

IMI – The Innovative Medicines Initiative

Ann Martin

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Summary of presentation today

- Some background - our current environment
- IMI – what it is and what it does
- Big Data examples in IMI projects
- Challenges
- Future Prospects

Some Background

What is the current environment for Healthcare Innovation?

Drivers for Change in Innovative Medicines

- Science and technology – the knowledge base is changing rapidly
- Huge challenges bringing this knowledge to patients
- Public Health challenges are increasing
 - Emerging diseases
 - Chronic diseases
- Demand on health provision is increasing
- Economic environments are more constrained
- Industry is adapting to a new ecosystem

Challenges in the Development of New medicines

- High Risk (large failure rate mostly due to unpredicted toxicity and lack of efficacy)
- Very inefficient process
- Duplication of effort amongst industry players
- Expensive
- Complex
- Long timelines
- Not enough science accompanying all development stages
- Clinical trial design not optimised for specific indications
- Regulatory pathways not always optimised for patient needs

All of this has a significant impact on the affordability and speed of access for innovation for patients



The Innovative Medicines Initiative

The Innovative Medicines Initiative

Through IMI projects we hope to:

- Share risk (amongst public and private players)
- Increase efficiency of drug development by developing common tools
- Reduce duplication of effort (especially at early stages)
- Incentivise companies to play in the non-competitive space
- Reduce timelines using a stratified approach (precision medicine)
- Integrate the latest science in real time during the development process
- Put patients at the centre
- **Use data and knowledge management to increase the efficiency of everything we do**

IMI – Europe's partnership for health

IMI1: 2008-2013

€2 bn budget

59 projects

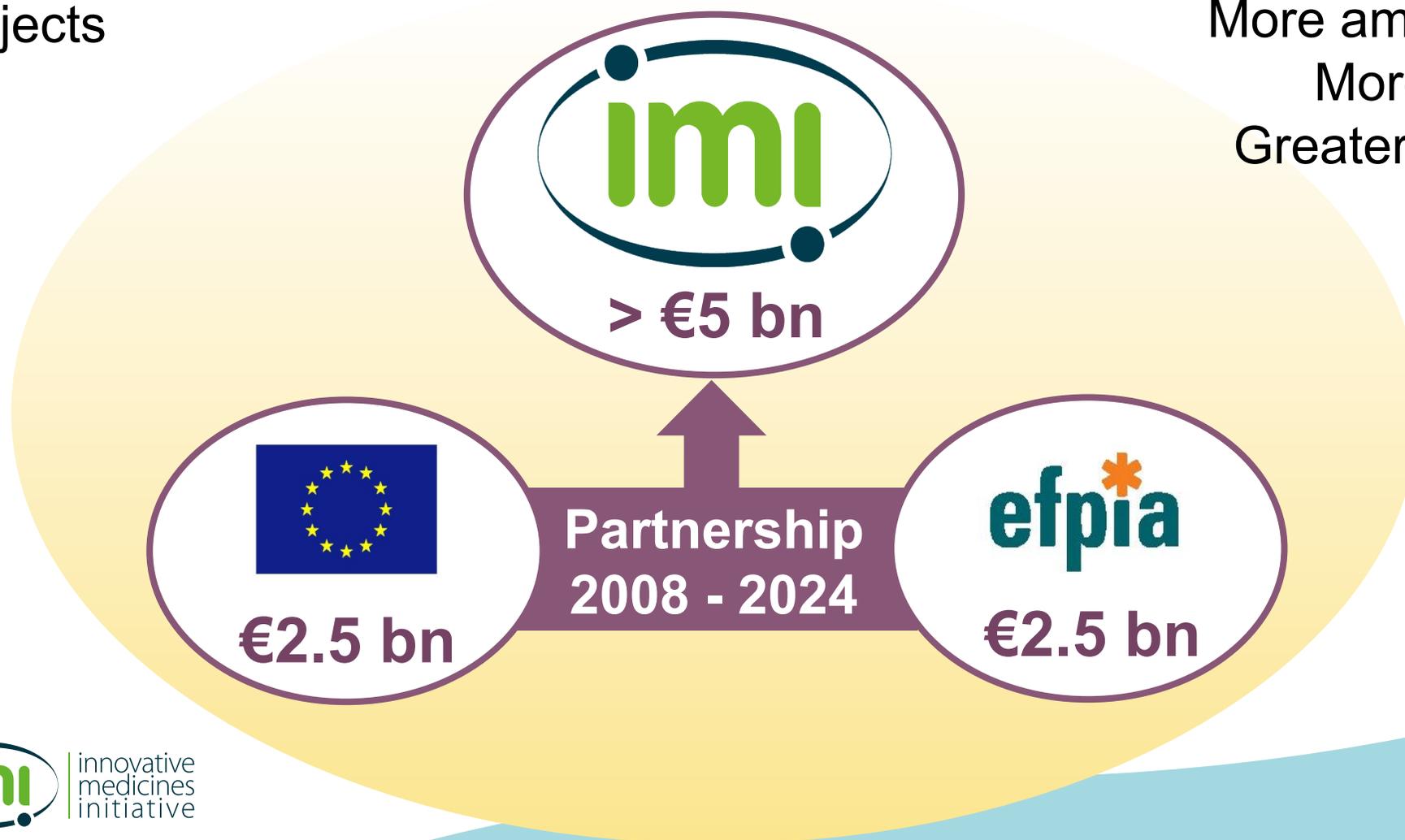
IMI2: 2014-2024

€3.3 bn budget

More ambitious

More open

Greater scope



IMI2 – building on successes of IMI1



- Focused: **stratified medicines** and healthcare priorities
- Healthcare solutions: prevention and treatment
- **End-to-end**: R&D, regulatory and access – move integration a step further
- Multi-sector: **within and beyond life sciences**

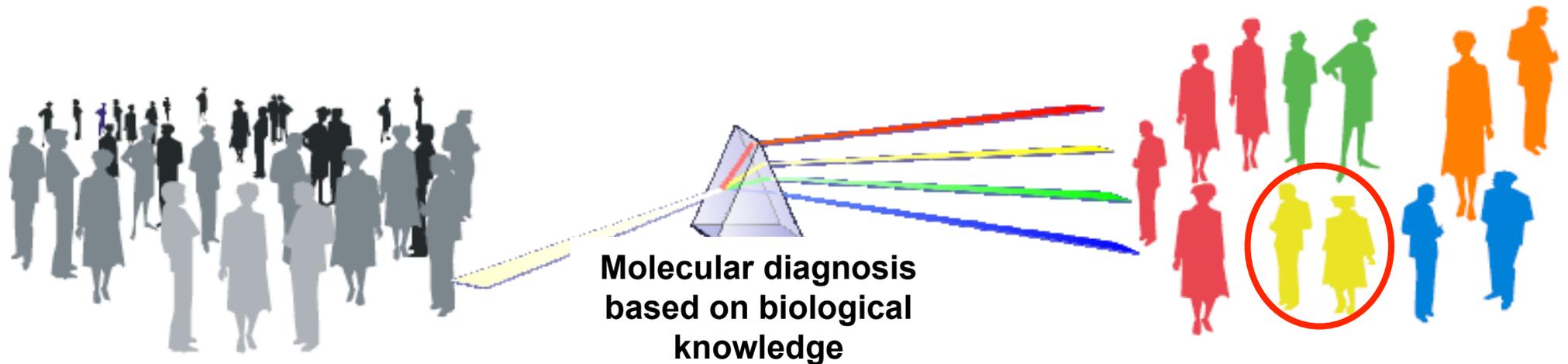
The Vision for IMI2

Science is driving the manner in which we view disease

Population



Individual



We “treat” a population.
Some respond and some don’t

We “treat” a *targeted* population
They all respond

Big Data examples in IMI projects

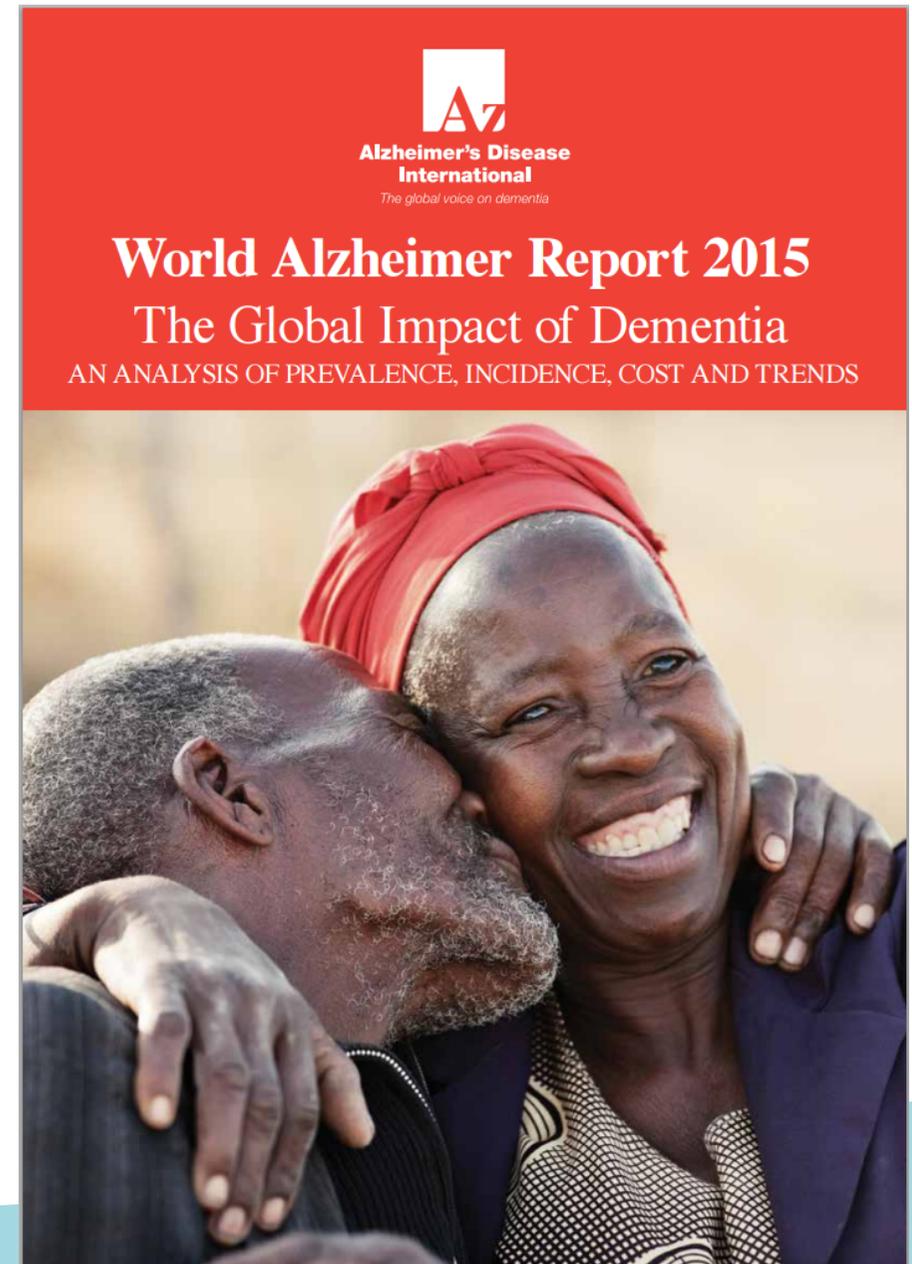
What types of Data are we talking about?

- Research Informatics “omics” and all analytical tools that are needed to create new knowledge
- Translational Informatics – needed to design clinical trials and validate tools (biomarkers) to speed up clinical development. Includes predictive toxicology work
- Real World Data – clinical data, pharmacovigilance data

Alzheimer's disease – a major unmet need

Alzheimer's disease in numbers...

- **46.8 million** affected globally
- **10.5 million** in Europe
- **Global cost** USD 818 billion (EUR 732 billion)



IMI action on Alzheimer's disease

PHARMA-COG

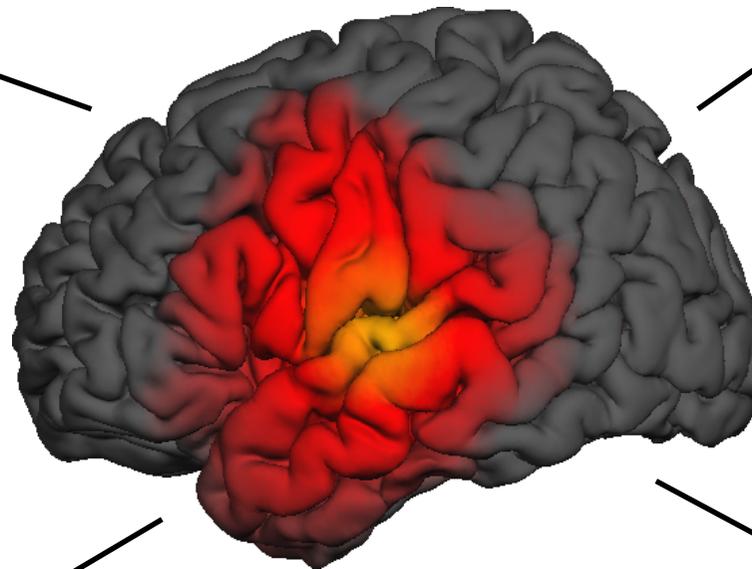
Matrix of biomarkers

- Test efficacy of new treatments

EMIF

Linking & analysing data

- Identify those at risk



AETIONOMY

New classification of AD/PD

- Personalised treatments

EPAD

'Adaptive' clinical trials

- Faster drug development & patient access

*Total budget
€169 million*

The Innovative Medicines Initiative

IMI as a productive public-private partnership for innovative medicines

- IMI is a magnet for collaboration and co-investment.
- IMI facilitates end-to-end integration, from research to consumers of innovation (patients and payers).
- IMI is a neutral platform for pharmaceutical companies and others to collaborate and share data and knowledge.
- IMI is an open model that is attracting other disciplines (e.g. ICT).



Thank you

infodesk@imi.europa.eu • www.imi.europa.eu

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