Resource Summary Report

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NIH Blueprint NHP Atlas

RRID:SCR_010559
Type: Tool

Proper Citation

NIH Blueprint NHP Atlas (RRID:SCR_010559)

Resource Information

URL: http://www.blueprintnhpatlas.org/

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Description: Atlas of gene expression in the developing rhesus macaque brain. This atlas is a free online resource with a unique set of data and tools aimed to create a developmental neuroanatomical framework for exploring the cellular and molecular architecture of the developing postnatal primate brain with direct relevance for human brain development. The atlas includes: * Microarray ** Microdissection: Fine structure transcriptional profiling across postnatal development for fine nuclear subdivisions of the prefrontal cortex, primary visual cortex, hippocampus, amygdala and ventral striatum ** Macrodissection: Gross structure transcriptional profiling across postnatal development for the same structures * ISH: ** Cellular resolution in situ hybridization image data of five major brain regions during postnatal developmental periods for genes clinically important for a variety of human neurodevelopmental disorders, including prefrontal cortex, primary visual cortex, hippocampus, amygdala and ventral striatum. ** Serial analysis of selected genes across the entire adult brain, focusing on cellular marker genes, genes with cortical area specificity and gene families important to neural function. * ISH Anatomic Search: Detailed gene expression search on the ISH data based on expert annotation * Reference Data: Developmental stage-specific reference series, consisting of magnetic resonance imaging (MRI) and Nissl histology to provide a neuroanatomical context for the gene expression data. These data and tools are designed to provide a valuable public resource for researchers and educators to explore neurodevelopment in non-human primates, and a key evolutionary link between other Web-based gene expression atlases for adult and developing mouse and human brain.

Abbreviations: NHP Atlas

Synonyms: NIH Blueprint Non-Human Primate Atlas

Resource Type: data or information resource, expression atlas, database, atlas, reference atlas

Keywords: molecular neuroanatomy resource, developing brain, development, brain, gene expression, postnatal, mrna transcript, in situ hybridization, prefrontal cortex, primary visual cortex, hippocampus, amygdala, ventral striatum, dna microarray, magnetic resonance imaging, nissl, histology, brain development, developmental stage, microdissection, macrodissection, microarray, cell density, neuroanatomy, non-human primate

Related Condition: Neurodevelopmental disorder

Funding: NIH Blueprint for Neuroscience Research ;
NIMH contract HHSN-271-2008-0047

Availability: Free

Resource Name: NIH Blueprint NHP Atlas

Resource ID: SCR_010559

Alternate IDs: nlx_37895

Record Creation Time: 20220129T080259+0000

Record Last Update: 20250521T061345+0000

Ratings and Alerts

No rating or validation information has been found for NIH Blueprint NHP Atlas.

No alerts have been found for NIH Blueprint NHP Atlas.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 23 mentions in open access literature.

Listed below are recent publications. The full list is available at dkNET.

Kenwood MM, et al. (2023) Gene expression in the primate orbitofrontal cortex related to anxious temperament. Proceedings of the National Academy of Sciences of the United States of America, 120(49), e2305775120.

Anderson KM, et al. (2020) Transcriptional and imaging-genetic association of cortical interneurons, brain function, and schizophrenia risk. Nature communications, 11(1), 2889.

Jiang S, et al. (2020) Identification of de novo mutations in prenatal neurodevelopment-associated genes in schizophrenia in two Han Chinese patient-sibling family-based cohorts. Translational psychiatry, 10(1), 307.

Wang W, et al. (2019) Understanding Molecular Mechanisms of the Brain Through Transcriptomics. Frontiers in physiology, 10, 214.

Binks D, et al. (2019) A Re-evaluation of the Anatomy of the Claustrum in Rodents and Primates-Analyzing the Effect of Pallial Expansion. Frontiers in neuroanatomy, 13, 34.

Pearl JR, et al. (2019) Genome-Scale Transcriptional Regulatory Network Models of Psychiatric and Neurodegenerative Disorders. Cell systems, 8(2), 122.

Li J, et al. (2019) Application of Computational Biology to Decode Brain Transcriptomes. Genomics, proteomics & bioinformatics, 17(4), 367.

Gomez J, et al. (2019) Human visual cortex is organized along two genetically opposed hierarchical gradients with unique developmental and evolutionary origins. PLoS biology, 17(7), e3000362.

Patwardhan D, et al. (2018) STIL balancing primary microcephaly and cancer. Cell death & disease, 9(2), 65.

Anderson KM, et al. (2018) Gene expression links functional networks across cortex and striatum. Nature communications, 9(1), 1428.

Sorrells SF, et al. (2018) Human hippocampal neurogenesis drops sharply in children to undetectable levels in adults. Nature, 555(7696), 377.

Kelley KW, et al. (2018) Variation among intact tissue samples reveals the core transcriptional features of human CNS cell classes. Nature neuroscience, 21(9), 1171.

Adams Waldorf KM, et al. (2018) Congenital Zika virus infection as a silent pathology with loss of neurogenic output in the fetal brain. Nature medicine, 24(3), 368.

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Jasinska AJ, et al. (2017) Genetic variation and gene expression across multiple tissues and developmental stages in a nonhuman primate. Nature genetics, 49(12), 1714.

Kamitakahara A, et al. (2017) Distinct projection targets define subpopulations of mouse brainstem vagal neurons that express the autism-associated MET receptor tyrosine kinase. The Journal of comparative neurology, 525(18), 3787.

Bakken TE, et al. (2016) A comprehensive transcriptional map of primate brain development. Nature, 535(7612), 367.

Bakken TE, et al. (2015) Spatiotemporal dynamics of the postnatal developing primate brain transcriptome. Human molecular genetics, 24(15), 4327.

Boyd JL, et al. (2015) Human-chimpanzee differences in a FZD8 enhancer alter cell-cycle dynamics in the developing neocortex. Current biology : CB, 25(6), 772.

Willsey AJ, et al. (2015) Autism spectrum disorders: from genes to neurobiology. Current opinion in neurobiology, 30, 92.