

REHABILITATION OF ELDERLY AT HOME: A GLOBAL OPPORTUNITY

June 5th, from 13:00 to 16:30

Biocruces HRI – Cruces University Hospital
(City of Barakaldo, 15 min in metro from Bilbao City Center)



This project vCare has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 769807.



biocruces
health research institute



REHABILITATION OF ELDERLY AT HOME: A GLOBAL OPPORTUNITY

13.00 – 15:15




“Sala Arriaga”
presentations


15.15 – 16:30



“Cristalera”
exhibitions
and coffee

Program	
13:00 – 13:10	Welcome [Luis Castaño, MD; Scientific Director, Biocruces HRI] [Inigo Gabilondo, MD; Neurology Department, Cruces University Hospital; Biocruces HRI]







Luis Castaño
MD, PhD; Pediatrician

SCIENTIFIC DIRECTOR
BIOCRUCES HRI

Program	
13:00 – 13:10	Welcome [Luis Castaño, MD; Scientific Director, Biocruces HRI] [Inigo Gabilondo, MD; Neurology Department, Cruces University Hospital; Biocruces HRI]
13:10 – 13:25	Presentation of the EU H2020 vCARE project [Hannes Schlieter, vCARE coordinator, Technische Universität Dresden, Germany]






Hannes Schlieter

Research Assistant
Chair of Business Informatics,
Eso systems Engineering

VCARE COORDINATOR



Program	
<p>13:00 — 13:10 Welcome [Luis Castaño, MD; Scientific Director, Biocruces HRI] [Iñigo Gabilondo, MD; Neurology Department, Cruces University Hospital; Biocruces HRI]</p> <p>13:10 — 13:25 Presentation of the EU H2020 vCARE project [Hannes Schlieter, vCARE coordinator, Technische Universität Dresden, Germany]</p> <p>13:25 — 13:40 Stroke survivors and self-management services: Lessons learned from the STARR project [Leire Ortiz, MD; Rehabilitation Department, Cruces University Hospital; Biocruces HRI]</p>	 <p>Osakidetza EZERRALDEA - ENHARTERRI - CRUCES OSAKIDETZA SANTOIN INTEGRATUA ORGANIZACIÓN SANITARIA INTEGRADA EZERRALDEA - ENHARTERRI - CRUCES</p>  <p>Leire Ortiz MD, Physical medicine and rehabilitation specialist Rehabilitation Department Cruces University Hospital – Biocruces HRI</p> <p><u>STARR CLINICAL PARTNER</u></p> 

Program	
<p>13:00 — 13:10 Welcome [Luis Castaño, MD; Scientific Director, Biocruces HRI] [Iñigo Gabilondo, MD; Neurology Department, Cruces University Hospital; Biocruces HRI]</p> <p>13:10 — 13:25 Presentation of the EU H2020 vCARE project [Hannes Schlieter, vCARE coordinator, Technische Universität Dresden, Germany]</p> <p>13:25 — 13:40 Stroke survivors and self-management services: Lessons learned from the STARR project [Leire Ortiz, MD; Rehabilitation Department, Cruces University Hospital; Biocruces HRI]</p> <p>13:40 — 13:55 Games and Gamification in Healthcare: towards patient-centric, connected care [Lucia Pannese, CEO imaginary Italy]</p>	  <p>Lucia Pannese Expert in #gamification #VR #seriousgames and enabling technologies for #healthtech #smartcities and #edTech</p> <p><u>CEO IMAGINARY ITALY</u></p> 

Program	 Inspiring Business
<p>13:00 — 13:10 Welcome [Luis Castaño, MD; Scientific Director, Biocruces HRI] [Iñigo Gabilondo, MD; Neurology Department, Cruces University Hospital; Biocruces HRI]</p> <p>13:10 — 13:25 Presentation of the EU H2020 vCARE project [Hannes Schlieter, vCARE coordinator, Technische Universität Dresden, Germany]</p> <p>13:25 — 13:40 Stroke survivors and self-management services: Lessons learned from the STARR project [Leire Ortiz, MD; Rehabilitation Department, Cruces University Hospital; Biocruces HRI]</p> <p>13:40 — 13:55 Games and Gamification in Healthcare: towards patient-centric, connected care [Lucia Pannese, CEO imaginary Italy]</p> <p>13:55 — 14:10 Armassist: A robot for unsupervised neurorehabilitation: Usability results [Thierry Keller, Head of Neurorehabilitation Department, Tecnalia, Spain]</p>	 <p>Thierry Keller</p> <p>HEAD REHABILITATION DEPARTMENT TECNALIA</p>  <p>ArmAssist</p>

Program	
<p>13:00 — 13:10 Welcome [Luis Castaño, MD; Scientific Director, Biocruces HRI] [Iñigo Gabilondo, MD; Neurology Department, Cruces University Hospital; Biocruces HRI]</p> <p>13:10 — 13:25 Presentation of the EU H2020 vCARE project [Hannes Schlieter, vCARE coordinator, Technische Universität Dresden, Germany]</p> <p>13:25 — 13:40 Stroke survivors and self-management services: Lessons learned from the STARR project [Leire Ortiz, MD; Rehabilitation Department, Cruces University Hospital; Biocruces HRI]</p> <p>13:40 — 13:55 Games and Gamification in Healthcare: towards patient-centric, connected care [Lucia Pannese, CEO imaginary Italy]</p> <p>13:55 — 14:10 Armassist: A robot for unsupervised neurorehabilitation: Usability results [Thierry Keller, Head of Neurorehabilitation Department, Tecnalia, Spain]</p> <p>14:10 — 14:25 Sensor based solutions for hospitals and care at home [Jordi Rovira / CEO, Mysphera, Spain]</p>	 <p>Jordi Rovira</p> <p>HEALTH DATA SCIENTIST AND INNOVATION MANAGER MYSPHERA</p> 

Program	 Osakidetza <small>OSAKIDETZA - ENKARTERRI - CRUCES OSKUNTSU SANEAMU INTEGRATUA ORGANIZAZIÓI SANITARIO INTEGRADA OSKIDETZA - ENKARTERRI - CRUCES</small>
13:00 — 13:10 Welcome [Luis Castaño, MD; Scientific Director, Biocruces HRI] [Iñigo Gabilondo, MD; Neurology Department, Cruces University Hospital; Biocruces HRI]	 Covadonga Fernandez Maiztegi MD, Neurologist MEDICAL SUBDIRECTOR CRUCES UNIVERSITY HOSPITAL
13:10 — 13:25 Presentation of the EU H2020 vCARE project [Hannes Schlieter, vCARE coordinator, Technische Universität Dresden, Germany]	
13:25 — 13:40 Stroke survivors and self-management services: Lessons learned from the STARR project [Leire Ortiz, MD; Rehabilitation Department, Cruces University Hospital; Biocruces HRI]	
13:40 — 13:55 Games and Gamification in Healthcare: towards patient-centric, connected care [Lucia Pannese, CEO imaginary Italy]	
13:55 — 14:10 Armassist: A robot for unsupervised neurorehabilitation: Usability results [Thierry Keller, Head of Neurorehabilitation Department, Tecnalia, Spain]	
14:10 — 14:25 Sensor based solutions for hospitals and care at home [Jordi Rovira / CEO, Mysphera, Spain]	
14:25 — 14:40 The point of view of the Basque Health System [Covadonga Fernandez Maiztegi, MD; Medical Subdirector of Cruces University Hospital; Biocruces HRI]	 Osakidetza

Program	 INNOVATION SPRINT
13:00 — 13:10 Welcome [Luis Castaño, MD; Scientific Director, Biocruces HRI] [Iñigo Gabilondo, MD; Neurology Department, Cruces University Hospital; Biocruces HRI]	 Sofoklis Kyriazakos CEO iSPRINT
13:10 — 13:25 Presentation of the EU H2020 vCARE project [Hannes Schlieter, vCARE coordinator, Technische Universität Dresden, Germany]	
13:25 — 13:40 Stroke survivors and self-management services: Lessons learned from the STARR project [Leire Ortiz, MD; Rehabilitation Department, Cruces University Hospital; Biocruces HRI]	
13:40 — 13:55 Games and Gamification in Healthcare: towards patient-centric, connected care [Lucia Pannese, CEO imaginary Italy]	
13:55 — 14:10 Armassist: A robot for unsupervised neurorehabilitation: Usability results [Thierry Keller, Head of Neurorehabilitation Department, Tecnalia, Spain]	
14:10 — 14:25 Sensor based solutions for hospitals and care at home [Jordi Rovira / CEO, Mysphera, Spain]	
14:25 — 14:40 The point of view of the Basque Health System [Covadonga Fernandez Maiztegi, MD; Medical Subdirector of Cruces University Hospital; Biocruces HRI]	 Assisted Living at Home Personalized Health Platform of Tomorrow
14:40 — 14:55 CloudCare2U: A cloud eHealth infrastructure for the wellbeing of chronic disease patients [Sofoklis Kyriazakos, CEO iSPrint, Belgium]	

Program

13:00 — 13:10 Welcome [Luis Castaño, MD; Scientific Director, Biocruces HRI]
[Inigo Gabilondo, MD; Neurology Department, Cruces University Hospital; Biocruces HRI]

13:10 — 13:25 Presentation of the EU H2020 vCARE project [Hannes Schlieter, vCARE coordinator, Technische Universität Dresden, Germany]

13:25 — 13:40 Stroke survivors and self-management services: Lessons learned from the STARR project [Leire Ortiz, MD; Rehabilitation Department, Cruces University Hospital; Biocruces HRI]

13:40 — 13:55 Games and Gamification in Healthcare: towards patient-centric, connected care [Lucia Pannese, CEO Imaginary Italy]

13:55 — 14:10 Armassist: A robot for unsupervised neurorehabilitation: Usability results [Thierry Keller, Head of Neurorehabilitation Department, Tecnalia, Spain]

14:10 — 14:25 Sensor based solutions for hospitals and care at home [Jordi Rovira / CEO, Mysphera, Spain]

14:25 — 14:40 The point of view of the Basque Health System [Covadonga Fernandez Maiztegi, MD; Medical Subdirector of Cruces University Hospital; Biocruces HRI]

14:40 — 14:55 CloudCare2U: A cloud eHealth infrastructure for the wellbeing of chronic disease patients [Sofoklis Kyriazakos, CEO iSprint, Belgium]

14:55 — 15:15 Discussion and questions: attendees are invited to share their experiences



Exhibition

15.15 – 16:30

During the exhibition attendees will be able to talk with experts and specifically see and try the following solutions:

- **REHABILITY** <http://www.rehability.me>
- **ARMASIST** <http://www.tecnalia.es/en/proyectos-item/armassist>
- **CloudCare2U** <http://cloudcare2u.com/>
- **MYSPHERA Health:** <http://mysphera.com/health/>
- **MYSPHERA LOCS:** <http://mysphera.com/senior-living/#locs>



“Cristalera”
exhibitions
and coffee



INTRODUCTION

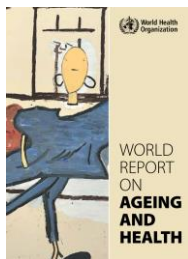
REHABILITATION OF ELDERLY AT HOME: A GLOBAL OPPORTUNITY

June 5th, from 13:00 to 16:30

Biocruces HRI – Cruces University Hospital

(City of Barakaldo, 15 min in metro from Bilbao City Center)

INTRODUCTION



World report on Ageing
And Health (2015)
World Health Organization.
at <www.who.int/>

Fig. 3.1. Proportion of population aged 60 years or older, by country, 2015

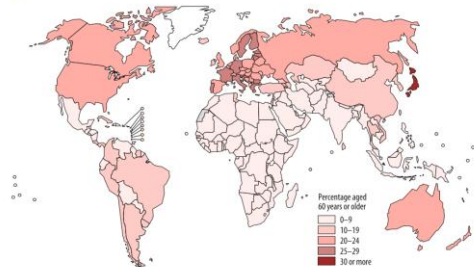
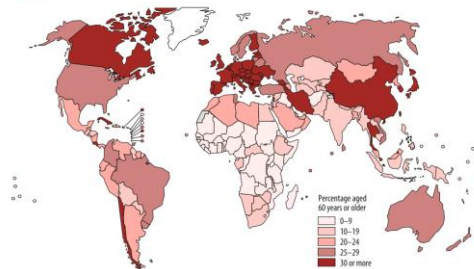
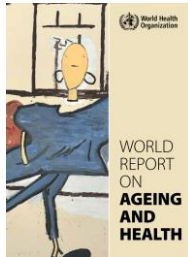


Fig. 3.2. Proportion of population aged 60 years or older, by country, 2050 projections

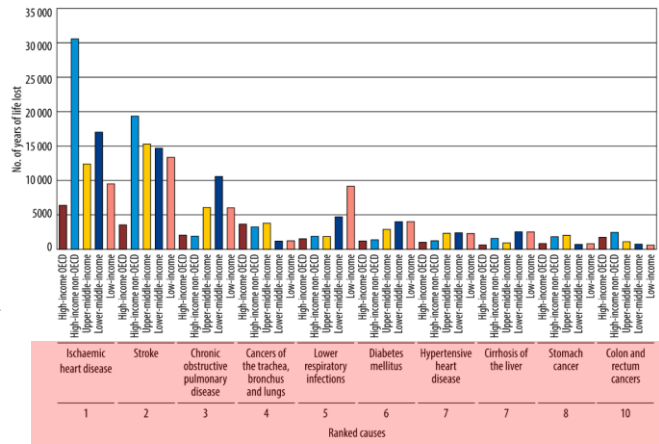


INTRODUCTION



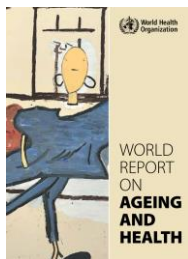
World report on Ageing
And Health (2015)
World Health Organization.
at <www.who.int/>

Fig. 3.14. Number of years of life lost to mortality (YLL) per 100 000 population for the top 10 causes of lost years, in populations aged 60 years and older, 2012

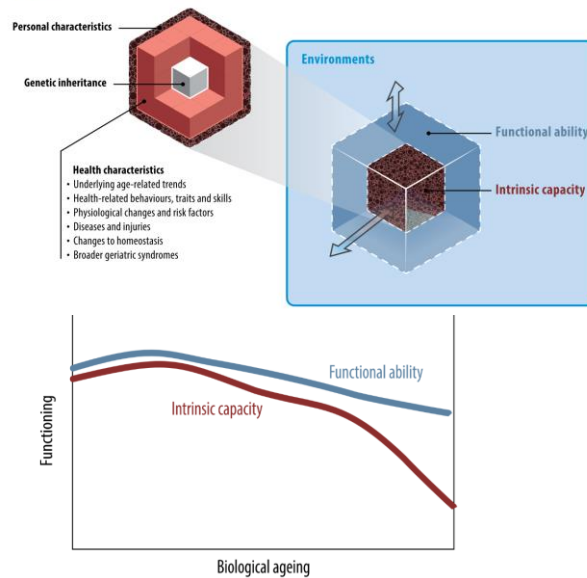


INTRODUCTION

Fig. 2.1. Healthy Ageing

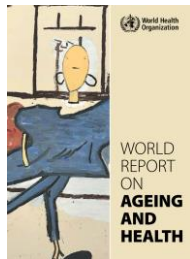


World report on Ageing
And Health (2015)
World Health Organization.
at <www.who.int/>

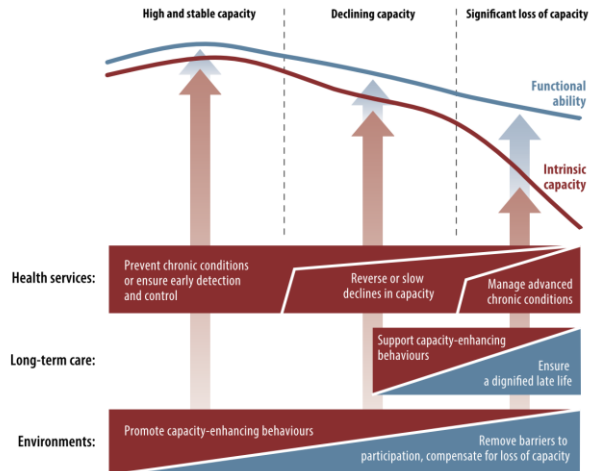


INTRODUCTION

Fig. 2.4. A public-health framework for Healthy Ageing: opportunities for public-health action across the life course



World report on Ageing
And Health (2015)
World Health Organization.
at <www.who.int/>

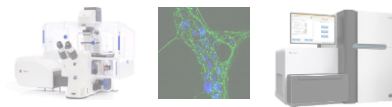


INTRODUCTION

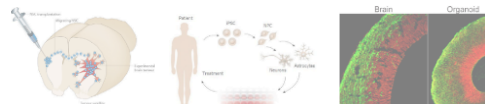
BIOSENSORS – WEARABLE DEVICES



MICROSCOPY, IMMUNOHISTOCHEMISTRY, MICROFABRICATION, MOLECULAR DIAGNOSTICS



STEM CELLS



OPTOGENETICS, GENE THERAPY



INTRODUCTION

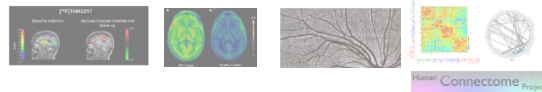
IMPLANTABLE TECHNOLOGY– NEUROMODULATION



PHYSICAL REHABILITATION AND ORTHOPEDICS



IMAGING TECHNOLOGY AND COMPUTATIONAL IMAGING



MASSIVE DATA ANALYSIS ALGORITHMS: Big data, machine learning, deep learning, neural networks

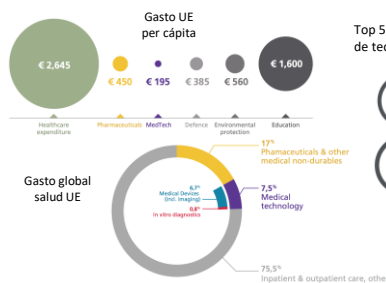


Digital Medicine: Telemedicine, Mobile Medicina, Cloud computing, Internet of things



INTRODUCTION

- In **Europe** there are **25,000 companies** dedicated to medical technologies, **95% SMEs**
- Most located in **Germany, followed by UK, Italy, Switzerland, Spain and France**
- Medical technology in Europe represents **7.5% of global spending on health**
- **100 billion euros market in Europe**, with growth of 4% in recent years
- One of the most **innovative technological sectors**



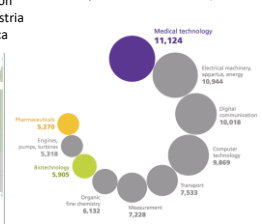
Top 5 países de UE en mercado de tecnología médica (2014)



Top 6 países de UE con mayor empleo en industria de tecnología médica



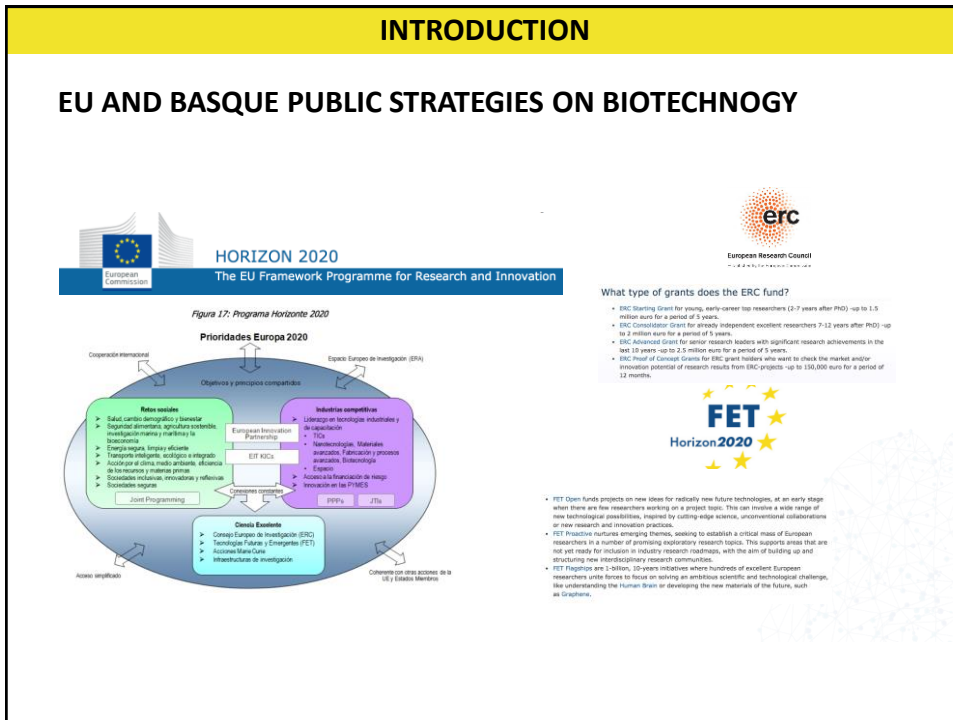
Top 10 sectores tecnológicos por nº solicitudes de patentes (Oficina Europea de Patentes, 2012)



Fuente: MedTech Europe, the European Medical Technology Industry in Figures

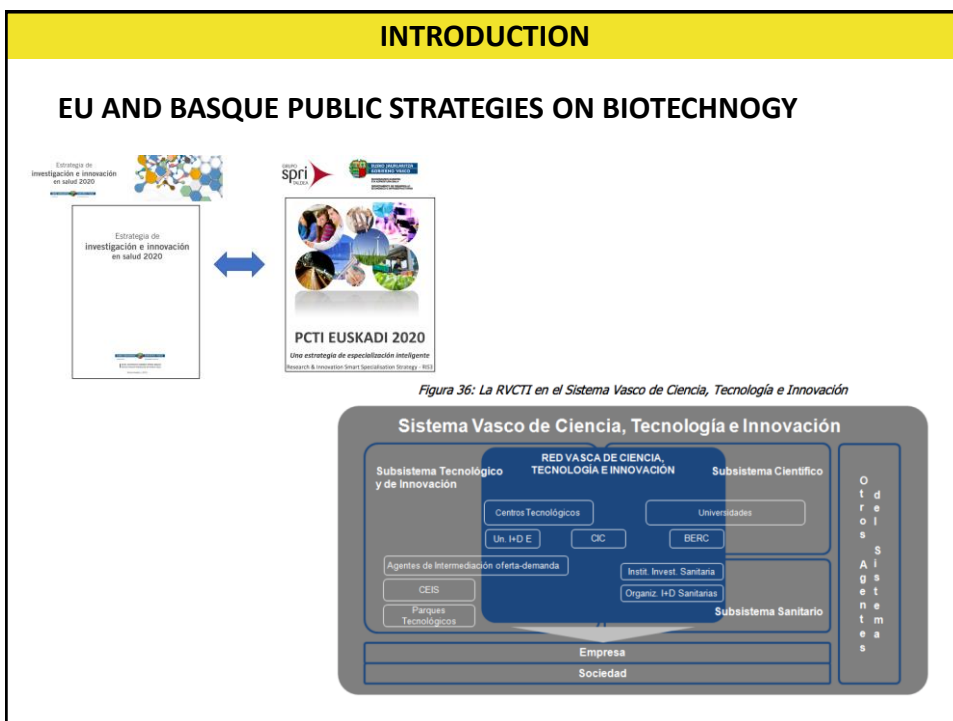
INTRODUCTION

EU AND BASQUE PUBLIC STRATEGIES ON BIOTECHNOLOGY



INTRODUCTION

EU AND BASQUE PUBLIC STRATEGIES ON BIOTECHNOLOGY



REHABILITATION OF ELDERLY AT HOME: A GLOBAL OPPORTUNITY

June 5th, from 13:00 to 16:30

Biocruces HRI – Cruces University Hospital
(City of Barakaldo, 15 min in metro from Bilbao City Center)



This project vCare has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 769807.



biocruces
health research institute

