Senior Officials Working Group on EU-CELAC collaboration on International Early Stage Researchers' Career Development

(sub group of SOM Cross -Cutting Issues Working Group)

Elaborated by CONICYT (Chile) and Ministry of Education and Culture, FinCEAL+, VTT (Finland)

V EU-CELAC Senior Officials Meeting

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1 Objectives of the thematic report of the sub group EU-CELAC collaboration on International Early Stage Researchers' Career, Development

- To support the policy level strategic discussion on Early Stage Researchers' Career Development in
 the framework of EU-CELAC collaboration, taking into account efforts related to the 1st Academic
 Summit EU-CELAC held in Santiago in January 2013, where universities, institutes,
 research centres and academics of the CELAC region and the EU gathered to analyse the
 current status of university cooperation
- To inform about progress of activities of the sub group EU-CELAC collaboration on International Early Stage Researchers' Career Development, of the Cross-Cutting Issues Working Group of the SOM, underlining the strategic contribution to the JIRI Roadmap and the EU-CELAC Common Research Area
- To present concrete proposals to be implemented by the thematic WG in synergy with ongoing related projects and initiatives.
- To forward recommendations for SOM deliberations: i) Ideas to enhance bi-regional
 cooperation on R&I and future sustainability beyond lifetime of ongoing supporting projects and
 initiatives; ii) Reflections towards HORIZON 2020 -focused calls and national initiatives related to
 enhancing researchers capabilities for engaging in international research, as well as the
 instruments rules of participation and, opportunities.
- To define next Activity Plan 2016-2017, including concrete actions and resources to be committed.

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¹ Definition Early Stage Researcher: Less than 4 years of full-time equivalent research experience (counted from the time when the researcher is entitled to embark on a doctoral degree), and without a doctoral degree. Source: EU Commission.

2 Bi-regional Cooperation Activities in the EU-CELAC Collaboration on International Early Stage Researchers' Career Development

2.1 Thematic area background in Latin America, Caribbean and the European Union

The EU-CELAC STI SOM thematic working groups that also include career-specific actions initiated the discussion on forming a working group focusing on researcher training cooperation. This was supported by the suggestion in the EU-CELAC Funding Agencies meeting in November 2012 that the SOM pay attention to doctoral training and researcher career development when considering the Knowledge Triangle of higher education, research and innovation. Research capacity building, e.g. through PhD programmes, researcher mobility and career development and networking activities were considered important for the Joint Initiative for Research and Innovation (JIRI). In the STI SOM meeting held in Brussels in April 2013, Finland suggested coordinating the researcher career development efforts in a specific working group. The following countries agreed to formulate a concept for the working group, to be evaluated in the next SOM in April 2014: Finland (co-leader), Chile (co-leader), Dominican Republic, Malta, France, Argentina and Uruguay. Austria joined the group later.

The theme is also closely linked to ongoing efforts related to the 1st Academic Summit EU-CELAC held in Santiago in January 2013, where universities, institutes, research centers and academics of the CELAC region and the EU gathered to analyse the current status of university cooperation. In the Santiago Statement, the summit expressed their strong will for developing bi-regional cooperation in higher education and proposed to the heads of states, governments and other relevant institutions in both regions to develop the Euro-Latin American space for higher education, science, technology and innovation, promoting and strengthening the integration of Higher Education systems and scientific research and innovation systems. These objectives were further reinforced by the 2nd Academic Summit EU-CELAC held in Brussels in June 2015.

The Brussels Declaration and Proposals to the Heads of State and Government stressed especially the importance of creating the normative and financial conditions for the further development of EU-CELAC academic and STI cooperation, as well as the need to promote the cooperation in the aforementioned areas through interregional programmes and harmonisation of higher education systems. In the development of the bi-regional cooperation activities in the EU-CELAC collaboration on Early Stage researchers' career development it is also necessary to maintain a regular dialogue with the Permanent Academic Forum (PAF) in charge of the preparation of the next Academic Summit, as well as the Permanent Reflection Groups of the PAF. A concrete opportunity of continuing and enhancing this dialogue is the next preparatory meeting for the EU-CELAC Academic Summit that will be held in Stockholm in autumn 2016.

The concepts and the policies of researcher career development in the EU and in CELAC shall be discussed in line with the processes of regional integration of higher education (HE), and particularly researchers' training, in both regions. In the EU, the Bologna process, the Salzburg Principles and the European Framework for Research Careers create a framework in which biregional cooperation can be developed. In the LAC region, the creation of a common space for higher education is supported, for example, by the regional platform created for academic cooperation, ENLACES, and sub-regional plans for higher education integration, such as PIRESC I, II and III in Central America.

The regional HE integration in the LAC region has also been supported through EU-LAC bilateral and bi-regional initiatives, such as the EUROPEAID-funded ALFA I, II and III programmes, as well as the Ibero-American Network for Quality Assurance in Higher Education (RIACES), and the initiatives of the Organization of Ibero-American States for Education, Science and Culture (OEI), such as the Ibero-American Knowledge Space (EIC) and the Center for Higher Education Studies (OEI/CAEU). The bi-regional HE cooperation has been supported earlier by e.g. the ALCUE Common Area of Higher Education initiative. The experiences from these co-initiatives shall be taken into account in the work. The planning of possible new schemes for supporting research training and mobility shall also be built on the developments, results and lessons learned from current or earlier programmes and projects supporting EU-LAC bi-regional and bilateral research cooperation and/or mobility, such as the Alßan scholarship programme and the INCO-Net projects (EULARINET, ALCUE-Net, ENLACE, and EUCARINET), other FP6 and FP7 projects (e.g. ERANET-LAC), as well as the Ibero-American CYTED programme, and other bilateral cooperation programmes.

2.2 The aim of the work

The overall aim of the work is to shape framework conditions in such a way that talents of researchers in both the EU and CELAC can develop and give sustainment to the successful implementation of the JIRI. This could be achieved by promoting research excellence, the creation of an attractive environment for research careers (characterized by interdisciplinarity², intersectoral³ exchange and internationalisation) and promotion of mobility schemes, transferable skills training and quality assurance within bi-regional cooperation. The objectives of the work include better integrating the diverse and scattered funding schemes, promoting and enhancing the cooperation and access to research infrastructures, as well as widening researchers' career and employment opportunities across CELAC-EU. The work will consist of two interrelated themes: International collaboration in research training and intersectoral cooperation.

The restructured work of the cross-cutting issues is mandated by the EU-CELAC STI SOM, to whom it reports its activities. The goal is to give recommendations and propose actions for the STI SOM and its thematic working groups to develop bi-regional research training cooperation and mobility.

² interdisciplinarity = the result of integrating two or more areas of knowledge in the pursuit of a common goal

³ intersectoral = the result of combining two or more sectors such as industry, academia and government

These areas of work are approached especially through the following activities:

- Mapping the different cooperation and mobility schemes for young researchers that already
 exist at national, bilateral, regional and bi-regional level with the aim of clarifying the
 framework of existing support and identifying strategic coordination possibilities and
 complementarities;
- Promoting EU-LAC mobility and exchange of Early Stage Researchers, as well as
 experienced researchers involved in supervision and research training, taking advantage of
 their respective and complementary research infrastructures, teaching capacity, and
 possibilities for field research;
- Creating links between researchers' career development and industry, as well as other relevant employment sectors outside of the academic environment; and

In all of the above mentioned areas of work to establish links, support for, and cooperation with, the thematic STI SOM working groups – which focus on ICT for Societal Challenges, Bioeconomy, Biodiversity and Climate Change, Renewable Energy, and Health – to support them in issues concerning research training and mobility.

A bottom-up approach stemming from the researcher community to the cooperation is encouraged across the areas of work. All the activities should promote brain circulation instead of brain drain. The work conducted in this group also supports the development of research training and research careers in the universities and research institutes. In addition, the work of this group could be beneficial for the preparation of EU-CELAC Academic Summits.Part of the recommendations to the Academic Summit regarding the promotion of the integration of scientific, technologic research and innovation systems include cooperation and information sharing:

... it was emphasized the necessity to shift the paradigm of technology transfer to the paradigm of cooperation with mutual benefits from a material, human and symbolical view. With the objective of reduce asymmetries between both regions, it was proposed the possibility to expand opening of European publications to the Latin-American and Caribbean universities and to progress on the recognition of undergraduate and postgraduate diplomas in all the countries of both regions. To do so, it was suggested as well the possibility to organize a bi-regional agency to accredit undergraduate and postgraduate diplomas. Given the existence of several collaborative processes between institutions from both regions in this aspect, it is recommended to profit them through a capitalization area of these experiences which should be presented in the next Academic Summit. It was also recalled the need to reinforce the dynamic of post-doctorate studies on the bi-regional area so they can articulate even more with cooperation projects in scientific and technologic fields between countries of both regions and, particularly, with different workgroups of the Joint Initiative for Research and Innovation (JIRI).

2.3 Setting the scene: Identifying synergies between EU-CELAC funding schemes on international collaboration in researcher career development

Currently, most CELAC and EU countries are implementing different types of funding schemes oriented towards international research career development. These can be for example doctoral studies abroad, research internships, access to research infrastructure, postdoctoral fellowships.

Even though the schemes are in essence national, the international dimension is of great importance and present in many of the funding opportunities. This is also why the creation of synergies between the funding schemes oriented to researcher career development is an opportunity to further strengthen the schemes and thus providing better conditions for effectively developing an international pool of talented researchers .

Actions in this line of work are:

- Identify existing funding schemes on international researcher career development, such as national, bilateral, regional and bi-regional schemes focusing on postgraduate studies abroad, research internships, cotutelle programmes, access to research infrastructure for training purposes, mobility, postdoctoral fellowships;
- Focus on the limitations and compatibility of these schemes to identify strategic coordination possibilities between the existing schemes, and identify complementarities to the existing schemes;
- Set up working groups on concrete initiatives to explore coordination of existing funding schemes, for instance under the Joint Actions of the ERANet-LAC.

2.4 Concrete actions: International collaboration in research training

Promote joint access to research infrastructure

Doctoral education and excellence in research require access to Research Infrastructures (RI) which not only support research but also renew and redirect science and create attractive environments for knowledge creation and the careers of young talents. EU-CELAC dialogue countries fund, operate and have access to research infrastructures on the national, regional and global levels. The group identifies and discusses the good practices of improving access of the early stage researchers to RIs taking into account the work done by ESFRI, ScienceEurope etc. as well as opportunities by CELAC national research funding agencies and relevant regional initiatives. The group collects existing information on improving access for the use of thematic working groups.

Each local, national, regional and international research infrastructure has an open access policy of its own. In Europe, each ESFRI infrastructure defines the policies themselves, as the European

Research Infrastructure consortiums (ERIC) are required to have these access policies. ERIC enhances European science as such and thus the infrastructures cannot be closed societies. Different access groups are possible, some fees can be charged and differences may occur between scientific disciplines. At this moment there are 12 ERICs, but also research infrastructures which are established by other legal formats (such as CERN, EMBL) and have again different access policies. These different policies and guidelines should be known to the early stage-researchers in both regions.

Promote open science and open access

Open science and research creates new opportunities for participating in scientific research and applying research results, increasing the global contribution and social impact of scientific activities. In wider context, open science and research improves the visibility and impact of science and research in the innovation system and society at large.

In the context of research training the establishment of openness can be furthered by supporting the acquisition of expertise in open science and research through, for example, training, guidelines, best practises and enhancing general information management expertise throughout the research system in EU-CELAC dialogue.

Mobility

International mobility offers Early Stage Researchers opportunities for international experience and networking. It provides an introduction to the international research environment and the chance for making valuable contacts outside of the home institution and country. Internationally mobile scientists tend to publish more in higher-quality journals than their counterparts who stay in the same country throughout their research careers (OECD Science, Technology and Industry Scoreboard 2013). Mobility enables more relevant and state-of-the-art training. For the experienced researchers involved in supervising and research training, mobility also offers possibilities to share their teaching responsibilities with international partners and to develop their teaching capacities. In addition to individual benefits, mobility agreements promote increased contacts and deeper cooperation between the institutions and departments involved. EU-LAC mobility is promoted in the group through e.g. the following activities:

- Promoting programmes e.g. through Horizon 2020: Marie Skłodowska-Curie Innovative Training Networks (ITN) and Marie Skłodowska-Curie Research and Innovation Staff Exchange (RISE), ERANET LAC participant agencies
- Promoting national programmes in Latin America and Caribbean Countries as well in Europe
- Encouraging the mobility of Early Stage Researchers as well as teachers; and
- Promoting the development of a CELAC-EU EURAXESS portal (other countries could be linked to the already existing EURAXESS Links Brazil hub: http://ec.europa.eu/euraxess/index.cfm/links/eurRes/brazil.
- Encouraging EU-CELAC cooperation actions taken in EU-funded initiatives such as European Institutes of Technology and other joint actions

2.5 Concrete Actions: Inter-sectoral cooperation

Much research is done and research skills are also needed outside the academic sector. The development of inter-sectoral cooperation ⁴aims to enhance the employability of the PhD candidate through curriculum development, which supports the development of more relevant skills that match other sectors' needs and are transferable from one sector to other. Through inter-sectorial cooperation, Early Stage Researchers are exposed to working environments other than academic ones and at the same time, employers' awareness of researchers' skills and suitability increases in these other sectors. The objective is to widen the scope of researchers' career placements in working life. The group promotes and supports inter-sectoral cooperation through e.g. the following activities:

- Mapping the possible existing national, bilateral, regional and bi-regional schemes supporting joint inter-sectoral cooperation for early career researchers as well as companies;
- reviewing best practices and providing support for linking scientific research to the industrial sector and other sectors outside the academic sector;
- identifying needs, opportunities and challenges in entrepreneurship coordination of startup schemes, for instance
- Encouraging candidates to spend some research time outside the academic sector.

3 Mapping of Funding and opportunities for Early Stage Researchers

3.1 EC Funding and other opportunities for Early Stage Researchers

3.1.1 Marie Skłodowska-Curie actions (MSCAs)

The MSCA ensure excellent and innovative research training as well as attractive career and knowledge-exchange opportunities through cross-border, cross-sector and cross-discipline mobility of researchers, to better prepare them for current and future societal challenges. They are open to all domains of research and innovation addressed under the Treaty on the Functioning of the European Union, from basic research up to market take-up and innovation services. Research and innovation fields as well as sectors are chosen freely by the applicants in a fully bottom-up manner.

There are MSCA grants for all stages of a researcher's career, from PhD candidates to highly experienced researchers. The MSCA are the main EU programme for doctoral training, financing 25,000 PhDs over the 2014-2020 funding period. MSCA opportunities for researchers are the following:

• Innovative Training Networks (ITN)

Innovative training networks bring together universities, research centres and all other kind of socio-economic actors (including companies) from different countries worldwide to train a new generation of researchers. The funding boosts scientific excellence and business innovation, and enhances researchers' career prospects through developing their skills in entrepreneurship, creativity and innovation. These include: European Training Networks, European Industrial Doctorates and European Joint Doctorates. Open to organisations from outside the EU. Early stage researchers or doctoral candidates can find vacancies on the EURAXESS Portal.

• Individual Fellowships (IF)

These cover European (EF) and Global Fellowships (GF). This action is meant to support the best, most promising individual experienced researchers from anywhere in the world.

Research and Innovation Staff Exchange (RISE)

RISE funds short-term exchanges for staff to develop careers combining scientific excellence with exposure to other countries and sectors. RISE enables more interaction between academia and non-academic organisations within Europe and beyond.

Co-funding of regional, national and international programmes (COFUND) This action is meant for organisations that fund or manage doctoral programmes (DP) or fellowship programmes (FP) for researchers. Each COFUND proposal should have a sole

participant, which could be for example a government ministry, regional authority, funding

agency, university, research organisation, research academy or enterprise. Experienced researchers as well as doctoral candidates can find vacancies of co-funded programmes on the <u>EURAXESS</u> Portal.

3.1.2 European Research Council (ERC) Starting Grants

For researchers of any nationality with 2-7 years of experience since completion of PhD (or equivalent degree) and scientific track record showing great promise.

3.1.3 EURAXESS Researchers in Motion

"EURAXESS – Researchers in Motion" is an initiative of the European Research Area (ERA) strategy that addresses barriers to the mobility of researchers and seeks to enhance scientific collaboration between Europe and the world. The initiative strives to become the global support and career development tool for European and international researchers, not only for their mobility experience inside and outside Europe, but also for their social networking with researchers from all over the world. Designed as a comprehensive tool-set it provides access to a complete range of information and support services

3.1.4 Erasmus+ mobility projects for higher education students and staff

Staff Mobility for Teaching and Training

Erasmus+ offers travel and subsistence support for mobility periods between 2 days and 2 months within Europe, and between 5 days and 2 months between Europe and the rest of the world (including Latin America and the Caribbean). It funds teaching and training activities (e.g. job shadowing, observation periods...); it does not fund research as such and participation in conferences.

Student mobility for studies and traineeships

Erasmus+ offers travel and subsistence support for mobility periods for studies between 3 and 12 months within Europe and between Europe and the rest of the world (including Latin America and the Caribbean). In mobility within Europe, it also supports traineeships between 2 and 12 months.

PhD candidates can participate both in staff mobility and student mobility depending on the status granted by their higher education institutions.

3.1.5 European Institute of Innovation & Technology

Knowledge and Innovation Centers' (KICs)' -innovative programmes are based on partnerships between different universities, companies and research centres that collaborate closely and offer double or joint degrees, international and cross-sectorial mobility experiences, as well as applied innovation and entrepreneurship education. The EIT from 2014 to 2020, through its KICs, is expected to train 10.000 Master's students and 10.000 PhD candidates in new curricula combining excellent scientific and technical content with a strong entrepreneurship component during this

period.

3.1.6 European Young Researcher Award (EYRA)

Granted since 2010 to researchers demonstrating outstanding research performance and leadership. It aims to inspire early stage researchers to incorporate a European dimension and perspective into their research. The Award is granted each year; in odd years, the prize is dedicated to PhD candidates, and in even years to post-doctoral fellows.

3.2 International Funding Opportunities for Early Stage Researchers of the LAC Region

3.2.1 Mexico

The National Council on Science and Technology (CONACYT) is the Federal Executive's advisory body responsible for articulating the federal government's public policies regarding scientific research, technological development and innovation. CONACYT actions aim to increase the national productivity to foster economic growth and to enhance the welfare of society.

As stated in the Special Programme for Science, Technology and Innovation (PECITI) 2014-2018, CONACYT is the main public institution responsible for granting scholarships at the country level. It also coordinates, jointly with the Secretariat for Public Education, the National Programme for Quality Graduate Studies. Both measures are put in place in order to support the objective of training of high-level human capital, as established in the PECITI.

Postdoctoral and Sabbatical Stays Abroad

This program seeks to increase opportunities for young PhD graduates who wish to pursue their training in high-level international institutions working in their field of knowledge. These young investigators are expected to strengthen the work of their research group upon their return to the country.

Postdoctoral stays abroad

This call is open to PhD graduates with Mexican citizenship and residency who apply to the fellowship within five years of having obtained their degree. Applicants must have graduated from a national or international high-quality program recognized by CONACYT (in the case of national programmes) or international rankings of higher education institutions.

The selected host institution must be internationally recognised in the applicant's field of study. The call funds full-time postdoctoral stays and is open to all study subjects.

University of Southern California (USC) – CONACYT 2015 Call for Proposals for Postdoctoral Fellowships

The USC and CONACYT endorse their commitment to the creation of a Joint Postdoctoral Fellowship Programme, with the objective to contribute to the strengthening of scientific capacity, technology and innovation of the United States and Mexico.

This call is open to researchers from Mexico that have obtained the degree of PhD in a period of no more than 4 years prior to the year of publication of this call. Up to 30 postdoctoral fellowships will be awarded for postdoctoral residencies to be completed at the University of Southern California. The award will be granted for one year, with the possibility of renewal for a second year, depending on evaluation and development of the fellow. Due to limited resources, applicants may also solicit funding from other sources.

Applicants must have obtained a PhD in one of the following areas: Biological sciences; Earth Sciences; Chemistry; Engineering; Health Sciences; Gerontology; Physics; Psychology; Sociology; Social Work; Spatial Sciences; History; Pharmacy; Occupational Therapy; Physical Therapy; Public Policy; Craniofacial Molecular Biology; and Neuroscience.

University of Manchester – CONACYT 2015 Call for Proposals for Postdoctoral Fellowships

The University of Manchester (UoM) and CONACYT endorse their commitment to the creation of a Joint Postdoctoral Fellowship Programme, as signed in a Specific Agreement, by joining efforts and resources through this Call for Proposals, in order to contribute to the strengthening of scientific capacity, technology and innovation of the United Kingdom and Mexico.

This call is open to researchers from Mexico that have obtained the degree of PhD in a period of no more than 5 years prior to the year of publication of this Call for Proposals. Up to 6 postdoctoral fellowships will be awarded for postdoctoral fellowships to be completed at the UoM. Postdoctoral fellowships are up to 3 years in the first instance, subject to satisfactory annual evaluation and review.

Postdoctoral fellowships will be held in any scientific area of the University of Manchester; however, priority will be given to the following areas: Graphene; Energy; Bioengineering; Biomechanics; Materials; and Applied Mathematics.

Stanford University – CONACYT 2015 Call for Postdoctoral Fellowships

The Board of Directors of the Leland Stanford Junior University (Stanford) and CONACYT endorse their commitment to the creation of a Joint Postdoctoral Fellowship Programme, as signed in a Specific Agreement in 2014, by joining efforts and resources through this Call with the objective to contribute to the strengthening of scientific capacity, technology and innovation of both countries.

Open to researchers from Mexico that have obtained the degree of PhD in social sciences in a period of no more than 3 years prior to the publication of this call. Up to 2 postdoctoral fellowships will be awarded to work with the Programme on Poverty and Governance of the FSI (Freeman Spogli Institute for International Studies). Funding will be offered to projects related to security and violence in Mexico and educational performance and evaluation.

3.2.2 Chile

In Chile, the National Commission for Scientific and Technological Research (CONICYT) through its different programmes, supports international collaboration at the different stages of the research and innovation chains. CONICYT offers a range of financing opportunities for international collaboration in Chile and invites Chilean and foreign individuals, research groups and institutions to make the best possible use of them.

The <u>Programme for Formation of Advanced Human Capital</u> (Becas Chile) is the main public programme in charge of managing scholarships in the country.

Postdoctoral Opportunities

Becas Chile postdoctoral fellowship outside Chile

Enables doctoral graduates in any area of expertise to start or continue their postdoctoral training at any institution of excellence abroad. These scholarships are open to Chilean or foreign researchers with permanent residence in Chile who holds a doctoral degree.

Requirements are return to Chile within a year of completing the fellowship programme for double the time of the fellowship duration (residents of the Metropolitan Region of Chile) or for a period of time equal to the duration of the fellowship (residents of other regions of Chile).

Postdoctoral fellowship in Chile

Enables young postdoctoral research scientists to develop research projects in any area of expertise within well-established research groups, enhancing their productivity and leadership. Applicants can be Chilean or foreign researchers (residing in Chile or outside) who have obtained a doctoral degree within 3 years prior to the time of application. Female researchers, who have given birth during said period of time, may apply if they have obtained a doctoral degree within 4 years prior to the time of application.

The applicants must be sponsored by a university or another type of research institution and a researcher who works at least 22 hours a week at the sponsoring institution. Projects must be executed in Chile. However, successful applicants may seek permission in order to carry out part of the project (up to 12 months) abroad.

Special initiatives for training of advanced human capital

Support for the return to Chile of researchers from abroad

Supports the return to Chile of highly qualified young scientists with a doctoral degree in any area of expertise obtained abroad. Researchers selected have up to six months to obtain the sponsorship of a Chilean university or research centre.

Applicants can be Chilean or foreign researchers residing in a foreign country who had obtained a doctoral degree abroad within 2 years prior to the time of application. Foreign researchers must hold a certificate of definite residence in Chile to be able to apply. They must be sponsored by an accredited Chilean university or by a legally constituted research centre with at least 3 years proven track record in research.

Attraction of advanced human capital from abroad short-term visit programme (MEC)

Offers outstanding scientists from abroad the opportunity to teach and conduct research at a Chilean regional university, with the aim of strengthening a postgraduate programme and conduct collaborative research with Chilean researchers and students. Any thematic area is eligible.

Applicants can be from universities whose headquarters are located in a region other than the Metropolitan region of Chile and that have been accredited by the *Comisión Nacional de Acreditación* in Chile for at least 3 years.

The host institution must designate one of its full time academics as the institutional counterpart, who will be responsible for the implementation of the project. The host institution may apply in association with another public or private research and/or technology transfer institution (i.e. universities, research centres or institutes) located anywhere in Chile.

3.2.3 Ecuador Programa de becas para educación superior – Ecuador

Postdoctoral Fellowships Programmes

This programme awards fellowships for research stays to PhD graduates currently involved in a national research project and wishing to strengthen their scientific and research capacity in national or international high-quality academic institutions or research centres. Four modalities of fellowships are available: Foreign country; Country-Country; Foreigner-Country; Foreigner-Foreigner. Candidates are expected to contribute to the national development of research, scientific production and teaching upon their return to the country.

Fellowships are awarded in the fields of: Basic Sciences; Life Sciences; Natural Resources Sciences; Innovation and Production Sciences, Social Sciences; Education Sciences; and Arts and Culture.

Prometeo Project

The Prometeo Project is an initiative of the Ecuadorian government that seeks to strengthen research, academy, and knowledge transference in specialised topics through the incorporation of foreign and Ecuadorian experts (who live abroad) to different host institutions. It is aimed at universities, polytechnic schools, public research institutes, and other public or co-financed institutions that require assistance in the development of research projects in areas of priority.

There are two fundamental pre-requirements to become a Prometeo: To hold a Ph.D. degree and to reside abroad (for no more than three months at the time of your application). The time of incorporation of the Prometeos may be from 2 months to one year (not necessarily in consecutive periods), during which foreign experts will develop a joint project with their host institution that will contribute to one of the priority areas of the programme.

The study subjects have to be in line with the National Development Plan for Good Living: Basic Sciences; Life Sciences; Natural resources; Innovation and production; Educational Sciences; and Art and Culture.

3.2.4 Brazil

Science without Borders is a large scale nationwide scholarship programme primarily funded by the Brazilian federal government. The programme seeks to strengthen and expand the initiatives of science and technology, innovation and competitiveness through international mobility of undergraduate and graduate students and researchers.

The programme is a joint effort of the Ministry of Education (MEC) and the Ministry of Science and Technology (MCT) through their respective funding agencies - CAPES and CNPq.

Young Talents Scholarship Programme

Young researchers working abroad with very good scientific accomplishments and who have excelled both qualitatively and quantitatively in their scientific or technological career are eligible to receive funding and resources to perform a two to three year-long research project in Brazil. The host research group would also receive funds, as a bench fee. An international call for proposals will be periodically and internationally disclosed. The programme anticipates the availability of funds for at least 100 young researchers per year.

Fellowships are open to the following study subjects: Engineering and other technological areas; Pure and Natural Sciences; Health and Biomedical Sciences; Information and Communication Technologies; Aerospace; Pharmaceuticals; Sustainable Agricultural Production; Oil, Gas and Coal; Renewable Energy; Biotechnology; Nanotechnology and New Materials; Technology for prevention and mitigation of natural disasters; Biodiversity and bioprospection; Marine Sciences; Minerals; New technologies for constructive engineering; and Formation of technical personnel.

Postdoctoral Fellowships Abroad

Enable researchers to update their technical knowledge and training through research stays and development of scientific and innovation projects in institutions abroad.

The call is open to PhD graduates, Brazilian or foreigners with permanent residency, who will be dedicated full-time to the project. The time of incorporation of the fellow may be from 6 months to one year, with the possibility of renewal for another 12 months.

3.2.5 Argentina

RAICES

The RAICES Network of Argentine Researchers and Scientists Living Abroad, is a Programme managed by the Ministry of Science, Technology and Productive Innovation of the Nation, under the direct supervision of the National Directorate of International Relations. The programme has been declared a State Policy Under Act 26.421 in the year 2008.

The purpose is to strengthen the scientific and technological capabilities of the country by developing liaison policies with Argentine Researchers living abroad, as well as actions to promote the stay of researchers in the country and the return of those interested in developing their activities in Argentina. The programme aims at providing a responsive environment open to the concerns and initiatives of Argentine researchers residing in the country and abroad, by implementing retention, return, and liaison policies.

For more information about the Action Lines of the RAICES Programme, kindly visit the following link: http://www.raices.mincyt.gov.ar/lineas.htm

CELFI: Latin American Center of interdisciplinary training

The Latin American Training Programme for Interdisciplinary Centres of Excellence MINCYT-OEI, aims at high-level human resources capacity building based on a cross-disciplinary and involved vision focused on regional issues, while strengthening skills to transfer scientific knowledge and technology not only to the public sector but also to the private sector, thus creating new production chains. In operational terms, the Latin American Centre for Interdisciplinary Training (CELFI), is based in the building 0+INFINITY and coordinates, for the first time in the region, centres of excellence in research in the subject areas of molecular biology, neuroscience, physics, chemistry, bioinformatics, nanotechnology, computer science, meteorology, and related areas.

This programme has three main components:

- 1. Human resources training
- a. Short-Stay Fellowships (15 days 4 months) PhD student or postdoc who want to learn specific techniques to use scientific equipment or perform essays pertinent to their respective projects that cannot be developed in their home institutions.
- b. Fellowships for postdocs (6 months to 1 year) advance and specialisation for newly trained researchers
- c. Internships / researchers trained visits

Researchers develop teaching and / or research activities during their stay at the selected centre.

d. Intensive theoretical/practical

Annual calls will be disseminated throughout the region, where proposals will be submitted to perform activities such as courses, schools, etc. International conferences (up to 1 week).

2. Studies and Indicators

Based on the thematic studies conducted by the Organization of American States, a compilation will be made to assess the state-of-art of the region in general and its future prospective. Therefore, with the support of OEI Observatory CTS strategic information on R&D potential offered by the region for better planning of objectives, activities and decision making will be available. The studies, moreover, will be particularly focused on meta-analysis, mapping and production of indicators and statistics on science and higher education. Similarly, prospective studies will be conducted for the strategic planning of the programme with respect to the period between 2015 and 2021.

3. Communication and visibility plan

A communication and visibility plan will also be developed in order to make the programme attractive and actively encourage interaction with other programmes and extra-regional agencies to identify specific opportunities for complementarity and funding and to get other countries to provide financing and offer training opportunities in their centres of excellence.

Bec.ar – External training S&T Grants

Support training abroad to be conducted in the next four years by 1,000 Argentine professionals involved in STI sector (Agri-business, Environment and Sustainable Development, Social Development, Energy, industry and health) http://bec.ar/

Strategic Plan for Engineering Education 2012-2016

Engineering education, which aims to increase the number of engineering graduates by 50 % by 2016 and by 100 % in 2021; to ensure the quantity and quality of human resources through grants and incentives . www.pefi.siu.edu.ar/

Bicentennial Fellowship: National Programme for scientific and technical careers

Fellowships targeting low-income students who have been admitted to, or are pursuing a career in the higher education system related to applied sciences, natural sciences, exact sciences and basic sciences. www.becasbicentenario.gov.ar

3.3 Global Funding Opportunities

<u>TWAS (The World Academy of Sciences) – Joint Postdoctoral Fellowship Programme (CONACYT – Mexico, CNPq – Brazil)</u>

TWAS-CONACYT postdoctoral fellowship programme is open to young scientists from developing countries (other than Mexico and Brazil) who wish to pursue postdoctoral research in natural sciences. Fellowships are available for pursuing postdoctoral studies at research centres or institutions of higher education in Mexico recognized by CONACYT.

Applicants for these fellowships must meet the following criteria: hold a PhD degree in a field of natural sciences; apply for the fellowship within five years of having obtained a PhD degree in a field of the natural sciences; be nationals of a developing country (other than Mexico and Brazil); be regularly employed in a developing country (other than Mexico and Brazil); and hold a research assignment there.

Fellowships are awarded in the field of natural sciences (Agricultural Sciences, Structural, Cell and Molecular Biology, Biological Systems and Organisms, Medical and Health Sciences incl. Neurosciences, Chemical Sciences, Engineering Sciences, Astronomy, Space and Earth Sciences, Mathematical Sciences and Physics).

<u>CARIBU – International Mobility Programme between African, Caribbean and Pacific (ACP) Countries and Higher Education Institutions in the European Union (EU)</u>

CARIBU is an Erasmus Mundus Action 2 Partnership Programme (EMA2), between 8 European Union (EU) and 12 non-EU Higher Education Institutions (HEIs). These HEIs are called the 'CARIBU consortium'. The Organization of American States (OAS) participates as an associated

partner. The objective of the CARIBU Consortium is to increase Academic Mobility, Research and Capacity Building opportunities between Master students, PhD candidates and academic and administrative staff members of universities.

The programme benefits students, researchers and staff members who will bring an immediate impact in their home institutions through the exchange of best practices, mutual sharing of knowledge, teaching and managements skills as well as very enriching linguistic, cultural and educational experience.

The participating EU partner universities are located in Belgium, the Czech Republic, Denmark, France, Poland, Portugal, and Romania; and the participating ACP country partner universities are located in Cameroon, the Democratic Republic of the Congo, Ethiopia, Tanzania, Uganda, Mozambique, Gambia, Ghana, the **Bahamas**, **Suriname**, Timor-Leste, and Samoa. **The University of Guyana** is participating as an associated partner.

4 Cooperation Actions and instruments: Road Map for implementation

Activity	Concrete Actions	Work progress	Instruments & resources	Indicators + Impact	Timeline	Who is involved
	Relaunch call for participants	Ongoing		At least 5 LAC and 5 EU countries will join the WG	Before and during the EU- CELAC SOM 2016	Chile and Finland
	Establish dialogue with the thematic working groups of the EU- CELAC SOM	In progress	email, VC calls with WGs coordinators	Input of WG on identified career development needs in both regions	Second half of 2016	Finland and Chile
	Establish a roadmap for gathering information on policies of joint access of early stage researchers to research national and multinational infrastructures (open science and access policies)	To be started	Preparation of draft document describing different policies of national and multinational research infrastructures. Gathering of inputs from countries in both regions.	Reaching of milestones in time.	First draft by October 2016 Circulation for inputs SOM CELAC- UE 2016 publishing the survey	All
	Promoting pilot programmes of early career researchers development	In progress	Preparation of a draft programme Gathering of inputs from countries Preparation of final document Implementatio		1)First draft by October 2016 2)Circulation for inputs 3)SOM CELAC approval of rules 4) Implementation for H2020 2017-	All

	n of the Pilot	2018	
Create the CELAC-EU EURAXESS portal	Discussion of specs of the website Implementatio n by LAC countries	Implementation by end of2016.	LAC Partners

5 Summary of EU-CELAC SOM decisions-making issues

Recommendation 1: Relaunch of a call for participants of the sub working group on International Early Stage Researchers Career Development

During the EU-CELAC SOM 2016 a call for participants to this sub WG will be launched in order to form a core group to start implementing the activities suggested.

Recommendation 2: Establish dialogue with the thematic working groups of the EU-CELAC SOM in ICT for Societal Challenges, Bio-economy, Biodiversity and Climate Change, Renewable Energies and Health.

During the first half of 2016, the co-leaders of this sub WG will call for participants of the abovementioned WGs to inform on the priorities they have identified in their WG regarding education and early-career development, in order to give support to priority setting in definition of schemes for joint use of infrastructure and pilot schemes for early career researchers mobility support.

Recommendation 3: Promoting links between the thematic working groups, Cross-Cutting issues' Early-Career researchers' group and the European Institute of Technology and its' KICs as well as other EU-lead initiatives such as joint programming initiatives.

Recommendation 4: Promoting programmes of early-career researchers development

This activity shall be done by means of stipulating among the participant countries the conditions, focus (considering the priorities defined by the thematic WGS), and funding means of a pilot call to try out the implementation of mechanisms for developing early career researchers. Funding schemes and rules that should be emulated can be, e.g. through Horizon 2020: Marie Skłodowska-Curie Innovative Training Networks (ITN) and Marie Skłodowska-Curie Research and Innovation Staff Exchanges (RISE), ERANET LAC call among participant agencies, etc.

Recommendation 5: Establish a roadmap for gathering information on policies of joint access of Early Stage Researchers to national and multinational research infrastructures (open science and access policies).

Recommendation 6: Promote the development of a CELAC-EU EURAXESS portal by expanding to other LAC countries the already existing EURAXESS Links Brazil hub at http://ec.europa.eu/euraxess/index.cfm/links/eurRes/brazil for the encouragement of mobility of early career researchers, as well as teaching staff. This shall be discussed among the LAC countries participating in the sub WG by the time of the EU-CELAC SOM2016.

Recommendation 7: Promote open science in the EU- CELAC early stage researchers' cooperation initiatives.

Recommendation 8: Establishing a sustainable platform for information sharing such as EURAXESS preferably on already existing address.

6 USEFUL LINKS

The EU Contest for Young Scientists

An annual showcase of the best of European student scientific achievement and as such attracts widespread media interest.

Joint Research Centre

The Joint Research Centre (JRC) is the European Commission's in-house science service which employs scientists to carry out research in order to provide independent scientific advice and support to EU policy. It has a <u>jobs page</u> covering various temporary and permanent positions.

European Cooperation in Science and technology (COST)

COST funds pan-European, bottom-up networks of scientists and researchers across all science and technology fields. These networks, called 'COST Actions', promote international coordination of nationally-funded research. COST does not fund research itself, but provides support for networking activities carried out within COST Actions. COST Actions are bottom-up science and technology networks open to researchers and stakeholders, with a four-year duration and a minimum participation of five COST Countries. For European institutions only.

Research and Innovation on europa.eu

International Cooperation in Research and Innovation on europa.eu: INCO

Seventh Framework Programme 2007-2013

Horizon 2020

Research and Innovation Observatory – Horizon 2020 Policy Support Facility (RIO)

Innovation Union Information and Intelligence System I3S

ALCUE Common Area of Higher Education initiative http://www.alcue.net/; http://cordis.europa.eu/projects/index.cfm?fuseaction=app.details&TXT=alcue-net&FRM=1&STP=10&SIC=&PGA=&CCY=&PCY=&SRC=&LNG=en&REF=10644

EU-LAC Permanent Academic Forum/Foro Académico Permanente ALC-UE http://fap-alcue.org/en

Brussels declaration and proposals to the Heads of State and Government of the CELAC-EU Summit 2015

http://fap-alcue.org/sites/fap-alcue.org/files/pdf/INGLES DECLARACAO 0.pdf

Alexander von Humbold Foundation: http://www.humboldt-foundation.de/web/home.html

ALFA and Alßan programmes: http://ec.europa.eu/europeaid/where/latin-america/regional-cooperation/index en.htm

Bologna process: http://www.ehea.info/

Consejo Superior Universitario Centroamericano: http://www.csuca.org/

The Ibero-American Programme for Science, Technology and Development, CYTED: http://www.cyted.org/

ENLACE: http://www.enlace-project.eu/

ERANet-LAC: http://cordis.europa.eu/projects/index.cfm?fuseaction=app.details&TXT=alcue-

net&FRM=1&STP=10&SIC=&PGA=&CCY=&PCY=&SRC=&LNG=en&REF=109856

Erasmus Plus: http://ec.europa.eu/programmes/erasmus-plus

European Research Council - ERC grants: http://erc.europa.eu/funding-and-grants

Espacio de Encuentro Latinoamericano y Caribeño de Educación Superior (ENLACES): http://www.iesalc.unesco.org.ve/index.php?option=com_content&view=featured&Itemid=303&lang=es

EU-LAC research and innovation policy cooperation:

http://ec.europa.eu/research/iscp/index.cfm?lg=en&pg=latin-americ-carib

EURAXESS: http://ec.europa.eu/euraxess/

EU research policy documents: http://ec.europa.eu/euraxess/index.cfm/services/researchPolicies

Marie Skłodowska-Curie actions (MSCA): http://ec.europa.eu/mscaOrganization of Ibero-American States for Education, Science and Culture: http://www.oei.es

Science without borders programme: http://www.cienciasemfronteiras.gov.br/web/csf-eng/

Inter-American Organization for Higher Education http://www.oui-iohe.org/en/

Asociación de Universidades – Grupo de Montevideo http://grupomontevideo.org/sitio/