline interp.

Mapped histology

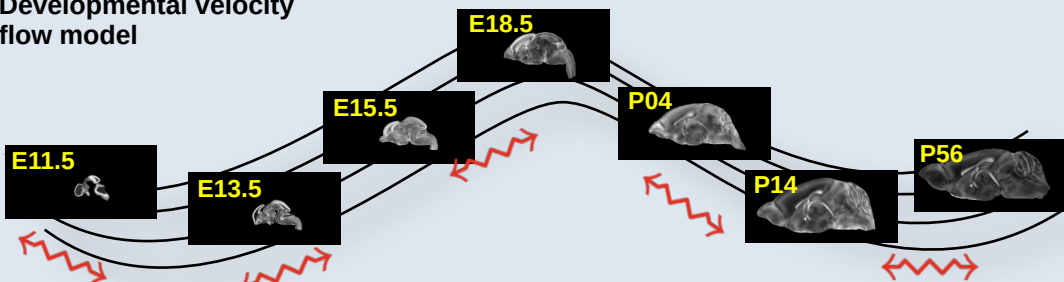
Gene B

FA template

Gene A

ants.registration
ants.apply_transforms
ants.fit_bspline_object_to_scattered_data

Developmental velocity flow model



ants.fit_time_varying_transform_to_point_sets
ants.integrate_velocity_field