

Resource Summary Report

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GenitoUrinary Development Molecular Anatomy Project

RRID:SCR_001554

Type: Tool

Proper Citation

GenitoUrinary Development Molecular Anatomy Project (RRID:SCR_001554)

Resource Information

URL: <http://www.gudmap.org>

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Description: Project aggregates and provides experimental gene expression data from genito-urinary system. International consortium providing molecular atlas of gene expression for developing organs of GenitoUrinary (GU) tract. Mouse strains to facilitate developmental and functional studies within GU system. Experimental protocols and standard specifications. Tutorials describing GU organogenesis and primary data via database. Data are from large-scale in situ hybridization screens (wholemound and section) and microarray gene expression data of microdissected, laser-captured and FACS-sorted components of developing mouse genitourinary (GU) system.

Abbreviations: GUDMAP

Synonyms: Murine Atlas for Genitourinary Development

Resource Type: biomaterial supply resource, organism supplier, material resource

Defining Citation: [PMID:21652655](#), [PMID:18287559](#)

Keywords: gene expression, genitourinary tract, molecular anatomy, genitourinary system, organogenesis, genitourinary, in situ hybridization, immunohistochemistry, microarray, mutant mouse strain, development, rna, protein, theiler stage, gene, anatomy, male, female, embryonic mouse, kidney, urogenital tract, urinary, reproductive, disease, molecule, cell, gene, phenotype, functional annotation, protein interaction, transgenic transgene, image, rna extraction, sample preparation, fluorescent immunohistochemistry, rna isolation, rna amplification, labeling, fluorescent in situ-hybridization, riboprobe synthesis, cellular localization, tissue isolation, embedding, cryostat sectioning, laser capture microdissection, paraffin, whole mount, optimal cutting temperature, riboprobe

synthesis, target amplification, sectioning, FASEB list

Funding: NIDDK DK070136;
NIDDK DK070200;
NIDDK DK070181

Availability: THIS RESOURCE IS NO LONGER IN SERVICE

Resource Name: GenitoUrinary Development Molecular Anatomy Project

Resource ID: SCR_001554

Alternate IDs: nlx_152871, nif-0000-33426

Record Creation Time: 20220129T080208+0000

Record Last Update: 20260801T190144+0000

Ratings and Alerts

No rating or validation information has been found for GenitoUrinary Development Molecular Anatomy Project .

No alerts have been found for GenitoUrinary Development Molecular Anatomy Project .

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 287 mentions in open access literature.

Listed below are recent publications. The full list is available at [PRECISE-TBI](#) .

G??l H, et al. (2025) Targeting TRPM3 as a potential therapeutic approach for autosomal dominant polycystic kidney disease. Scientific reports, 15(1), 4714.

Honeycutt SE, et al. (2023) Netrin 1 directs vascular patterning and maturity in the developing kidney. Development (Cambridge, England), 150(22).

Honeycutt SE, et al. (2023) Netrin-1 directs vascular patterning and maturity in the developing kidney. bioRxiv : the preprint server for biology.

Goea L, et al. (2022) Hnf1b renal expression directed by a distal enhancer responsive to Pax8. Scientific reports, 12(1), 19921.

Ahuja N, et al. (2022) Endothelial Cyp26b1 restrains murine heart valve growth during development. Developmental biology, 486, 81.

Bartik Z, et al. (2022) A genome-wide scan to locate regions associated with familial vesicoureteral reflux. *Experimental and therapeutic medicine*, 23(1), 92.

Mingardo E, et al. (2022) A genome-wide association study with tissue transcriptomics identifies genetic drivers for classic bladder exstrophy. *Communications biology*, 5(1), 1203.

Kwon HN, et al. (2022) Omics profiling identifies the regulatory functions of the MAPK/ERK pathway in nephron progenitor metabolism. *Development (Cambridge, England)*, 149(19).

Deal KK, et al. (2021) Altered sacral neural crest development in Pax3 spina bifida mutants underlies deficits of bladder innervation and function. *Developmental biology*, 476, 173.

Li H, et al. (2021) Postnatal prolongation of mammalian nephrogenesis by excess fetal GDNF. *Development (Cambridge, England)*, 148(10).

Smith-Anttila CJA, et al. (2021) Spatiotemporal mapping of sensory and motor innervation of the embryonic and postnatal mouse urinary bladder. *Developmental biology*, 476, 18.

Zou J, et al. (2021) The Versatile Gasdermin Family: Their Function and Roles in Diseases. *Frontiers in immunology*, 12, 751533.

Naganuma H, et al. (2021) Molecular detection of maturation stages in the developing kidney. *Developmental biology*, 470, 62.

Niborski LL, et al. (2021) Hnf1b haploinsufficiency differentially affects developmental target genes in a new renal cysts and diabetes mouse model. *Disease models & mechanisms*, 14(5).

Ding F, et al. (2021) Determination of the dynamic cellular transcriptional profiles during kidney development from birth to maturity in rats by single-cell RNA sequencing. *Cell death discovery*, 7(1), 162.

de Boer IH, et al. (2021) Rationale and design of the Kidney Precision Medicine Project. *Kidney international*, 99(3), 498.

Dai G, et al. (2021) Recent Advances in Cellular and Molecular Bioengineering for Building and Translation of Biological Systems. *Cellular and molecular bioengineering*, 14(4), 293.

Amato CM, et al. (2021) Developmental and sexual dimorphic atlas of the prenatal mouse external genitalia at the single-cell level. *Proceedings of the National Academy of Sciences of the United States of America*, 118(25).

Kohl S, et al. (2021) Molecular causes of congenital anomalies of the kidney and urinary tract (CAKUT). *Molecular and cellular pediatrics*, 8(1), 2.

Zeng Z, et al. (2021) Generation of patterned kidney organoids that recapitulate the adult kidney collecting duct system from expandable ureteric bud progenitors. *Nature communications*, 12(1), 3641.