

**Конкурсные тематики на 2017 год по  
тематическому приоритету  
«Здравоохранение, демографические  
изменения и качество жизни»  
программы Горизонт 2020**

Информационный день  
Медицинский научно-образовательный центр МГУ  
08.12.2016



# The Work Programme 2016/17

A photograph of a doctor in a white lab coat with a green stethoscope around their neck, examining a child's chest. The child is wearing a grey and white striped shirt. The background is plain white.

## Call 'Personalised Medicine'

21 topics (9 in 2017)

## Call for 'Co-ordination activities'

15 topics (3 in 2017)

**€ 1  
billion**

## Health, Demographic Change and Wellbeing

Здравоохранение, демографические изменения и качество жизни

<http://ec.europa.eu/programmes/horizon2020/en/h2020-section/health-demographic-change-and-wellbeing>

Научные исследования нацелены на долголетие, на продление активного и здорового образа жизни и разработку новых, безопасных и эффективных методов терапии

**Personalised Medicine (PM)**

**Coordination activities (HCO)**

The programme will implement several research priorities: personalised medicine, rare diseases, human bio-monitoring, mental health, comparative effectiveness research, advanced technologies, e/m-health, robotics, patient empowerment, active and healthy ageing, data security, big data, valorisation, anti-microbial resistance, infectious diseases including vaccines, maternal and child health



# Work Programme 2016-2017



EN

Horizon 2020

Work Programme 2016 - 2017

*8. Health, demographic change and well-being*

**Important notice on the second Horizon 2020 Work Programme**

This Work Programme covers 2016 and 2017. The parts of the Work Programme that relate to 2017 are provided at this stage on an indicative basis. Such Work Programme parts will be decided during 2016.

*(European Commission Decision C (2015)6776 of 13 October 2015)*

**Adoption of  
work  
programme**

**13 October 2015**

**Submission  
deadlines for  
your proposals**

**One-stage: 31 January 2017**

**(1 call)**

**14 March 2017**

**(3 calls)**

**11 April 2017**

**(5 calls)**

[http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference\\_docs.html#h2020-work-programmes-2016-17](http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference_docs.html#h2020-work-programmes-2016-17)

## Deadline 31 January 2017

- **SC1-PM-15-2017**

## Deadline 14 March 2017

- **SC1-PM-16-2017**
- **SC1-PM-17-2017**
- **SC1-PM-19-2017**

## Deadline 11 April 2017

- **SC1-PM-03-2017**
- **SC1-PM-20-2017**
- **SC1-HCO-03-2017**
- **SC1-HCO-07-2017**
- **SC1-HCO-08-2017**



## UNDERSTANDING HEALTH, WELL-BEING AND DISEASE

### SC1-PM-03–2017:

#### Diagnostic characterisation of rare diseases

- The **aim** is to apply genomics and/or other –omics and/or other high-throughput approaches for the molecular characterisation of rare diseases in view of developing molecular diagnoses for a large number of undiagnosed rare diseases.
- **Expected Impact:** Providing better and faster means of high quality and clinical utility for the correct diagnosis of undiagnosed rare diseases for which there is no or unsatisfactory diagnosis available.



## ACTIVE AGEING AND SELF-MANAGEMENT OF HEALTH

### SC1-PM-15-2017:

#### Personalised coaching for well-being and care of people as they age

- The "coach" should provide personalised advice, guidance and follow-up for key age related issues in daily life which impact the person's ability to remain active and independent, for example diet, physical activity, risk avoidance, preventive measures, lifestyle and activity management, leisure, social participation and overall wellness. The goal should be to preserve physical, cognitive, mental and social well-being for as long as possible and to facilitate interaction with carers (where relevant).
- **Expected Impact:**
  - Usefulness and effectiveness of personalized recommendations and follow-up in terms of the goals of preserving physical, cognitive, mental and social well-being for as long as possible;
  - Validation of non-obtrusive technology for physical, cognitive, social and mental well-being;
  - Potential cost-effectiveness due to enhanced self-care, life-style and care management



# SC1-PM-16–2017:

## METHODS AND DATA

# In-silico trials for developing and assessing biomedical products

- Proposals will develop innovative in-silico trials for designing, developing and assessing drugs, radiation and other biomedical and bioactive products. They will build on comprehensive biological and biomedical knowledge management and advanced modelling paradigms in order to be able to simulate the individual human physiology and physiopathology at the biological levels relevant for the biomedical product under study (at the cell level, tissue level or organism level) and the interaction with the product, thus taking into account the variability among individuals (for example, molecular pathways, cellular microenvironments, microbiota, genetics, gender characteristics, behaviours, comorbidities, development, diet).
- **Expected Impact:**
  - Reducing the size and the duration of the human clinical trials
  - A more effective human clinical trials design
  - Leading to a significant reduction of animal testing
  - Innovative medical products on the market with lower development costs and/or shorter time-to-market
  - Improving prediction of human risks for new biomedical products including medical foods
  - Setting standards for in-silico trials





## METHODS AND DATA

## SC1-PM-17-2017:

## Personalised computer models and in-silico systems for well-being

- Proposals should **aim** at the **development of new integrative computer-models and simulation systems** of acceptable validity, with the potential to being reused, built on open service platforms and with **application in well-being, health and disease**.
- The projects must include computer modelling and simulations able to aggregate various information sets e.g. **molecular, biochemical, medical imaging, social, lifestyle, economic, occupational, microbiome, environmental, developmental, psychological, gender etc.** to generate robust predictors for resilience to challenges and recovery from stresses and illness.
- Proposals will focus on **multi-disciplinary research in medicine, Social Sciences and Humanities (SSH) and ICT** and should take advantage, when relevant, of existing large databases in clinical medicine, biomedical or occupational research, environmental sciences, SSH, so enabling and facilitating the accumulation and combining of complex and heterogeneous data collections.
- **Expected Impact:**
  - Benefit for health and well-being: new personalised interventions for increasing resilience and recovery.
  - Advancements in medical computer-modelling and simulation that takes into account time scale.
  - Supporting predictive and preventive approaches in medicine, neurosciences and life sciences.
  - Improving knowledge about well-being and association with life circumstances.



## COORDINATION ACTIVITIES

**SC1-HCO-03–2017:**

**Implementing the Strategic Research  
Agenda on Personalised Medicine**

**SC1-HCO-07–2017:**

**Global Alliance for Chronic Diseases  
(GACD)**

**SC1-HCO-08–2017:**

**Actions to bridge the divide in European  
health research and innovation**



The challenge of the prize is to identify and bring to market innovative solutions preventing death and complications during pregnancy and childbirth.

The 'Birth Day' Prize is an initiative of the European Commission which has committed €1 million, with the Bill & Melinda Gates Foundation pledging another €1 million and a further €500 000 donated by the MSD for Mothers programme of Merck Sharp & Dohme Corporation.

### Why this Prize?

Around the world, hundreds of thousands of women and babies die on the day of birth, and millions more are left with serious illness.

Thanks to global efforts, since 1990 maternal deaths have dropped worldwide by 44%. However, deaths and serious health effects for both mothers and their new babies are still unacceptably high, especially in low and middle income countries.

A recent WHO report estimates that 303 000 women died in 2015 from preventable causes related to pregnancy and childbirth

According to UNICEF, 5.9 million children per year die before their 5th birthday, of which 2.65 million are newborn babies

99% of maternal deaths occur in developing countries; most of these are due to preventable or treatable conditions (source: WHO factsheet)

The poster features a stylized silhouette of a woman in profile, facing left. The silhouette is filled with intricate, colorful patterns in shades of red, orange, yellow, green, and blue. The background is a light beige color. In the top right corner, there is the European Commission logo. A large red circle on the left contains the text 'Horizon Prize' and 'BIRTH DAY'. Below this, the text 'Can you crack the challenge?' is written in a large, white, sans-serif font. At the bottom, there is a red banner with white text: 'BIRTH DAY PRIZE', 'Develop solutions to reduce death and illness in mothers and babies during delivery.', 'COMPETE, INNOVATE & WIN', '€ 1 million\*', and 'Apply by 6 September 2017'. At the very bottom, there are logos for the Bill & Melinda Gates Foundation and MSD for Mothers, along with the website 'www.ec.europa.eu/horizonprize/birthday' and the hashtag '#horizonprize'.

European Commission

Horizon Prize  
BIRTH DAY

Can you crack the challenge?

**BIRTH DAY PRIZE**  
Develop solutions to reduce death and illness in mothers and babies during delivery.

**COMPETE, INNOVATE & WIN**  
**€ 1 million\***  
Apply by 6 September 2017

\* Up to three prizes of a maximum of €1m will be awarded. The Birth Day Prize is brought to you in collaboration with:

BILL & MELINDA GATES Foundation  
MSD  
MSD for mothers  
www.ec.europa.eu/horizonprize/birthday  
#horizonprize