

Project Demo EMBL-EBI by @NamPham

The project is final assignment from EMBL to Nam Pham. That provide the RESTful API to support: - A mouse gene resource that returns mouse gene symbols and synonyms - A resource that returns the relationships between mouse and human genes

How to build

The project development on

- Java version "11.0.12" 2021-07-20 LTS
- IntelliJ IDEA 2019.1. Please note install lombok plugin before open project on IntelliJ
- Spring Boot version 2.5.2

Build and run

Quick run:

```
java -jar project-demo-run.jar
```

Run step by step

Step 1: Build project with maven

```
mvn clean package -U
```

Step 2: Start docker compose file.

```
docker-compose up -d
```

Step 3: Start app.

```
java -jar target/project-demo-five.jar
```

API Reference

1. Get Mouse gene detail by id

```
GET /api/v1/mouse-gene/{id}
Response
{
  "id": 2305,
  "name": "fibroblast growth factor 8",
  "symbol": "Fgf8",
  "mgi_gene_acc_id": "MGI:99604"
}
```

| PathVariable | Type | Description |
|--------------|------|-----------------------------|
| id | Long | Required. The mouse gene id |

2. Mouse gene detail with mouse gene symbols and synonyms by query param `symbol` .

```
GET /api/v1/mouse-gene?symbol={symbol}
```

Response

```
{
  "id": 2305,
  "name": "fibroblast growth factor 8",
  "symbol": "Fgf8",
  "mgi_gene_acc_id": "MGI:99604",
  "synonyms": [
    "Fgf-8",
    "Aigf"
  ]
}
```

| Parameter | Type | Description |
|---------------------|---------------------|---|
| <code>symbol</code> | <code>string</code> | Required. The Mouse gene's symbol. e.g. Fgf8 |

3. Mouse gene detail with mouse gene symbols and synonyms by query param `mgi_gene_acc_id`.

```
GET /api/v1/mouse-gene?mgi_gene_acc_id={mgi_gene_acc_id}
```

Response

```
{
  "id": 2305,
  "name": "fibroblast growth factor 8",
  "symbol": "Fgf8",
  "mgi_gene_acc_id": "MGI:99604",
  "synonyms": [
    "Fgf-8",
    "Aigf"
  ]
}
```

| Parameter | Type | Description |
|------------------------------|---------------------|---|
| <code>mgi_gene_acc_id</code> | <code>string</code> | Required. The Mouse gene's mgi_gene_acc_id. e.g. MGI:99604 |

4. Mouse gene detail with mouse gene symbols and synonyms by query param `synonym`.

```
GET /api/v1/mouse-gene?synonym={synonym}
```

Response

```
{
  "id": 2305,
  "name": "fibroblast growth factor 8",
  "symbol": "Fgf8",
  "mgi_gene_acc_id": "MGI:99604",
  "synonyms": [
    "Fgf-8",
    "Aigf"
  ]
}
```

| Parameter | Type | Description |
|----------------------|---------------------|--|
| <code>synonym</code> | <code>string</code> | Required. The Mouse gene's synonym. e.g. Aigf |

5. Mouse gene detail and relation between mouse and human genes by query param `symbol`

```
GET /api/v1/mouse-gene/relations?symbol={symbol}
```

Response

```
{
  "id": 2305,
  "name": "fibroblast growth factor 8",
  "symbol": "Fgf8",
  "mgi_gene_acc_id": "MGI:99604",
  "human_gene_relation_details": [
    {
      "human_gene": {
        "human_gene_id": "9024"
      },
      "support_count": 12
    },
    {
      "human_gene": {
        "human_gene_id": "9040"
      },
      "support_count": 1
    },
    {
      "human_gene": {
        "human_gene_id": "9041"
      },
      "support_count": 1
    }
  ]
}
```

| Parameter | Type | Description |
|-----------|--------|---|
| symbol | string | Required. The Mouse gene's symbol. e.g. Fgf8 |

6. Mouse gene detail and relation between mouse and human genes by query param `mgi_gene_acc_id`

```
GET /api/v1/mouse-gene/relations?mgi_gene_acc_id={mgi_gene_acc_id}
```

Response

```
{
  "id": 2305,
  "name": "fibroblast growth factor 8",
  "symbol": "Fgf8",
  "mgi_gene_acc_id": "MGI:99604",
  "human_gene_relation_details": [
    {
      "human_gene": {
        "human_gene_id": "9024"
      },
      "support_count": 12
    },
    {
      "human_gene": {
        "human_gene_id": "9040"
      },
      "support_count": 1
    },
    {
      "human_gene": {
        "human_gene_id": "9041"
      },
      "support_count": 1
    }
  ]
}
```

| Parameter | Type | Description |
|-----------------|--------|---|
| mgi_gene_acc_id | string | Required. The Mouse gene's mgi_gene_acc_id. e.g. MGI:99604 |

7. Please refer to API document to get more information. (Need to start app before access to documentation)

[Local API documentation](#)