



More benefits

EU health research in Horizon 2020

Ruxandra Draghia-Akli, MD, PhD
Director for Health Research

Directorate-General for Research & Innovation
European Commission



**"It is the new and different
that are always most
vulnerable to market
research"**

Malcolm Gladwell, 2005



EU health research produces knowledge, innovation and growth

1,210
projects funded

4.9
billion euros invested

14,000
teams

114
countries

~50%
of projects on-going

70,000
PubMed publications

50,000
high-skilled jobs

23.3%
listed on patent application(s)

17%
envisage creating a SME

7.4%
created one or more SMEs



EU health research delivers results for patients

- Treat OA - better treatment & diagnosis of osteoarthritis
- EU contribution: €11.9 million
- Helped develop TIGENIX' lead product ChondroCelect® for cartilage regeneration in the knee
- This product is the first ATMP (Advanced Therapy Medicinal Product) approved in the EU.





EU health research concentrates scarce resources



- Alpha Man project is developing a promising treatment for patients suffering from the rare disease, alpha-mannosidosis.
- Alpha mannosidosis has a prevalence of 1 in 500.000 people
- A biotechnologically derived human enzyme has successfully completed a phase 2a clinical trial
- Three projects from 2001 to 2013 have led to this stage, with a total EU contribution of ~€10 million
- European research has been crucial given the low case numbers per member state and the limited incentive for private investment

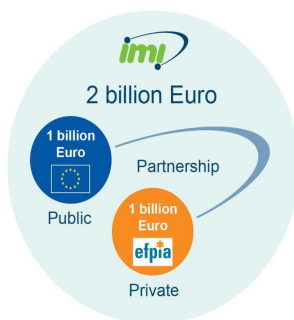


EU level health research co-ordinates



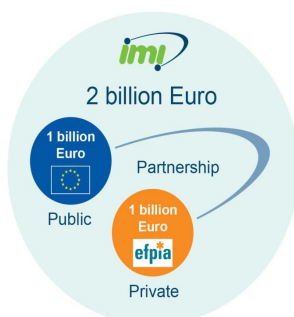
- ...objectives which can only be achieved at European / global level
- e.g. the Blueprint project – Europe's co-ordinated contribution to the International Human Epigenome Consortium
- Agreed goal of IHEC: generate 1000 epigenomes
- SMEs are embedded in the consortium, paving the way for the next phase of research, drug development.

Partnership – the Innovative Medicines Initiative



- IMI projects - research and innovation
- Proof of concept for new public private collaborations in pharmaceuticals
- Open collaboration to define and address common challenges
- IMI works: tangible deliverables after less than 2 years – at pace that no other funding scheme allows
- IMI bridging the gap between science, health and growth

IMI slides kindly provided by M. Chlebus, EFPIA



- IMI rules and procedures should aim to fulfill the needs of both private and public sectors
- IMI is more than a research framework: it is also a platform for stakeholder dialogue
- IMI is result driven and allows direct implementation of results in the innovation cycle
- SMEs participation in IMI projects is 13-15% without pre-set thresholds



| FP7 Health Projects | IMI projects |
|--|---|
| Low involvement of EFPIA companies | Strong involvement of EFPIA companies |
| 65 participations of EFPIA companies in 700 FP7 Health projects | 273 participations of EFPIA companies in 30 IMI projects (Call 1-3) |
| EFPIA companies receive a total of € 19 M for their participation | EFPIA companies have committed € 272 M of in-kind contribution (Call 1-3) |
| <ul style="list-style-type: none">• 4.28-fold difference of total number of participations• Comparing number of participations to the total number of projects, EFPIA companies are 100-fold more involved in IMI than in FP7 Health projects.• 14.4-fold difference of financial contribution of EFPIA companies between IMI and FP7 Health | |



Learning lessons, listening to partners...

Cutting red tape, increasing simplification

- **Harmonisation is not simplification**
- **Harmonisation = to make life easier for the administration**
- **Simplification = to make a tool suitable for the applicant**
- **One size does not fit all = build on learning's from FP7 and PPPs to find right balance between what can be harmonised and what needs to be adapted**

Funding models and processes should be adapted to the type of collaboration and nature of projects - in both standard programmes and partnerships



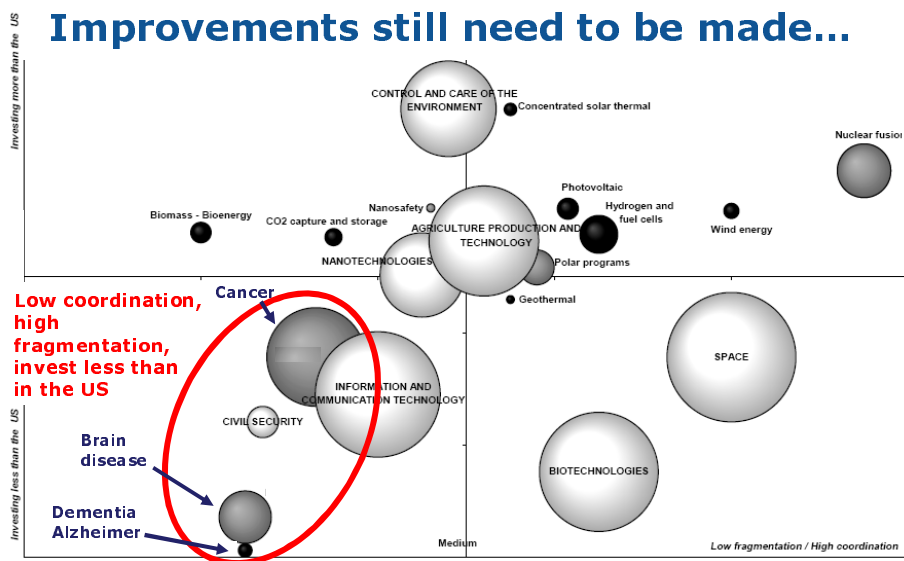
Innovation the Framework Programme

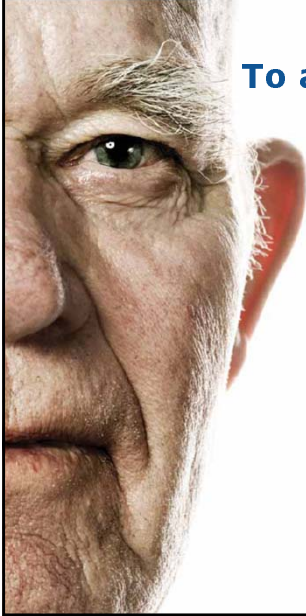
FP7-HEALTH-2012-Innovation-2 – "SMEs for Innovation"

- 3-5 partners, minimum 50% funding to SME, max 3 year duration
- 106 proposals evaluated September 2011 – February 2012
- higher threshold for 'impact' during evaluation
- 19 proposals to be funded, average grant size €4.5m
- Topics included:
 - Medical technology for transplantation and bio-artificial organs
 - Diagnostics for infectious disease
 - Technological approaches to combating sensory impairment



Improvements still need to be made...





To address significant challenges...

- Non-communicable diseases worldwide will cause an output loss of €35 trillion over the next two decades
- Increasing pressure on European healthcare systems
- The EU is not closing the persistent gap with global innovation leaders such as the US, Japan and South Korea
- Biomedical companies are finding drug development in Europe economically challenging and are moving their operations from the region, mainly to Asia

...and benefit from opportunities



- Stratified and subsequently personalised medicine can deliver cost savings and better outcomes for patients
- Recent studies suggest cost savings of 37% for breast cancer and 46% for CVD when a stratified approach is taken
- But the building blocks are many and linked, requiring clinical trials, a better understanding of the fundamentals of disease, and efforts to translate results to the clinic



...requiring strategic co-ordination in Horizon 2020 and beyond

- Some activities will be continued in strategic partnership where the goals are clearly delineated:
- Next stages of IMI, EDCTP, IRDiRC, etc
- The way in which we address other common challenges and opportunities is yet to be defined – the purpose of this meeting



How to ensure strategic co-ordination?

- Health in horizon 2020 provides for support to research to underpin and implement stratified and personalised medicine
- But strategic co-ordination throughout Europe is necessary
- In other words, how can European level funding work in concert with other funding streams?



What next?

- We have the 'what' but not the 'how'
- Do you agree we need better co-ordination?
- How can this be achieved?
- What are you willing to commit?



Horizon 2020: Health, Demographic Change and Wellbeing Challenge Proposal: ~ €8.5bn

Understanding the determinants of health (including environmental and climate related factors), improving health promotion and disease prevention;

Developing effective screening programmes and improving the assessment of disease susceptibility

Improving surveillance and preparedness

Understanding disease

Developing better preventive vaccines

Improving diagnosis

Using in-silico medicine for improving disease management and prediction

Treating disease

Transferring knowledge to clinical practice and scalable innovation actions

Better use of health data

Improving scientific tools and methods to support policy making and regulatory needs

Active ageing, independent and assisted living

Individual empowerment for self-management of health

Promoting integrated care

Optimising the efficiency and effectiveness of healthcare systems and reducing inequalities through evidence based decision making and dissemination of best practice, and innovative technologies and approaches.