

# BrainSpan

## BrainSpan Atlas of the Developing Human Brain

This is the online help for the BrainSpan Atlas of the Developing Human Brain Web application.

The BrainSpan Atlas of the Developing Human Brain is designed as a foundational resource for studying transcriptional mechanisms involved in human brain development. The atlas will contain a variety of data modalities and covers several developmental stages. The data includes:

**Gene expression data** - transcriptome profiling measured by RNA sequencing (RNA-Seq) and exon microarray, microarray expression for finely sampled structures and *in situ* hybridization (ISH)

**Anatomic data** - reference atlases, MRI, histology

The currently available dataset is described below. For complete details please see the White Papers on our [Documentation](#) page.

### KEY FEATURES:

#### [Transcriptome Profiling Data](#)

RNA-Seq and exon array expression data are available for 13 stages of development over 16 structures.

#### [Microarray Data for Finely Sampled Prenatal Structures](#)

Microarray data are available for ~300 structures obtained by laser microdissection (LMD) at midgestational developmental stages (15-21 pcw) of four male and female donors.

#### [In Situ Hybridization \(ISH\) Data](#)

Gene expression data is available as colorimetric *in situ* hybridization (ISH) for specific brain regions. Images are grouped into image series that comprise an experiment. Experiments consist of slides from the same specimen that receive the same treatment, whether it is Nissl staining or ISH with a probe for a particular gene.

#### [References Atlases](#)

Full color, high-resolution digital atlases accompanied by a hierarchically organized taxonomy of developing human brain structures are available. Fully annotated coronal sections spanning the rostro-caudal extent of the brain at 500-3400 micron are available for 15 pcw, 21 pcw and 34 years. A brainstem atlas at 21 pcw is available at 250-500 micron intervals.