



#InvestEUresearch

Horizon 2020 Work Programme for Research & Innovation 2018-2020

EU funding for health research SMEs

EMA SME Info day, 17 Nov 17, London

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Research and
Innovation

Health Research in Horizon 2020



EU definition of Small and Medium-sized Enterprise (SME)¹

Any autonomous entity engaged in an economic activity, irrespective of its legal form, with the following characteristics:

- < 250 employees
- ≤ €50 million annual turnover, *and/or*
- ≤ €43 million annual balance sheet

1. COMMISSION RECOMMENDATION of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises (2003/361/EC)

European Innovation Council: pilot 2018-2020

€ 2.7 billion to support +5,000 SMEs and innovators

ECOSYSTEM SUPPORT: **COACHING, MENTORING** for all **SME beneficiaries**

Early stage science
& tech
*Emerging tech,
Visionary ideas*

Test and co-create
*Demonstrate,
validate*

Feasibility /
Startup

Development

FET-OPEN
Future
Emerging
Technologies

FTI
Fast Track to
Innovation

**SME
Instrument**
Phase 1

**SME
Instrument**
Phase 2

MARKET CREATING

6 EIC HORIZON **PRIZES**:

1. Innovative Batteries for eVehicles
2. Fuel from the Sun: Artificial Photosynthesis
3. **Early Warning for Epidemics**
4. Blockchains for Social Good
5. Low-Cost Space Launch
6. **Affordable-HighTech for Humanitarian Aid**



European
Commission

European Innovation Council pilot

Instrument →	SME-Instrument		FTI	FET-Open	EIC Horizon prizes
	Phase 1	Phase 2			
For whom	One or more eligible ¹ SMEs		From 3 to 5 eligible ¹ entities (mostly industrial ²)	At least 3 entities ³	One or more entities (with restrictions ¹ for some of the prizes)
Maximum funding ⁴	50,000 €	2.5 M€	3 M€	3 M€ (RIAs) 0.5 M€ (CSAs)	Varies for each prize
Total budget 2018-20	164 M€	1,425 M€	300 M€	647 M€ (RIAs) 10 M€ (CSAs)	40 M€
Focus	Exploring the feasibility of a business idea (~ 6 months)	Breakthrough innovation & international growth (12-24 months)	Close-to-market innovation	Radically new technologies	6 different topics (major societal issues)

(1) Applicants must be established in an EU Member State or in a country associated to Horizon 2020

(2) This industry involvement implies: (a) either the allocation of at least 60% of the budget to industry participants in the consortium, or (b) the presence of a minimum number of two industry participants in a consortium of three or four partners, or of three industry participants in a consortium of five partners

(3) A FET-Open consortium must always include at least 3 participants from 3 different EU Member States or Associated Countries. In addition to these three partners, any legal entity from anywhere in the world can also be included in the consortium.

(4) Per project – with possible exceptions



1.148 billion

Eurostars total public budget 2014-2020



75%

EUROSTARS
COUNTRIES
CONTRIBUTION

+

25%

EU
CONTRIBUTION





Project leader
is an **R&D-
performing
SME** from
a Eurostars
country



**At least
2 Participants**

- Autonomous entities
- Legal entities **from at least
2 Eurostars
countries**



SMEs are in
the **driving
seat**

**International
balance**



**Project
duration** is
max. **3 years**

**Market
introduction**
within **2 years**

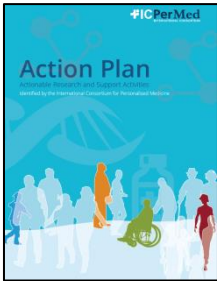
Collaborative research

- Collaboration between countries, sectors, disciplines
- minimum 3 legal entities from 3 different EU Member States or FP-associated countries
- 3-year work programme (2018-2020) with published call topics
- 8 month from submission deadline to signature of the grant agreement
- Typical EU funding per project: (1) – **4-6** – (55) million EUR



Health collaborative research – 7 priorities for 2018–2020

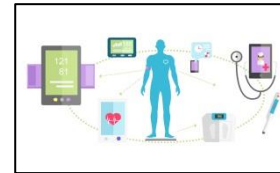
≈ € 2
billion



Personalised medicine



Innovative health
and care industry



Innovative health, and
care systems –
Integration of care



Decoding the role of
the environment for
health and well-being



Digital transformation in
Health and Care



Infectious diseases and
improving global health



Trusted Big Data
solutions and
Cybersecurity for
Health and Care

Personalised medicine

SC1-BHC-01-2019

Understanding causative mechanisms in **co- and multi-morbidities**

- improve prevention, diagnosis, prognosis, therapy development, and management

SC1-BHC-02-2019

Systems approaches for the discovery of **combinatorial therapies** for complex disorders

- new concepts of combinatorial therapies for complex disorders tailored to the needs of individuals or stratified patient groups

SC1-BHC-03-2018

submission deadline: 18 Apr 2018

Exploiting research outcomes and application potential of the **human microbiome** for personalised prediction, prevention and treatment of disease

- better prediction and prevention of diseases through validated novel clinical tools that are helpful for end-users

Infectious diseases and improving global health

SC1-BHC-14-2019

Stratified **host-directed approaches** to improve prevention, treatment and/or **cure of infectious diseases**

- enriched product development pipelines with novel, potentially more effective, targeted treatments, cures and/or preventive measures for infectious diseases and/or validated biomarkers with potential for rapid uptake into clinical practice

SC1-BHC-15-2018

submission deadline: 06 Feb 2018

New anti-infective agents for prevention and/or treatment of **neglected infectious diseases** (NID)

- increase the number and quality of treatment and vaccine candidates for neglected infectious diseases appropriate for implementation and uptake by health systems with limited resources

Innovative health and care industry

SC1-BHC-07-2019

Regenerative medicine: from new insights to new applications

- addressing unmet clinical needs of large patient groups

SC1-BHC-09-2018

submission deadline: 18 Apr 2018

Innovation platforms for **advanced therapies** of the future

- new technologies for tackling diseases affecting large patient groups

SC1-BHC-10-2019

Innovation Procurement: **next generation sequencing** (NGS) for routine diagnosis

- clinically validated procedures, quality assurance schemes

Innovative Medicines Initiative



> €5 bn

EU funding goes to:

- universities
- SMEs
- patient groups etc.

EFPIA companies

- receive no funding
- contribute to projects 'in kind'



€2.5 bn

Partnership
2008 - 2024



€2.5 bn

Europe's partnership for health

Example of an IMI consortium

Industry partners

- Boehringer Ingelheim, Germany
- F. Hoffman-La Roche, Switzerland
- Novartis, Switzerland
- Takeda, United Kingdom
- Eli Lilly, United Kingdom
- Janssen, Belgium
- Pfizer, United Kingdom

Public consortium partners

- Academisch Ziekenhuis Leiden - LUMC, Netherlands
- Alma Mater Studiorum - University of Bologna, Italy
- Centro de Investigacion Biomedica en Red, Spain
- Erasmus Universitair Medisch Centrum Rotterdam, Netherlands
- Stichting Buro ECNP, Netherlands
- Stichting Katholieke Universiteit, Netherlands
- Stichting VU-VUmc, Netherlands
- Universitair Medisch Centrum Utrecht, Netherlands
- University of Exeter, United Kingdom

Patients organisation

- European Federation of Associations of Families of People with Mental Illness, Belgium

SMEs

- Biotrial Sas, France
- Concentris Research Management GmbH, Germany
- Drug Target ID BV, Netherlands
- P1vital Limited, United Kingdom
- SBGNeuro Limited, United Kingdom



Topics under consideration for next Calls – Nov 2017

- Assessment of the uniqueness of **diabetic cardiomyopathy** relative to other forms of heart failure using unbiased pheno-mapping approaches
- **Genome-environment interactions in inflammatory skin disease**
- The value of **diagnostics to combat antimicrobial resistance** by optimising antibiotic use
- **Mitochondrial dysfunction in neurodegeneration**
 - identify and understand the impact of mitochondrial dysfunction in *in vitro* and *in vivo* models of neurodegenerative diseases
- Support and coordination action for the projects of the neurodegeneration area of the innovative medicines initiative
- A sustainable European **induced pluripotent stem cell platform**
- Linking **digital assessment of mobility** to clinical endpoints to drive **regulatory acceptance** and clinical practice
- Human **tumor microenvironment** immunoprofiling
- CONCEPTION – continuum of evidence from **pregnancy exposures, reproductive toxicology and breastfeeding** to improve outcomes now
- Improving the **preclinical prediction of adverse effects** of pharmaceuticals on the **nervous system**
 - a combination of *in silico*, *in vitro* and *in vivo* models, including safety biomarkers (for peripheral neuropathies)
- **Translational safety biomarker pipeline** (TRANSBIOLINE): enabling development and implementation of novel safety biomarkers in clinical trials and diagnosis of disease
- Federated and privacy-preserving **machine learning in support of drug discovery**
- Pilot programme on a **clinical compound bank for repurposing** (Cardiovascular diseases and diabetes, Respiratory diseases, Neurodegenerative diseases, Rare/orphan diseases)

InnovFin - EU Finance for Innovators

SMEs	Midcaps	Large Caps	Thematic Finance
InnovFin SME Guarantee	InnovFin MidCap Guarantee	InnovFin Large Projects	InnovFin Energy Demo Projects
InnovFin SME Venture Capital	InnovFin MidCap Growth Finance		InnovFin Infectious Diseases
SMEs and small Mid-Caps < 500 Employees	Mid-Caps < 3,000 Employees	Large Caps Typically > 3,000 Employees	SPV, Mid-Caps and Large Caps
Intermediated SME/Mid-Cap Financing	Intermediated and/or direct Corporate lending	Direct Corporate Lending	Project Finance and/or Direct Corporate Lending

direct products

indirect products



Financial Instrument for Infectious Diseases R&D



- Jointly developed by EC and EIB
- Provides **loans** between **EUR 7.5m and EUR 75m**
- No calls: demand-driven
- Must be in pre-commercial phase with proof-of-concept and **pre-clinical research phases completed** and clinical validation required for further development.
- Must have **proven public health impact** and potentially have market prospects.
- Should provide for the intellectual property created in the course of the project to remain in the EU

More information and support is available for:

- Call text, guide for applicants, FAQ: **Participant portal**
<http://ec.europa.eu/research/participants/portal/desktop/en/home.html>
- Horizon 2020 **Work Programmes**
<https://ec.europa.eu/programmes/horizon2020/en/what-work-programme>
- Practical information & local assistance: **National Contact Points**
http://ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html
- IP questions and advice: **IPR helpdesk**
<https://www.iprhelpdesk.eu/>
- **Eurostars**
<https://www.eurostars-eureka.eu/>
- **Innovative Medicines Initiative**
<http://www.imi.europa.eu/>
- **InnovFin** Infectious Diseases Finance Facility: EIB
<http://www.eib.org/products/blending/innovfin/products/infectious-diseases.htm>
- Loan guarantee, equity: **financial support** available in your country
<http://europa.eu/youreurope/business/funding-grants/access-to-finance/>

International partnership, business innovation: **Enterprise Europe Network**

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