# Resource Summary Report

Generated by NIF on Sep 1, 2026

## Genetic Tools Atlas

RRID:SCR_025643
Type: Tool

### Proper Citation

Genetic Tools Atlas (RRID:SCR_025643)

### Resource Information

**URL:** https://portal.brain-map.org/genetic-tools/genetic-tools-atlas

**Proper Citation:** Genetic Tools Atlas (RRID:SCR_025643)

**Description:** Searchable catalog of enhancer-adeno-associated viruses (AAVs) that have been developed and tested at the Allen Institute for Brain Science. We present a suite of enhancer AAVs that can provide access to specific cell types when delivered to the whole brain. Multiple epigenomic and transcriptomic datasets were interrogated to reveal candidate enhancers that are selectively accessible in particular cell populations. Enhancer AAVs were constructed and screened for desirable expression and a sizeable subset of enhancer AAVs were subjected to further characterization by single cell transcriptomics and/or brain-wide expression imaging in mouse. In the GTA, we present a large toolkit for selective gene expression in cell types of interest. Genetic Tools Atlas is part of the growing Brain Knowledge Platform.

**Abbreviations:** GTA

**Synonyms:** Allen Genetic Tools Atlas

**Resource Type:** atlas, catalog, data or information resource, database

**Keywords:** enhancer-adeno-associated viruses, enhancer AAVs, mouse transgenes, epifluorescence imaging, serial two-photon tomography, sc/snRNA-seq, genetic tools,

**Funding:** NIMH 1RF1 MH114126;
NIMH 1RF1 MH121274;
NIMH 1UF1 MH128339;
NIMH 1UG3 MH120095;
Paul G. Allen Foundation n/a

**Availability:** Free, Freely available

**Resource Name:** Genetic Tools Atlas

**Resource ID:** SCR_025643

**Alternate URLs:** https://knowledge.brain-map.org/data/7CVKSF7QGAKIQ8LM5LC/summary, https://knowledge.brain-map.org/data/7CVKSF7QGAKIQ8LM5LC/specimens



**License URLs:** https://www.alleninstitute.org/legal/terms-use/

**Record Creation Time:** 20240822T053247+0000

**Record Last Update:** 20260829T183408+0000

## Ratings and Alerts

No rating or validation information has been found for Genetic Tools Atlas.

No alerts have been found for Genetic Tools Atlas.

## Data and Source Information

**Source:** SciCrunch Registry

## Usage and Citation Metrics

We found 9 mentions in open access literature.

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

Wirthlin ME, et al. (2026) A Cross-Species Enhancer-AAV Toolkit for Cell Type-Specific Targeting Across the Basal Ganglia. bioRxiv : the preprint server for biology.

Hunker AC, et al. (2026) Technical and biological sources of noise confound multiplexed enhancer AAV screening. Nature communications, 17(1).

Matuszek Z, et al. (2025) Current trends in gene therapy to treat inherited disorders of the brain. Molecular therapy : the journal of the American Society of Gene Therapy, 33(5), 1988.

Hunker AC, et al. (2025) Technical and biological sources of noise confound multiplexed enhancer AAV screening. bioRxiv : the preprint server for biology.

Hunker AC, et al. (2025) Enhancer AAV toolbox for accessing and perturbing striatal cell types and circuits. Neuron, 113(10), 1507.

Ben-Simon Y, et al. (2025) A suite of enhancer AAVs and transgenic mouse lines for genetic access to cortical cell types. Cell, 188(11), 3045.

Tasic B, et al. (2025) Exploring brain circuits, one cell type-or more- at a time. Neuron, 113(10), 1469.

Hunker AC, et al. (2024) Enhancer AAV toolbox for accessing and perturbing striatal cell types and circuits. bioRxiv : the preprint server for biology.

Ben-Simon Y, et al. (2024) A suite of enhancer AAVs and transgenic mouse lines for genetic access to cortical cell types. bioRxiv : the preprint server for biology.