



EUROPEAN  
COMMISSION

Community research

Building a  
**Europe** of  
Knowledge



Health  
Research  
in the  
**Seventh**  
Framework  
Programme  
2007-2013

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DG Research –  
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# EU research: the story so far



- 1952:** ECSC treaty; first projects started March 1955
- 1957:** EURATOM treaty; Joint Research Centre set up
- 1983:** ESPRIT programme
- 1984:** **First Framework Programme (1984-1987)**
- 1987:** 'European Single Act' – science becomes a Community responsibility;  
**Second Framework Programme (1987-1991)**
- 1990:** **Third Framework Programme (1990-1994)**
- 1993:** Treaty on European Union;  
role of RTD in the enlarged EU
- 1994:** **Fourth Framework Programme (1994-1998)**
- 1998:** **Fifth Framework Programme (1998-2002)**
- 2000:** European Research Area
- 2002:** **Sixth Framework Programme (2002-2006)**
- 2007:** **Seventh Framework Programme (2007-2013)**



## FP7 : 2007 - 2013

### Aims:

- Towards the world's leading research area
- Investment in world class research
- Build on and further efforts of FP6 – towards a knowledge based economy and society



## FP7 : What's new?



### Main elements:

- Duration increased to seven years
- Annual average budget increase  
€4.47 (FP6) to €7.22 billion (FP7)
- Frontier research (~ €1.1 billion per year)
- New structure:  
Cooperation – Ideas – People – Capacities
- Flexible funding schemes
- Joint Technology initiatives
- Simpler procedures
- Outsourcing



# FP7 2007 –2013 | Specific Programmes

## *Cooperation*

To gain leadership in science and technology by **supporting cooperation** between universities, industry, research centres and public authorities across the EU and rest of the world

## *Ideas (external) – European Research Council*

To stimulate the creativity and excellence of European research through the funding of “**frontier research**” carried out by individual teams competing at European level

## *People (external) – Marie Curie Actions*

To develop and strengthen the **human potential** of European research through support to training, mobility and the development of European research careers

## *Capacities*

To enhance **research and innovation capacity** throughout Europe



# FP7 2007 –2013 | Specific Programmes

## **Cooperation – Collaborative research**

### **Four sub-programmes:**

- Collaborative Research
- Joint Technology Initiatives (JTIs)
- Coordination of non-Community research programmes
- International Cooperation (INCO)

 **applied across ten themes!**

## **Ideas – Frontier Research - ERC**

## **People – Marie Curie Actions**

## **Capacities – Research Capacity**



# FP7 2007 –2013 | Specific Programmes

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→ applied across **ten themes!**

## *Ideas – Frontier Research - ERC*

## *People – Marie Curie Actions*

## *Capacities – Research Capacity*



# Cooperation

## Ten Themes:

- 1 Health
- 2 Food, agriculture and fisheries, biotechnology
- 3 Information and communication technologies
- 4 Nanosciences, nanotechnologies, materials and new production technologies
- 5 Energy
- 6 Environment (including climate change)
- 7 Transport (including aeronautics)
- 8 Socio-economic sciences and humanities
- 9 Space
- 10 Security



# Health

## Objectives:

- Improving the health of European citizens
- Increasing the competitiveness of European health-related industries
- Addressing global health issues including emerging epidemics



# Health

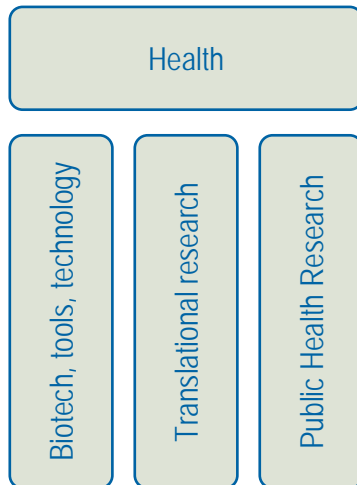
## Rationale:

- Sequencing of human genome and recent advances in post-genomics  
⇒ to integrate vast amounts of data
- Translational research  
⇒ to bring knowledge into the clinic
- Clinical research  
⇒ international multi-centre trials
- Reinforce health policy-driven research  
⇒ comparison of the national policies
- Strong EU-based biomedical research  
⇒ strengthen competitiveness of industries and SMEs



# Health

## Three pillars:



- Biotechnology, generic tools and technologies for human health
- Translating research for human health
- Optimising the delivery of health care to European citizens

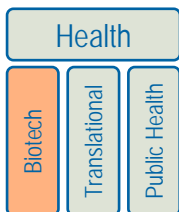


# Health

## Pillar 1:

Biotechnology,  
generic tools  
and medical technologies  
for human health

- High-throughput research
- Detection, diagnosis and monitoring
- Predicting suitability, safety and efficacy of therapies (incl alternatives to animal testing)
- Innovative therapeutic approaches and intervention



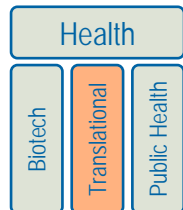


# Health

## Pillar 2:

Translating research for human health

- Integrating biological data and processes: **large-scale data gathering**, systems biology
- Research on the **brain and related diseases**, human development and ageing
- Translational research in **infectious diseases**: drug resistance, HIV/AIDS, malaria, tuberculosis, Hepatitis, new and re-emerging epidemics, etc.)
- Translational research in **major diseases**: cancer; cardiovascular disease; diabetes/obesity; rare diseases; other chronic diseases (e.g. rheumatic, respiratory musculo-skeletal diseases and arthritis)

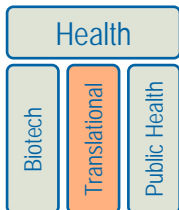




# Health

## Brain Research:

- Aim: better understanding of brain function and dysfunction
- Brain function: the integrated structure and dynamics of the brain
- Brain dysfunction: neurological and psychiatric diseases
- search for new therapies, including regenerative and restorative therapeutic approaches
- Focus on translational clinical and industrial research leading to
  - better diagnosis of brain diseases
  - new drugs
  - innovative brain-machine interfaces.



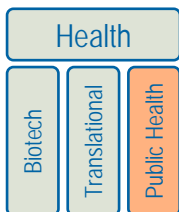


# Health

## Pillar 3:

Optimising the delivery of health care to European citizens

- Translating clinical outcome into clinical practice
- Quality, efficiency and solidarity of health systems including transitional health systems (i.e. health systems that are currently under reform)
- Enhanced disease prevention and better use of medicines
- Appropriate use of new health therapies and technologies

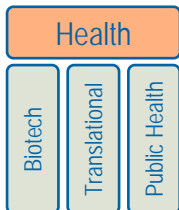




# Health

## Horizontal Issues:

- Two themes addressed horizontally across the three activity pillars
- Child health and paediatric diseases
- The health of the ageing population





**FP7 2007 –2013**

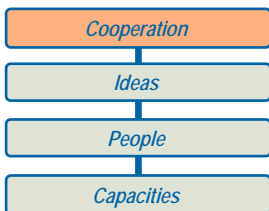
## Implementation of Cooperation



# Collaborative Research

## Funding schemes:

- **Collaborative Projects**
  - ⇒ Multi-partner, multi-national research projects
  - ⇒ small, medium, large scale projects
  
- **Networks of Excellence**
  - ⇒ integrating activities in a given field
  - ⇒ Longer term co-operation
  
- **Coordination and Support Actions**
  - ⇒ Small scale coordination and support activities
  
  - ⇒ Specific topics, in particular SMEs
  - ⇒ Based on calls for proposals





# Collaborative Research

## Minimum conditions for participation

- 3 independent participants from 3 different Member States (MS) or Associated countries (Ac)
- Natural persons may participate
- JRC may participate and is deemed to be from a different MS or AC
- Sole participants composed of members that meet the criteria above can participate



# Collaborative Research

## Submission and Evaluation:

- Commission to adopt and publish rules for proposal submission, evaluation, selection and award:
  - Includes two-stage submission and two-step evaluation
  - consistent verification of the legal status and financial capacity of participants
  - Evaluation criteria (S&T quality, impact, implementation)
- Call for proposals based on annual work programmes:
  - 2007 work programmes currently being prepared





# Collaborative Research

## Grant Implementation:



- No more financial collective responsibility ≠ FP6
- Instead: establishment of a participant guarantee fund to cover risks.
- Contribution to guarantee fund of max. 5% of the EC contribution by each participant, to be returned at the end of the project
- Consortium agreements obligatory unless exempted by call for proposals
- Simplified procedure for changes in consortium membership



# Collaborative Research

Cost reporting models eliminated



Participants charge direct and indirect eligible costs

1) Direct costs:

- Research and technological activities: 50% of eligible costs except for:
  - Public bodies: 75%
  - Secondary and higher education establishments: 75%
  - Research organisations: 75%
  - SMEs: 75%
  - Security related research: 75%
- Demonstration activities: 50% of eligible costs for all
- Other activities: 100% including e.g. Management Training
  - Coordination and support actions: 100%



# Collaborative Research

## 2) Indirect costs:

### All participants:

- Actual indirect costs (participants may use a simplified method of calculation)  
or
- Flat-rate of direct eligible costs excluding subcontracts and reimbursement of third parties' costs (to be established by the Commission)
- Flat-rate of 60% of total direct eligible costs (until end 2009)
- Flat rate of minimum 40%, to be established by the Commission (as of 2010)



# FP7 2007 –2013

## Cooperation – Collaborative research

### Four sub-programmes:

- Collaborative Research
- **Joint Technology Initiatives (JTIs)**
- Coordination of non-Community research programmes
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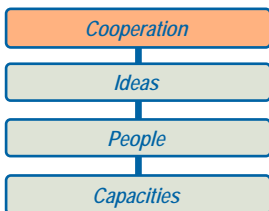
 **applied across nine themes!**



# Joint Technology Initiatives (JTI)

New  
FP7

- Arising from European Technology Platforms
- In fields of major European public interest
- “Strategic Research Agenda” defined by stakeholders
- Specific implementation structure and *modus operandi*
- Firmly anchored to Themes of the Cooperation Programme
- In HEALTH:  
Innovative Medicines Initiative (IMI):  
Accelerate development of safe and more effective medicines by joint public-private collaborations  
Cancer - Brain disorders - Inflammatory diseases –  
Metabolic diseases - Infectious diseases





# Innovative Medicines Initiatives (IMI)

**Aim** → Accelerate development of safe and more effective medicines by joint public-private collaborations

**Strategic  
Research Agenda:  
Disease focus**

- **Cancer**
- **Brain disorders**
- **Inflammatory diseases**
- **Metabolic diseases**
- **Infectious diseases**



# Innovative Medicines Initiatives (IMI)

## Strategic Research Agenda: Key areas

- **Safety**  
Addressing the bottlenecks of predictivity in **safety evaluation** and **pharmacovigilance** with the authorities
- **Efficacy**  
Addressing the bottlenecks of **predictive pharmacology, biomarkers identification** and **validation, patient recruitment** and **risk assessment** with the authorities
- **Knowledge Management**  
Leveraging the potential of new technologies to analyse a huge amount of **information** in an integrated and predictive way
- **Education and Training**  
Addressing certain gaps in expertise which need to be resolved in order to change and support the biopharmaceutical research and development process



# FP7 2007 –2013 | Specific Programmes

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## *Ideas – Frontier Research*

## *People – Marie Curie Actions*

## *Capacities – Research Capacity*



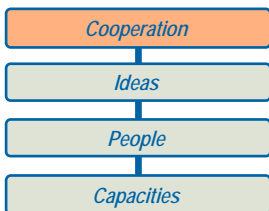
# INCO / ERA NET

## International Cooperation

- Enhance participation of third countries
  - ⇒ specific actions
  - ⇒ through specific topics in thematic areas

## Coordination of Non-Community Research Programmes

- ERA NETs
  - ⇒ implementing public research programmes
  - ⇒ not necessarily within priorities
- Article 169





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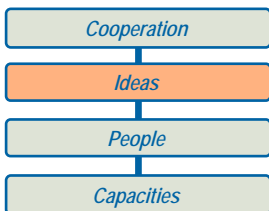
To enhance **research and innovation capacity** throughout Europe



## Principles of the European Research Council

New  
FP7

- Investigator – driven research
- Individual independent teams (including SME)
- basic and applied research across all research fields
- Europe-wide competitive funding structure  
⇒ Excellence as sole criterion
- Simplified grant mechanisms (100% reimbursement)
- Independent scientific governance (Scientific Council)
- Dedicated implementation structure (Executive Agency)





## ERC : Funding Schemes

### ERC Starting Grant

- Funding for up to five years
- Grants at pre-set levels, eg between 100k and 400k (fixed increments) per year
- Only one application during the same year
- Only one active ERC grant by the same investigator at the same time
- Eligible: Researchers less than 10 years from award of their PhD
- First call probably in early 2007
- Goal: to award ~200 ERC Starting Grants each year (depending on ERC budget available)

### ERC Advanced Grant

- Details yet to be elaborated
- First call: 2008?



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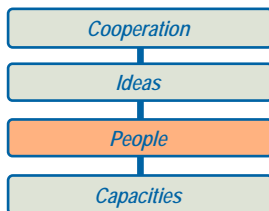


# Marie Curie Actions

## Overall scope:

⇒ Human resource development in R&D in Europe

- Initial training of researchers
- Life-long training and career development
- Industry-academia pathways and partnerships
- International dimension
- Specific actions



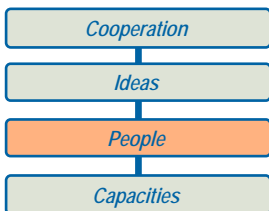


# Marie Curie Actions

## Implementation:

- Initial training of researches
  - Marie Curie Networks\*
- Life-long training and career development
  - Individual Intra-European Fellowships
  - Co-financing of regional/national/international programmes
- Industry-academia pathways and partnerships
  - Industry-Academia Knowledge-sharing Scheme\*
- International dimension
  - Outgoing & Incoming International Fellowships\*
  - International Cooperation Scheme
  - Reintegration grants
- Specific actions
  - Mobility and career enhancement actions
  - Excellence awards

\* Open to third-country nationals





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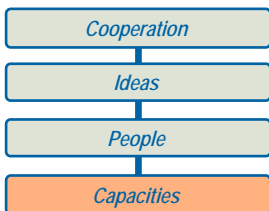
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# Capacities

## Activities:

- Research infrastructures
- Research for the benefit of SMEs
  - ⇒ Small groups of SMEs
  - ⇒ SME associations/groupings
- Regions of Knowledge
- Research Potential
- Science in Society
- Activities of International Cooperation
- Coherent development of policies





# Research Infrastructures

## Definition of Research Infrastructures:

- Facilities, resources, services used by scientific community for
  - Development of leading-edge, EU-level research
  - Knowledge transmission, knowledge exchanges and knowledge preservation
  
- Includes
  - Major equipment
  - Scientific archives and structured information
  - ICT-based infrastructures
  - Entities of a unique nature, used for research



# Other issues in FP7



# Programme Management

## Outsourcing:

- **Executive agencies for:**
  - Frontier research projects (ERC)
  - Most Human Potential (Marie Curie) actions
  - Logistics and administrative tasks (All other proposals/projects)
  
- **Ad-hoc special structures to manage:**
  - Joint Technology Initiatives
  - New infrastructure initiatives

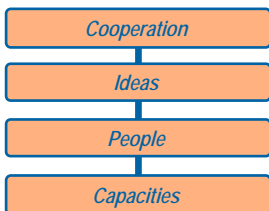


# Simplification of procedures

## Objective:

⇒ Rationalisation and streamlining of procedures

- Lighter submission, evaluation, reporting
- Reducing a priori controls
- Streamlining the selection process
  - ⇒ Reduced 'time to project start'
- Exploring new modes of funding
  - ⇒ Greater use of lump-sum and flat-rate financing schemes
- Simplifying the costs-based system
  - ⇒ Simplified cost-reporting models used for FP6



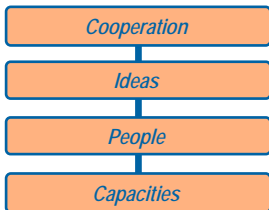
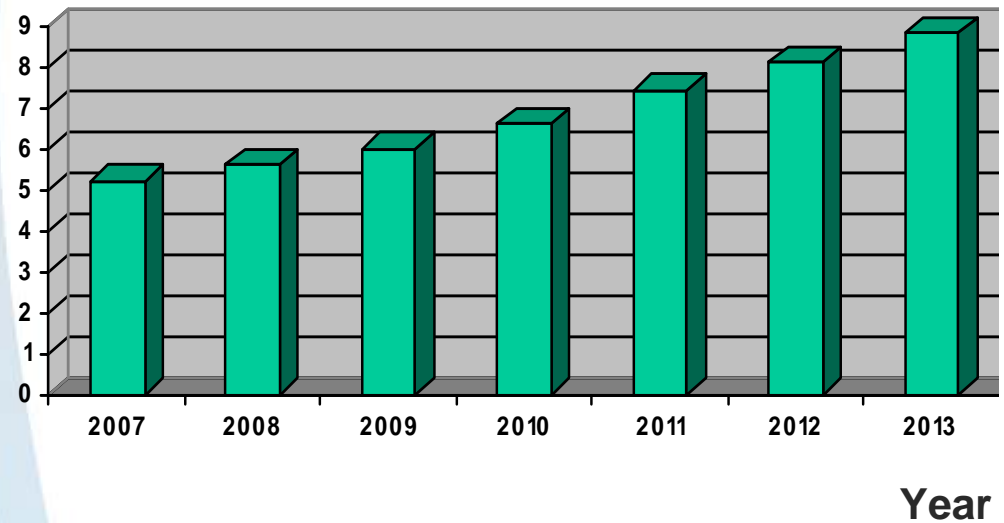


# FP7 Budget

Annual budget  
to increase  
progressively

preliminary projection

Billions Euros





# Information



- EU research:  
<http://europa.eu.int/comm/research>
- Seventh Framework Programme:  
[http://europa.eu.int/comm/research/future/index\\_en.cfm](http://europa.eu.int/comm/research/future/index_en.cfm)

- Information on research programmes and projects:  
<http://cordis.europa.eu>

**Thank you  
for your  
attention!**

**Patrizia Tosetti**

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