



The EU Framework Programme for Research and Innovation

HORIZON 2020

Pain, Research: what can the EU institutions do?



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*Research and
Innovation*



The context

- **Demographic change**
- **Increased burden of non - communicable diseases**
- **Raising health costs, increasing pressure on healthcare systems**
- **Increased costs for medicines and vaccines development**
- **Differences in outcomes, insufficient evidence on comparative benefits and overall value of current practices and approaches**

EU health research



- **Translate science to benefit citizens**
- **Test and demonstrate new healthcare models, approaches and tools**
- **Promote healthy and active ageing**
- **Improve health outcomes, reduce inequalities**
- **Support a competitive health sector**
- **Provide evidence-base for effective health policies development**



**Collaborative
research**

Real-life solutions based
on joint problem-solving

This panel features a photograph of three scientists in white lab coats looking at a computer screen. A large, semi-transparent DNA double helix is overlaid on the image.



**Public-private
partnerships**

Investing together for
next generation medicines
and treatments

This panel shows a group of people in a meeting setting. A woman in a white lab coat is smiling in the foreground. A large, semi-transparent DNA double helix is overlaid on the image.

EU health research



**Global
co-operation**

One world, one team
working to solve
common health challenges

This panel depicts a laboratory scene with a woman wearing safety goggles and a young girl looking through a microscope. A large, semi-transparent DNA double helix is overlaid on the image.



**Public
partnerships**

Harnessing global
expertise to fight
poverty-related diseases

This panel shows a woman and a man in lab coats examining a molecular model, with a young girl smiling in the foreground. A large, semi-transparent DNA double helix is overlaid on the image.

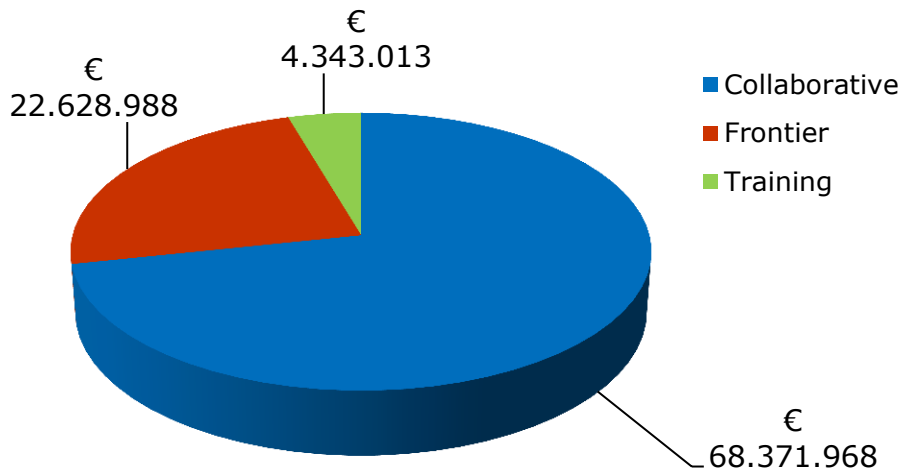
Pain challenges



- **20% of adults** are estimated to suffer from pain globally
- Chronic pain occurs in **19% of adult Europeans**
- **Low back pain number-one cause of years lost to disability** worldwide*
- **Affects all populations**, unevenly distributed
- **Complex aetiology**: multidisciplinary approaches needed
- **Comorbidity** with chronic non-communicable diseases
- Research needed to decipher its **underlying mechanisms**, develop effective **therapies and comprehensive management approaches**

2010 Global Burden of Disease Study

Pain research – what's being funded FP7



Translational research

- acute pain
- chronic pain
- mechanisms
- biomarkers
- imaging
- epidemiology
- technology
- prevention
- early detection
- palliative care
- migraine

€ 95 million (2007-2013)



EPCRC – The European Palliative Care Research Collaborative. Improved treatment of pain, depression and fatigue through translation research

- First major EU-funded palliative care research collaborative
- Established international classification systems and biomarkers
- Developed European, evidence-based guidelines for pain, depression cachexia

Led to revised clinical guidelines on the use of opioids in cancer pain from the European Association for Palliative Care and informed national policies - UK NICE clinical guidelines for opioid use in palliative care

Use of opioid analgesics in the treatment of cancer pain: evidence-based recommendations from the EAPC



Augusto Caraceni, Geoffrey Hanks*, Stein Kaasa*, Michael I Bennett, Cinzia Brunelli, Nathan Cherny, Ola Dale, Franco De Conno, Marie Fallon, Magdi Hanna, Dagny Faksvåg Haugen, Gitte Juhl, Samuel King, Pål Klepstad, Eivor A Laugsand, Marco Maltoni, Sebastiano Mercadante, Maria Nabal, Alessandra Pigni, Lukas Radbruch, Colette Reid, Per Sjogren, Patrick C Stone, Davide Tassinari, Giovambattista Zeppetella, for the European Palliative Care Research Collaborative (EPCRC), on behalf of the European Association for Palliative Care (EAPC)*

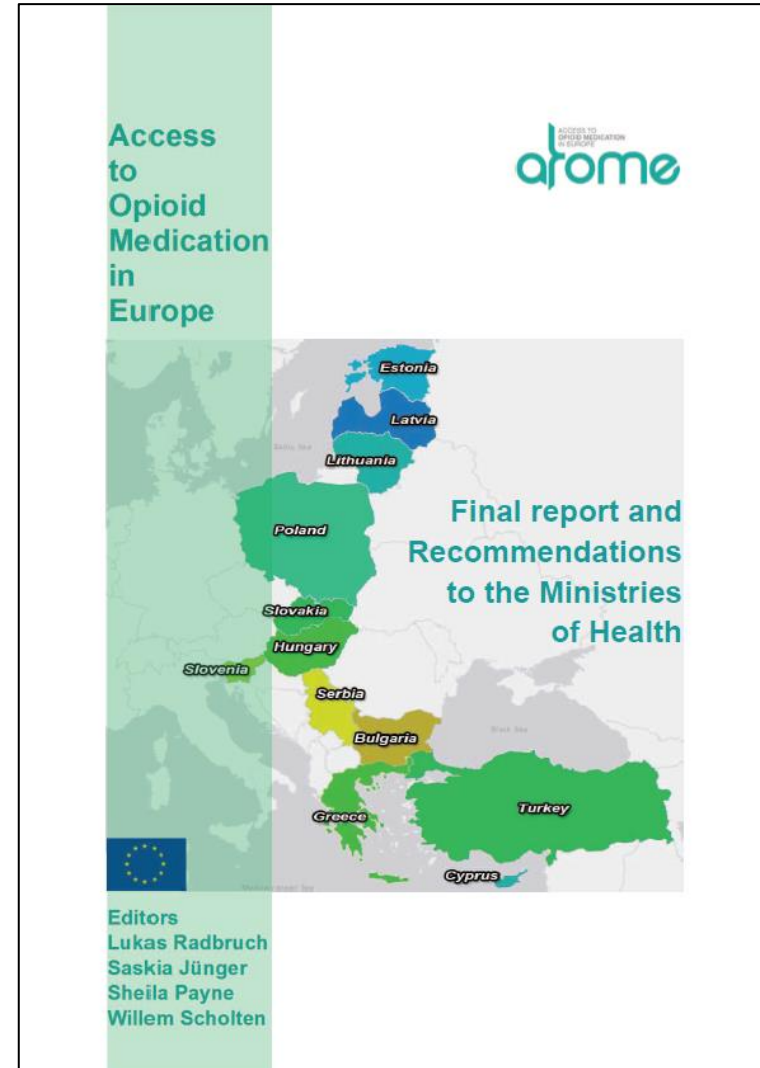
Here we provide the updated version of the guidelines of the European Association for Palliative Care (EAPC) on the use of opioids for the treatment of cancer pain. The update was undertaken by the European Palliative Care Research Collaborative. [Previous EAPC guidelines](#) were reviewed and compared with other currently available guidelines, and

Lancet Oncol 2012; 13: e58-68

**These authors contributed equally*

Underpinning EU Drugs Strategy (2013-2020)

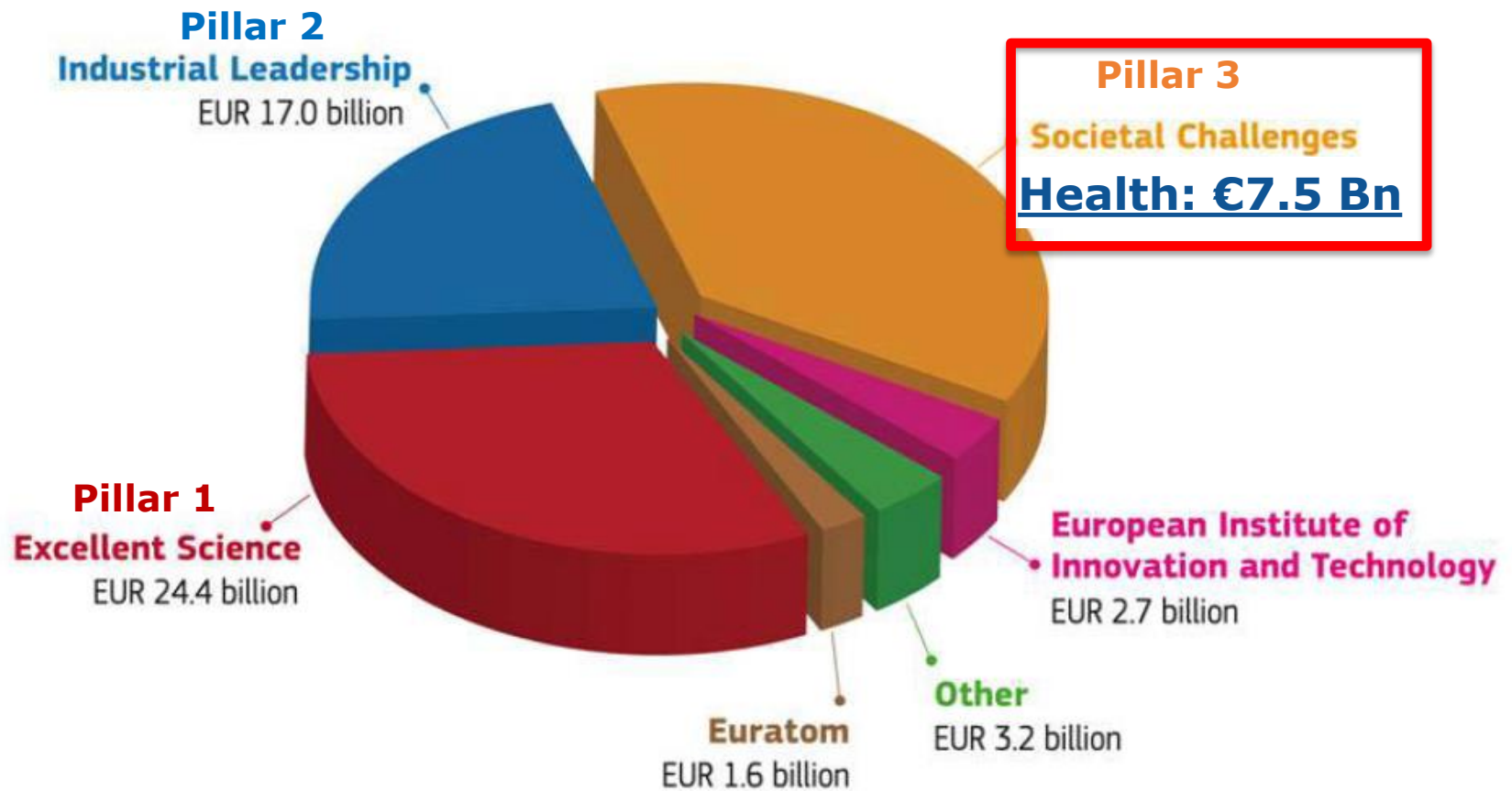
- The EU Drugs Strategy aimed at reducing demand and supply to drugs in Europe while ensuring access to prescribed controlled medicines
- ATOME analysed potential barriers for accessibility, availability and affordability of opioid medication in 12 European countries and developed policy recommendations to Health authorities
- WHO guidelines "Ensuring Balance in National policies on controlled substances" prepared as part of ATOME
- ATOME was presented at the WHO-MS meeting on controlled substances (Dec 2014)



Horizon 2020

Societal Challenge on
'Health, demographic
change and well-being'

Horizon 2020 – The Framework Programme for Research and Innovation





Health, Demographic Change and Wellbeing



Challenge-driven

Broad topics

Two-year work programme

Stronger focus on end users

2014-15:
EUR 1.3 B

2016-17:
EUR 1.4 B

PRIORITY



Personalised medicine



Healthy ageing



Health ICT



Infectious Diseases
(2014-2017)

Human
biomonitoring

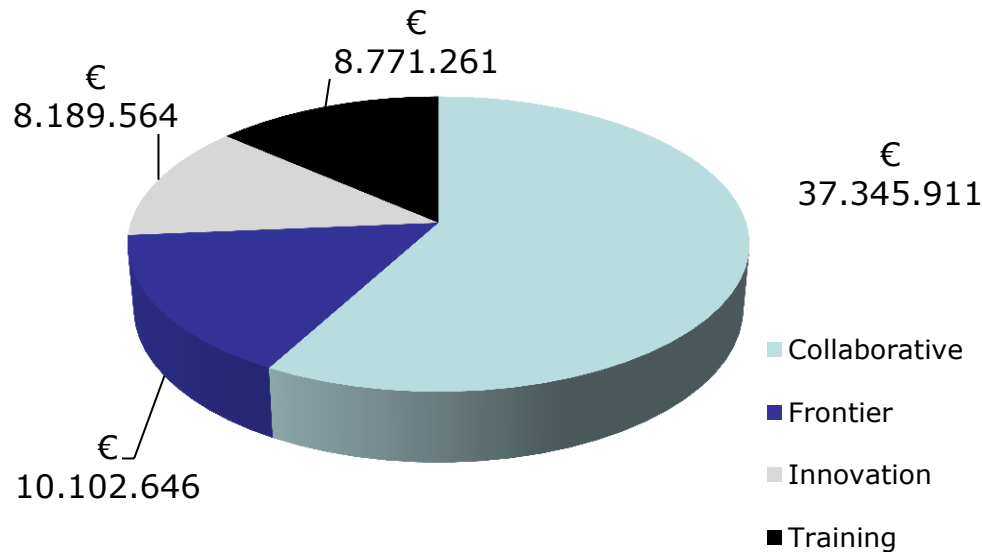


Research and
Innovation



Maternal and
child health

EU pain research – what's being funded HORIZON 2020



Translational research

- acute pain
- chronic pain
- biomarkers
- imaging
- models
- technology
- prevention
- early detection
- clinical trials
- palliative care

€ 64 million (2014-2015)

DOLORisk: Understanding risk factors and determinants for neuropathic pain



Objectives

- 1) Identifying the influence of **demographic factors**;
- 2) identifying and validating **genetic risk factors**;
- 3) validating **molecular pathways**;
- 4) determining **patient stratification** based on physiological and psychological factors;
- 5) developing a **risk model/algorithm** for neuropathic pain

Understanding patho-physiology and risk factors for neuropathic pain

- ✓ **Comprehensive approach** covering basic research on molecular, patient and population level
- ✓ Providing a **platform** to improve **diagnosis** & patients stratification according to **risk profile**
- ✓ Employing **preventive strategies**
- ✓ Developing **novel therapeutics**

<http://dolorisk.eu>

Funding opportunities for pain research

€ 935
million

Understanding health, well-being and diseases

- **SC1-PM-02-2017: New concepts in patient stratification**
- SC1-PM-04-2016: Networking and optimising the use of population and patient cohorts at EU level

Treating and managing diseases

- SC1-PM-09-2016: New therapies for chronic diseases
- **SC1-PM-10-2017: Comparing the effectiveness of existing healthcare interventions in the adult population**

SME instrument

- **SMEInst-05-2016-2017: Supporting innovative SMEs in the healthcare biotechnology sector**

Accelerating the delivery of therapies



innovative medicines initiative



Developing the next generation of vaccines, medicines and treatments


Aligned with WHO priorities



The right prevention and treatment for the right patient at the right time
Strategic Research Agenda for Innovative Medicines Initiative 2



The world's largest public private partnership in health research
IMI – € 2 billion
IMI 2 – € 3.3 billion



- **Low Back Pain** in IMI2's Strategic Research Agenda (2014-2020)
- **EUROPAIN:** increase understanding of chronic pain mechanisms; overall contribution € 22.5 million
- IMI2 7 call - **Pathological neuron-glia interactions in neuropathic pain** (call launched December 2015)



Research and Innovation

EFPIA = European Federation of Pharmaceutical Industry Association



International Consortium for Personalised Medicine (IC PerMed)

WHAT

- Establish Europe as a global leader in PM research
- Support the PM science base through a coordinated approach to research

WHY

- Provide evidence to demonstrate the benefit of PM to citizens and healthcare systems
- Pave the way for PM approaches for citizens

HOW

Roadmap based on CSA PerMed
Strategic Research Agenda (SRIA)



Personalised Medicine conference

1-2 June 2016 – Charlemagne Building, Brussels

- Policy focus with around 600 participants expected
- Official launch of the International Consortium for Personalised Medicine (IC PerMed)
- Five thematic sessions based on PerMed SRIA

Developing
awareness &
Empowerment

Bringing Innovation to
the Market

Translating Basic to
Clinical Research &
Beyond

Integrating Big Data &
ICT solutions

Shaping Sustainable
Healthcare





- Aimed at improving cancer control in Member States, quality of life of cancer patients and survivors
- To develop a **European Guide on Quality Improvement in Comprehensive Cancer Control** by February 2017
- 65 organizations from 23 Member States
- The Guide will include **pain management recommendations**
- EUR 6 million, 2014-2017





European
Commission



- A European Joint Action aimed at exchange and disseminate good practices on chronic diseases across EU Member States and to facilitate its uptake across local, regional and national borders
- To develop a **'Platform for Knowledge Exchange'**
- 70 partners from national and regional health authorities in 26 Member States
- EUR 4.6 million
- 2014 - 2017

European Journal of Internal Medicine 26 (2015) 157–159



ELSEVIER

Contents lists available at ScienceDirect

European Journal of Internal Medicine

journal homepage: www.elsevier.com/locate/ejim



Original Article

Time to face the challenge of multimorbidity. A European perspective from the joint action on chronic diseases and promoting healthy ageing across the life cycle (JA-CHRODIS)



Graziano Onder^{a,b,*}, Katie Palmer^b, Rokas Navickas^{c,d}, Elena Jurevičienė^c, Federica Mammarella^{a,b}, Mirela Strandzheva^e, Piermannuccio Mannucci^f, Sergio Pecorelli^b, Alessandra Marengoni^{b,g}, on behalf of the, Joint Action on Chronic Diseases and Promoting Healthy Ageing across the Life Cycle (JA-CHRODIS)



Co-funded by
the Health Programme
of the European Union

The EIP on Active and Healthy Ageing

+2 Healthy Life Years by 2020

- A stakeholder-led, cross sectorial, collaboration initiative for research, innovation & intervention.
- Launched 2012 as part of Europe 2020 Strategy.
- Reach a critical mass for action by pooling EU resources/ expertise & recognising innovation/ excellence.



health & quality of life of European citizens

Sustainable & efficient care systems

growth & expansion of EU industry

SIX AREAS OF INTERVENTION

- A1. Adherence to treatment
- A2. Preventing falls
- A3. Frailty & cognitive decline
- B3. Integrated care
- C2. Independent Living
- D4. Age-friendly environments

TWO STREAMS FOR ACTION



Action Groups

Reference Sites

Patients at the heart of R&I



©Photographee.eu, #68778904, 2015
Source: Fotolia

In projects

- Partners
- Through ethics board, safety monitoring board, and patient input platform
- Offer patients' perspective on recruitment, study design, project communication
- Translate results in lay language, modify guidelines to better fit patients' needs, contribute to dissemination activities...

In policy design

- Work programmes based on wide consultations:
 - Advisory Group: representative of European Patient Associations
 - workshops: participation patients
- Horizon 2020 topics are patient-centred
- Many events are triggered by patient organisations



European
Commissi

**Collaborative
health research
(SC1)**

**Public-private
partnership**

**Frontier
research**

**AAL
PROGRAMME**

**Support to
innovation**

**Loans for
de-risking R&I**

**Research
Education
Innovation**

**Public-public
partnerships**

**ESFRI European Strategy Forum
on Research Infrastructures**

Health research infrastructures

Support to pain research in Horizon 2020

“Health is life lived in the silence of the organs”

René Leriche, French physician and surgeon (1879-1955)
“The surgery of pain” (1939)



European
Commission

**Thank you
for your attention**