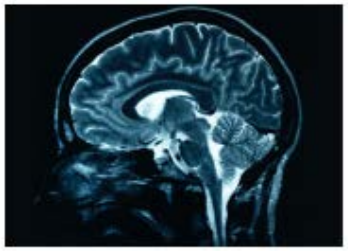
Biomedical data that can be reused for research

Clinical Data

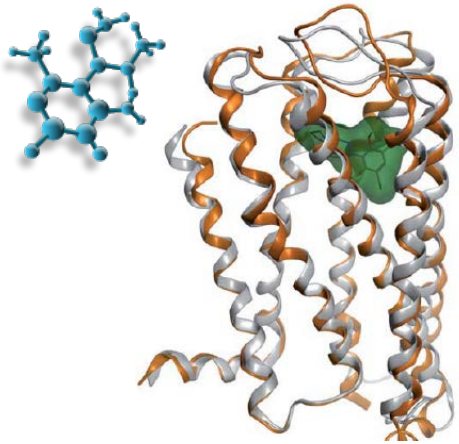
HEALTHCARE

Biomedical literature

Biomedical imaging

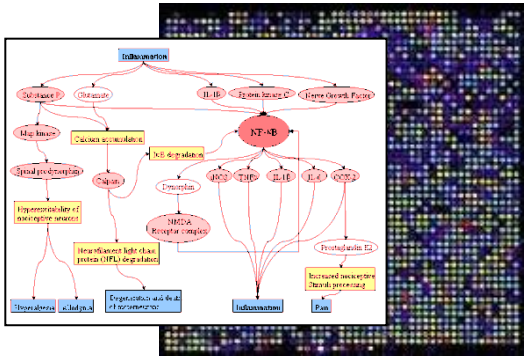


BIOLOGICAL, CLINICAL, PHARMACEUTICAL RESEARCH



Drugs & other chemicals

'omics & Systems Biology



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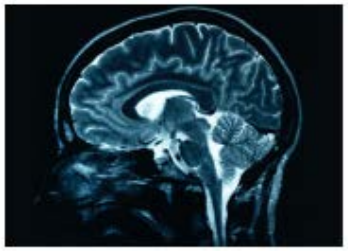
Biomedical data that can be reused for research

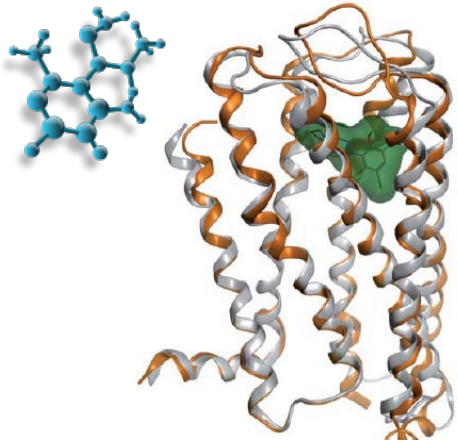
23 million scientific papers referenced in PubMed®, and more than 700,000 are added each year

Clinical Data

Biomedical literature

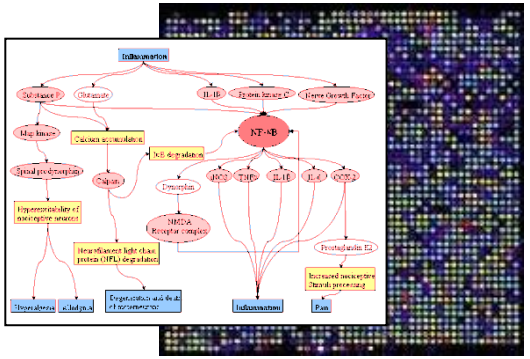
Biomedical imaging





Drugs & other chemicals

'omics & Systems Biology



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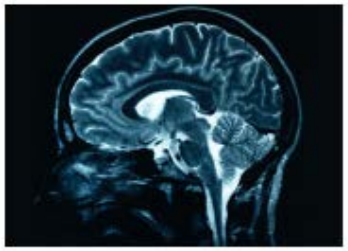
Biomedical data that can be reused for research

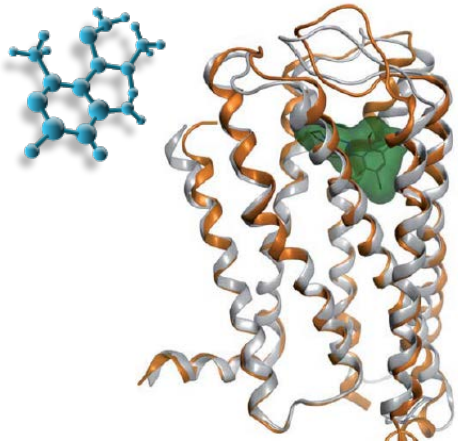
Clinical Data

Millions of European EHRs can be reused for research

Biomedical literature

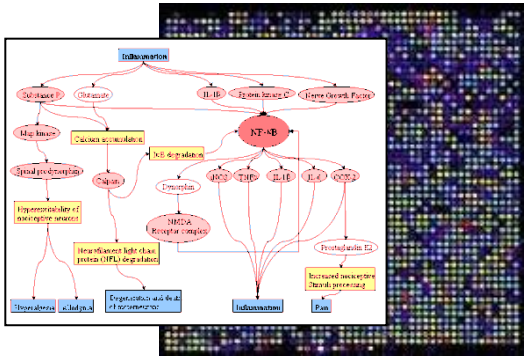
Biomedical imaging





Drugs & other chemicals

'omics & Systems Biology



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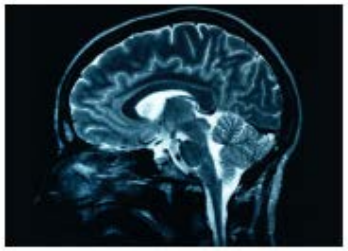
Biomedical data that can be reused for research

Clinical Data

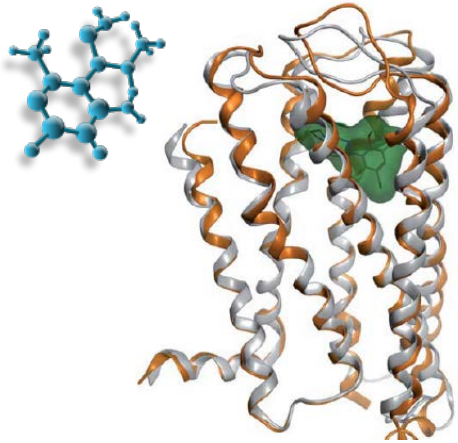
Biomedical literature

Biomedical imaging



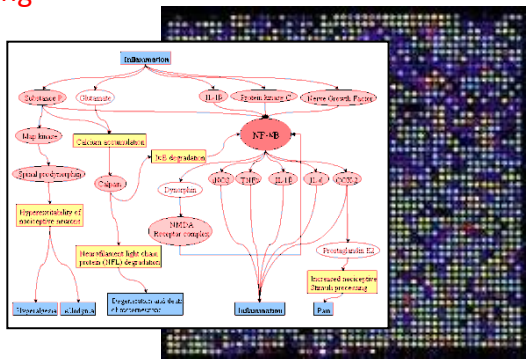
Estimated biomedical imaging worldwide in 2020: $3.5 \cdot 10^{22}$ bytes

S. Sarcar. GE Healthcare. http://es.slideshare.net/sarcar/data-explosion-in-medical-imaging



Drugs & other chemicals

'omics & Systems Biology

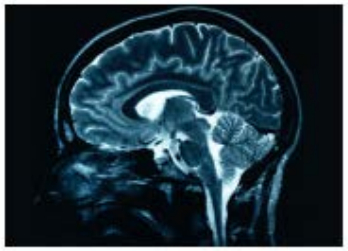


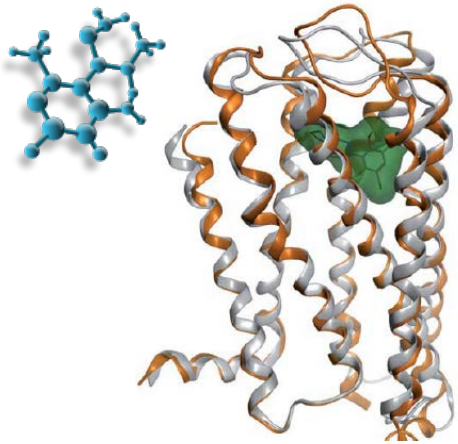
Biomedical data that can be reused for research

Clinical Data

Biomedical literature

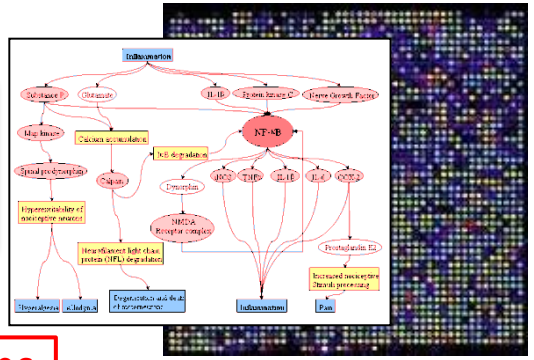
Biomedical imaging





Drugs & other chemicals

'omics & Systems Biology



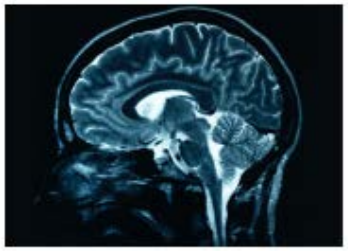
The genome of a person contains > 3,000 M base pairs {G,A,T,C}

Biomedical data that can be reused for research

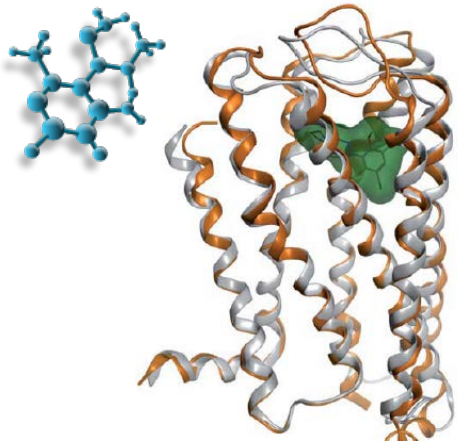
Clinical Data

Biomedical literature

Biomedical imaging

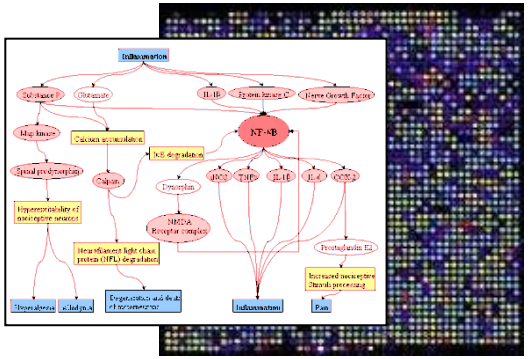


ChEMBL: > 10K targets; >1.4M compounds; >12.8M activities



Drugs & other chemicals

'omics & Systems Biology



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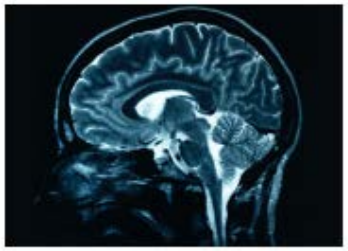
Integration of heterogeneous biomedical information to gain a more complete and powerful view on diseases and therapeutics

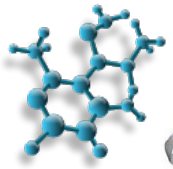
Clinical Data

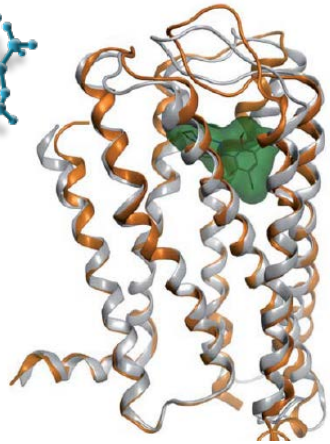
Biomedical literature

INTEGRATIVE BIOINFORMATICS

Biomedical imaging

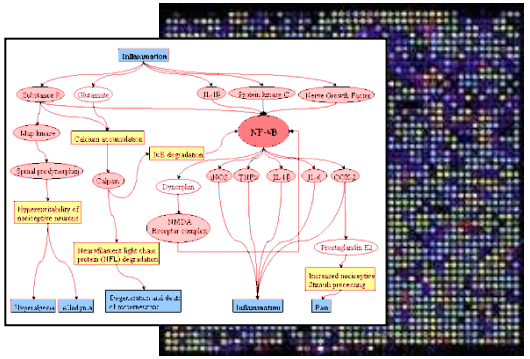






Drugs & other chemicals

‘omics & Systems Biology



Ferran Sanz – GRIB (IMIM-UPF)

Examples of IMI projects on integrative knowledge management

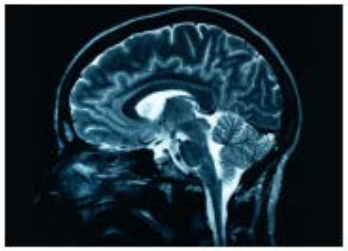
Clinical Data

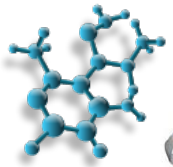
EMIF: Exploitation of +40 millions of EHRs for the advancement of biomedical research (www.emif.eu)

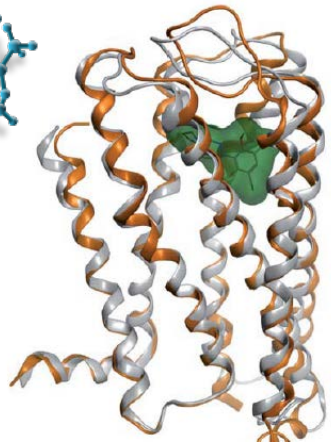
Biomedical literature

INTEGRATIVE BIOINFORMATICS

Biomedical imaging

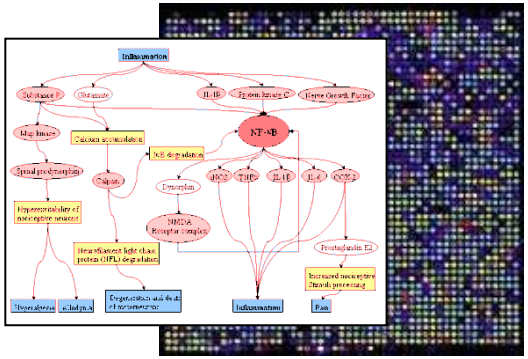






Drugs & other chemicals

'omics & Systems Biology



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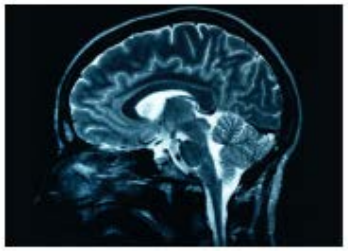
Examples of IMI projects on integrative knowledge management

Clinical Data

Biomedical literature

Biomedical imaging

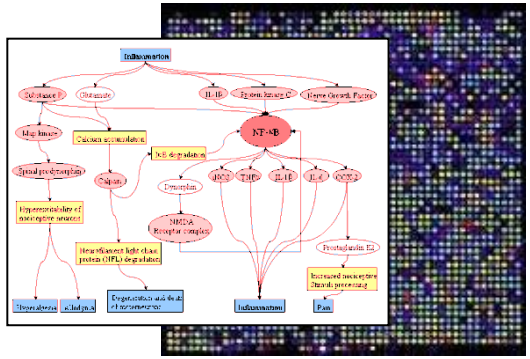


INTEGRATIVE BIOINFORMATICS

eTOX: Sharing of toxicological data from 13 pharma companies for the development of advanced predictive models (www.etoxproject.eu)

& other chemicals

'omics & Systems Biology



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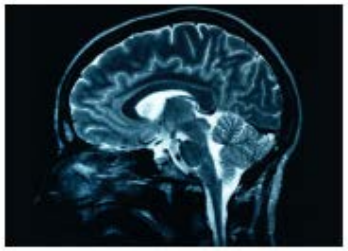
Examples of IMI projects on integrative knowledge management

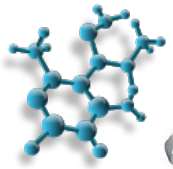
Clinical Data

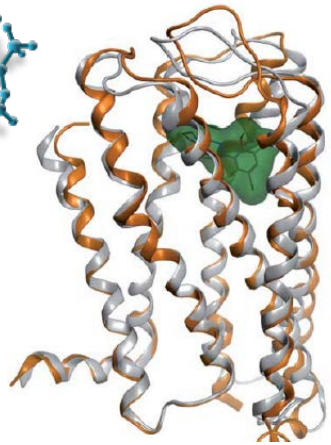
Biomedical literature

Open PHACTS: Computational extraction, integration and exploitation of the public knowledge to facilitate pharmaceutical R&D. (www.openphacts.org)

Biomedical imaging







Drugs & other chemicals

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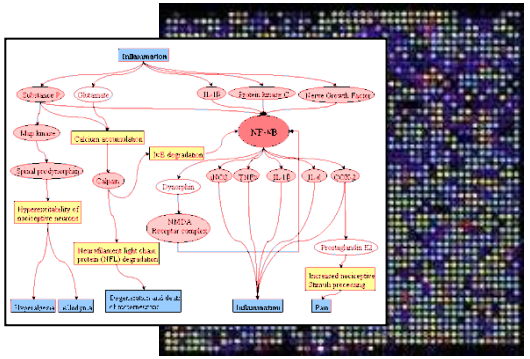

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DisGeNET

- A comprehensive resource on gene-disease associations
- Integrates information from publicly available databases and the literature (text mining)
- Freely available at: http://ibi.imim.es/DisGeNET