



EU health research

Inspiring collaboration

STAMP

10 March **2015**

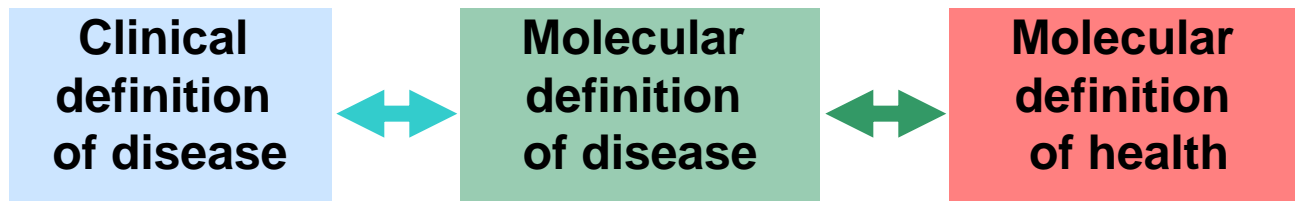
Irene Norstedt
Head of Unit

*Innovative and Personalised
Medicine*

DG Research and Innovation

Healthcare opportunities: more personalised medical interventions

Avalanche of new -omics and molecular information, which needs to be translated from basic to clinical research → better understanding of health and disease



Innovative approaches needed for changing the focus from treatment and cure to prediction and prevention

Personalised medicine to address significant challenges...

...and benefit from opportunities

- **Burden of non-communicable diseases (loss of €35 trillion over next 20 years)**
- **Pressure on healthcare systems**
- **Gap between EU and global innovation leaders**
- **Challenges of drug development in Europe**



- *Better outcomes for patients and potential cost savings (as suggested by early studies of stratified approach)*

Europe can lead implementation of personalised medicine thanks to favourable conditions

History of personalised medicine at EU level

2010: Preparatory workshops (-omics, biomarkers, clinical trials/regulatory, uptake)

2011: European Perspectives conference

2013: Commission Staff Working Document on "use of '-omics' technologies in the development of personalised medicine"

2015: Council conclusions on Personalised Medicine



Council Conclusions on personalised medicine for patients (2015/C 421/03)

"Personalised medicine refers to a medical model using characterisation of individuals' phenotypes and genotypes (e.g. molecular profiling, medical imaging, lifestyle data) for tailoring the right therapeutic strategy for the right person at the right time, and/or to determine the predisposition to disease and/or to deliver timely and targeted prevention"

Definition developed by the Advisory group for the H2020 Health, demographic change and well-being challenge

Framework for Personalised Medicine

R&D
the basics

R&D
stratifying
tools

R&D
test in
human

Towards
the market

Uptake in
healthcare

In patients

“Omics”

Technologies

Data

Samples

Statistics

Biomarkers
Identification
Qualification
Validation

Data modelling
tools

Technical
aspects &
challenges

Clinical trials
methodologies

Patient -
recruitment

Diagnostics &
Therapies

Approval
processes

Regulatory
aspects

Pricing &
Reimbursement

Health economy

HTA

Novel models of
healthcare
organisation

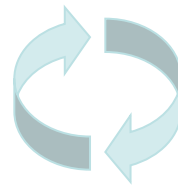
Availability &
usability in the
clinic

Patient
perspective

Equal
treatment

Social and
legal issues

Education and
training



Prediction - Prevention – Treatment - Cure

Identified key research challenges

Breaking barriers & speaking the same language

"cross-disciplinarity", capacity building, education & training

Generating knowledge & developing the right tools

standards, clinical bioinformatics, adaptation of tools



Translating knowledge to medical applications

disease taxonomy, biomarker validation, clinical trials

Understanding the value & economic aspects

health care pilots, HTA, comparative effectiveness research, value chain



Over 2 billion EUR to top research

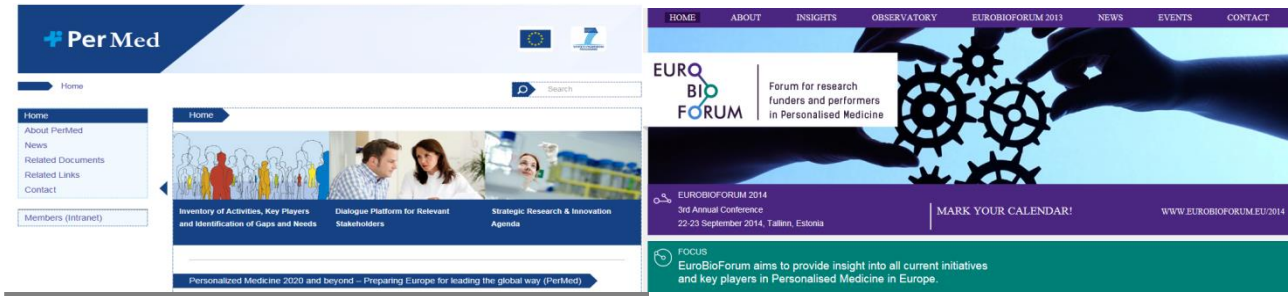
EU Health Research Programme Enabling personalised medicine 2007-2015



Research areas

- Large scale data gathering and "-omics"*
- Technology development*
- Statistics*
- Diagnostics*
- Biomarkers*
- Clinical trial methodologies*
- Pre-clinical and clinical research*
- Rare diseases: small patient populations*
- Omics for health promotion and disease prevention*
- Piloting personalised medicine in healthcare*

Support and coordination actions



History of IC PerMed

- **PerMed - FP7 funded Support and Coordination Action**
<http://www.permed2020.eu/index.php>
- **Aiming to: step up coordination efforts, allow synergies and avoid duplication or competition, to ensure maximum transparency and openness preparing Europe for leading the global way.**
- **Coordinated by DLR engaging a variety of stakeholders throughout Europe and beyond**
- **Deliverable: PerMed Strategic Research and Innovation Agenda (SRIA)**



History of IC PerMed

- **4 meetings organised by the EC to bring together representatives from research funders and policy makers in the EU Member States and in countries Associated to H2020**
- **Participants agreeing to establish International Consortium for Personalised Medicine (IC PerMed) aiming to implement the PerMed SRIA**
- **Organisation inspired by other large scale international research consortia such as IRDiRC (rare diseases)**



International Consortium for Personalised Medicine (IC PerMed)

WHAT

Collaboration of research funders and policy makers from EU Member States and beyond

WHY

- Establish Europe as a global leader in PM research
- Support the PM science base through a coordinated approach to research
- Provide evidence to demonstrate the benefit of PM to citizens and healthcare systems
- Pave the way for PM approaches for citizens

HOW

Implementation of a Roadmap based on PerMed Strategic Research Agenda (SRIA)



5 Challenge Groups Lead by "Facilitators":

Developing awareness &
Empowerment

Maria Judith Molnar, Health Ministry, HU

Integrating Big Data &
ICT solutions

*Wolfgang Ballensiefen, Ministry of
Research (DLR-PT), DE*

Translating Basic to
Clinical Research & Beyond

*Hemma Bauer, Ministry of Research, AT
and Natalia Martin & Daria Julkowska,
National Research Agency, FR*

Bringing Innovation to
the Market

Peter Andersen, Innovation Fund, DK

Shaping Sustainable
Healthcare

Gaetano Guglielmi, Ministry of Health, IT

Challenge Groups tasks

Consortium Roadmap -building on the challenges of the PerMed SRIA

- **Actionable research activities**
- **Mapping of ongoing activities** (for proposed actions)
- **Proposed means for implementation**
(instruments/initiatives at regional, national, EU, international level)

(+ Specific metrics to measure progress)

Conference program for each challenge-
Personalised medicine conference 1-2 June, Brussels

How can you contribute?

Consortium Roadmap -building on the challenges of
the PerMed SRIA

- **Propose actionable research activities**
- **Tell us about ongoing activities** (for proposed actions)
- **How you can help to implement proposed actions**

***Participate in Personalised medicine conference 1-2
June, Brussels***



European
Commission

Personalised Medicine

Conference
1-2 June 2016
Charlemagne
Brussels

<http://ec.europa.eu/permed2016>

Research and
Innovation



HORIZON 2020

**Thank you
for your attention**

Find out more:

www.ec.europa.eu/research/horizon2020

<http://ec.europa.eu/research/participants/portal/desktop/en/home.html>