

## Research & Innovation must be central in the “new normal”

This is a decisive time for Portugal, through its government, to define its future and play a stronger role in shaping Europe's future. To do so, the Portuguese government must have a strong and visionary position on research and innovation. We hereby, scientists and entrepreneurs, speak with one voice.

In the coming months, the Economic and Social Recovery Plan (2020-2030) will be defined in Portugal. At the same time, in Europe, the research and innovation budget for the next framework program (Horizon Europe 2021-2027) will also be defined. The guidelines and financial amount of both these programs will determine our collective future.

Our country's response to the recent pandemic has revealed to us how science and innovation feed the best decisions - in health, in industry, in companies - for our society as a whole. The investment in science and innovation in the last 30 years has allowed for a mobilization never seen before. In record time, huge adaptations and changes were introduced both in the production of scientific knowledge, diagnostics and essential equipment to fight the pandemic, but also in the mobilization of highly trained human resources, and even in the business models themselves. Never has it become so clear to society, the need to place research and innovation, as well as the institutions that carry out these actions, such as Research Institutes, Higher Education Institutions and Companies, at the centre of our activities. The role of scientists, and decisions based on scientific evidence, is now fundamental to our current daily lives.

This new look at science and its current central role in society reinforces our belief that only with a strong investment in research and innovation, and in the institutions that produce them, will it be possible to respond to the unknown challenges that lie ahead. Research has made an essential contribution to the creation and dissemination of scientific knowledge indispensable to innovation. More than 80% of the drugs we use to treat current diseases (hypertension, cancer, cholesterol) were identified from fundamental research projects<sup>1</sup>. It is estimated that each € 1 invested in research and development programs in Europe has a return of € 13 in the business sector<sup>2</sup>. Even more visible are how previous investments in science in Portugal are currently paying dividends in terms of innovation. Recently, our country was recognised as a “Strong Innovator” country in the European Innovation Scoreboard 2020 Report just published by the European Commission<sup>3</sup>. Therefore, we believe we should not allow the new framework program for research and innovation to have a budget that jeopardizes everything we have built-in recent years.

Europe's competitiveness must be strengthened and amplified. We are talking about the production of new ideas and new approaches to the challenges of the future, whether it be in health, climate change, education, energy, the organization of urban life, or in digitization and automation processes. This is the time to call for increased investment in research and innovation, to pave the way for our future. Only in this environment can we expect European companies to remain competitive in a global world, and, for Europe to assert itself as a leader forging the future we collectively dream of: sustainable, inclusive and prosperous.

It is, therefore, crucial to increase the installed capacity in research and innovation, and the coordination and interaction of the various sectors of society. It is essential not only to react to the unknown challenges that arise in different areas but above all, to prepare ourselves in advance for future challenges. To this end, the subscribers to this *manifesto* appeal to the following lines of action

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<sup>1</sup> Spector et al 2018, DOI: [10.1126/scitranslmed.aag1787](https://doi.org/10.1126/scitranslmed.aag1787)

<sup>2</sup> [https://ec.europa.eu/research/evaluations/pdf/speech\\_pascal-lamy\\_03072017.pdf](https://ec.europa.eu/research/evaluations/pdf/speech_pascal-lamy_03072017.pdf)

<sup>3</sup> <https://ec.europa.eu/docsroom/documents/41941>

that should be expanded by the Economic and Social Recovery Plan (2020-2030), and by reinforcing the budget of Horizon Europe (2021-2027):

a) **A vision for the future.** Only excellent fundamental, discover-driven research, which deals with the unpredictable and uncovers the unknown, will allow us to create knowledge and tools to face the future unknown challenges to imprint our future aspirations and needs.

b) **Cooperation.** Joint public and private investment in research and innovation along the value chain and its integration into society and the national economy is required so that we better anticipate and respond to global crises. Moreover, a clear strategy for permanent coordination with national and international institutions is also needed. This cooperation entails:

i) Greater long-term investment in excellent human resources, ecosystems and technological infrastructures of fundamental, translational and cutting-edge science and innovation, in universities, technical universities (*Politecnico* in Portuguese), research institutes and companies.

ii) Greater investment in linking national and international industry to the research and innovation ecosystem through a strategy that includes joint collaborative projects that promote trust and long-term relationships between the different sectors, and respond to the society's needs and challenges with new products and services.

iii) Greater connection and coordination between national and international institutions to anticipate scenarios coordinating and improving joint responses to global challenges.

c) **Budgetary reinforcement.** Europe has all the potential to lead global research and innovation and to be a model for economic and social development. Portugal has the critical mass and the necessary infrastructure to be a major player in this transformation.

i) The Horizon Europe budget must be strengthened so that Europe can assert itself as a world leader in research and innovation. The ideal investment value threshold to achieve this objective is € 150bn as defined by Pascal Lamy in his economic study<sup>4</sup>. Portugal and its European Member State partners must support the investment for a strong research and innovation panorama, either through the multiannual financial framework and through the Economic and Social Recovery Plan (Next Generation EU).

ii) The European budget should synergize - not replace - nationally based investment in research and innovation. European cooperation enables faster scientific discoveries and the creation of value chains that can help all Member States to respond to the challenges of the future. However, the investment of each of its member states remains crucial to the potential for Europe's research and innovation to be fully achieved. Portugal must be visionary, and by having strengthened its investment in research and innovation during the crisis, it should thus increase, its competitiveness and employment in the short and long term. Thus, Portugal must have a concrete plan to reach its goal for investment in research and innovation of 3% of the gross domestic product (GDP) in 2030<sup>5</sup>. The bet on science and innovation, and on the human resources and institutions that belong to them, must go beyond the plan of intentions and irregular priority. We do believe it must be based on a well-defined and long-term strategy, evident to all and beyond the political cycles.

We believe this is a decisive time. A time of fast changes that challenge intelligence and the quick adaptation of the society and the general *status quo*. A world in transition that needs concrete actions, courage and knowledge. The course of history will depend on a bet on research and innovation, by visionary leaders in Portugal and Europe.

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<sup>4</sup> [https://ec.europa.eu/research/evaluations/pdf/speech\\_pascal-lamy\\_03072017.pdf](https://ec.europa.eu/research/evaluations/pdf/speech_pascal-lamy_03072017.pdf)

<sup>5</sup> [https://www.europarl.europa.eu/RegData/etudes/BRIE/2018/630284/EPRS\\_BRI\(2018\)630284\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2018/630284/EPRS_BRI(2018)630284_EN.pdf) e <https://expresso.pt/politica/2019-09-11-Antonio-Costa-promete-investimento-de-2-do-PIB-na-cultura-e-de-3-na-ciencia-ate-2030>

People that sign:

**Scientists:**

Adelino Vicente Mendonça Canário, UAlg

Ana Paula Duarte, UBI

António Coutinho, IGC/FC

António Jacinto, NOVA/MedSchool

Arlindo Oliveira, ULisboa/IST

Carlos Salema, ULisboa/IST/AcademiadasCiências

Cláudia Cavadas, UCoimbra

Cláudio Soares, NOVA/ITQB

Cláudio Sunkel, UP/I3S

Elvira Fortunato, NOVA/FCT

Hélder Maiato, UP/I3S

Helena Freitas, UCoimbra

Helena Nazaré, UA

Henrique Leitão, ULisboa/FCUL

Henrique Veiga Fernandes, FC

Isabel Narra Figueiredo, UCoimbra

Isabel Gordo, IGC

Isabel Horta Correia, UCP

Isabel Palmeirim, UAlg

Joana G Sá, ULisboa/IST

João Falcão e Cunha, UP/FEUP

João Ramalho-Santos, UCoimbra

João Rocha, UA

José Manuel Mendonça, UP/INESCTEC

Karin Wall, ULisboa/ICS

Luís O. Silva, ULisboa/IST

M. Carmo-Fonseca, ULisboa/iMM

Madalena Alves, UMinho

Manuela Ivone Cunha, UMinho

Mara Guadalupe Freire Martins, UA

Margarida D Amaral, ULISBOA/FCUL  
Maria Manuel Dias Mota, ULisboa/iMM  
Mariana Pinho, NOVA/ITQB  
Marina Costa Lobo, ULisboa/ICS  
Marques dos Santos, UP/INESCTEC  
Miguel Poiares Maduro, IUE/UCP  
Mónica Bettencourt Dias, IGC  
Nuno Ferrand, UP/CBIO  
Nuno Sousa, UMinho  
Octávio Mateus, NOVA/FCT  
Orfeu Bertolami, UP/FC  
Paula Alves, iBET, NOVA/ITQB  
Paulo Ferreira, INL/IST  
Pedro Magalhães, ULisboa/ICS  
Raquel Seruca, UP/I3S  
Rogério Colaço, ULisboa/IST  
Sebastião Feyo de Azevedo, UPT  
Sobrinho Simões, UP/I3S  
Susana Peralta, NOVA/SBE  
Sandra Maximiniano, UL/ISEG

**Entrepreneurs:**

Ana Maria Caetano, Caetano Coatings  
Ana Teresa Freitas, HeartGenetics  
António Bica, Medinfar  
António Camara, Ydreams  
António Lobo Xavier, MLGTS  
António Murta, Pathena  
António Rios de Amorim, Corticeira Amorim  
Armando Pinho, Arsopi  
Artur Santos Silva, Fundação La Caixa  
Carlos Gomes da Silva, GALP

Carlos Moreira da Silva, Teak Capital  
Carmo Neves, Tecnimede  
Cláudia Azevedo, Sonae  
Eduardo Piedade, Sonae IM  
Fernando Guedes, Sogrape  
Fernando Oliveira, Sonae Sierra  
Frederico Magalhães, Sisqual  
Germano de Sousa, CML Germano de Sousa  
Guy Villax, Hovione  
Isabel Furtado, TMG/COTEC  
Isabel Rocha, SilicoLife (CSO)  
Isabel Vaz, Luz Saúde  
João Bento, CTT  
João Carreira, Critical Software  
João Castello Branco, Navigator  
João de Mello, Bondalti  
João Miranda, Frulact  
Jorge de Mello, Sovena  
José Luís Simões, Luís Simões  
José Manuel Fernandes , Frezite  
José Ramos, Grupo Salvador Caetano  
José Roquete, Herdade do Esporão  
Luís Moutinho, Sonae MC  
Luís Portela, Bial  
Luís Reis, Sonae S&F  
Manuel Violas, Solverde  
Miguel Almeida, NOS  
Miguel Gil Mata, Sonae Capital  
Miguel Mota Freitas, Worten  
Nuno Macedo Silva, RAR  
Paula Videira, Cellmabs  
Paulo Azevedo, EFANOR

Paulo Pereira da Silva, Renova

Paulo Rosado, Outsystems

Pedro Pacheco, Berd

Pedro Soares dos Santos, Jerónimo Martins

Pedro Teixeira Duarte, Teixeira Duarte

Peter Villax, Hovione Capital

Rui Correia, Sonae

Salvador de Mello, CUF

Sandra Santos, BA Glass

Vasco de Mello, José de Mello Saúde