

Resource Summary Report

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Department of Psychiatry, Turner Laboratory

RRID:SCR_008067

Type: Tool

Proper Citation

Department of Psychiatry, Turner Laboratory (RRID:SCR_008067)

Resource Information

URL: <http://psychiatry.ucsd.edu/Neuroembryologylab/index.htm>

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Description: Dr. Eric Turner's laboratory studies the mechanisms underlying the development of the nervous system. The vertebrate brain is comprised of a tremendous variety of neurons, each class exhibiting a unique phenotype characterized by the expression of specific neurotransmitter receptors, ion channels, patterns of axonal growth, and synapse formation. The research we conduct focuses on the critical role transcription factors play in the specification of neuronal cell type during development. We are particularly interested in transcription factors of the homeodomain family that bind to DNA and in doing so activate or repress gene expression. One area of study is the role of POU-domain transcription factor Brn3a in axon growth and survival. The primary research areas are: * Neuronal cell fate determination: The expression of regulatory genes is manipulated in living chick embryos using microsurgery and electroporation and the effects on neural marker genes studied. * Molecular mechanisms of gene regulation: Target DNA binding sites of neural transcription factors are biochemically characterized and findings coordinated with sequence data from the mouse and human genomes. * Targeted misexpression of regulatory genes: Transgenic and knockout mouse technology is used to misexpress genes of interest, and the effects on neural marker genes, axonal growth, and cell survival studied. * Global analysis of neural gene expression: Micro-arrays (GeneChips) are employed in conjunction with other areas of study to understand the coordinated regulation of gene expression in the nervous system. Dr. Turner is a member of the University of California, San Diego's Graduate Program in Neuroscience and Biomedical Sciences Program and accepts students from these two programs. Interesting rotation projects are available using methods ranging from biochemistry and molecular biology to embryology. Additionally, Dr. Turner is also the Director of this NIMH-funded training program for research-oriented psychiatrists, psychologists, and basic neuroscientists working in areas relevant to psychiatry. Typically Fellows spend two years in the program, during which they develop a research project under the close supervision of one of the highly productive members of the UCSD Department of Psychiatry, or another investigator in the La Jolla (UCSD/Salk/Scripps) research community.

Abbreviations: Turner Lab

Synonyms: UCSD Turner Laboratory, UCSD Psychiatry (Turner"s Lab), Turner Laboratory, Turner Laboratory Developmental Neurobiology Research

Resource Type: organization portal, data or information resource, laboratory portal, portal

Keywords: electroporation, embryo, embryology, expression, gene, axon, biochemistry, biomedical science, cell, c hick, development, dna, dna binding site, homeodomain, human, knockout technology, microarray, microsurgery, misexpression, molecular biology, molecular mechanism, mouse, nervous system, neural gene, neural marker gene, neural transcription factor, neuronal cell, neuroscience, neuroscientist, psychiatrist, psychologist, regulation, regulatory gene, transcription factor, transgenic technology

Resource Name: Department of Psychiatry, Turner Laboratory

Resource ID: SCR_008067

Alternate IDs: nif-0000-10507

Record Creation Time: 20220129T080245+0000

Record Last Update: 20260804T043353+0000

Ratings and Alerts

No rating or validation information has been found for Department of Psychiatry, Turner Laboratory.

No alerts have been found for Department of Psychiatry, Turner Laboratory.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We have not found any literature mentions for this resource.