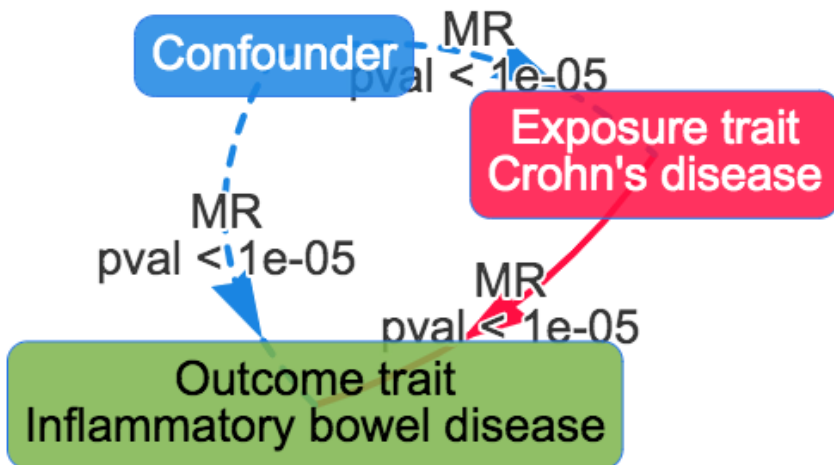


EpiGraphDB

Query for confounders

<http://epigraphdb.org/confounder/>

```
(cf:Gwas)-[r1:MR]->  
(exposure:Gwas {trait: "Crohn's disease"})-[r2:MR]->  
(outcome:Gwas {trait: "Inflammatory bowel disease"})  
<-[r3:MR]-(cf:Gwas)
```

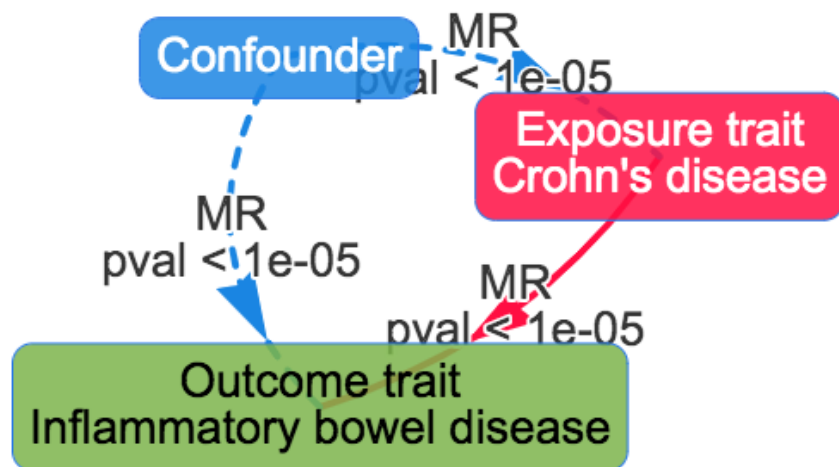


EpiGraphDB

Query for confounders

<http://epigraphdb.org/confounder/>

```
(cf:Gwas)-[r1:MR]->
(exposure:Gwas {trait: "Crohn's disease"})-[r2:MR]->
(outcome:Gwas {trait: "Inflammatory bowel disease"})
<-[r3:MR]-(cf:Gwas)
```

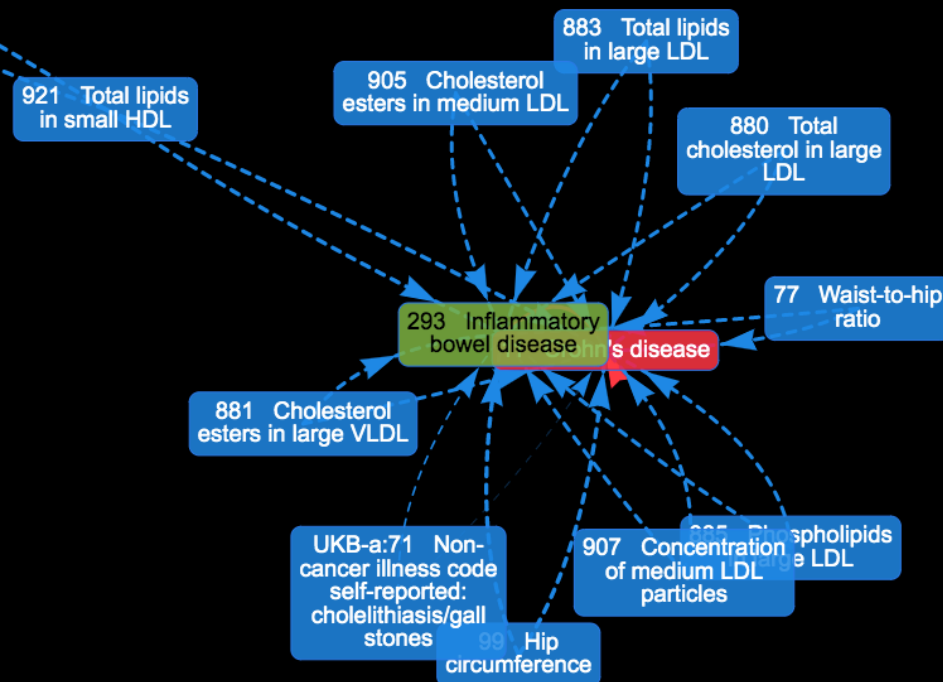


Query for all integrative evidence!



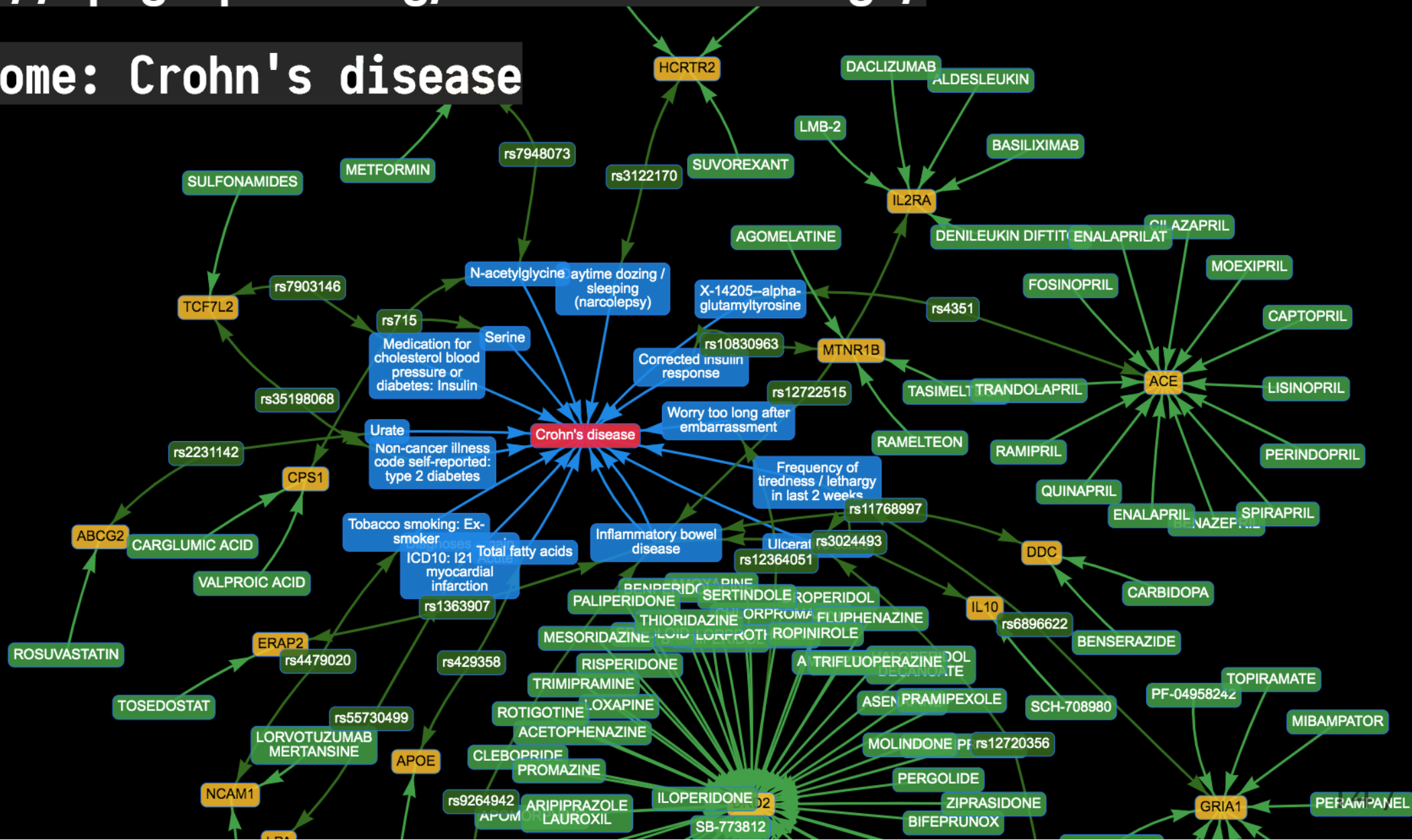
<http://epigraphdb.org/confounder/>

Exposure: Crohn's disease
Outcome: Inflammatory bowel disease



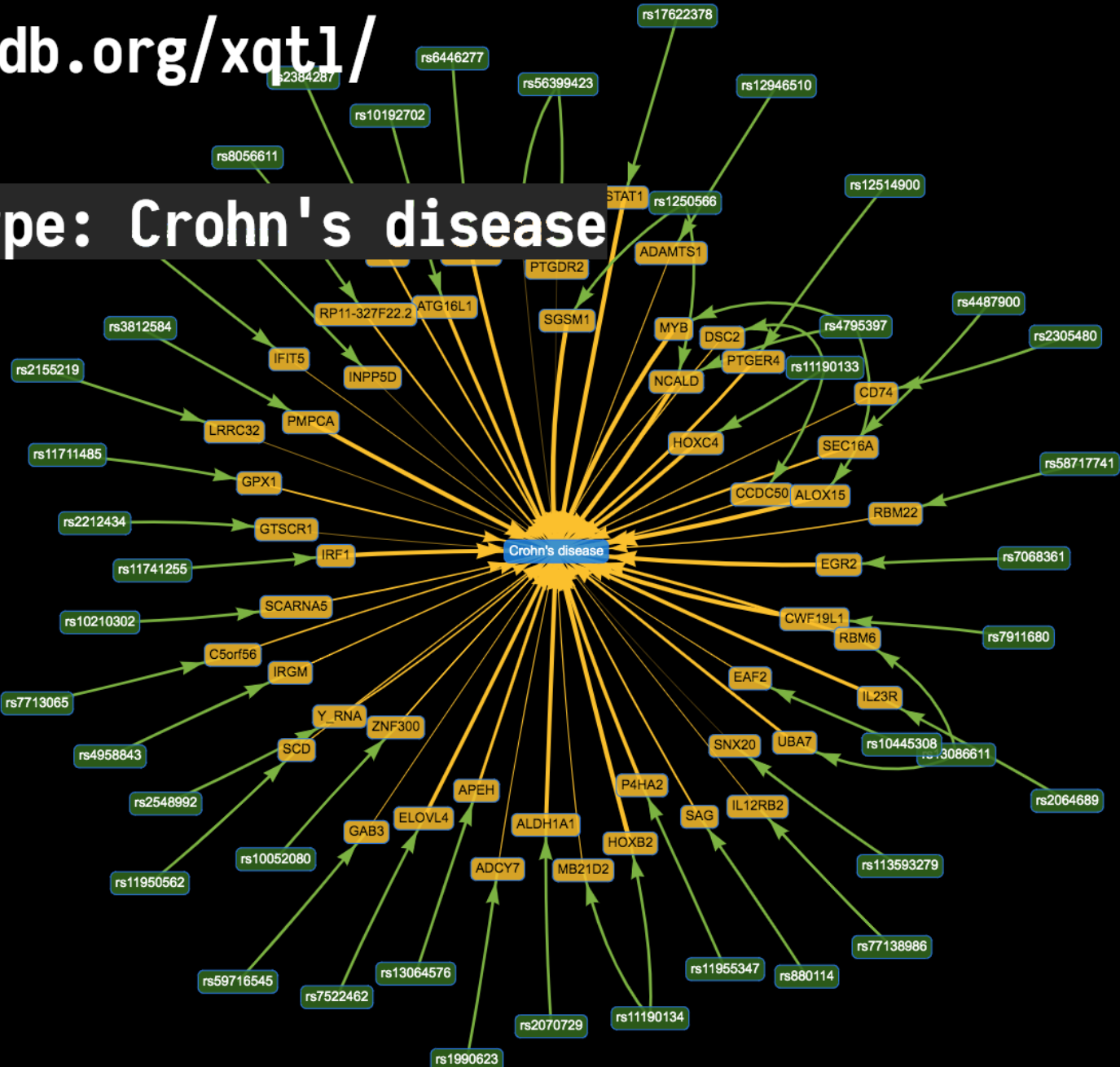
<http://epigraphdb.org/risk-factor-drugs/>

Outcome: Crohn's disease



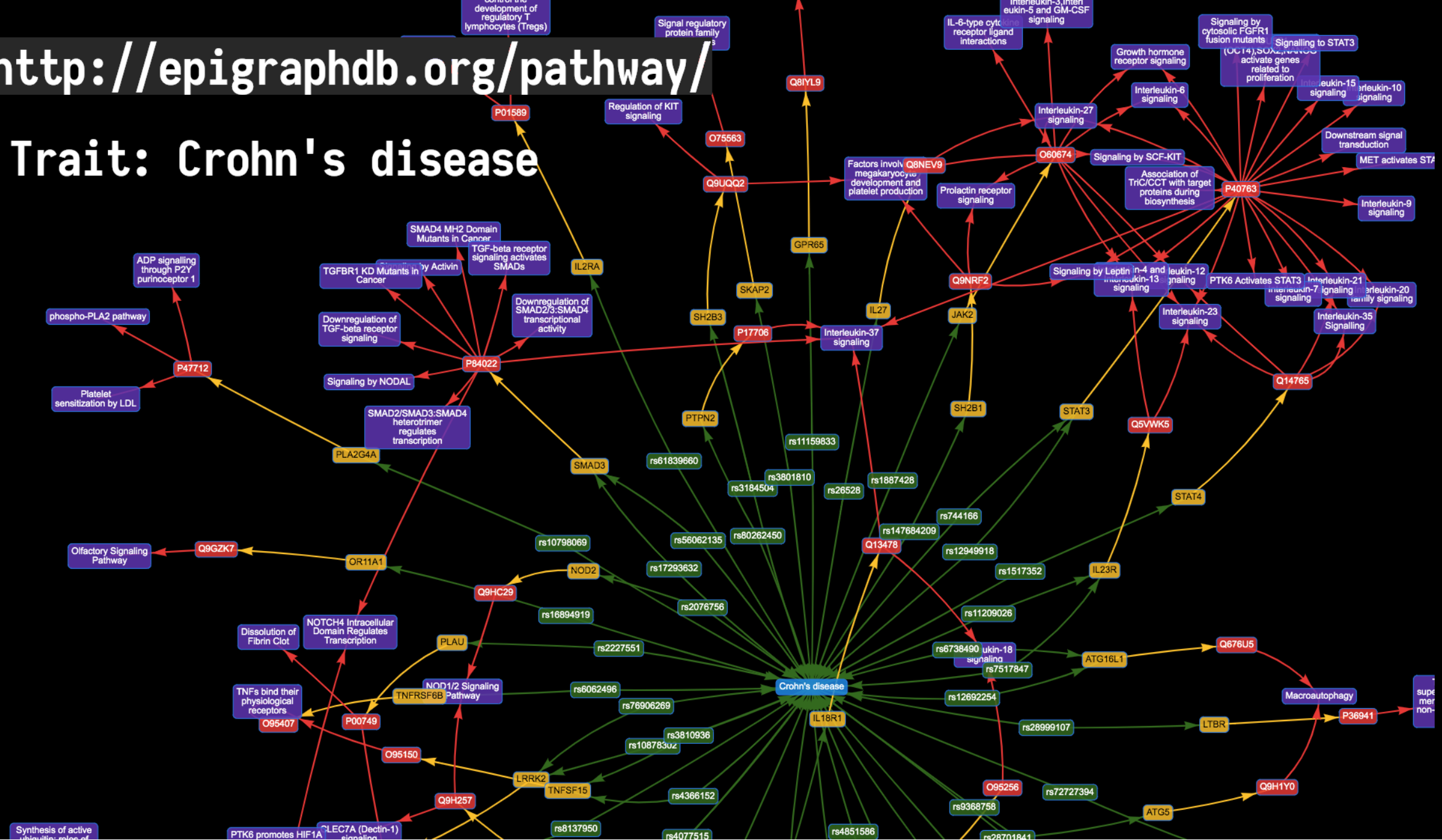
<http://epigraphdb.org/xqt1/>

Outcome phenotype: Crohn's disease



<http://epigraphdb.org/pathway/>

Trait: Crohn's disease



```

Connection: Keep-Alive
Date: Tue, 16 Jul 2019 16:51:43 GMT
Keep-Alive: timeout=5, max=100
Server: uvicorn
Set-Cookie: BIGipServer~SysOps~epigraphdb.app~epigraphdb=2684557740.20480.0000; path=/; Httponly
content-length: 10416
content-type: application/json

```

```

{
  "query": "MATCH (t1:Gwas)-[r:MR]->(t2:Gwas) WHERE t1.trait = \"Crohn's disease\" AND r.p < 1e-05 RETURN t1.id AS exposure_id, t1.trait AS exposure_name, t2.id AS outcome_id, t2.trait AS outcome_name, r.estimate AS estimate, r.se AS se, r.p AS p, r.ci_upper AS ci_upper, r.ci_lower AS ci_lower, r.selection AS selection, r.method AS method, r.moescore AS moescore ORDER BY r.p;",
  "results": [
    {
      "ci_low": 0.692523218427283,
      "ci_upper": 0.800046228817002,
      "estimate": 0.746284723622142,
      "exposure_id": "12",
      "exposure_name": "Crohn's disease",
      "method": "Simple median",
      "moescore": 0.85,

```

Any REST API client (httpie, curl, requests, postman, ...)

R is a collaborative project with many contributors.
Type 'contributors()' for more information
'citation()' on how to cite R or R packages

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

```
R> epigraphdb::mr(exposure="Crohn's disease")
```

```

# A tibble: 31 x 12
  exposure_id exposure_name outcome_id outcome_name estimate se p
  <chr>        <chr>        <chr>        <chr>        <dbl> <dbl> <dbl>
1 12          Crohn's dise... 31          Inflammator... 0.746 2.74e-2 5.36e-163
2 12          Crohn's dise... 32          Ulcerative ... 0.454 2.29e-2 1.14e- 87
3 30          Crohn's dise... 32          Ulcerative ... 0.400 2.02e-2 2.24e- 87
4 12          Crohn's dise... 30          Crohn's dis... 1.11 1.79e-2 9.75e- 86
5 12          Crohn's dise... 970         Ulcerative ... 0.464 2.45e-2 3.76e- 80
6 11          Crohn's dise... 293         Inflammator... 0.602 3.76e-2 1.08e- 57
7 30          Crohn's dise... UKB-a:552   Diagnoses -... 0.00130 9.13e-5 6.59e- 46
8 12          Crohn's dise... 294         Inflammator... 0.749 1.45e-2 1.79e- 44
9 12          Crohn's dise... 969         Ulcerative ... 0.553 4.56e-2 6.70e- 34
10 30         Crohn's dise... UKB-a:553   Diagnoses -... 0.00153 1.32e-4 6.44e- 31
# ... with 21 more rows, and 5 more variables: ci_upper <dbl>, ci_lower <dbl>,
# selection <chr>, method <chr>, moescore <dbl>

```

R package

`devtools::install("MRCIEU/epigraphdb-r")`



EpiGraphDB API 0.3.1 OAS3

/openapi.json

A RESTful Web API for querying EpiGraphDB.

Service builds:

- EpiGraphDB: 0.2
 - Database: 0.2.2-dev
 - API: 0.3.1
- pQTL database: 3.0

API documentation

<http://api.epigraphdb.org>

Authorize



topics

GET

/mr Get Mr

Return information related to Mendelian Randomisation

Arguments: "optional": {"exposure": "Exposure name", "outcome": "Outcome name"},

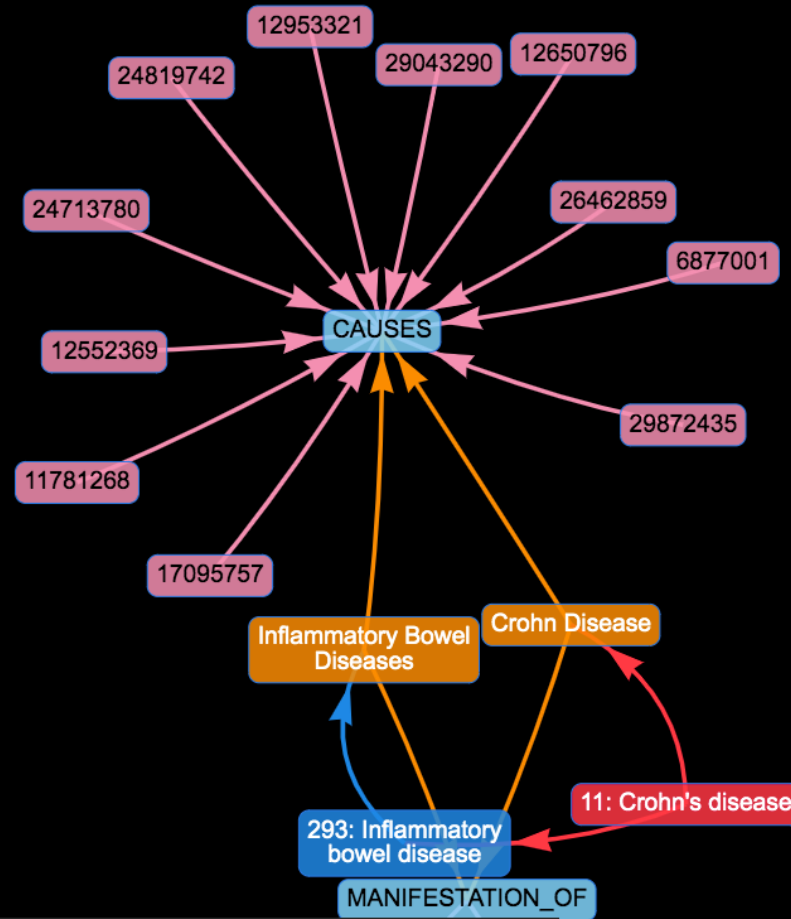
Examples:

Get MR evidence between exposure trait Overweight and outcome trait Body mass index:

- exposure: Overweight; outcome: Body mass index

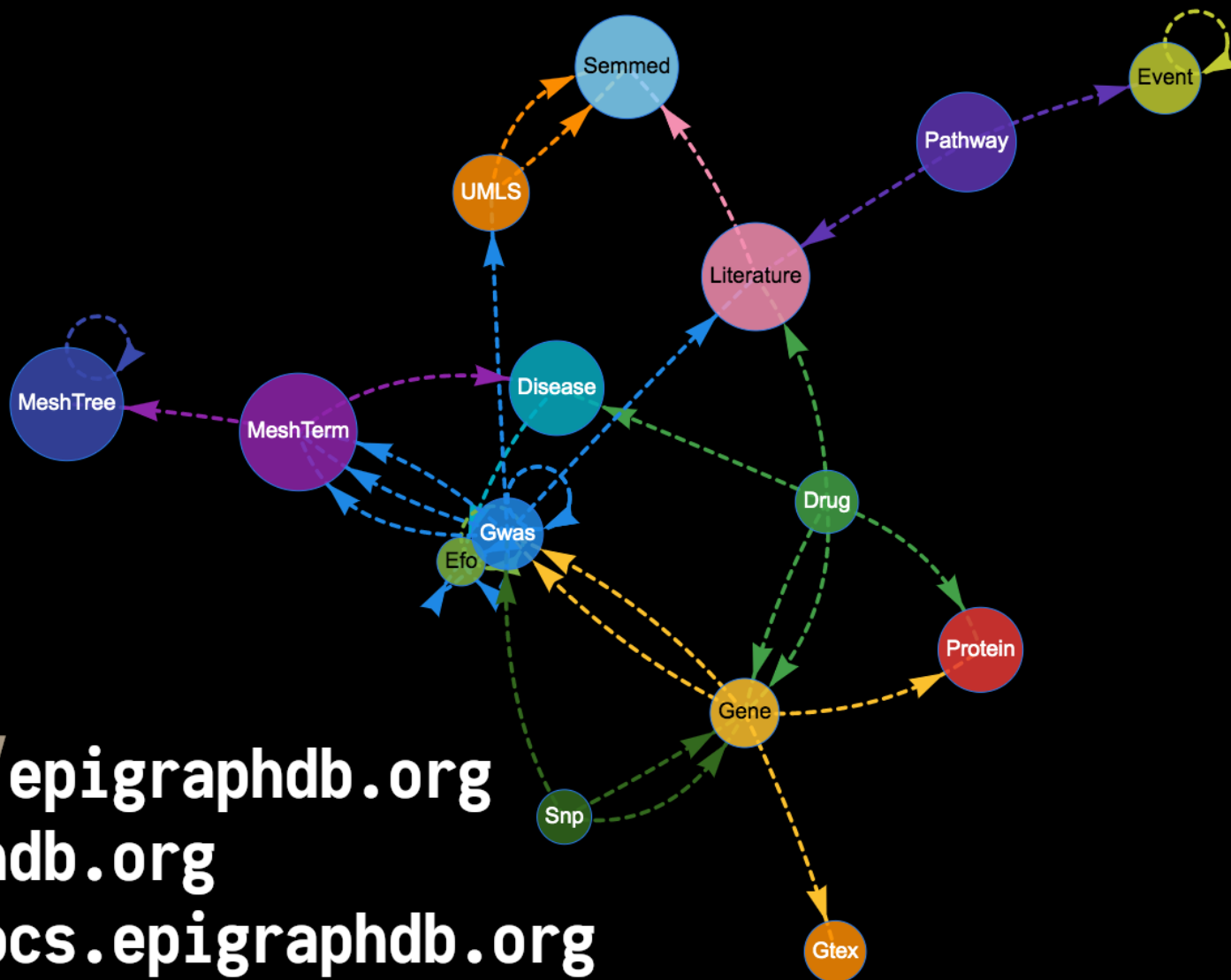
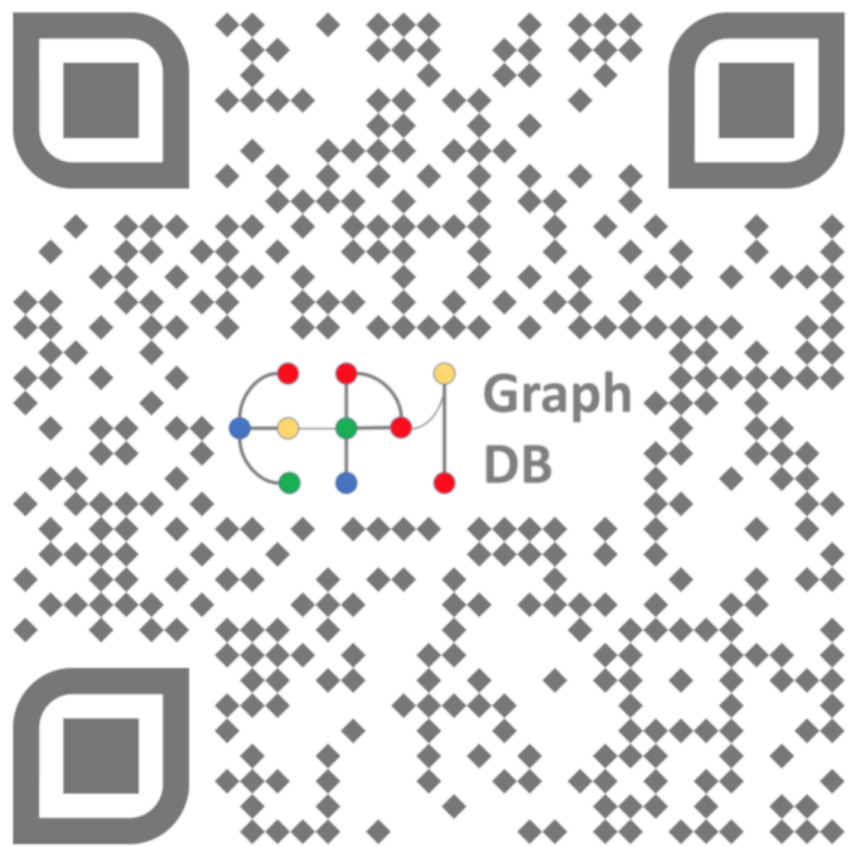
Get MR evidence of exposure trait Overweight

- exposure: Overweight



<http://epigraphdb.org/literature/>

Trait: Crohn's disease



Web application: <http://epigraphdb.org>

API: <http://api.epigraphdb.org>

documentation: <http://docs.epigraphdb.org>

R package: <https://github.com/MRCIEU/epigraphdb-r>