

# Example Queries for Experiment Metadata

## EXAMPLE QUERIES FOR EXPERIMENT METADATA

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RMA

The following query examples demonstrate how to use [RESTful Model Access \(RMA\)](#) to retrieve metadata for experiments.

- [SectionImage Download Service](#) can be used to download images.
- [WellKnownFile Download Service](#) can be used to download a file.

Please note that multiple line example RMA queries on this page represent spaces enclosed in quotation marks with the "+" character to make the examples compatible with some browsers.

### Allen Brain Atlas API Status

#### Date Updated

```
http://api.brain-map.org/api/v2/status/query.xml
```

### Mouse Brain

#### All Mouse Brain ISH experiments

```
http://api.brain-map.org/api/v2/data/query.xml?criteria=
model::SectionDataSet,
rma::criteria,[failed$eqfalse],products[abbreviation$eq'Mouse'],treatments[name$eq'ISH'],
rma::include,genes,specimen(donor(age)),plane_of_section
&num_rows=50&start_row=0
```

#### All Mouse Brain ISH experiments in comma delimited format

```
http://api.brain-map.org/api/v2/data/query.csv?criteria=
model::SectionDataSet,
rma::criteria,[failed$eqfalse],products[abbreviation$eq'Mouse'],treatments[name$eq'ISH'],genes,plane_of_section,
rma::options,
[tabular$eq'plane_of_sections.name+as+plane','genes.acronym+as+gene','data_sets.id+as+section_data_set_id'],
[order$eq'plane_of_sections.name,genes.acronym,data_sets.id']
&num_rows=50&start_row=0
```

## Sagittal Mouse Brain ISH experiments for Adora2a

```
http://api.brain-map.org/api/v2/data/query.xml?criteria=
model::SectionDataSet,
rma::criteria,[failed$eq'false'],products[abbreviation$eq'Mouse'],plane_of_section[name$eq'sagittal'],genes
[acronym$eq'Adora2a']
```

## Images for sagittal Mouse Brain ISH Adora2a experiment 70813257

```
http://api.brain-map.org/api/v2/data/query.xml?criteria=
model::SectionImage,
rma::criteria,[data_set_id$eq70813257]
```

## Mouse Brain coronal images for Adora2a in comma delimited format

```
http://api.brain-map.org/api/v2/data/query.csv?criteria=
model::SectionDataSet,
rma::criteria,[failed$eqfalse],products[abbreviation$eq'Mouse'],treatments[name$eq'ISH'],genes
[acronym$eq'Adora2a'],plane_of_section,section_images,
rma::options,
[tabular$eq'plane_of_sections.name+as+plane','genes.acronym+as+gene','data_sets.
id+as+section_data_set_id','sub_images.id+as+section_image_id'],
[order$eq'plane_of_sections.name,genes.acronym,data_sets.id,sub_images.id']
&num_rows=50&start_row=0
```

## Expression summary for coronal Adora2a experiment 72109410

```
http://api.brain-map.org/api/v2/data/SectionDataSet/query.xml?id=72109410&include=structure_unionizes(structure)
```

## Mouse Connectivity

## Projection summary for Mouse Connectivity experiment 183282970 in comma delimited format

```
http://api.brain-map.org/api/v2/data/query.csv?criteria=
model::ProjectionStructureUnionize,
rma::criteria,[is_injection$eq'f'],hemisphere,structure,section_data_set[id$eq183282970](specimen
(stereotaxic_injections(primary_injection_structure,stereotaxic_injection_coordinates)),rma::include,
section_data_set(specimen(stereotaxic_injections(primary_injection_structure))),
rma::options[tabular$eq'distinct+specimens.name+as+specimen_name,stereotaxic_injection_coordinates.
coordinates_ap,stereotaxic_injection_coordinates.coordinates_dv,stereotaxic_injection_coordinates.
coordinates_ml,data_sets.id+as+data_set_id,stereotaxic_injections.primary_injection_structure_id,structures.
acronym+as+target_structure,hemispheres.symbol+as+hemisphere,projection_structure_unionizes.is_injection,
projection_structure_unionizes.sum_pixels,projection_structure_unionizes.sum_projection_pixels,
projection_structure_unionizes.sum_pixel_intensity,projection_structure_unionizes.
sum_projection_pixel_intensity,projection_structure_unionizes.projection_density,projection_structure_unionizes.
projection_intensity,projection_structure_unionizes.projection_energy,projection_structure_unionizes.volume,
projection_structure_unionizes.projection_volume,projection_structure_unionizes.normalized_projection_volume,
projection_structure_unionizes.max_voxel_density,projection_structure_unionizes.max_voxel_x,
projection_structure_unionizes.max_voxel_y,projection_structure_unionizes.max_voxel_z'][start_row$eq0
[num_rows$eq3000]
```

## Developing Mouse Brain

### All Developing Mouse Brain ISH experiments with images

```
http://api.brain-map.org/api/v2/data/query.xml?criteria=
model::SectionDataSet,
rma::criteria,[failed$eqfalse],products[abbreviation$eq'DevMouse'],treatments[name$eq'ISH'],
rma::include,genes,specimen(donor(age)),plane_of_section,section_images
&num_rows=10&start_row=0
```

### All Developing Mouse Brain Genes in comma delimited format

```
http://api.brain-map.org/api/v2/data/query.csv?criteria=
model::Gene,
rma::criteria,products[abbreviation$eq'DevMouse'],
rma::options,[tabular$eq'genes.id','genes.acronym+as+gene_symbol','genes.name+as+gene_name','genes.
entrez_id+as+entrez_gene_id','genes.homologene_id+as+homologene_group_id'],
[order$eq'genes.acronym']
&num_rows=all&start_row=0
```

### P28 Developing Mouse Brain ISH experiments for Gad1

```
http://api.brain-map.org/api/v2/data/query.xml?criteria=
model::SectionDataSet,
rma::criteria,[failed$eq'false'],products[abbreviation$eq'DevMouse'],specimen(donor(age[name$eq'P28']))
```

### Developing Mouse Brain P28 ISH images for Gad1

```
http://api.brain-map.org/api/v2/data/query.xml?criteria=
model::SectionDataSet,
rma::criteria,[failed$eq'false'],
rma::include,genes[acronym$eq'Gad1'],section_images,specimen(donor(age[name$eq'P28']))
```

## Sleep Study

### Sleep Study ISH experiments with images, including the experimental condition:

```
http://api.brain-map.org/api/v2/data/query.xml?criteria=
model::SectionDataSet,
rma::criteria,[failed$eqfalse],products[abbreviation$eq'Sleep'],treatments[name$eq'ISH'],
rma::include,probes(gene),plane_of_section,specimen(donor(disease_categories,medical_conditions)),section_images
&num_rows=10
```

## Human Brain

### Human Brain ISH Autism Study experiments with images, including the donor's conditions

```
http://api.brain-map.org/api/v2/data/query.xml?criteria=
model::SectionDataSet,
rma::criteria,[failed$eqfalse],products[abbreviation$eq'HumanASD'],treatments[name$eq'ISH'],
rma::include,probes(gene),specimen(donor(age,disease_categories,medical_conditions)),section_images
&num_rows=10
```

### Human Brain Microarray experiments

```
http://api.brain-map.org/api/v2/data/query.xml?criteria=
model::MicroarraySlide,
rma::criteria,microarray_data_sets[failed$eqfalse](products[abbreviation$eq'HumanMA']),
rma::include,structures,well_known_files,microarray_data_sets(specimen(donor(age)))
```

## Developing Human Brain

### Developing Human Brain ISH experiments with images

```
http://api.brain-map.org/api/v2/data/query.xml?criteria=
model::SectionDataSet,
rma::criteria,[failed$eqfalse],products[abbreviation$eq'DevHumanISH'],treatments[name$eq'ISH'],
rma::include,probes(gene),specimen(donor(age,disease_categories,medical_conditions)),section_images
&num_rows=10
```

### Expression summary for GAD1 Developing Human Brain ISH

```
http://api.brain-map.org/api/v2/data/SectionDataSet/query.xml?id=73931410&include=structure_unionizes(structure)
```

### Developing Human Brain Prenatal LMD Microarray experiments

```
http://api.brain-map.org/api/v2/data/query.xml?criteria=
model::MicroarraySlide,
rma::criteria,microarray_data_sets[failed$eqfalse](products[abbreviation$eq'DevHumanMA']),
rma::include,structures,well_known_files,microarray_data_sets(specimen(donor(age)))
```

### Developing Human Brain Transcriptome experiments

```
http://api.brain-map.org/api/v2/data/query.xml?criteria=
model::Specimen,
rma::criteria,data_sets(products[abbreviation$eq'DevHumanTrans']),
rma::include,structure,donor,well_known_files(well_known_file_type)
```