Improve preclinical and clinical data analysis. Now and tomorrow

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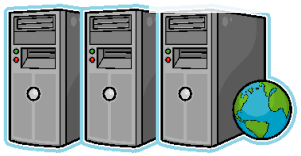
Keywords: databases, in silico, bioinformatics, biostatistics, systems biology, metanalysis, knowledge management, bench-to-bedsisde and benchside-to-bench, omics, data sharing, data vizualization…

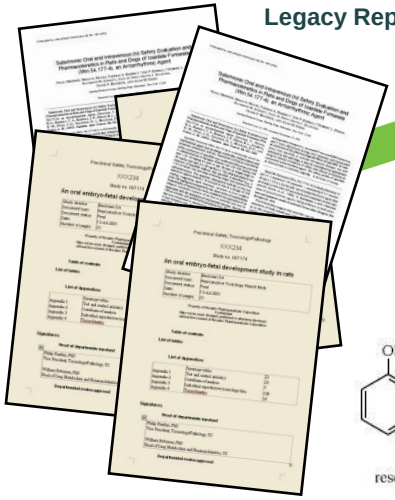
Example 1

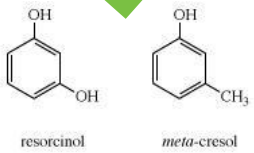
1. Data collection

Public databases



Legacy Reports

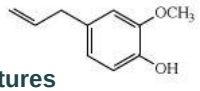




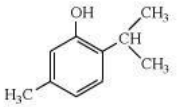
resorcinol

meta-cresol

Chemical structures

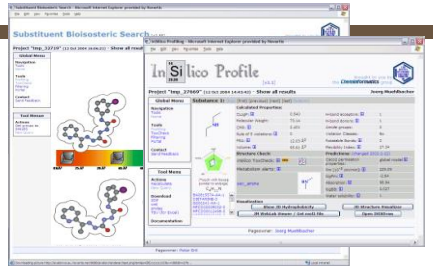


eugenol

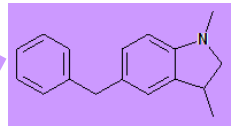


thymol

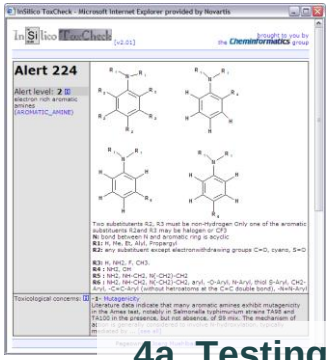
2. Data sharing and Integration



3. Model building



4b. Validation with new compounds

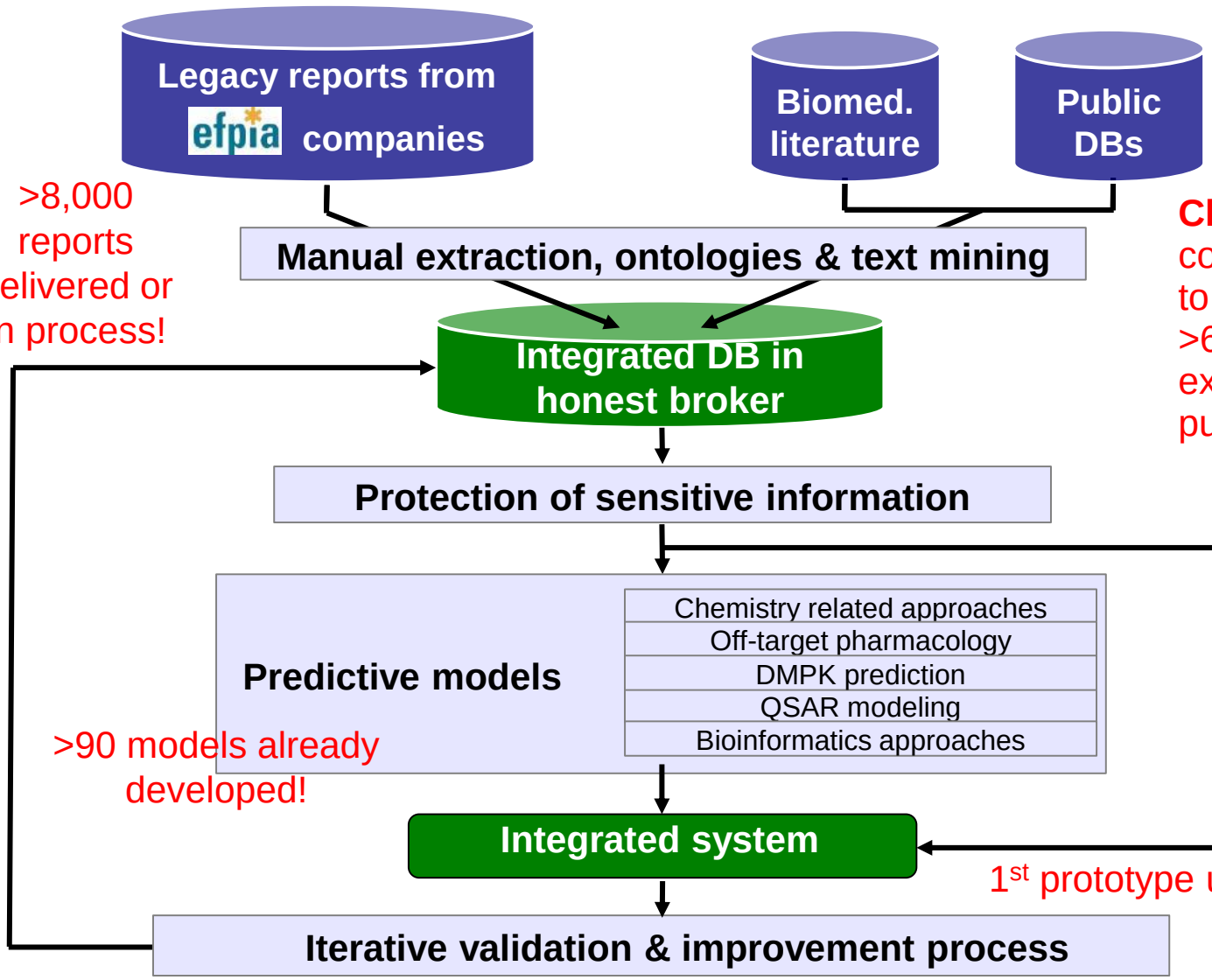


4a. Testing alerts

5. Refinement

(new structures
or limited early toxicity studies)

Some achievements



>8,000 reports delivered or in process!

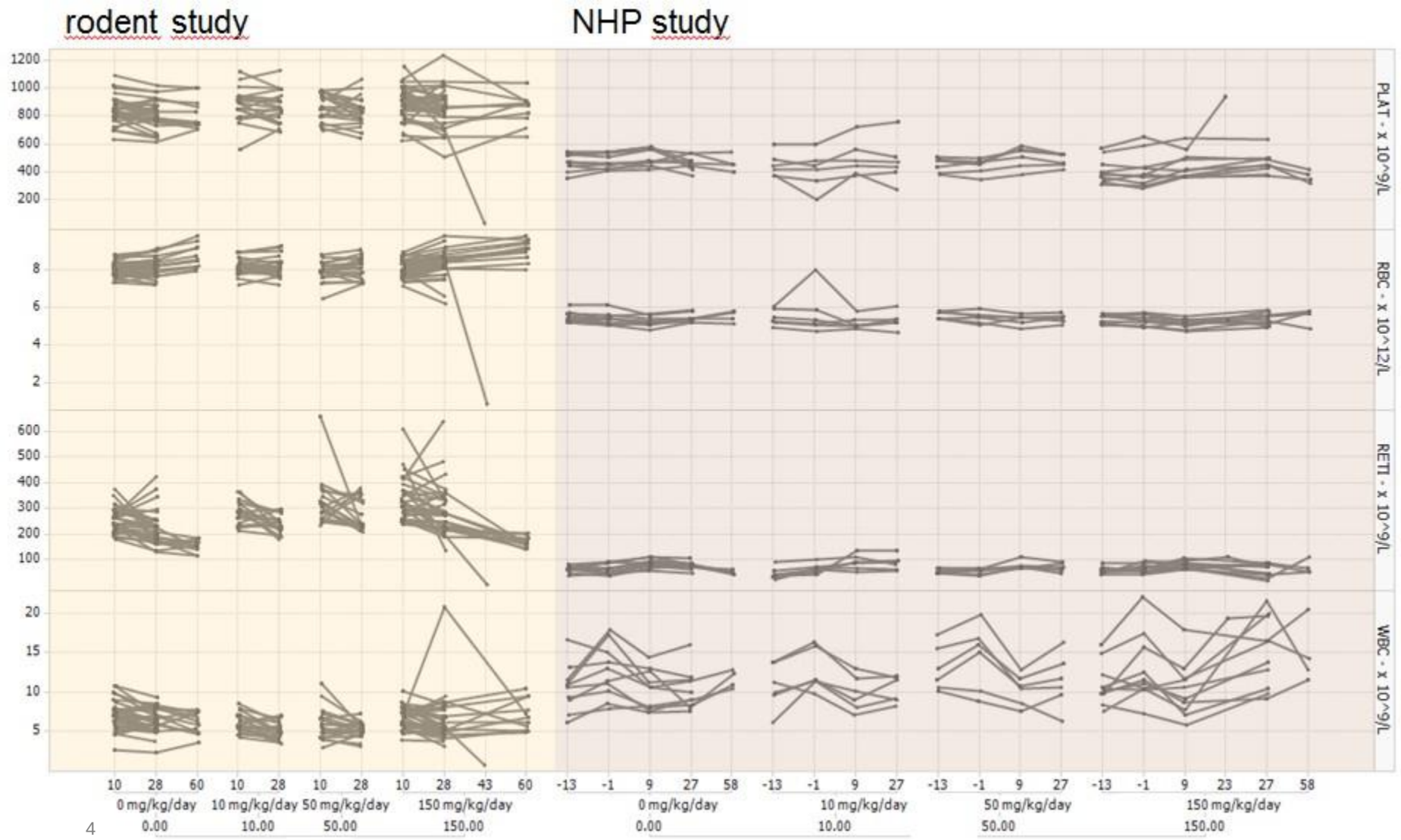
ChOX DB: >160,000 compounds annotated to >400 targets with >600,000 activities extracted from 10,000 publications approx.

>90 models already developed!

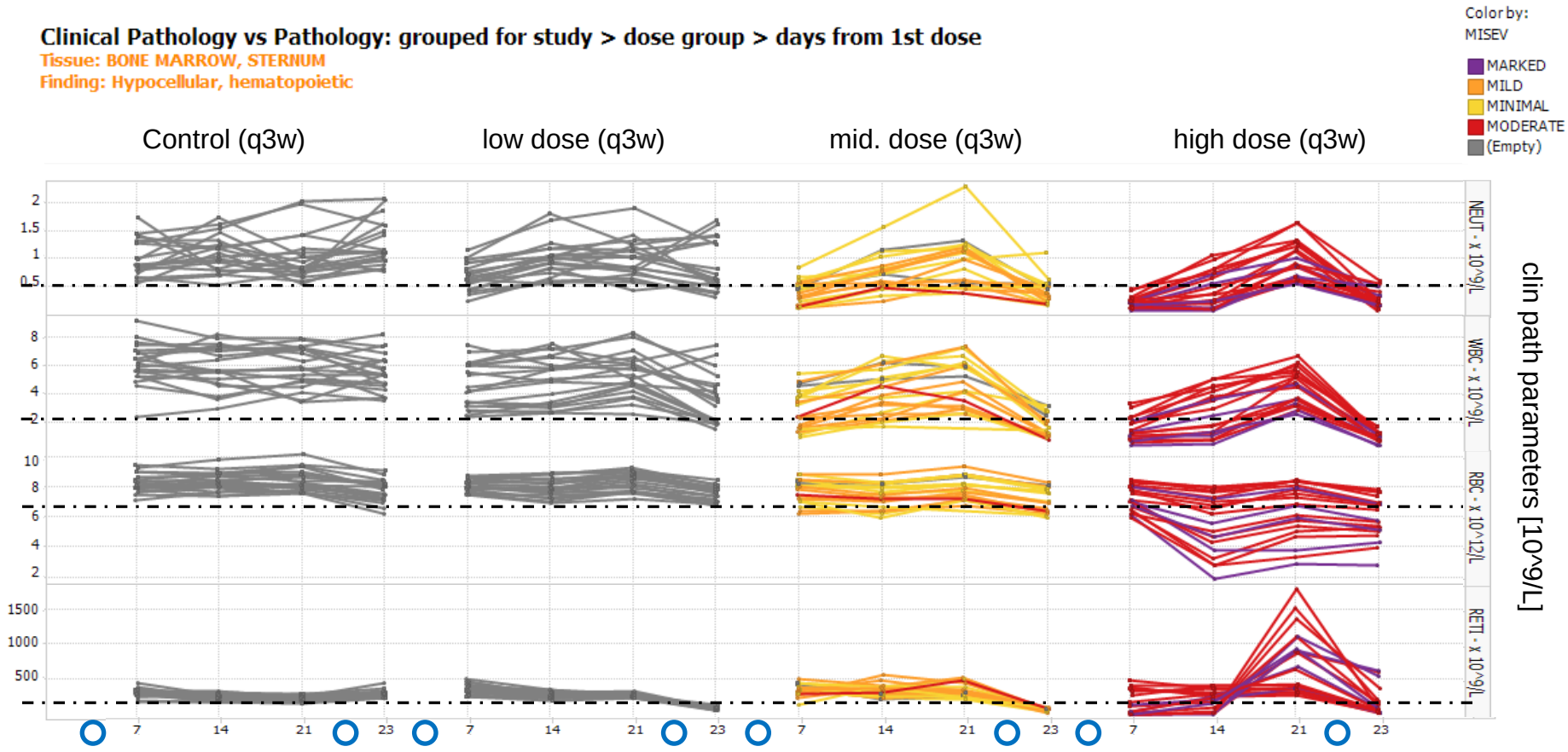
1st prototype under testing!

SEND database

Example 2. Clinical-preclinical data. Internal data analysis tool preclinical



Example 2 Internal data analysis tool



Idea for proposal (example 2).

- **Statement of problem:** There is no single, repository of normative data which allows preclinical safety experts, physicians, clinical investigators, regulatory reviewers and others to have rapid access to normative animal and human data.
- **Solution to problem:** This proposal outlines a comprehensive approach to the creation, maintenance and ready access to “EUbase”, a comprehensive normative data base of preclinical and clinical data.
- **Building of data mining tools**
- **Artificial Intelligence to triage the relevant data**.

Today.

Point of care devices

- More patients
- Time course

E-Watches

Sleep waves

Steps/day

BMI index

Continuous data

Tomorrow

Lab on a chip

Health care professional

Computer

Where can you help?

- Secured database
- Ontology
- Data collection
- Visualization
- Front end data mining
- Artificial intelligence
- New technologies to monitor biomarkers
- Validation of the new technologies
- Connectivity with Health care professionals, computer, algorithm for dosing, alert,....
- ...