Open PHACTS
impact at Janssen

Herman van Vlijmen, 19 Feb 2016

Pictured left: Pancreas tissue

Open PHACTS: Impact in multiple ways

- **Access to integrated biomedical and chemical databases**
  - Maximising the value of internal data by integration with public data
  - Create information workflows that were very difficult before, such as:
    - Searching for compounds across protein families, pathways, diseases
    - Target validation
    - Phenotypic screen analysis

- **Changing the mindset of Pharma IT**
  - At start of project Relational Databases was the only game in town
  - Now a strong realisation of the value of semantic databases, and actual efforts to integrate internal databases. This would not have been done in the pre Open PHACTS situation. Value for the pharma scientists!

- **Changing the mindset of scientists**
  - Semantic querying opens up new ways of using existing data
  - Target annotation, Assay ontology (BAO)
  - Sky is the limit, especially when additional domains are added, such as patent data (SureChembl), ADME, (pre)-clinical data

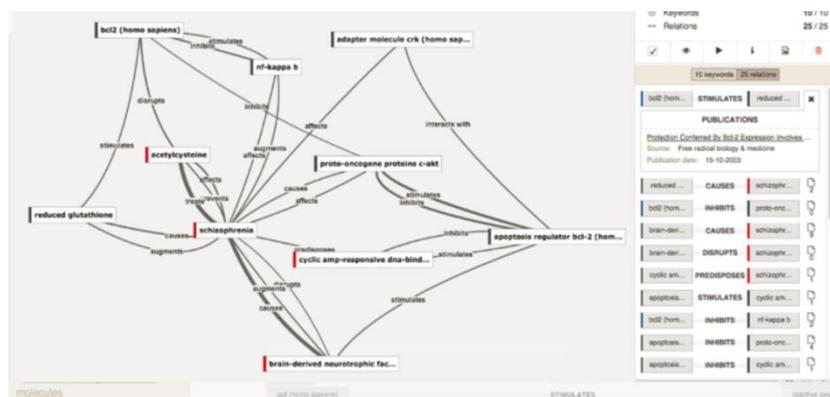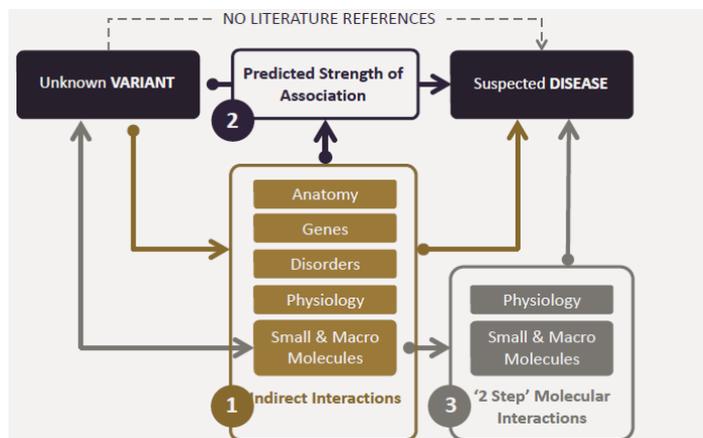- **Changing the mindset of public and commercial databases**

Chem³ is here

In 3DX and in Pipeline Pilot

Exploring Linked Data analysis tools

BRAIN (Euretos www.euretos.com)

Disqover (Ontoforce www.ontoforce.com)

Time and €€ savings

- Certain queries were possible before but were tedious work and took a lot of time (days). These can now be done in less than an hour
- Semantically integrated databases allow for completely new ways of analysing the data
- Integration of different databases is difficult, costly, and time consuming, and probably would not have been done at this level of quality without Open PHACTS

- Conclusion: Without Open PHACTS, pharma companies would not have access to this valuable resource
  - Sharing the cost and effort in precompetitive project saved millions
  - Accelerated research using integrated data
  - Involvement in the project sparked internal innovation in this area