

10 YEARS OF  
BREAKTHROUGHS  
A HEALTHIER  
FUTURE



innovative  
medicines  
initiative



efpia

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# How to apply technology convergence in safety

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# An analysis of the attrition of drug candidates from four major pharmaceutical companies

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Abstract | The pharmaceutical industry remains under huge pressure to address the high attrition rates in drug development. Attempts to reduce the number of efficacy- and

on attrition rates and that additional work is required to address safety-related failures. Further cross-company collaborations will be crucial to future progress in this area.

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| Termination reason      | Period    |           |
|-------------------------|-----------|-----------|
|                         | 2000–2005 | 2006–2010 |
| Clinical safety         | 48 (13%)  | 20 (8%)   |
| Commercial              | 23 (6%)   | 17 (7%)   |
| Efficacy                | 45 (11%)  | 10 (4%)   |
| Formulation             | 4 (1%)    | 5 (2%)    |
| Non-clinical toxicology | 144 (40%) | 96 (40%)  |

# Phase II and phase III failures: 2013–2015

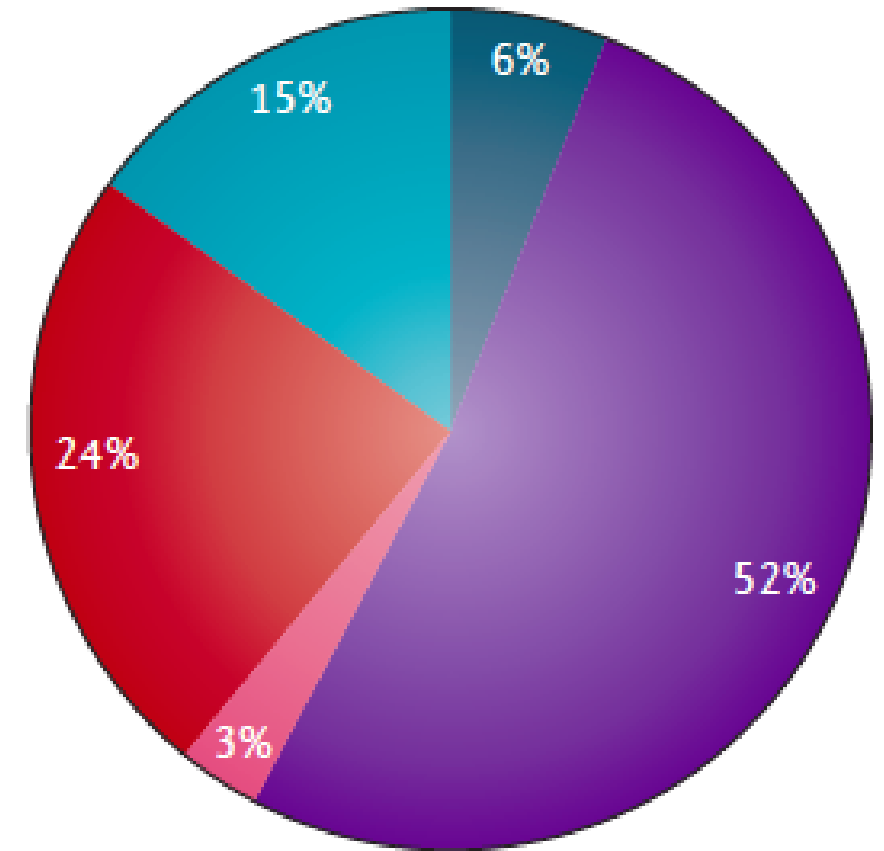
Richard K. Harrison

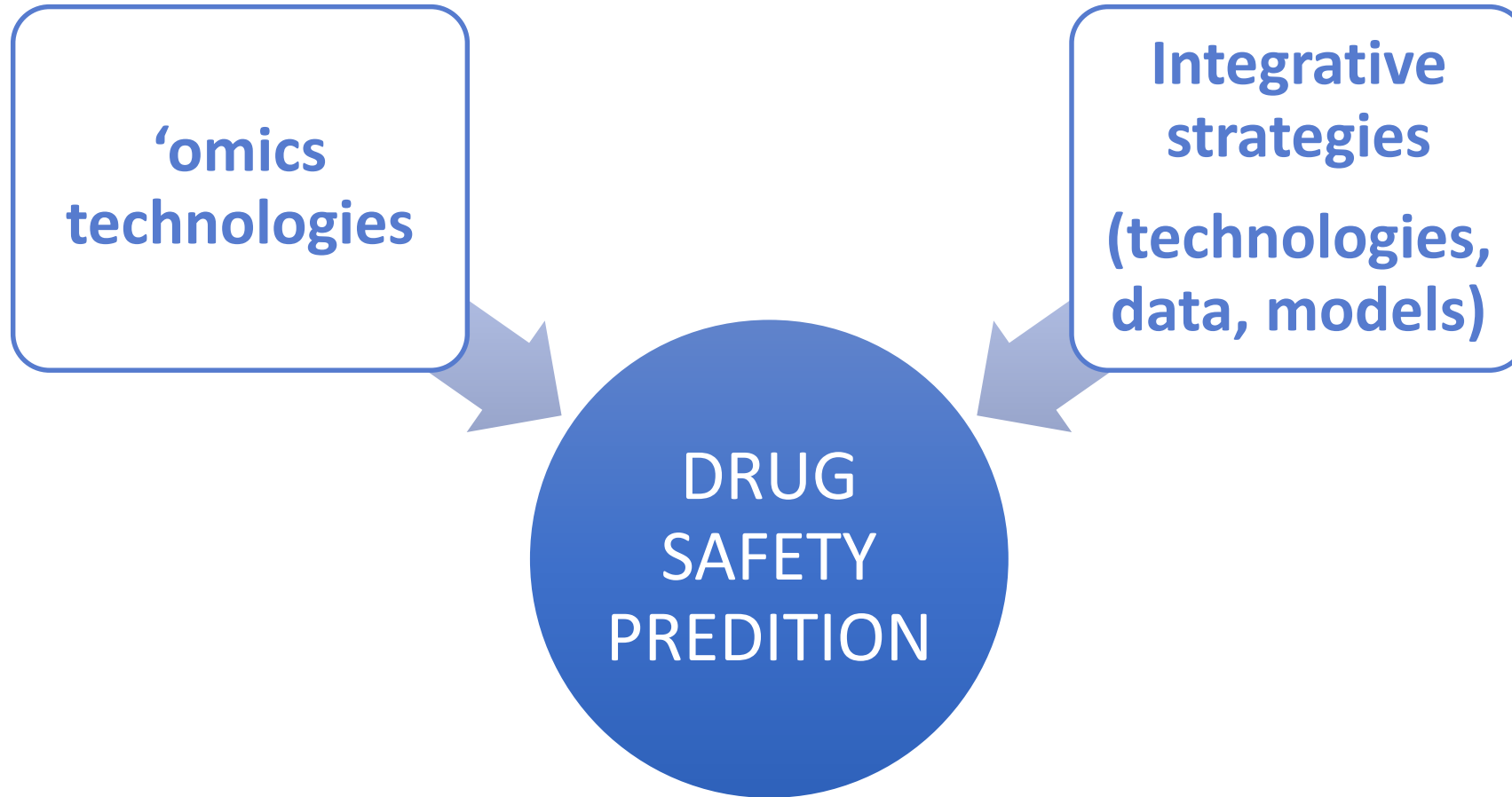
NATURE REVIEWS | DRUG DISCOVERY

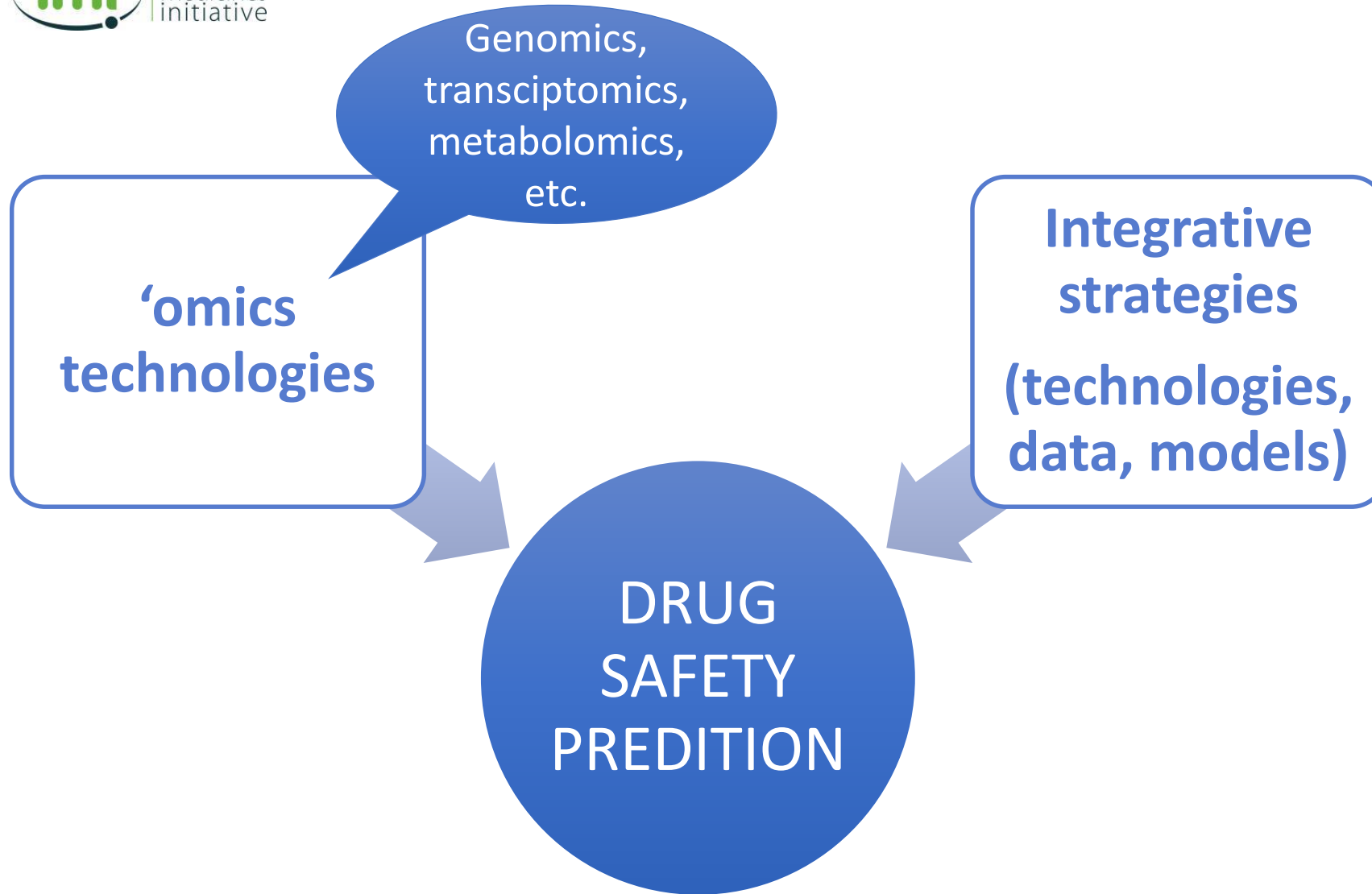
VOLUME 15 | NOVEMBER 2016 | 1

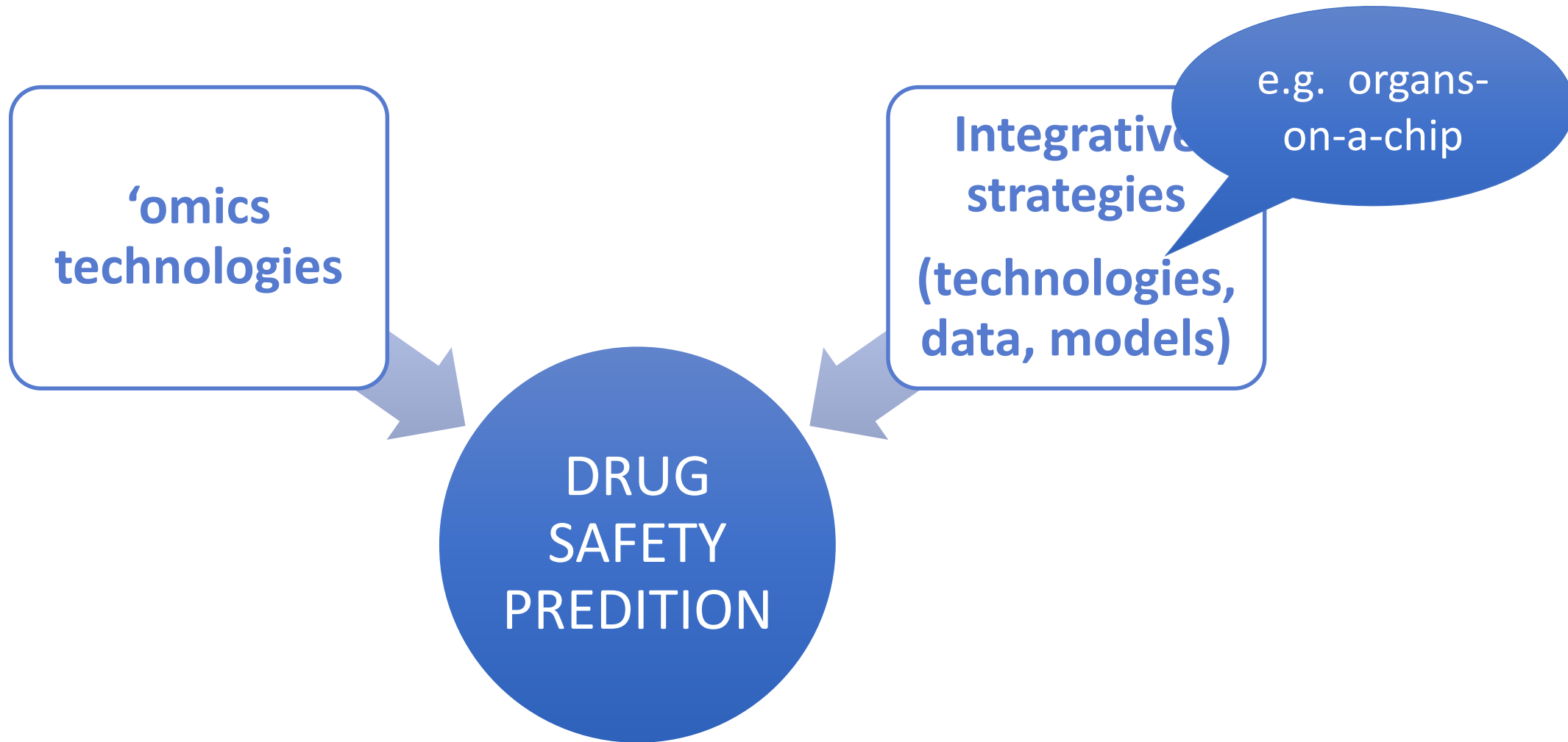
Late failures =  
Expensive failures

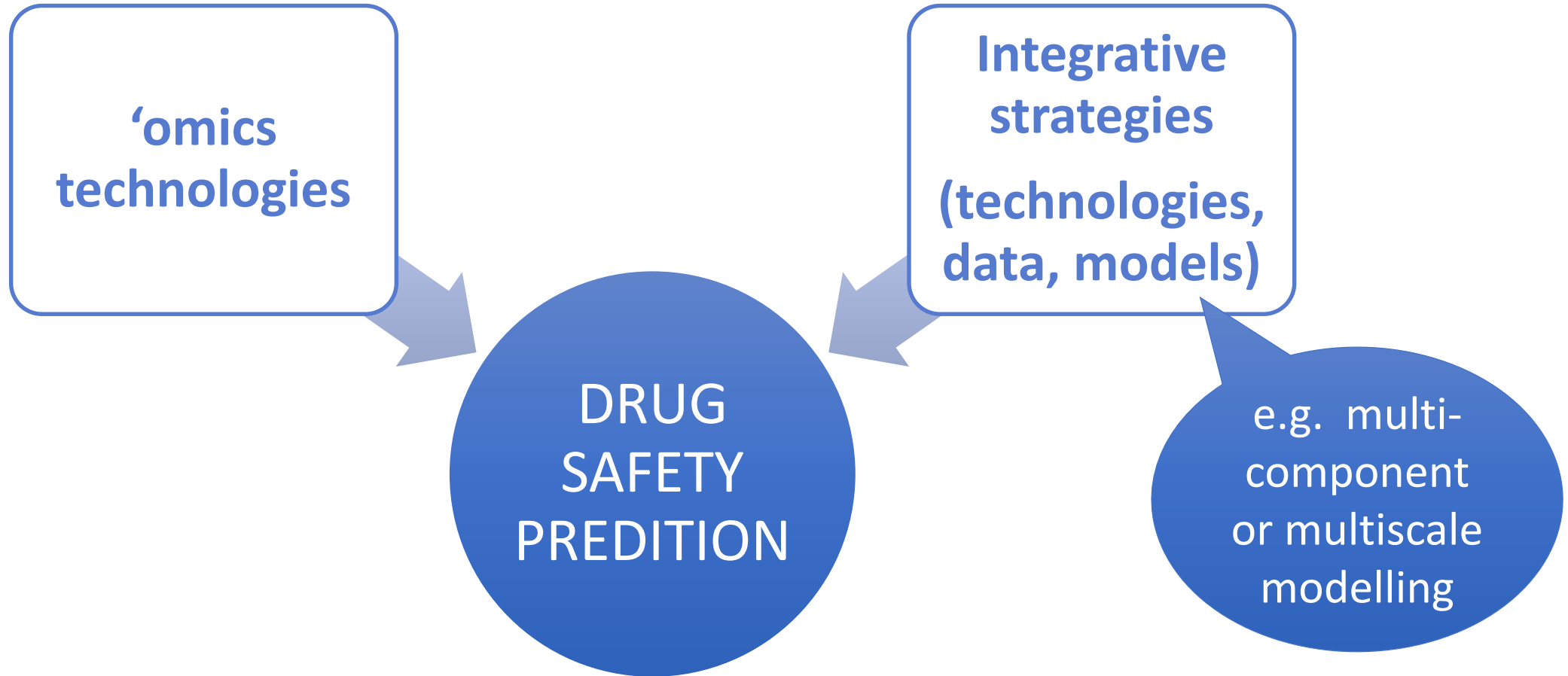
**a Reason for failure 2013–2015**



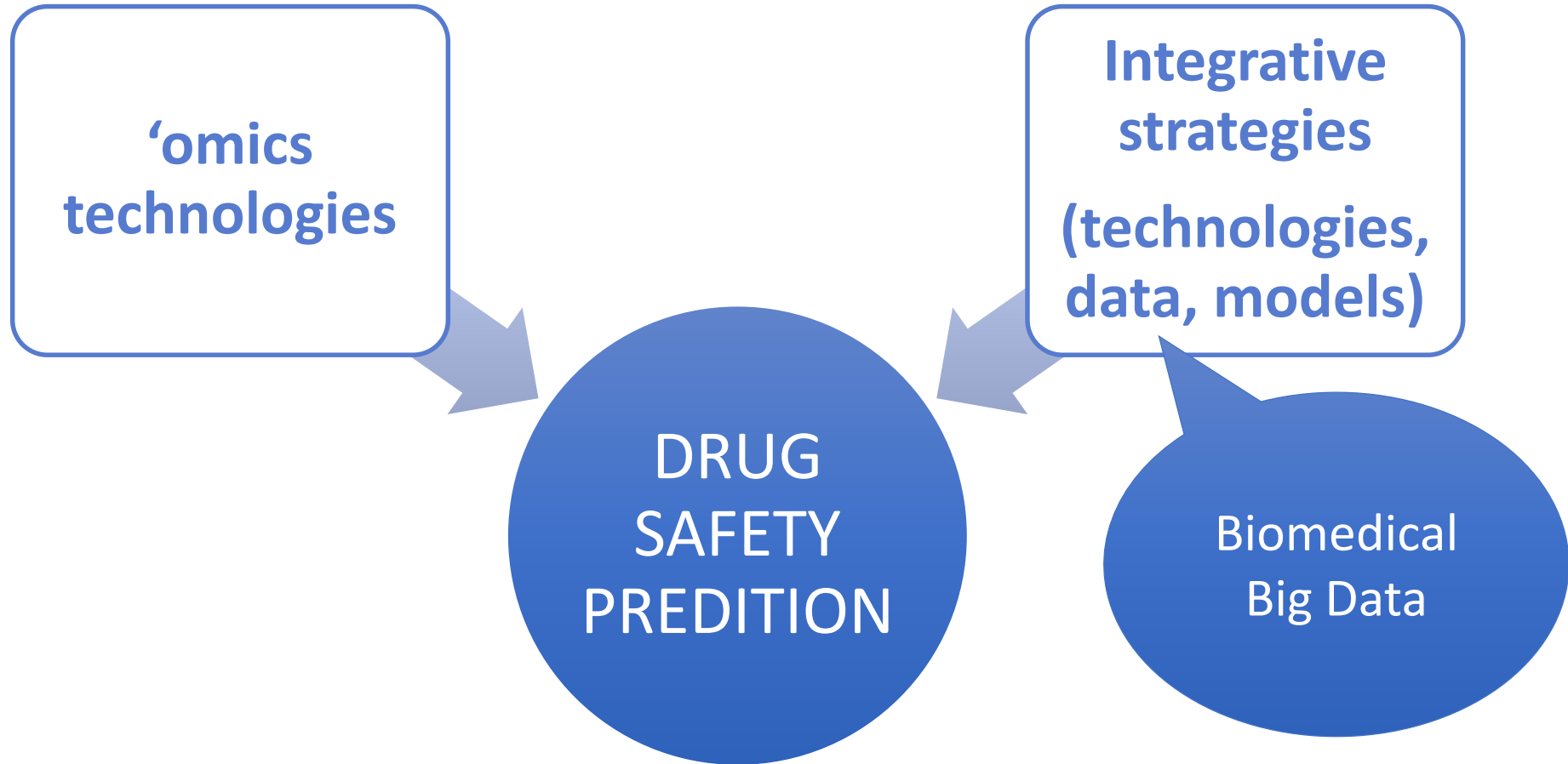












# Legacy data sharing to improve drug safety assessment: the eTOX project



Ferran Sanz<sup>1</sup>, François Pognan<sup>2</sup>, Thomas Steger-Hartmann<sup>3</sup>, Carlos Díaz<sup>4</sup> and eTOX\*

The sharing of legacy preclinical safety data among pharmaceutical companies and its integration with other information sources offers unprecedented opportunities to improve the early assessment of drug safety. Here, we discuss the experience of the eTOX project, which was established through the Innovative Medicines Initiative to explore this possibility.

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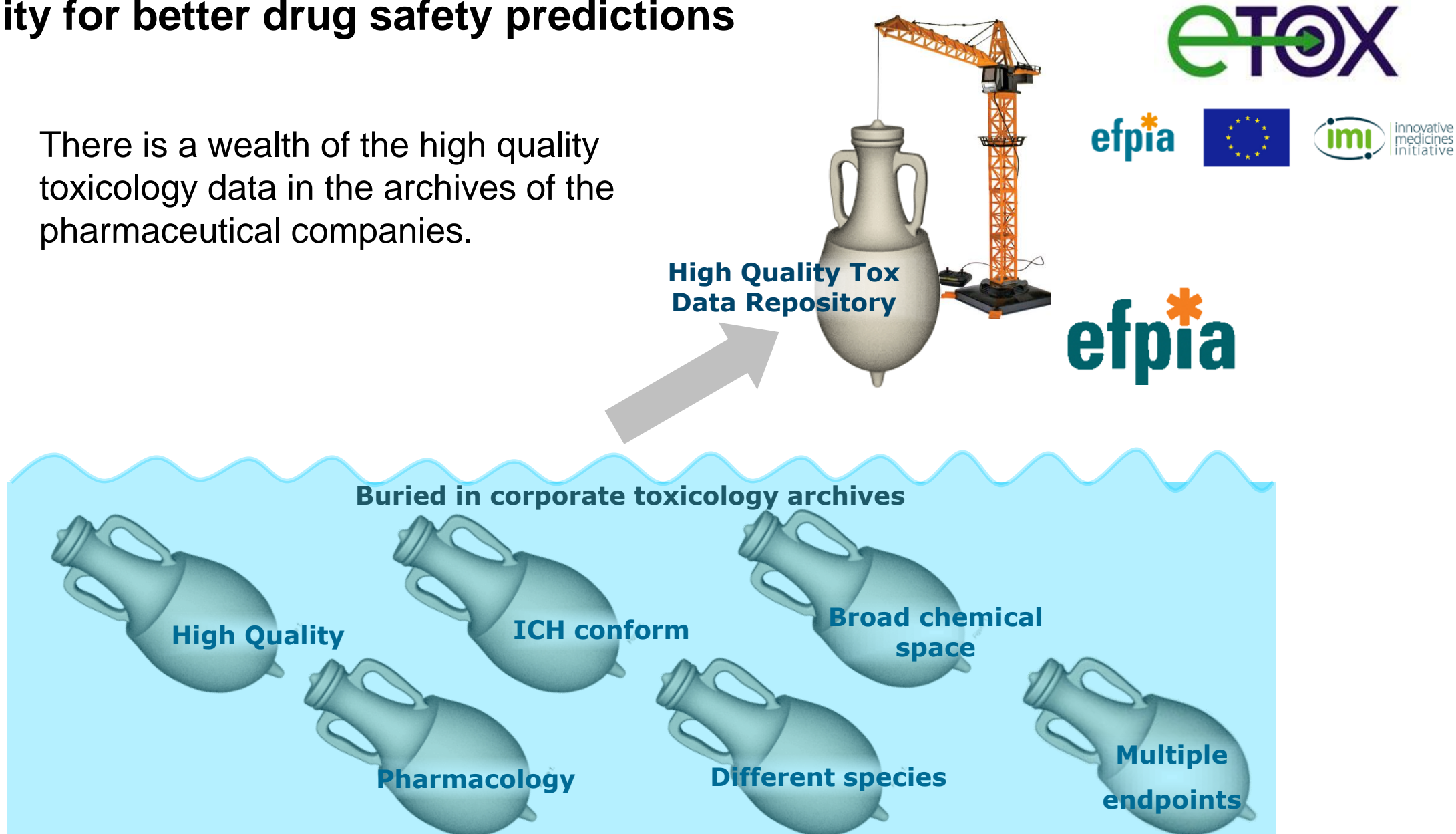
ACADEMIA



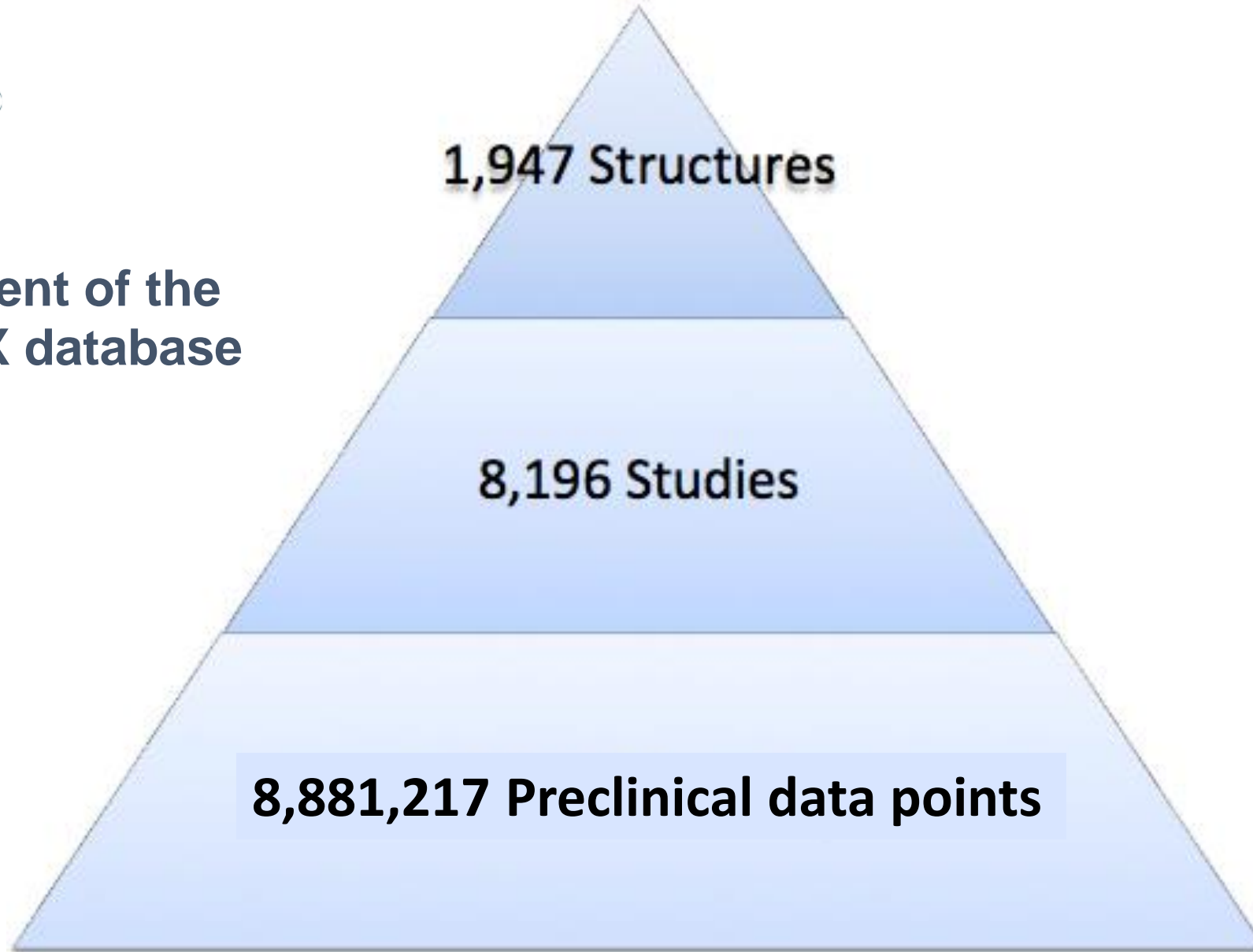
SMEs

# Opportunity for better drug safety predictions

There is a wealth of the high quality toxicology data in the archives of the pharmaceutical companies.

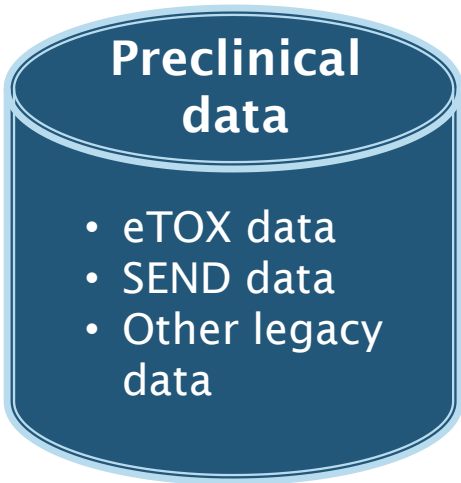


## Content of the eTOX database



# A New Player in Translational Safety Assessment

2017-2022

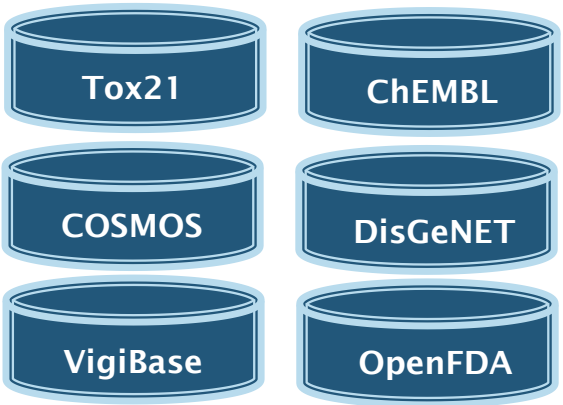


- ✓ **Read-across**
- ✓ **Visualization**
- ✓ **Modeling**

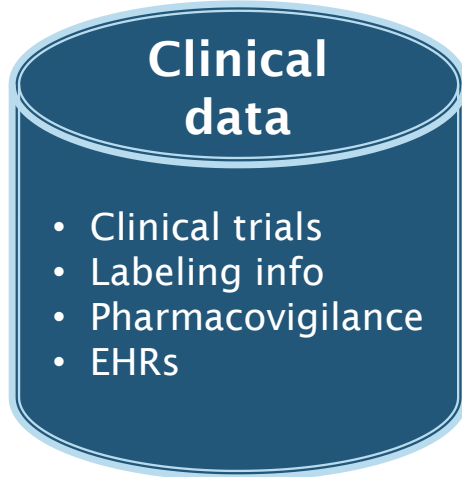
## Translational Safety Assessment



### Other data sources



FDA  
EMA  
PMDA





eTRANSAFE



efpia\*

Academia



SMEs



EFPIA

