

Quarterly
Newsletter
Issue 2
2018

The information contained in this publication is intended for personal use only. It should not be taken in any way to reflect the views of the European Commission nor of the Delegation of the European Union to the USA or the Delegation of the European Union to Canada.

Please email northamerica@euraxess.net with any comments, contributions you would like to make, if you think any other colleagues would be interested in receiving this document, or if you wish to unsubscribe.

Editors: Viktoria BODNAROVA and Dr. Dimah MAHMOUD, EURAXESS North America Team

EURAXESS NORTH AMERICA

Contents

1	EURAXESS Country in Focus: PORTUGAL.....	2
	Portuguese research landscape.....	2
	Facts & Figures.....	2
	Bilateral and International cooperation.....	3
	Portugal as a destination	3
2	EU Prize for Women Innovators 2018	4
3	Expanding Opportunities to Retain Young Talent in Canada: Promoting Career Development and Independence for Early- Career Researchers.....	5
4	HOT TOPIC: Austrian EU Presidency in RTI	9
5	In case you missed it....	10
	5.1 Event Outlook	10



1 EURAXESS Country in Focus: PORTUGAL

Centuries of history and culture, and a prime location and Mediterranean lifestyle, make Portugal the right place to learn and do science. Speaking the language of the future, Portugal is a hub for creativity and innovation, a gateway to the world. It is a unique place to live and share good memories.

Portuguese research landscape

With one of the oldest universities in Europe, the University of Coimbra, founded in 1290, Portugal has a long tradition in education and research. The country has also made significant progress in the last 25 years in enhancing its national research and innovation system, by extending its reach to a larger share of the population, by broadening its scope to all areas of knowledge, by fostering strong links with society, in particular with economic actors, and by always striving for excellent research as defined by international standards. In fact, the Portuguese research and innovation system is structurally internationalised, in part because of the relatively small size of the country and the need to share expertise with a broader community, but also because of the strong policy vision that we can only push the boundaries of modern science and technology in collaborative efforts, that have to go above and beyond national borders.

The main funding agency in Portugal is the [Foundation for Science and Technology](#) (FCT), responsible for the implementation of the public policies that arise from the Ministry for Science, Technology and Higher Education. In 2016, the Government published its “Compromise with Knowledge and Science: the compromise with the future”, a strategic document that defined the policy ambitions up to 2020. Among them was the goal of reinforcing the scientific institutions, to expand and dignify the scientific careers, to continue the stimulus for internationalisation, and to develop, with the involvement of the scientific community, a set of [research and innovation agendas](#) in different thematic areas that should guide national policies up to 2030.

Facts & Figures

Portugal has 132 Higher Education Institutions [spread throughout the country](#), supporting a community of almost 360 000 students, 12% of which are foreigners. In fact, the number of foreign students in Portugal increased by 95% in the last 7 years, a clear sign of the attractiveness of the country.

The national research and innovation system includes [307 research centres](#) dedicated to all areas of knowledge, originating around 2000 doctorates completed each year, a 74% growth between 2000 and 2010. The strong and long-lasting support to S&T policies led to a 35-fold increase in scientific production in the last 25 years – actually, Portugal had the second highest average annual growth rate of publications between 2001 and 2014 within the EU.

The country also had a 45-fold increase in registered patents between 2001 and 2014. An innovation-friendly environment led to an annual rate of 31 000 new start-ups created every year, and almost 310 000 created between 2007 and 2015. This reflects a changing economic environment in the country, also reflected in the 130% increase of the technology-based firms between 2007 and 2010. To continue fostering this dynamic, the Government has recently launched

EURAXESS – Researchers in Motion is an initiative of the European Research Area (ERA) that addresses barriers to the mobility of researchers and seeks to enhance their career development.

This pan-European effort is currently supported by over 40 countries, of which we will profile one in each of our quarterly EURAXESS North America newsletters. In the June 2018 edition, we zoom in on PORTUGAL.

Author: EURAXESS Portugal, Fundação para a Ciência e a Tecnologia.

READ OUR EURAXESS countries in FOCUS:

Focuses on other EU countries are available [here](#).



the [Collaborative Laboratories \(Colabs\)](#), a new model of association between academia and the industry, where the main goal is to create skilled and scientific jobs in Portugal, both directly and indirectly, by implementing research and innovation agendas geared at creating economic and social value.

Bilateral and International cooperation

Portugal has a number of active, bilateral agreements in Science and Technology, most under the responsibility of [FCT](#). These bilateral agreements normally support researcher mobility and, in some cases, collaborative projects. The historical and linguistic connection with Brazil has led to a strong bilateral cooperation, with frequent calls for researcher mobility ([CAPES](#) and [FAPESP](#)), and a dedicated legal regime to welcome Brazilian scientists and students in Portugal.

International cooperation is a fundamental characteristic of the Portuguese Research and Innovation landscape. Portugal has a tradition on bilateral agreement with several countries such as **Argentina** ([Cooperation Programme in S&T between Argentina and Portugal](#)), **China** ([Sino-Portuguese Programme for Cooperation in S&T](#)), **India** ([Indo-Portuguese Programme for Cooperation in S&T](#)), and the **USA** ([Fulbright Program](#)), among others.

Along with the bilateral agreements, the country is an active member of several international organisations, such as ESA, which is a part of the national [Space Programme](#), EMBO, EMBL or CERN. Portugal is also a very active participant in the [COST programme](#), as well as in [CYTED](#), the Ibero-american programme for science and technology for development.

Taking advantage of its historical connection to the ocean, of the privileged geographical location, and of the expertise that has been built during the last decades, Portugal has recently promoted the creation of the [Atlantic International Research Centre \(AIR Centre\)](#), an intergovernmental initiative to foster collaborative research activities on climate, land, space and oceans. The AIR centre already has the involvement of Portugal, Brazil, Spain, Angola, Cape Verde, Nigeria, Uruguay and São Tomé and Príncipe, with the United Kingdom and South Africa participating as Observers.

Marie Skłodowska-Curie Actions in Portuguese institutions

Experienced researchers willing to move to Portugal can apply to an Individual Fellowship (IF) of the [Marie Skłodowska-Curie Actions](#) (MSCA), irrespective of their country of origin.

Portugal is in the list of widening countries, and therefore, from 2018 to 2020, proposals above the quality threshold of 70% but not retained for funding through the MSCA IF call with a host institution in Portugal will be automatically reassigned to the Widening Fellowships call (unless the applicants explicitly opted-out).

Portugal as a destination

Besides its excellent universities and research centres, there are a number of reasons to justify the attractiveness of Portugal as a [study and research destination](#). Not only the sun, the food and the friendliness of the people, but also the reasonable [cost of living](#) and of [accommodation](#), the comprehensive [health system](#), or knowing that the country has been among the top 5 countries in the [Global Peace Index](#) for a number of years now. In fact, there are at least [10 reasons](#) to choose Portugal as a study and research destination. Find a [job](#) or a [hosting institution](#) and experience this beautiful country.

About the Widening Fellowships

The results from the first years of MSCA in Horizon 2020 revealed the existence of a mobility gap across Europe and discrepancies between European countries in their ability to attract funding. To specifically address this gap in participation the new Widening Fellowships call will provide an additional opportunity to researchers of any nationality to acquire and transfer new knowledge and to work on research and innovation in Widening countries, including Portugal.





"The four winners are truly inspiring women who developed ideas that succeeded in the market and at the same time improved the lives of people. I am happy that our prize recognised their outstanding achievement. But it also has another aim – to inspire future generations of women innovators. Women's participation and contribution to research and innovation is fundamental for Europe's growth."

[Carlos Moedas](#),

Commissioner for Research,
Science and Innovation

2 EU Prize for Women Innovators 2018

1st Prize (€100,000): Ms Gabriella Colucci (ITALY)



The founder and CEO of ArterraBioscience, a research-based biotech company, focused on the discovery and production of active compounds for industrial applications, in particular cosmetics and agriculture.

ArterraBioscience has developed 35 active ingredients for skin care applications, has filed 14 patents and has published 23 papers in peer-reviewed international scientific journals and specialist magazines.

[Winner video](#)

2nd Prize (€50,000): Ms Alicia Asín Pérez (SPAIN)



The co-founder and CEO of Libelium a Spanish company in the hardware solutions market for the Internet of Things. Libelium's intelligent sensor technology allows users to monitor any object or environment - a "thing" and to send this information in real time wirelessly to the internet.

[Winner video](#)

3rd Prize (€30,000): Ms Walburga Fröhlich (AUSTRIA)



Founder and CEO of [atempo](#), a social business company. Today, atempo has grown to a social franchise network with more than 80 partners in Germany, Switzerland and Austria.

It has invented services and products, which allow people with learning disabilities to enter the workforce as paid employees. The vision of this company is to change society's view of disabled people as needy fosterlings and to empower our society to manage diversity properly.

[Winner video](#)

Rising Innovator (€20,000): Ms Karen Dolva (NORWAY)



Co-Founder of [No Isolation](#), a company founded in October 2015 with the single purpose of creating tailored communications devices for groups that are socially isolated.

[Winner video](#)

[More information](#)



Cornelya F. C. Klütsch, PhD
Postdoctoral Researcher and Course
Instructor
Department of Biology, Trent
University, Canada
<http://cornelyaklutsch.weebly.com/>



Catarina C. Ferreira, PhD
Guest Scientist
UFZ - Helmholtz-Centre for
Environmental Research, Germany &
Department of Biology, Trent
University, Canada
<http://www.catarinaferreira.com/>
<http://contrasstprojecteu.com/>

3 Expanding Opportunities to Retain Young Talent in Canada: Promoting Career Development and Independence for Early-Career Researchers

By: Cornelya F. C. Klütsch and Catarina C. Ferreira

The Canadian scientific community is delighted that the federal government has fully committed to evidence-based decision-making with a historical investment in infrastructure, capacity building, and research budgets ^a. However, it will be crucial to allocate this investment strategically to align it with a long-term vision to retain trailblazing knowledge and expertise and to transfer it efficiently into channels that maximize the impact of Canadian science (such as market applications or evidence-based policymaking). Foundational pieces of this machinery are early-career researchers, who paradoxically are facing an increasingly precarious career outlook.

Early-career researchers (here, used interchangeably with postdoctoral researchers or postdocs) are consensually defined as people professionally conducting research after the completion of their doctoral studies, before they land permanent positions in academia or elsewhere. Specific conditions for postdoctoral researchers vary depending on specifics of the cultural and lab settings and may encompass additional training, teaching, managing and advising/supervising/mentoring functions, aside from developing research with various degrees of supervision from senior advisors. Despite their high skill level, many postdoctoral researchers are not considered employees by their host institutions. Instead, they are often viewed as a combination of researcher-trainee and individuals as “professors in training”, although they hold highly specialized skills and expertise that allow them to make invaluable contributions to research and society at large. For this reason, this segment of the scientific community is widely considered to be the workhorse driving academic research and innovation, and an asset to academic, industry, and public service sectors.

Importantly, this stage was classically seen as an interim, temporary career development step towards scientific independence, and more permanent positions (for example, tenure-track in academia) within a fairly linear career pathway. Things have changed, though. While it is typically advised that this stage does not exceed ~5 years, an over-supply of PhD graduates in many fields (see ^b), has officially turned this postgraduate phase into the *de facto* next career step after the PhD that often well surpasses the 5-year mark. For example, 15.5% of early-career researchers in Canada expect to be a postdoc for five or more years while 33% of respondents have already done 4+ years of postdoctoral research (private communication, Canadian Association of Postdoctoral Scholars). Moreover, a shift has been witnessed in the age distribution of postdocs from 2009 to 2016, where 31% of current postdocs are 35+ years old ^b.



These numbers may be reflective of the “postdoc pile-up” phenomenon where individuals now routinely complete multiple positions before finding permanent employment, in a cycle that can last for over 10 years ^c. The opportunities available for early-career researchers to launch their careers are therefore dim, and nowadays only ~3.5% will actually advance to permanent academic research staff positions in Europe compared to 15–20% in the US and Canada ^{c,d}. This creates a career limbo for early-career researchers that typically ends either voluntarily (e.g., by switching career paths) or when opportunities cease.

Funding structures at the root of the problem

In Canada, the primary source of funding for about one-third of postdocs is their advisor’s research grant while CIHR/NSERC/SSHRC fellowships are the second most commonly reported sources of funding ^b. Interestingly, the mean gross annual pay of an early-career researcher in Canada is ~ 47,798 Canadian dollars (CAD; ^b). This is considerably lower than the average annual starting salary of CAD 60,979 for employees holding a master’s degree ^d, and reveals a fundamental mismatch between societal expectations towards these highly skilled professionals and the systems in place to reward them. In addition, in our own field of conservation science, only a handful of postdoctoral fellowships are available in Canada (e.g., Banting, Mitacs, NSERC, and Liber Ero). Some of these, like the NSERC Postdoctoral Fellowship, have rather rigid eligibility criteria that decrease accessibility for the majority of postdoctoral researchers. For example:

1. They allow a one-time application within two years of obtaining the PhD (exceptions include maternity leave), meaning that potentially highly talented researchers that did not make the cut the first time around, will be eliminated from the candidate pool forever;

2. They are only accessible to Canadian citizens and permanent residence holders which puts international scholars at a significant disadvantage and lowers their chances of establishing a scientific career in Canada

To make matters worse, most fellowships have a maximum duration of two years. Although we speculate that the intention might be to decrease the average time spent on this postdoctoral stage, in our own experience, this time frame stands in stark contrast to the increasing work load associated with high-in-demand large computational data analysis and the increasing requirements for more senior positions. These types of larger scale projects call for a different skill set that includes leadership, project management, and independent thinking which often requires multiple years, and hence, multiple postdoctoral positions to acquire. Under these circumstances, researchers, particularly non-Canadians, will be more likely to apply to advertised postdoctoral positions and be employed by a senior researcher, which implies that they will conduct mainly non-independent research for the principal investigator’s research group. Considering one key characteristic of the early-career research position should be promoting individual independence, we strongly question that 2-year postdoctoral appointments, that are, at least partially, dependent on senior researchers, allow for these developments to occur.



So, what to do?

In order to support early-career researchers achieve better research outcomes, through independent research programs that meet societal needs and drive innovation, while advancing their financial status and improving their long-term career prospects, we propose the following changes to the current Canadian postdoctoral funding landscape:

- a) **Increase duration of postdoctoral appointments and turn them into appropriate work contracts:** A number of European countries, like the UK, Germany and Portugal, have introduced junior leadership research programs to stimulate scientific employment (e.g. ^{e,f}). These work contracts offer competitive salaries and include social benefits and facilitate the independent establishment of a research group without the reliance on a senior principal investigator. These programs usually run for ~5 years and may or may not succeed an initial postdoctoral fellow phase of several years. The longer lifespan of these funding schemes allows for large-scale international collaborative projects to be developed and therefore, present career development opportunities that foster self-determining research experiences.
- b) **Open up access to alternative funding sources:** Similarly, programs like the NSERC Discovery grant program should not only be accessible to senior faculty researchers but be opened up to postdoctoral researchers as principal investigators to support long-term independent research fairly early on. This could be combined with the introduction of tiers based on years of experience so that competition is more equally distributed. For example, two experience levels (i.e., junior: <5 years and consolidation: > 5 years of postdoctoral experience) would allow increased equity in the application process and diminish the competition of very early-career researchers with more senior, established colleagues. This would support the retention of young talent in the pool and present alternative means to guide postdoctoral researchers into independent research settings by letting them develop additional separate research projects.
- c) **Support opportunities to develop funding acquisition skills:** One skill that postdoctoral researchers need to master to succeed in any field of research is grant writing. Mandatory feedback of funding agencies to applicants outlining strengths and weaknesses of grant proposals would not only increase motivation to re-apply, but also improve grant writing skills, ultimately increasing fundraising success. In any case, limits to the number of application submissions should be avoided to ensure that good proposals have another chance in the next funding cycle to retain talent in the system.
- d) **Remove artificial time restrictions for fellowships:** Recently, the UK's Wellcome Trust removed time constraints based on the number of years since a researcher was awarded their PhD from their fellowship schemes g. The goal is to put the emphasis on achievements providing flexibility for researchers by including in the pool those who might have not followed linear career paths. Similarly, the EU's prestigious Marie Skłodowska-Curie actions selects for candidates based on outstanding professional trajectories and accomplishments (and not age or length of time since PhD) which might include some with incursions in sectors other than the academic. Increasing accessibility to people who, for different reasons, might have left academia for a while to work in business, industry, consultancy, policy, publishing and more will increase diversity and equality in academia h, while retaining the much needed eclectic expertise to address interdisciplinary research questions h.
- e) **Earmark unfunded proposals with a Seal of Excellence:** The European Union has introduced a seal of excellence for projects submitted to H2020 that have not managed to receive funding due to budget constraints but that have been earmarked as excellent and of high scientific value (<https://ec.europa.eu/research/soe/index.cfm>). The idea is that it will support the search for alternative funding from other sources (e.g., industry). This initiative could be introduced to postdoctoral funding as well to ensure that early career researchers have incentives for applying repeatedly and to alternative funding.
- f) **Consolidate and promote mentoring schemes across Canada:** A successful career in science is not just about talent, sometimes chance plays a part i, as does talking to the right people. Mentoring is pivotal to increase chance in our careers, as it provides collegiate support, valuable advice, and networking



opportunities beyond the academic setting that could be instrumental to place early-career researchers in the right place at the right time. Fullbright Canada, Apra Canada, and the Trudeau Foundation, to name a few, all offer mentoring programs that link researchers, fundraisers and others in different fields of research. However, to the best of our knowledge, not all fields enjoy structured mentoring opportunities (e.g., conservation science), and not all of these nurture connections to industry, NGOs or government. Therefore, a way forward could be to consolidate existing and develop further mentoring schemes in fields that lack them to ensure that early-career researchers have access to multiple and diverse opportunities for career development.

Although we consider that these recommendations would improve the status of early-career researchers in the short-term, we also acknowledge that these will not solve the long-term structural problem of a low number of permanent positions across all sectors. As the Minister of Science and Minister of Sport and Persons with Disabilities, Kirsty Duncan has put it, to go “big, so that researchers can go even bigger”^j requires additional steps to ensure that postdoctoral researchers are not stuck at these intermediate levels, and trapped in a loop of multiple postdoctoral positions or contract teaching appointments^c. To that end, Budget 2018’s provision of \$210 million over five years for the Canada Research Chairs Program is a promising initiative in providing longer-term career prospects for early-career researchers. However, only with sustained and strategic long-term funding will it be possible to retain and foster the large talent pool Canada needs to meet future societal challenges.

References

- ^a Owens B (2018). Canadian science wins billions in new budget. Nature 555: 153
<https://www.nature.com/articles/d41586-018-02529-6>
- ^b Jadavji NM, Adi MN, Corkery TC, Inoue J, Van Benthem K (2016). The 2016 Canadian National Postdoctoral Survey Report. 111 Pp.
- ^c Powell K (2015) The future of the postdoc. Nature, <https://www.nature.com/news/the-future-of-the-postdoc-1.17253>
- ^d Robinson J (2017) Now even a bachelor’s degree isn’t enough for some entry-level jobs. Canadian Business. <http://www.canadianbusiness.com/lists-and-rankings/best-jobs-now-even-a-bachelors-degree-isnt-enough-for-some-entry-level-jobs/>
- ^e <https://www.research-in-germany.org/en/jobs-and-careers/info-for-postdocs-and-junior-researchers/career-paths/junior-research-group-leader.html>
- ^f https://www.fct.pt/apoios/contratacaodoutorados/emprego_cientifico/ci_dez2017.phtml.en
- ^g <https://wellcome.ac.uk/news/weve-removed-post-phd-time-restrictions-our-fellowships>
- ^h Iossa G (2018). Let’s talk career paths. Rapid Ecology, <https://rapidecology.com/2018/03/28/lets-talk-career-paths/>
- ⁱ Pluchino A, Biondo AE, Rapisarda A (2018) Talent vs Luck: the role of randomness in success and failure. <https://arxiv.org/abs/1802.07068>
- ^j <http://sciencepolicy.ca/news/interview-minister-science-hon-kirsty-duncan-federal-budget-2018-0>



e 2 0
u 1 8
- a t

4 HOT TOPIC: Austrian EU Presidency in RTI

During the second half of 2018, Austria will hold the Presidency of the Council of the European Union for the 3rd time since becoming a member of the EU.

This third Austrian presidency, from July 2018 to December 2018, is a special point in time because Europe is facing a number of parallel **challenges** that will frame the Austrian Presidency:

- The proposal for the Multiannual Financial Framework 2021-2027 was published on 2 May 2018.
- The "Horizon Europe" package proposal is expected to be adopted by the Commission on 7 June 2018.
- The second half of 2018 marks the final phase of the Brexit negotiations.
- The European Parliament's legislative term ends in March 2019, with the EP elections following in May 2019, and with a new Commission to be in place by November 2019.
- Negotiations on Horizon Europe, the 9th EU Framework Programme for Research and Innovation
- Council Conclusions on ERA, building on the ERAC Review of the ERA Advisory Structure
- Support for Sectoral Policies (e.g.: Defence Research, Joint Undertaking High Performance Computing, European Open Science Cloud, European University Networks Initiative etc.).

The Austrian **presidency priorities** in the field of research, technology and innovation (RTI) are:

Dates for meetings at ministerial level:

10 July 2018

Hearing of Minister Faßmann in EP's ITRE Committee

16/17 July 2018 Informal meeting of Research Ministers in Vienna

First exchange of views on FP9 proposal at political level

27/28 September 2018 COMPET Council (Research) in Brussels

Negotiations on FP9 proposal

30 November 2018: COMPET Council (Research) in Brussels

Negotiations on FP9 proposal – depending on progress: Partial General Approach or progress report(s)

ERA Council Conclusions

Austria's **first presidency objective** are the negotiations on [Horizon Europe](#). The Austrian Presidency will launch the negotiations in Council and is planning to progress as far as possible.

Austria's **second presidency objective** deals with the [European Research Area](#). The Council Conclusions on ERA that the Austrian Presidency will propose after the ERAC Plenary in September 2018 in Salzburg will address a number of issues, such as the outcome of the current ERA advisory structure review, strategic intelligence produced by the Commission, as well as other thematic elements, all paving the way for the future of ERA under FP9.

Due to the fact that research and innovation are playing an ever more important role in many other policy areas, the **third objective** of the Austrian Presidency will be to support these [sectoral policies](#). The Austrian Presidency team in the field of research believes that the challenges of our time need modern governance, that is, more cooperation between all policy areas. This does not mean that Austria will negotiate all these items, but the Austrian Presidency intends to take an integral view and support ongoing negotiations in other Council formations in Brussels, as well as through [Presidency events](#) in Austria.

[More information](#)



5 In case you missed it....

5.1 Event Outlook

Event	When	Where	Organized by	Link
EuroScience Open Forum 2018 (ESOF 2018)	9-14 July 2018	Toulouse, France	ESOF	Link
NCURA 2018 Annual Meeting	5-8 August 2018	Washington, DC, USA	NCURA (National Council of University Research Administrators)	Link
Science Diplomacy 2018	14 September 2018	Washington, DC, USA	AAAS	Link

About EURAXESS North America

EURAXESS North America is a network of thousands of European and non-European researchers, scientists, and scholars throughout North America (USA and Canada). This multidisciplinary network includes members at all stages of their careers. It allows them to connect with each other and with Europe, ensuring that they are recognized as an important resource for European research, whether they remain in North America or return to Europe.

For further information about EURAXESS North America, please visit:

<http://northamerica.euraxess.org>.

To sign up for membership in our network, please go to our [website](#) and click on *Sign up and become a member for free* button.

Editors: Viktoria BODNAROVA and Dr. Dimah MAHMOUD, EURAXESS North America Team

Copyright© 2018 EURAXESS North America