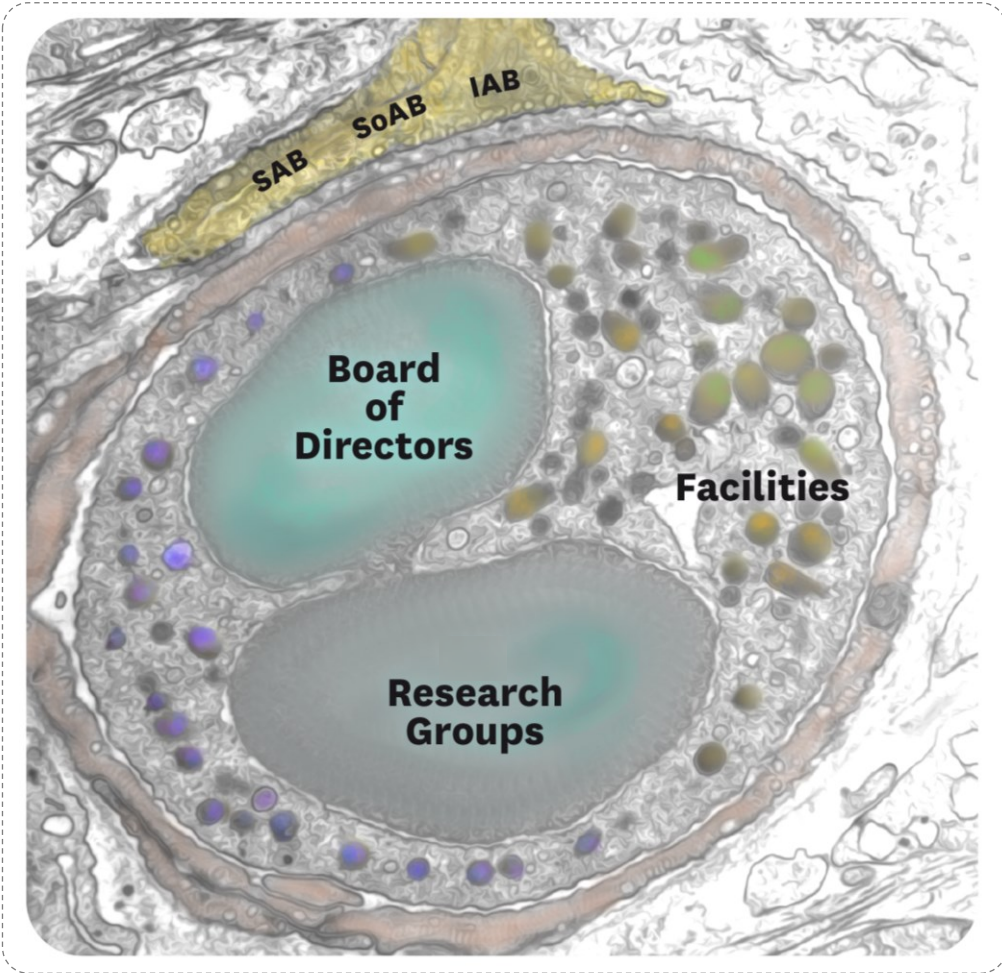Infoday Horizon Europe: Exploring The Upcoming Opportunities

Session #1 | Pathways to Research and Innovation

October 26, 2023

A collaborative ecosystem of 677 people!

Horizontal structure, with no artificial boundaries, promoting cooperation

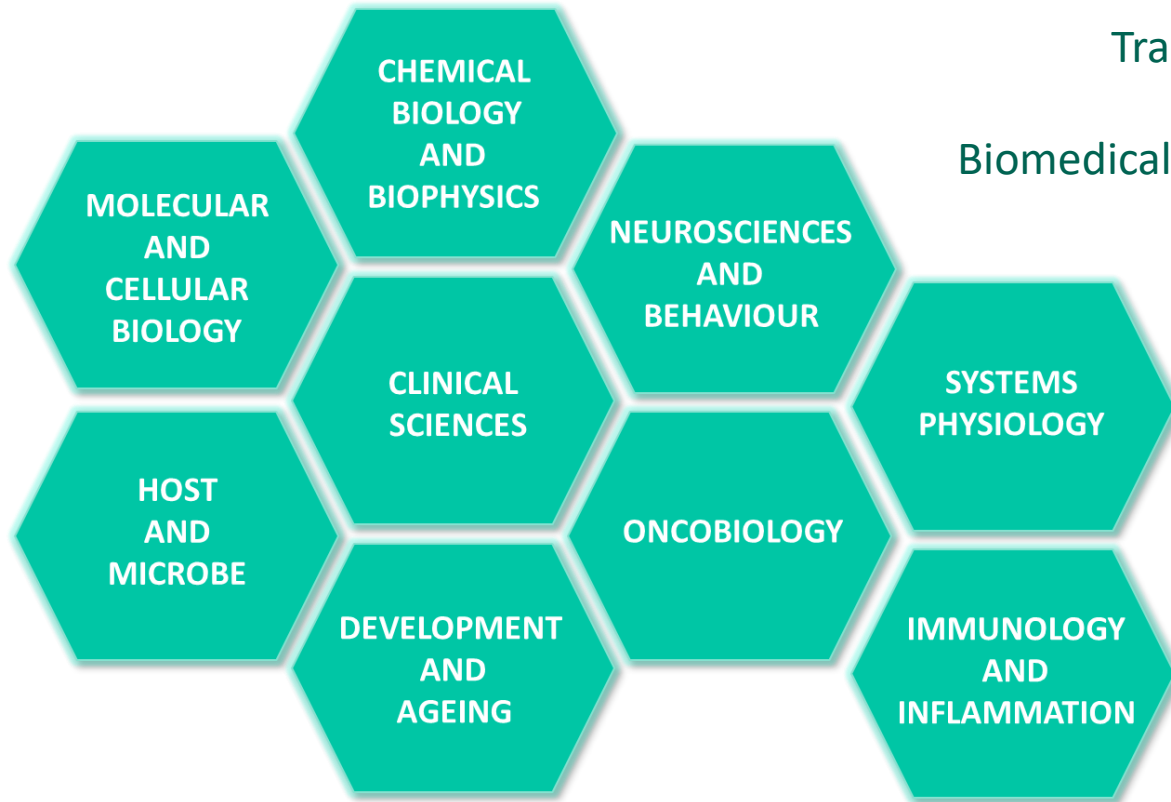
"Like a Cell"

iMM Community

People

531	RESEARCHERS
86	TECHNICAL STAFF
60	ADMINISTRATIVE STAFF
677	TOTAL

Female **456**

Male **221**

Nationalities **24**

Research Groups **32**

Thematic Lines of Research

Fostering new and disruptive discoveries to improve the health of the cit

Interest Groups for Multidisciplinarity & Critical Mass

CHEMICAL BIOLOGY AND BIOPHYSICS

MOLECULAR AND CELLULAR BIOLOGY

NEUROSCIENCES AND BEHAVIOUR

CLINICAL SCIENCES

SYSTEMS PHYSIOLOGY

HOST AND MICROBE

ONCOBIOLOGY

DEVELOPMENT AND AGEING

IMMUNOLOGY AND INFLAMMATION

Basic
Translational
Clinical
Biomedical Research

Strategic connection:
Lisbon Medical Academic Centre (CAML)

Chasing questions in patient-centred research

INGENIOUS SCIENTISTS
& ADVANCED TECHNOLOGY
TO MAXIMIZE CREATIVITY
towards
DISCOVERIES
WITHOUT BOUNDARIES

Excellent Science

Training

Translation

IMPROVE HUMAN HEALTH
&
ENGAGE THE PUBLIC
to debate the direction,
purpose and implications
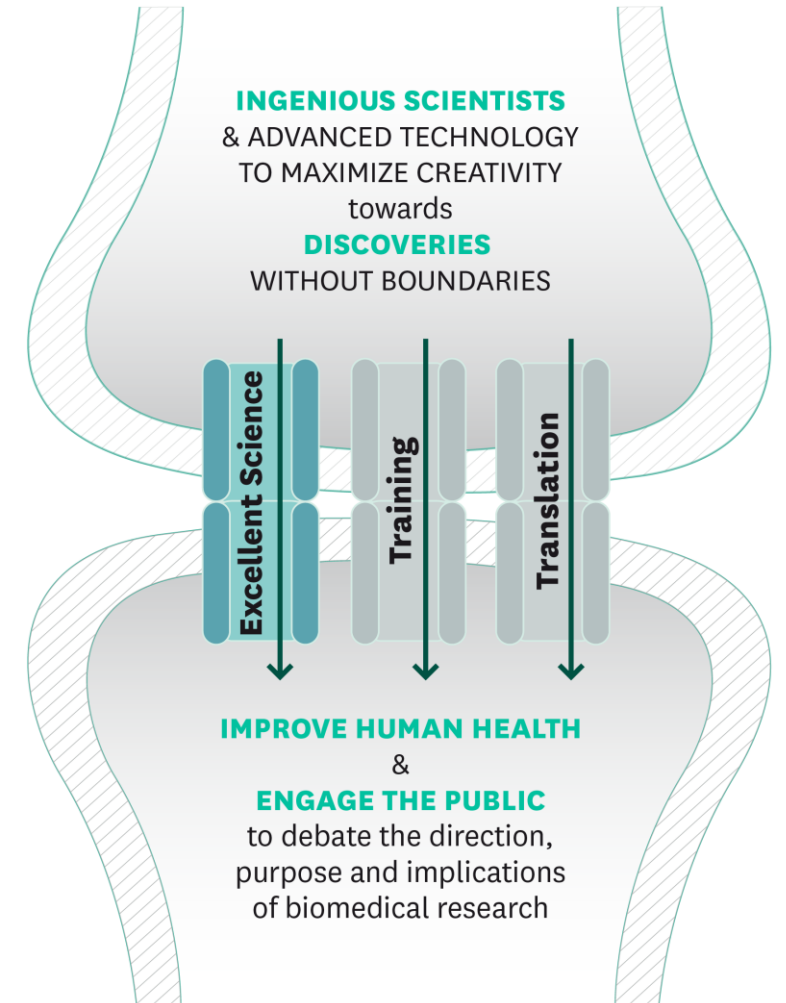of biomedical research
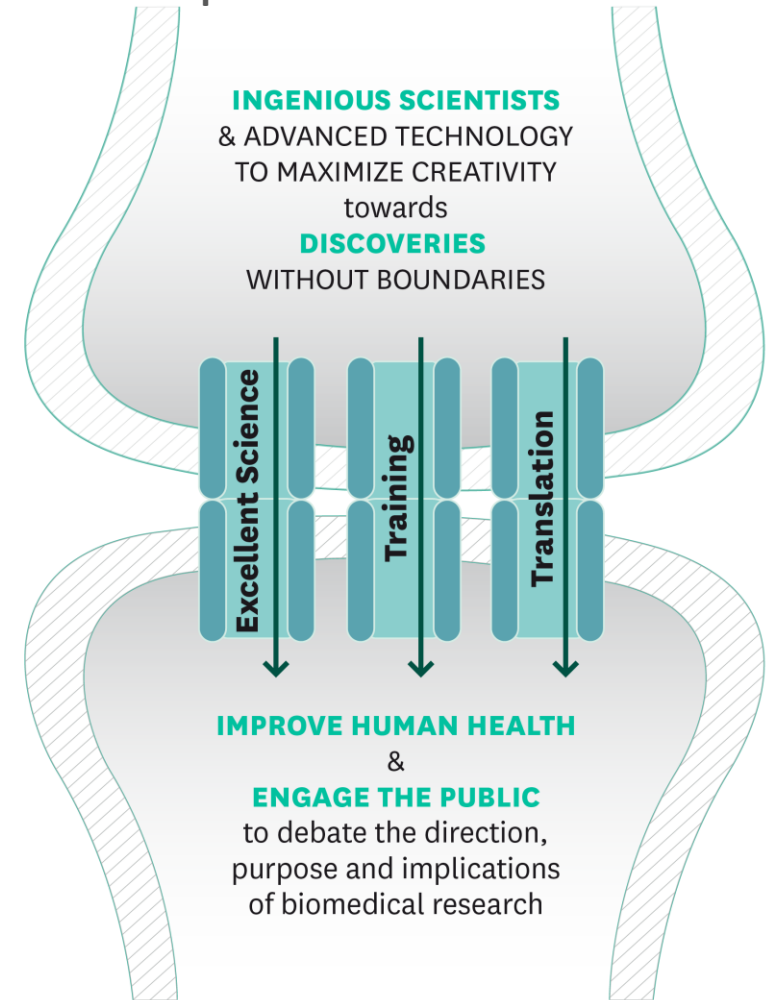
Strategic Objectives

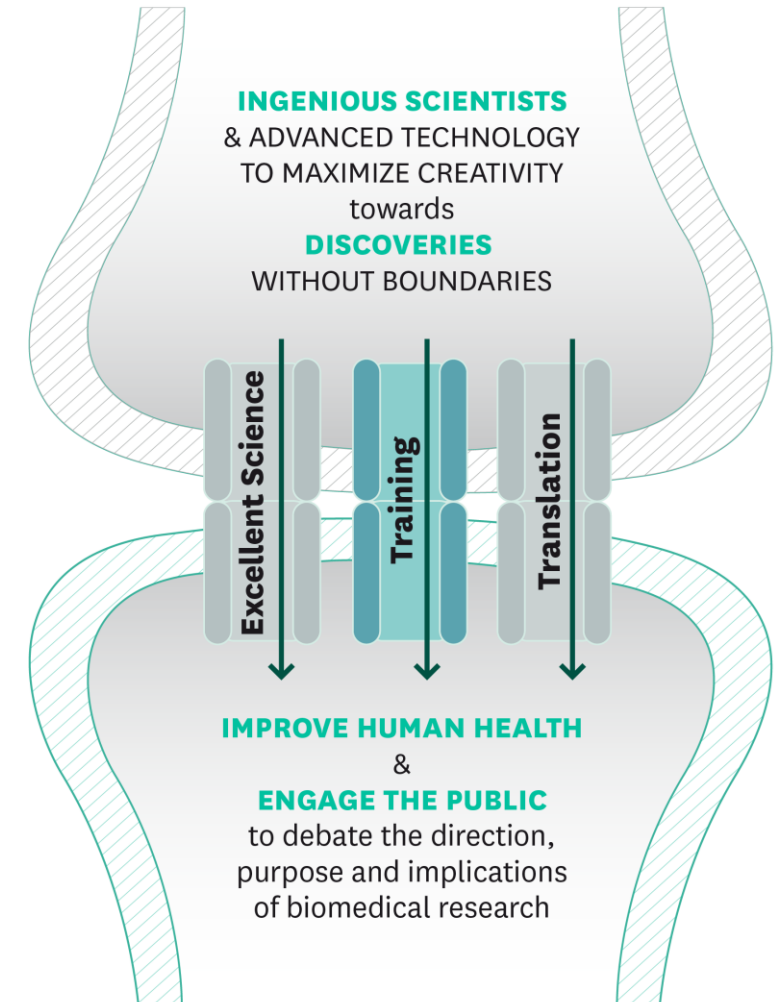## 1. Promote Scientific Excellence - delivering on key public policies

- **Attract**, **support** and continuously **review** our faculty and their projects

- Reduce artificial scientific barriers and encourage **interdisciplinarity**

- Promote **internationalization**

- Invest in state-of-the art **technological platforms** and support services

- Develop **internal funding schemes** and tools for bold initiatives

- Promote the **open-access dissemination** of the results of our research

INGENIOUS SCIENTISTS & ADVANCED TECHNOLOGY TO MAXIMIZE CREATIVITY towards DISCOVERIES WITHOUT BOUNDARIES

Excellent Science

Training

Translation

IMPROVE HUMAN HEALTH & ENGAGE THE PUBLIC to debate the direction, purpose and implications of biomedical research

Strategic Objectives

2. Nurture Advanced Training and Career Development - delivering on key public policies

- **Attract** the most curious and talented individuals

- Provide the **highest quality training** to early career scientists, namely through dedicated **MSc, PhD and Post-Doctoral programs**

- Encourage and foster **Independence** and **creativity** at all career stages

- Support **tailored** training and continued **professional development**

- Promote an **entrepreneurial mindset**

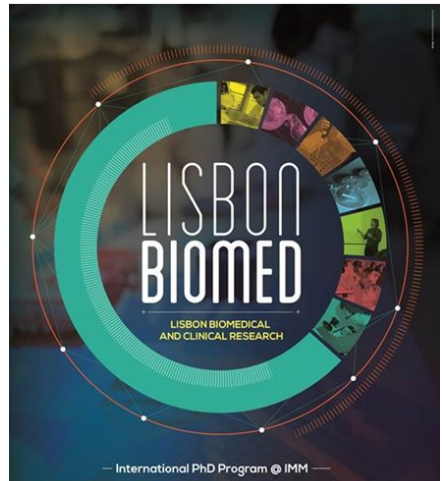INGENIOUS SCIENTISTS & ADVANCED TECHNOLOGY TO MAXIMIZE CREATIVITY towards DISCOVERIES WITHOUT BOUNDARIES

Excellent Science | Training | Translation

IMPROVE HUMAN HEALTH & ENGAGE THE PUBLIC to debate the direction, purpose and implications of biomedical research

2. Nurture Advanced Training and Career Development - delivering on key public policies
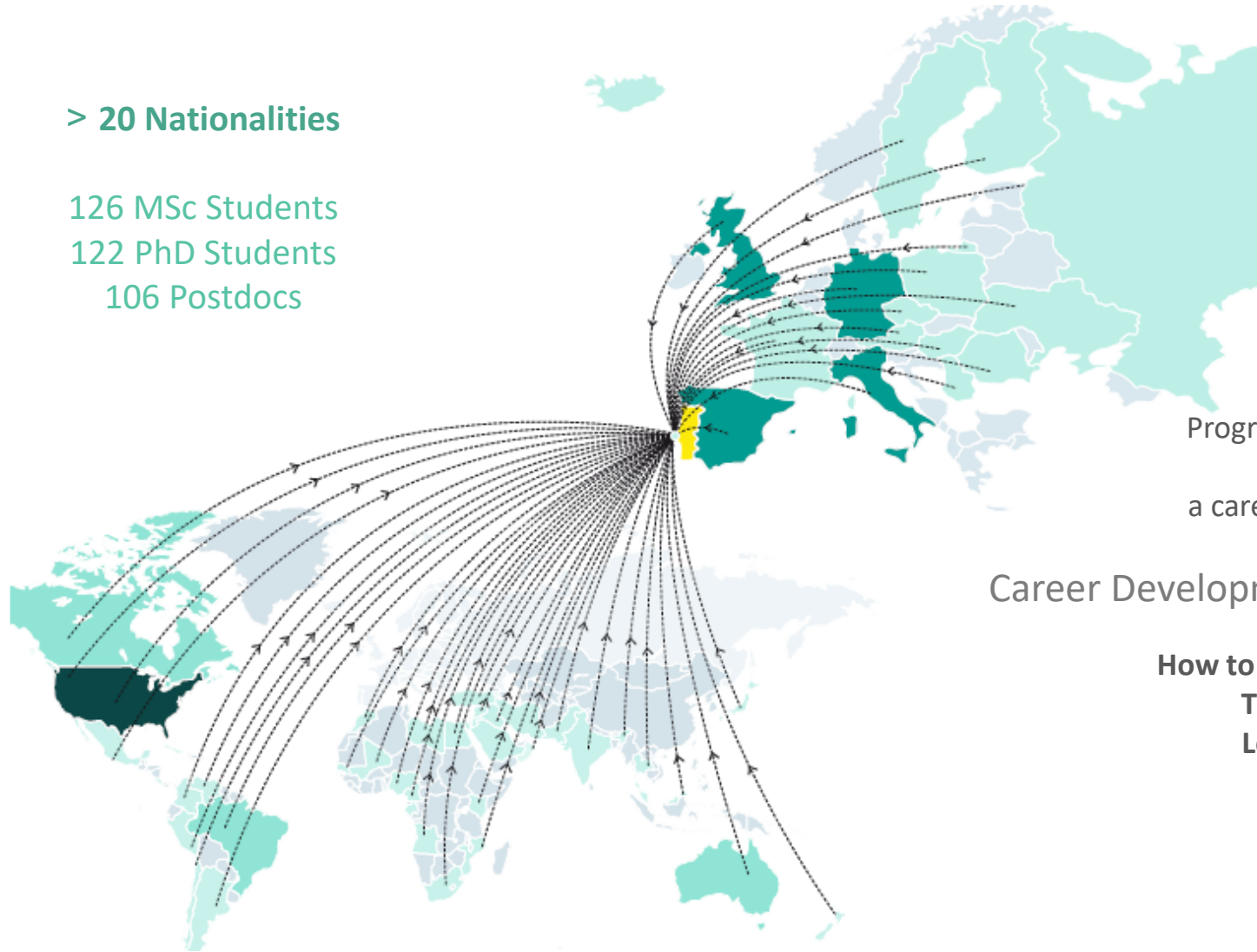
An integrative view
Critical thinking

Ph.D. Program in BioEngineering

BIOLOGY AT THE HOST MICROBE INTERFACE
PHD PROGRAM

NeurULisboa
Integrated Neurosciences

MedChemTrain

LISBON ACADEMIC
MEDICAL CENTRE

H2020 MSCA Innovative Training Networks

Protein Conjugates

Enlightten

GLYCOVAX

LISBON BIOMED
LISBON BIOMEDICAL
AND CLINICAL RESEARCH

— International PhD Program @ IMM —

> 20 Nationalities

126 MSc Students
122 PhD Students
106 Postdocs

Finding a niche
Fostering a career

MM
My ID

Program to help researchers to develop
a process of self-knowledge,
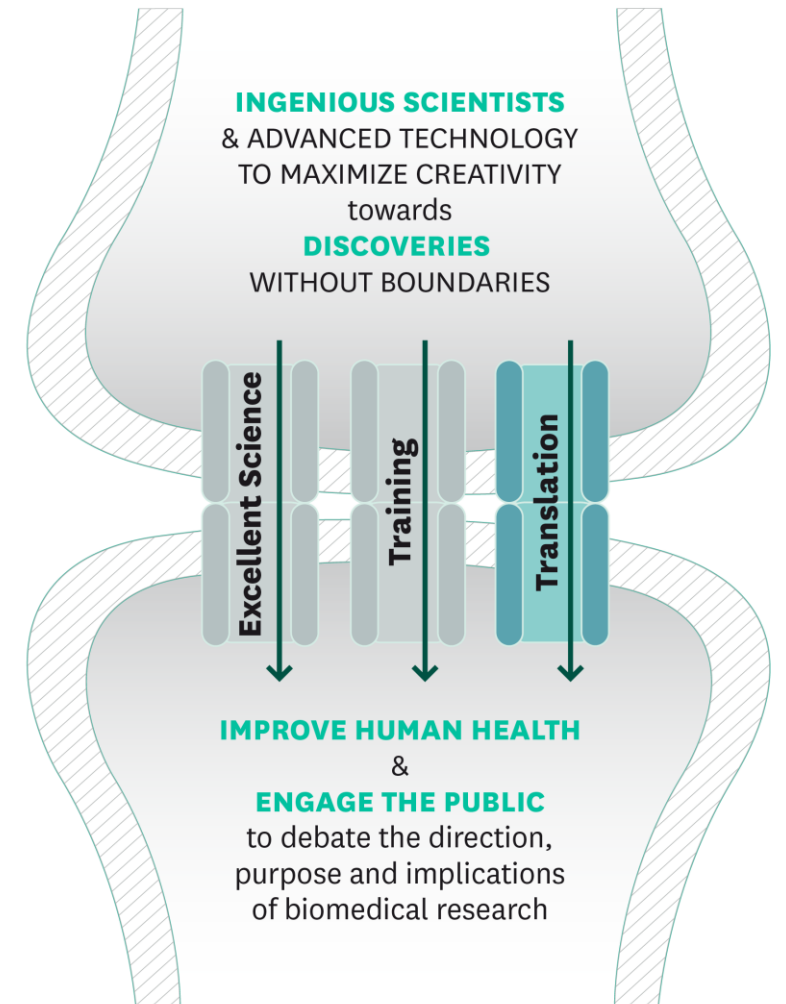a career plan and set professional goals

Career Development Executive Committee

How to write a Career Development Plan
Training Program for the Next Step
Leadership and Management skills
Science Communication
Entrepreneurship

Strategic Objectives

3. Galvanize Translation for Human Health - delivering on key public policies

- Increase portfolio of early translation projects (**proof-of-concept funding**)

- Increase **industry funding**

- Create **start-up programs** (entrepreneurs-in-residence; pre-seed accelerator)

- Create **investment fund**

- Equity position in new ventures

- Attract the best entrepreneurs to lead new ventures

INGENIOUS SCIENTISTS
& ADVANCED TECHNOLOGY
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IMPROVE HUMAN HEALTH
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of biomedical research

Strategic Objectives

3. Galvanize Translation for Human Health - delivering on key public policies

KPIs of TTO core activities
(2018 – 2022)

111 New Inventions

6 Spin-offs under development

37O Collaborations with Industry discussed

162 Patent applications

4 Spin-offs

21O Collaborations with Industry formalised

~46% Patents licensed

71.35M€ Funding raised

6.75M€ Industry funding

3. Galvanize Translation for Human Health - delivering on key public policies

iMM research and IP assets fuel a strong and attractive pipeline in therapeutics

	ASSET	LAB	PARTNER(S)	DISCOVERY	PRECLINICAL	CLINICAL
ONCOLOGY	New target for ALT cancers	CAzzalin	TessellateBIO	●		
ONCOLOGY	TRPV2 antagonists	GBernardes	TARGTEX	●	●	
ONCOLOGY	TEC inhibitors	GBernardes		●	●	
ONCOLOGY	New treatment based on CO releasing	GBernardes	Proterris	●	●	
ONCOLOGY	Cell therapy based on γδ T cells	BSSantos	Takeda	●	●	
ONCOLOGY	Development of traceless strategies for the selective release of BET inhibitors in cancer cells	GBernardes		●	●	
ONCOLOGY	RANK pathway + CDK inhibitors	LCosta	AMGEN	●	●	
ONCOLOGY	Induction of celular lethality in cancer	SAlmeida		●		
ONCOLOGY	Gene therapy	JBarata	Targeted Therapies Today	●		
ONCOLOGY	Anti-IL-7R antibodies	JBarata	FairJourney Biologics	●		
METAB. DISEASES	New target (Slc6a2) for obesity	GBernardes		●	●	
MULTIPLE	Peptide compounds to reduce side effects of CB1 receptor agonists	MCastanho	Disrupt Therapeutics	●	●	
MULTIPLE	Method to produce TRM cells	MVeldhoen	Start-up to be created	●		
IMMUN.	Undisclosed target to inhibit T cell activity in inflammation	MVeldhoen		●		

	ASSET	LAB	PARTNER(S)	DISCOVERY	PRECLINICAL	CLINICAL
INFECTIOUS DISEASES	Piperlongumine (PL) for SARS-CoV-2	GBernardes		●	●	
INFECTIOUS DISEASES	rG4 degraders	GBernardes	University of Cambridge enterprise	●	●	
INFECTIOUS DISEASES	Anti-malarial small molecules	MMota		●	●	
INFECTIOUS DISEASES	Peptide conjugates for Zika	MCastanho		●	●	
INFECTIOUS DISEASES	New porphyrin-CPP conjugates with antiviral activity	MCastanho		●	●	
INFECTIOUS DISEASES	New antimicrobial agents	MPrudêncio	BSL	●	●	
INFECTIOUS DISEASES	Plant extracts with antiviral activity	PSimas	NGC	●		
INFECTIOUS DISEASES	Neutralizing SARS-CoV-2 antibodies	LGraça	FairJourney Biologics	●		
NEUROSCIENCE	New drugs for AD and Epilepsy	ASebastião	iLoF, Co-Lab AcceliDio	●	●	
NEUROSCIENCE	New target (TrkB-T1) for absence seizures	ASebastião		●	●	
NEUROSCIENCE	Use of Eletriptan Hydrobromide for SCI	LSaúde	TECHNOPHAGE	●	●	
NEUROSCIENCE	New targets for SCI	LSaúde		●		
NEUROSCIENCE	MANF delivery to improve regenerative capacity in the skeletal muscle	PSVitor	Start-up to be created	●		
CARDIO.	ASO HCM	MCFonseca		●		

3. Galvanize Translation for Human Health - delivering on key public policies

An entrepreneurial institute from the onset

2004
Molecular Diagnostics
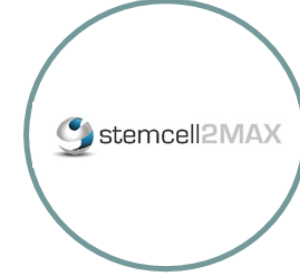Acquired by SYNLAB in 2022

2004
Therapeutics (biologics)
License agreements
Active

2013
Therapeutics (cell therapy)
License agreement
Acquired by GammaDelta Tx
(Takeda) in 2018

2014
Vaccines (malaria)
Inactive

2015
Biotechnology (cell culture)
Inactive

2017
Diagnostics (enabling technologies)
License agreement
Active

2018
Therapeutics (cell therapy)
License agreement
Inactive

2019
Therapeutics (small molecules)
License agreement & equity
Active

2020
Therapeutics (small molecules)
License agreement & equity
Active
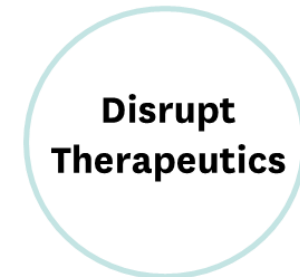
2023
Therapeutics (small molecules)
License agreement & equity
Active

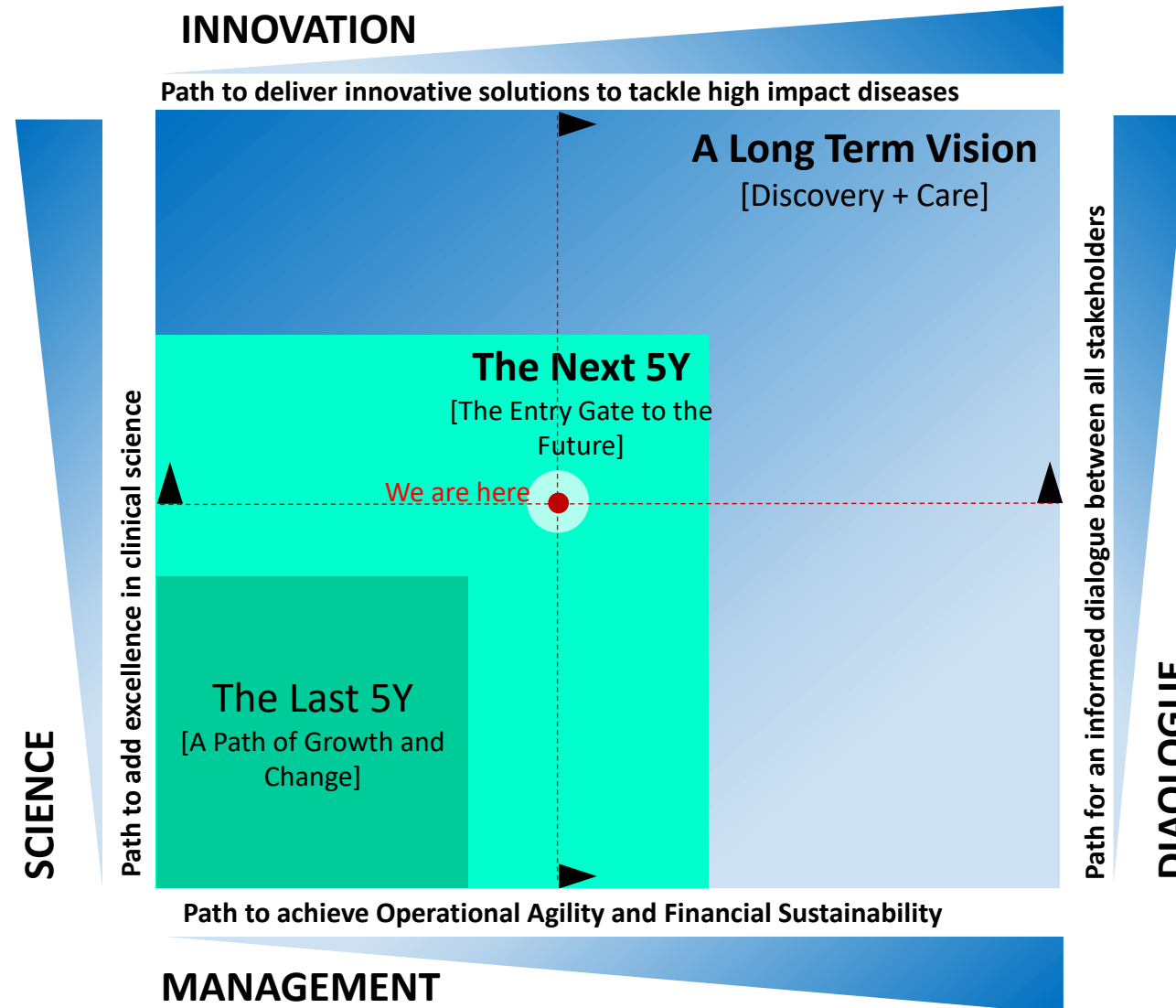3. Galvanize Translation for Human Health - delivering on key public policies

Promoting partnerships with biotech and pharma industry

iMM – **The Future**

To achieve excellence in **Clinical Research** & **Real-World Experimental Medicine**

Investing in iMM's R&I capacities

Need:

. Expand excellence to clinical and translational research
. Catch the digital transformation train
. State-of-the-art RI and powerful drug discovery platforms and tools following tech & market trends

Solution:

. Mission-driven, human-centred and data-powered clinical and translational research
. New digital facilities - omics, AI / data, blockchain
. World-class R&T facilities (digital, equipment), DD platforms and human-based models

European Commission

iMM-CARE: BOOSTING CLINICAL RESEARCH FOR THE BENEFIT OF SOCIETY

iMM-CARE
Grant agreement ID: 101060102

DOI
10.3030/101060102

Start date
1 May 2023

End date
30 April 2029

Funded under
Widening participation and spreading excellence

Total cost
€ 15 000 000,00
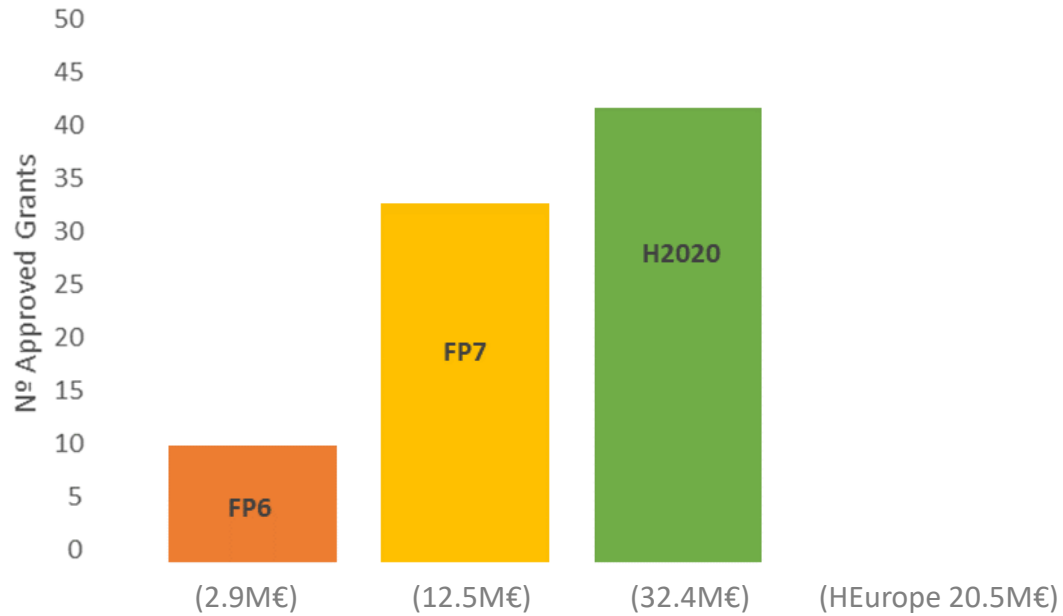
EU contribution
€ 15 000 000,00

Coordinated by
INSTITUTO DE MEDICINA MOLECULAR JOAO LOBO ANTUNES
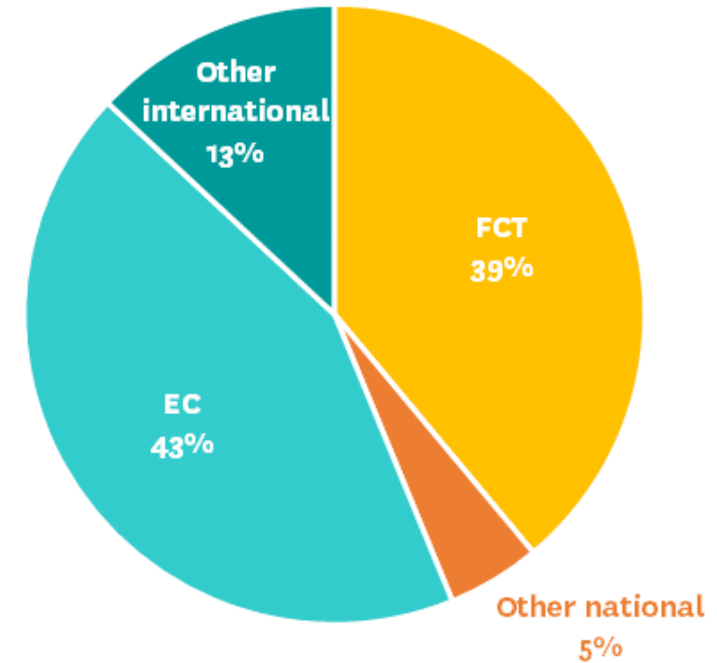
🇵🇹 Portugal

MM care
Instituto de Medicina Molecular

CTI
CENTROS DE TECNOLOGIA E INOVAÇÃO

Positive Pathway in EC's Framework Programmes

iMM in FP6 » FP7 » H2020

Nº Approved Grants

50
45
40
35
30
25
20
15
10
5
0

H2020

FP7

FP6

(2.9M€)   (12.5M€)   (32.4M€)   (HEurope 20.5M€)

Secured Funding Critical for iMM's Sustainability

Other international 13%

FCT 39%

EC 43%

Other national 5%

Instituto de Medicina Molecular João Lobo Antunes

THANK YOU FOR YOUR ATTENTION

EC H2020 funding (2014 – 2020) - iMM

FP6

Young Researchers 27%
Collaborative Research 73%

FP7

Young Researchers 62%
Excellent Science 23%
Societal Challenges 12%
Innovation 3%

Widening 23%
Excellent Science 41%
Young Researchers 11%
Innovation 14%
Societal Challenges 11%
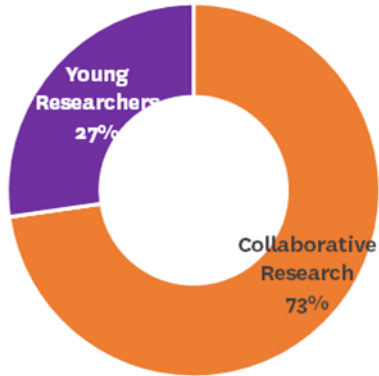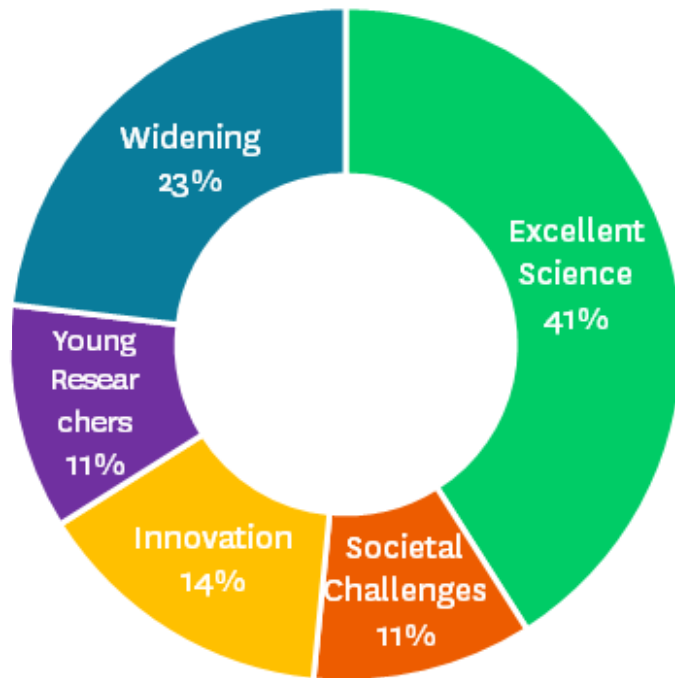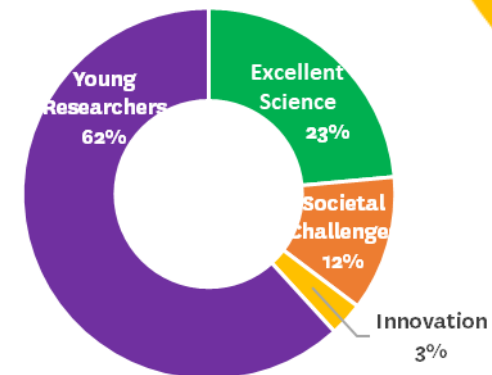
Excellent Science

. European Research Council (ERCs)

Young Researchers

. MSCA-Individual Fellowships

. MSCA – Innovative Training Networks

Societal Challenges (cluster Health)

- Consortium-based; Top-down; focus on translational/clinical research

Innovation

. Future Emerging Technologies (FET)

- Individual/consortium; Top-down/Bottom-up; focus on translational research/innovation for the market

Widening

. ERA-Chair | Twinning | Teaming

- Focus on capacity-building on R&I and improvement of institutional/regional/national scientific system