

The EU's Framework Programmes for Research & Innovation An opportunity for global health research

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Research and Innovation



Why the EU supports Research & Innovation

(Article 179 – 190, Treaty on the Functioning of the EU)

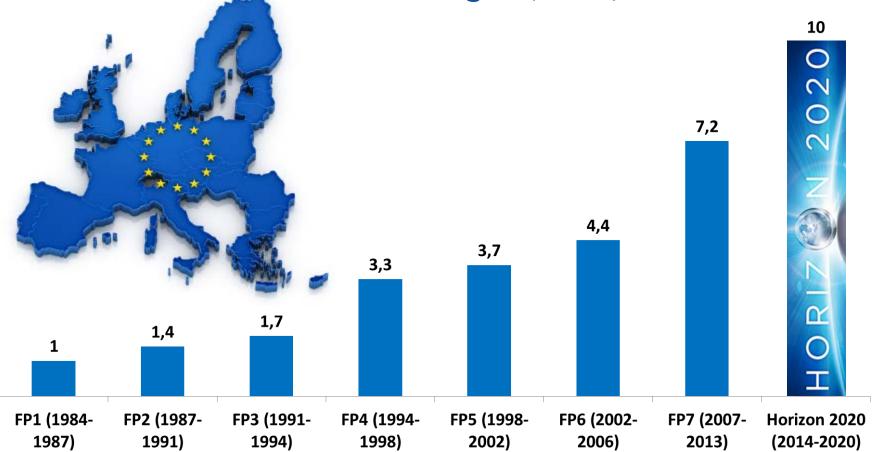
- Investing in future growth and development
- Strengthening the EU's global position in research, innovation and technology (European Research Area)
- Addressing people's concerns about their livelihoods, safety and environment in Europe and beyond

Supporting competitiveness & improving quality of life



30 years of EU funded R&I

Annual budget (in b€)



Innovation



A key player in global health research

- World's 3rd largest funder of research on poverty-related and neglected infectious diseases.
- Since 1984 on infectious diseases; since 2002 on poverty-related diseases; since 2007 on neglected infectious diseases.
- €1,2 billion invested in global health research since 2007



 Strategic Cooperation with other public and private funders worldwide (NB the EC manages only 5-10% of total public research funding in the European Union)



A stairway to global research collaboration

Since 1984

The EU Framework Programme for Research and Innovation (FP)

→Collaboration between scientists from academia and industry

→Health, Demographic Change and Well-being

→European Research Council (2007)

→Marie-Curie-Actions

Since 2003

Strategic cooperation with public and private European funders

→with European countries: EDCTP (2003)

→with European industry (EFPIA): IMI (2004/07)

→joint programmes, such as on antimicrobial resistance (2010)

Now

Strategic cooperation with other public/private funders worldwide/across sectors

- →Global Alliance on Chronic Diseases (GACD, 2009)
- →International Rare Diseases Research Consortium (IRDiRC, 2011)
- Global Research Collaboration for Infectious Disease Preparedness (GloPID-R, 2013)

Global TB Vaccine Partnership (GTBVP, 2014/15)

European Commission's Inducement Prizes

e.g. 1st prize awarded in March 2014 for innovation on thermo stable vaccines for Global Health



FP7 funding on HIV/AIDS, Malaria and TB (by theme)

FP7 PROGRAMME	THEME	HIV/AIDS	Malaria	ТВ	Multiple diseases	Total
COOPERATION	HEALTH	130,1	75,5	88,4	23,8	317,7
	іст	2,8	2,9	0,0	1,4	7,1
	ENVIRONMENT	0,0	3,5	0,0	1,7	5,2
	NMP	0,0	3,1	0,0	0,0	3,1
	SPACE	0,0	0,5	0,0	0,0	0,5
IDEAS	European Research Council	32,1	19,5	15,0	3,0	69,6
CAPACITIES	Infrastructures	0,0	8,5	0,0	18,4	26,9
	REGPOT	0,0	0,0	1,0	0,0	1,0
	SME	1,4	0,0	0,4	1,3	3,1
PEOPLE	Marie-Curie Actions	6,8	8,9	9,0	1,7	26,3
Total support in € million		173,1	122,4	113,7	51,2	460,4



FP7 funding on:

- Poverty-related Diseases: € 460 million (200)
- Neglected Infectious Diseases: € 213 million (77)
- Reproductive, maternal and child health: € 276 million (83)
- International public health research: € 109 million (39)

Total on MDG-related/global health research since 2007:

€ 1.2 billion (including EU funding to EDCTP)



FP7 CAPACITIES projects of >€8 million of EU contribution

e.g.

EURIPRED

European Research Infrastructures for Poverty Related Diseases

INFRAVEC

Research capacity for the implementation of genetic control of mosquitoes

TRANSVAC

European Network of Vaccine Development and Research



European Research Council (ERC/FP7 IDEAS) projects of >€2,5 million EU contribution

BEEHIVE

Bridging the Evolution and Epidemiology of HIV in Europe

FUTURE-PHARMA

Exploiting plants for the production of future generation recombinant pharmaceuticals

GENINVADE

Parasite population genomics and functional studies towards development of a blood stage malaria vaccine

HIVINNATE

Characterisation and Manipulation of Primate Lentiviral Interactions with Innate Immunity



FP7 PEOPLE projects (Marie-Curie-Actions) of >€1,8 million EU contribution

CYCLON HIT

NANOCARRIERS FOR THE DELIVERY OF ANTIMICROBIAL AGENTS TO FIGHT RESISTANCE MECHANISMS

FIGHTMAL

Correlating protection against malaria with serum profiles against Plasmodium falciparum antigen repertoires

INTERMALTRAINING

Intervention strategies against malaria





Free of charge services to assist potential applicants

Practical information & assistance: National Contact Points

http://ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html

Partner search, training, brokerage : Fit for Health 2.0

http://www.fitforhealth.eu/

IP questions and advices: IPR helpdesk

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SME regulatory one stop shop: EMA SME office

http://www.ema.europa.eu/ema/index.jsp?curl=pages/regulation/general/general_content_000059.jsp

EU Health projects database

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Become evaluator - register as Expert

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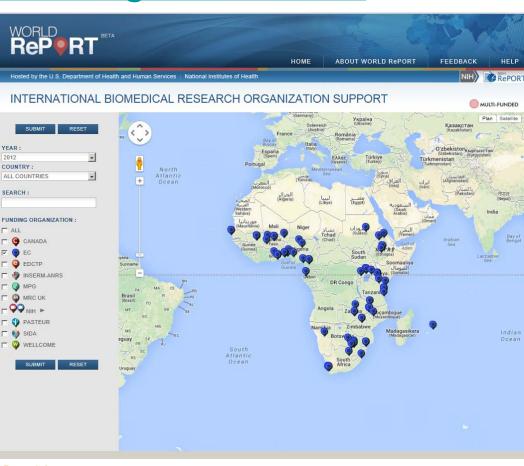
Financial support in your country

http://europa.eu/youreurope/business/funding-grants/access-to-finance/



The World RePORT http://worldreport.nih.gov/index.cfm

- an illustrative mapping database system
- designed to facilitate communication and coordination of biomedical research funding
- by major government agencies and philanthropic organizations around the world





The World RePORT (2)

- It is a dynamic database created by the US National Institutes of Health (NIH) in 2011 as a pilot project to know 'who is financing what and where' trying to avoid duplications and looking for synergies.
- The data is supplied by several members of the Heads of International Research Organizations (HIRO): NIH ⁽²⁾, CANADA - CIHR/IDRC/CIDA ⁽²⁾, EC DG RTD ⁽³⁾, INSERM-ANRS ⁽⁴⁾, MPG ⁽³⁾, MRC-UK ⁽³⁾, Pasteur ⁽³⁾, SIDA⁽³⁾, WELLCOME TRUST ⁽³⁾, EDCTP ⁽³⁾. For the next update the BMGF will also provide data.
- The initial effort focused on research projects performed in Sub-Saharan Africa. It will be extended to other regions of the World (South East Asia and Pacific).



The World RePORT (3)

- Each funding organization is plotted and easily recognizable using a graphical icon.
- Data includes the funding organizations and the institutes performing the research, as well as project title, and where available: project abstract, city and country of the research organization, and hyperlinks to more information.
- Funded research projects can be searched by keywords, filtered by country, funding organization, or any combination thereof.
- A data export feature to Excel brings the ability to build individualized datasets for analyses and customized reporting.

http://worldreport.nih.gov/index.cfm



Health programme in FP7: a few figures

Key figures

- **5**,**4** b€ invested to date
- 1052 projects
- **12 332** participations
- **3 613** organisations
- **124** countries

Preliminary outcomes

10 332 publications

- **3,2** average SJR* publication
- **203** patent applications
- **29** spin-offs created
- **8** international initiatives



European Commission

Horizon 2020

Building on the FP7 experience ...





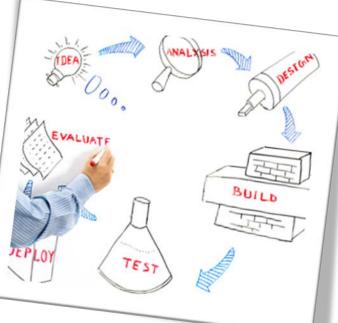
What is Horizon 2020?

The European Union's 2014-20 programme for research & innovation with a budget of 79 billion euro

A core part of Europe 2020, Innovation Union & European Research Area

Three priorities:

- 1.Excellent science (24,4 bn €)
- 2.Industrial leadership (17,0 bn €)
- 3.Societal challenges (29,7 bn €)
- + Other activities (5,9 bn €)



http://ec.europa.eu/research/horizon2020



What Horizon 2020 is not:

It is not a development aid programme

It is not a bilateral cooperation programme

<u>It is a programme focussed on European needs</u> and global challenges, <u>open to international</u> <u>cooperation</u>.



Horizon 2020 - Modalities

- Collaborative research projects require at least three legal entities from different EU Member States
- At least one legal entity required for:
 - European Research Council (ERC)
 - Training & Mobility Action (Marie Skłodowska-Curie actions)
 - SME instrument
 - Programme Co-Fund Actions
 - Coordination & Support Actions
- General openness for participation of organizations from countries outside EU and Associated Countries
- Public calls, peer review evaluation, competitive selection



How does it work ? (1)

"From defining policy to funding the best research projects"

- The policy for research is described in the Horizon 2020 documents (available on CORDIS web site).
- A <u>work programme is prepared by the EC staff</u>, based on consultation (Advisory Group, Programme Committee...)
- Then EC publishes <u>calls for proposals</u> to invite researchers to submit collaborative proposals for research projects.



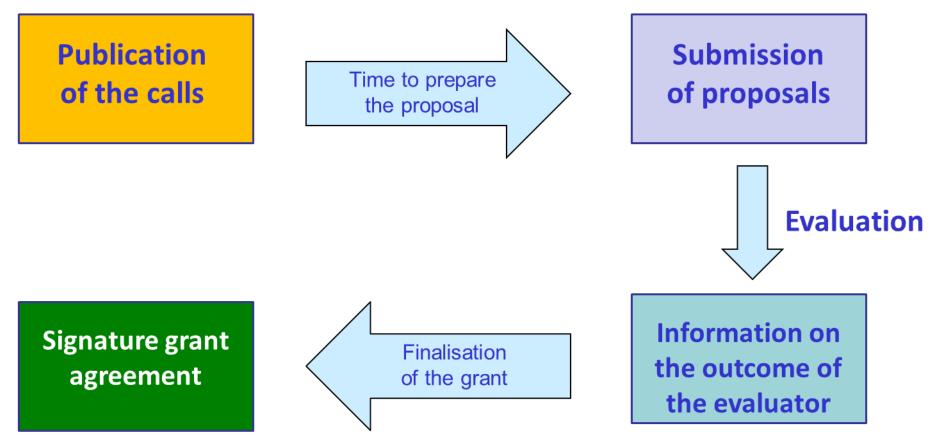
How does it work ? (2)

"From defining policy to funding the best research projects"

- Researchers form consortia and prepare proposals
- One or two-stage submission & evaluation process
- <u>Panels of independent experts</u> (peer review) identify best projects, which are selected by the EC
- After finalisation of a grant agreement, a project is normally funded for 2-5 years, with regular reporting.



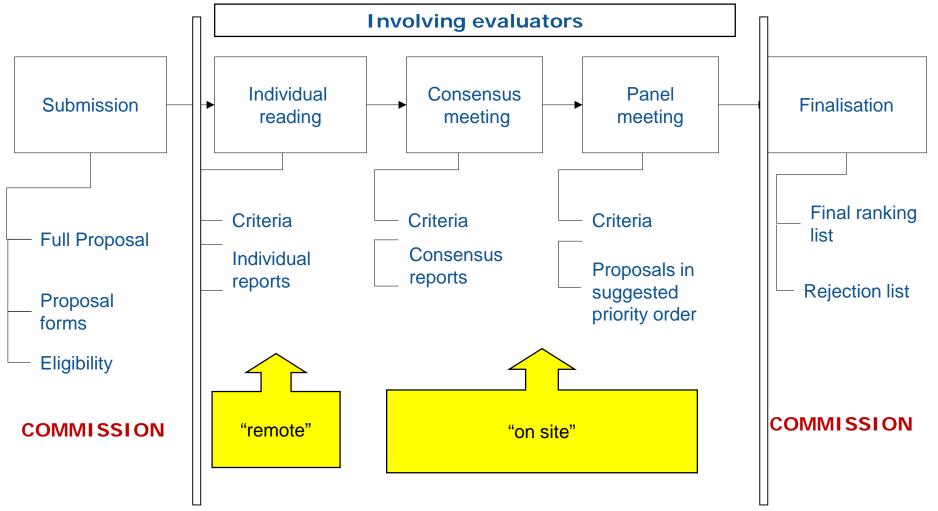
From CALL to GRANT



Research &



Overview of the Evaluation Process





Evaluation of proposals



ERC frontier Research actions >> only EXCELLENCE

Innovation actions

higher weighting for "IMPACT"

Horizon 2020 and its three pillars

- European Research Council
- Future and Emerging Technologies
- Marie Skłodowska-Curie actions
- Research infrastructures

Excellent science

- Leadership in enabling and industrial technologies
- Access to risk finance
- Innovation in SMEs

•Industrial leadership

•Societal challenges

- Health, demographic change and wellbeing
- Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the Bioeconomy
- Secure, clean and efficient energy
- Smart, green and integrated transport
- Climate action, environment, resource efficiency and raw materials
- Inclusive, innovative and reflective societies
- Secure societies



Health research in Societal Challenge 1 (SC1) Health, Demographic Change and Wellbeing



Collaborative research



Innovative Medicines Initiative

Public-private partnerships





Global initiatives GACD, GloPID-R, IRDiRC..



Public-public partnerships



Health, Demographic change and wellbeing

An integrated approach with 7 focus areas

- Understanding health, ageing & disease
- Effective health promotion, disease prevention, preparedness and screening
- Improving diagnosis
- Innovative treatments and technologies
- Advancing active and healthy ageing
- Integrated, sustainable, citizen-centred care
- Improving health information, data exploitation and providing an evidence base for health policies and regulation
- + co-ordination activities

and Strategic initiatives:







Getting the priorities right Intelligent funding of excellent health research

- Horizon 2020 legislative framework defined with EU Council and Parliament
- Formal consultations
 - Advisory group
 - Scientific Panel for Health
 - Member State bodies (Programme Committee, European Research Area and Innovation Committee ERAC)
 - Other thematic groupings (EIPs, ETPs, cPPPs, JPIs) or stakeholders (consultations via networks, expert workshops, and other)
 - Other Commission services

Approach for health and wellbeing:

- ☑ Challenge-based
- ☑ Bottom-up (less prescriptive)
- ☑ Non disease specific



R&I for global health (1)

Societal Challenge: Health, demographic change and wellbeing

- Support to transnational cooperation
 - o Medical interventions (from discovery to preclinical /Phase1)
 - > WP2014: Vaccine development: Tuberculosis
 - > WP 2015 Vaccine development: HIV/AIDS
 - o Health systems and services
- Support to Public Privat collaboration
 - From discovery to human testing to regulatory aspects, HTA and pharmacovigilence
- Support to public- public cooperation
 - All phases of clinical trials and capacity building



Innovative Medicines Initiative





R&I for global health (2)

- Support to excellent individual teams European Research Council
- Opportunities for training and career development Marie Sklodowska – Curie actions
- Access to research infrastructures Research infrastructures
- Engaging SME's Stimulating innovation in SME's





Some key figures

- 1b€/year devoted to health research collaboration in Horizon 2020
- One rule: Minimum 3 partners from 3 EU countries + anyone else from anywhere in the world
- Funding: 3-12 m€ per project
 100%+25% reimbursement rate
- Project duration: 3-5 years



Health research: FP7 vs Horizon 2020

	FP7	FP7	H2020	
	Total funding commitments	Funding commitments on PRNDs	Total budget allocation	
Health	6 100	517	7 472 (+22%)	
European Research Council	7 510	69	13 095 (+75%)	
Capacities/Infrastructures	1 715	18	2 488 (+45%)	
People/Marie-Curie Actions	4 750	30	6 162 (+30%)	
Other				
Total support in € million	50 500	673	78 631 (+56%)	



HORIZON 2020

Thank you for your attention!

Find out more: www.ec.europa/research/horizon2020

HORIZON 2020



Horizon 2020 'Health, demographic change and wellbeing'

> Applying for funding: proposal submission

HORIZON 2020



Participant portal – your one-stop shop

All call related documentation is published on the Participant Portal

- Topics
- Documents
- Rules for participation
- National Contact Points
- Etc.



http://ec.europa.eu/research/participants/portal



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Appropriately qualified individuals may apply to work as experts in H2020 evaluations

• Application via Participant Portal



Call for experts published 22 November 2013 Official Journal of the European Union C342/3

http://eurlex.europa.eu/JOHtml.do?uri=OJ%3AC%3A2013%3A342%3ASOM%3AETML



Other programmes where health research may be funded

- Frontier research (European Research Council)
- Marie Skłodowska-Curie actions
- Leadership in enabling and industrial technologies
- Search by key-word @

https://ec.europa.eu/research/participants/portal/desktop /en/opportunities/h2020/search/search_topics.html



More info @

Health Challenge:

http://ec.europa.eu/programmes/horizon20 20/en/h2020-section/health-demographicchange-and-wellbeing

Info Day (information for proposers):

http://ec.europa.eu/research/health/horizon -2020-health-open-info-days_en.html

• Examples of projects funded in previous programmes:

http://ec.europa.eu/research/health/index_ en.html

