

PORTUGAL

The evolution of the Portuguese scientific & technological (S&T) system is characterized by a significant growth on the human resources allocated to research. The number of researchers in Portugal has reached in 2010 about 8,2 per thousand workforce (i.e., about 46.000 full time equivalent researchers, with nearly 1/4 in the business sector. It is thus nowadays above the OECD average.

The number of doctorates graduates has increased over 40% in the last 5 years, more than duplicate in the last decade, with more than 1400 new PhDs graduated in 2010. The percentage of international students pursuing a PhD in Portugal has also increased considerably in the last ten years. In 2010-2011, foreign PhD students in Portuguese universities represented 15% of the total PhD students enrolled at Portuguese universities.

Portugal's gross domestic expenditure in R&D (GERD) exceeded 2748 million Euros in 2010, i.e. 1,59% of GDP, compared to 0,78% in 2005, and only 0,4% in the late 80's. The increase in public investment in R&D in recent years is matched by a steep rise in companies' investment in R&D, which represented 0,72% of GDP in 2010, while 0,3% in 2005 and less than 0,20% until some ten years ago. In fact, the number of enterprises in all business sectors that are active in R&D reached 1909 in 2009, an increase from approximately 970 in 2005. Business expenditure on R&D (BERD) has almost tripled since 2005 (at current prices), to 1.249 million Euros in 2010.

Research in Portugal is conducted by various actors such as Associate Laboratories which are research institutions of international recognised merit; Research Units, most of them associated to public universities; and State Laboratories. There are also various Foundations providing financial and strategic support to innovative projects and scholarships in the field of science and technology. By 2010, the network of scientific institutions included 510 research centres and 25 Associate Laboratories with an overall level of institutional funding about 85 million Euros in 2010.

The Portuguese Government, through the Portuguese Science and Technology Foundation initiated as a innovative program of strategic international partnerships in science, technology and higher education by bringing together several Portuguese and leading American universities, including the Massachusetts Institute of Technology (MIT), Carnegie Mellon University, Harvard Medical School and the University of Texas at Austin. These partnerships facilitated the creation of broad and effective thematic networks aimed at advancing science, technology and higher education in Portugal to internationally competitive levels. Current programs include frontier-advancing research in: regenerative medicine, making use of stem cells and tissue engineering; information technologies, exploiting new concepts for smart grids, next generation networks, and interactive digital media; and sustainable energy and transportation systems, including forms of electric mobility. The advance training programmes with the leading American Universities are open to applications to Portuguese and foreign nationals. For further information:

www.mitportugal.org

www.cmuportugal.org

www.utaustinportugal.org

www.hmsportugal.org

The Portuguese Government also signed a cooperation agreement with the Fraunhofer Gesellschaft for the establishment in Portugal of the first Fraunhofer Institute in Europe outside Germany through the **Fraunhofer Portugal Research Association**. This is an ambitious project focusing on emerging information and communication technologies, such as "Ambient Assisted Living", to be complemented by the establishment of R&D consortia and co-operative projects

involving several Portuguese institutions and Fraunhofer institutes in Germany. For further information on the Fraunhofer Portugal Research Association: www.fraunhofer.pt

Portugal is also a member of international organizations that operate large research infrastructures, namely the European Laboratory for Particle Physics (CERN), the European Space Agency, the European Southern Observatory, the European Molecular Biology Laboratory, the European Synchrotron Radiation Facility and the Joint European Torus, among others.

Created by an international treaty between Portugal and Spain in 2006, the **International Iberian Nanotechnology Laboratory (INL)** is based in Braga (Northern Portugal). INL is the first research laboratory set up under international law in the Iberian Peninsula and it is the first such institution worldwide explicitly focused in nanotechnology. INL will be open to the membership of other countries of Europe and other regions of the world. It is expected to achieve a reputation as an international institution of excellence in application areas of food and water quality, environmental monitoring and nanomedicine, conceived for about 200 researchers from all over the world, a total of 400 people, and an annual investment and operational budget of around 30 million Euros that is being funded equally by both countries. For further information on the INL: <http://www.inl.int/>

The Champalimaud Centre for the Unknown, based in Lisbon, focus on biomedical science and seeks to extent research in the fields of oncology and neuroscience, as well as to advance the field of ophthalmology. Through a detailed programme of research and clinical support, this centre strives to make significant scientific progress, particularly in the fields of cancer research and neuroscience. For further information on the Champalimaud Centre for the Unknown: www.fchampalimaud.org

SUMMARY REVIEW OF SCIENCE & RESEARCH COOPERATION WITH INDIA

In 1998 Portugal and India signed an Agreement on Scientific and Technological Cooperation. In that occasion it was also signed a Memorandum on Ocean Technology. Since the entry into force of these two instruments of cooperation there has been a regular exchange of Portuguese and Indian researchers.

Under the EU 7th Framework-Programme for Research & Technological Development (FP7 2007-2013), Portugal and India cooperated in 19 projects. In these, Portugal had 23 participants and India 24. Cooperation between the two countries has taken place in almost all thematic priorities of FP7 but the main area of cooperation between India and Portugal is Health Sciences.

Finally, within the framework of the FCT annual Call for Funding for Research and Development Projects in all Scientific Domains FCT funded 8 projects since 2001 to 2010, which included Indian partner Institutions in the areas of history, chemistry and biological sciences.

OPPORTUNITIES FOR SCIENCE & RESEARCH COOPERATION PORTUGAL-INDIA

In 2010 a new Cooperation Programme was signed within the framework of the Agreement on Scientific and Technological Cooperation and it foresees the continuation of the mobility of researchers between the two countries.

FCT also finances through public calls a variety of fellowships and grants which are open to foreign researchers. For further information: <http://alfa.fct.mctes.pt/apoios/bolsas/index.phtml.en>

WHERE CAN I FIND MORE INFORMATION?

For Research positions & fellowships in Portugal as well as provision of advice and support on mobility to the country, please visit the EURAXESS Portugal portal at <http://www.euraxess.pt/index.phtml.en>

Institutional websites:

Ministry of Education and Science	www.portugal.gov.pt
Portuguese Foundation for Science and Technology	www.fct.pt
DGEEC– Directorate General for Education and Science Statistics	www.gpeari.mctes.pt
Directorate General on Higher Education	www.dges.mctes.pt
Innovation Agency	www.adi.pt
Council of Associate Laboratories	www.labs-associados.org
Council of the Rectors of Portuguese Universities	www.crup.pt
Coordinating Council for Polytechnic Institutions	www.ccisp.pt
NARIC - National Academic Recognition Information Centres	www.naricportugal.pt/NARIC
Instituto Camões	www.instituto-camoes.pt
Instituto Gulbenkian da Ciência	www.igc.gulbenkian.pt