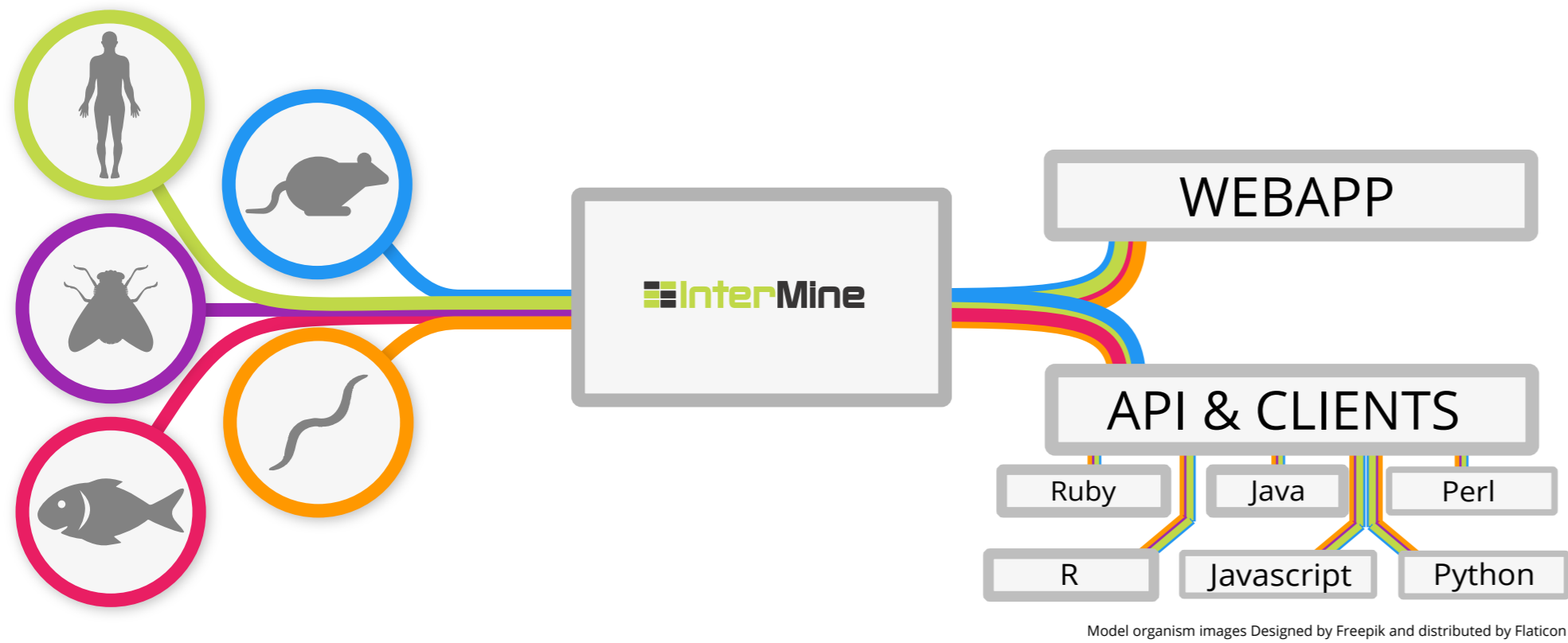


Implementing FAIR Identifiers in InterMine with Identifiers.org

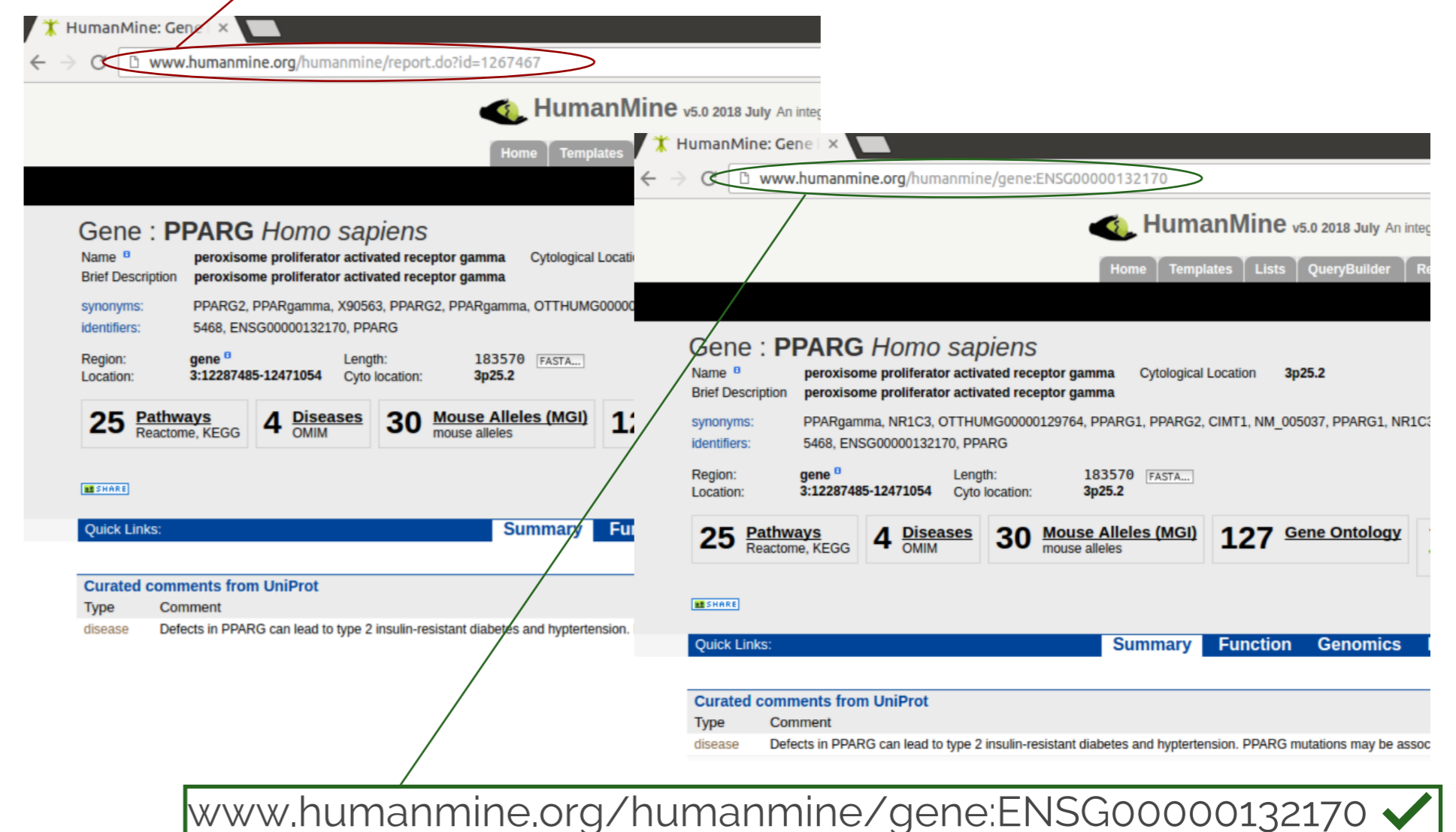
D. Butano, J. Clark-Casey, S. Contrino, J. Heimbach, R. Lyne, J. Sullivan, Y. Yehudi and G. Micklem
Department of Genetics, University of Cambridge

InterMine is an open source system to integrate many commonly used biological data sources and formats. It provides data through a web interface, comprehensive RESTful web services and client APIs for many programming languages. Other organizations download and deploy InterMine on their servers.



Current URIs change at every build

www.humanmine.org/humanmine/report.do?id=1267467 ❌



www.humanmine.org/humanmine/gene:ENSG00000132170 ✅

New URIs will be based on external IDs

New FAIR identifiers for data

FAIR URI Schema A - Using Identifiers.org prefixes and LUI (Local Unique IDs)

humanmine.org/humanmine/uniprot:D2KUA6
humanmine.org/humanmine/ensembl:ENSG00000132170
humanmine.org/humanmine/pubmed:11872365

- No InterMine minted IDs ✓
- URI is guaranteed unique ✓
- No embedded type ✓
- Automatic links to other sources ✓

Prefixes
biosample
ensembl
did
go
goa
kegg.pathway
mim
pubmed
reactome
uniprot

FAIR URI Schema B - Using InterMine core model class names and LUI (Local Unique IDs)

humanmine.org/humanmine/protein:D2KUA6
humanmine.org/humanmine/gene:ENSG00000132170
humanmine.org/humanmine/publication:11872365

- No InterMine minted IDs ✓
- No configuration required ✓
- Human-readable ✓
- Straightforward URI resolution ✓

```

core.xml
<class name="BioEntity">
.....
<class name="SequenceFeature" extends="BioEntity">
.....
<class name="Gene" extends="SequenceFeature">
.....
<class name="Protein" extends="BioEntity">
.....
    
```

Schema B is preferred because it requires less human intervention

Identifiers.org as Permanent URL provider

redirected to
<http://identifiers.org/humanmine:protein:D2KUA6> → <http://humanmine.org/humanmine/protein:D2KUA6>
 HumanMine URI registered in Identifiers.org