

## FEDERAL UNIVERSITY OF PARAÍBA

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MARIA LUIZA PEREIRA DE ALENCAR MAYER FEITOSA, DEAN

**Warning:** Dear Dean/Provost,

We hereby inform that this document is not valid as an application confirmation. The application receipt can only be issued after the English version of the Institutional Internationalization Project has been submitted, whose content and layout must match the Portuguese version, up to May 21, 2018, 5p.m. (Brasília time).

If the document is not sent as requested, your application will be annulled.

Yours,

The Coordination of Grants Abroad Applications

**CALL DATA**

Call	Call Initials
This Program is for selecting Institutional Internationalization Projects of Higher Education Institutions or Research Institutions home to at least four Graduate Programs recommended by Capes in the 2013 triannual evaluation and the 2017 quadrennial evaluation, among which there must be, at least, two Ph.D. programs.	CAPES-PRINT
Programs	
CAPES-PRINT	

**APPLICATION DATA**

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ID no.	Issued by	Issue date	
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**FOREIGN MEMBERS****Strengths****DIAGNOSIS****Title**

Professors Qualification

**Justification**

UFPB is the biggest higher education institution in the State of Paraíba. It is ranked top 100 among Latin-American universities according to the QS World University Ranking. It has over 30 thousand students in undergraduate and graduate programs and it is a top 4 university in Brazil's Northeast region. UFPB has four campuses, which are located in the cities of João Pessoa (university seat, campus I), Areia (129km from the seat, campus II), Bananeiras (140km from the seat, campus III) and Mamanguape/Rio Tinto (60km from the seat, campus IV). UFPB currently offers 124 undergraduate programs and 106 *stricto sensu* graduate programs in several fields of knowledge (58 Academic M.Sc., 12 Professional M.Sc., and 36 Ph.D. programs) and seven *lato sensu* graduate programs (02 Specializations and 05 medical residencies). Of the *stricto sensu* Graduate programs, 71% were rated 4, 5 and 6 in Coordination of Improvement of Higher Education Personnel (Capes)' Quadrennial Evaluation. Regarding the number of programs and their ratings in the quadrennial evaluation, UFPB's Graduate Programs rated 4 (43.42%) and 5 (17.10%) are now above the Northeast region's average (rated 4, 36.72%; rated 5, 12.28%) and Brazil's average (rated 4, 35.33.72%; rated 5, 17.82%). The number of rated 3 programs was reduced (34.21) when compared to the Northeast region's average (43.57%) and Brazil's average (32.86%). On average, 71.62% of the faculty holds a Ph.D., while Brazil's average in 2017 was 76.01%. Between 2013 and 2016, UFPB professors published an average of 2,303 papers indexed in the Qualis Capes; approximately 40% on average are indexed in the WEB OF SCIENCE Base, and 56% of the papers are indexed in the SCOPUS Base between 2013 and 2016. The faculty qualification index (FQI – IQCD, in Portuguese), which associates the quality of teaching in undergraduate and graduate programs with the number of researches, ranging from 1 to 5, averaged 4.31 at UFPB between 2013 and 2016; in 2017 the average raised to 4.45. UFPB has 562 research groups in 2,084 research lines and over 9 thousand researchers (students, faculty and staff). Teaching is offered both on-campus and in the form of distance education, both on undergraduate and graduate level. UFPB and its qualified faculty and their researches in strategic areas have considerably influenced the economic development of the state of Paraíba.

**Title**

Visiting Professor Admission Program

**Justification**

The Federal University of Paraíba (UFPB) is currently conducting a Visiting Professor Admission Program (through an Internal Public Call) in all fields of knowledge to specifically work in the institution's Graduate Programs. The objective is to attract to UFPB's Graduate Programs for up to 4 years both national and foreign specialists with distinguished academic-scientific competency in their fields of knowledge, who can help consolidate the institution's research, graduate programs and internationalization. Up to June 6<sup>th</sup> (the date for the publication of the final result), there will be a total of 90 vacancies available, 81 of which (90%) are for foreign visiting professors and the other 9 vacancies (10%) are for national visiting professors (Brazilian citizens) with vast international experience. Through this action ALONE, UFPB will raise the number of international faculty in Graduate Programs from 2.9% to 8%. This indicator will be potentialized with the support of PrInt/Capes.

## Title

Research in strategic areas

## Justification

UFPB has 21 graduate programs rated 5, and 4 programs rated 6 by Capes, producing top quality researches in several fields with national and international partnerships. In a scientific and technological context, UFPB stands out for its development in several areas which are today considered strategic, such as: alternative energy production, especially biofuel and natural gas, development of nanometric materials, pharmaceuticals and medicines, biotechnology, medical chemistry, astrophysics, astronomy, among others. As to patent production, in 2017 alone, UFPB produced 67 patents and 11 computer softwares and 32 members of the faculty received awards. Regarding issues of intellectual property, UFPB has abundant experience and is ranked 7<sup>th</sup>. UFPB has laboratories of national and international reference, such as LAVID, which produces knowledge in the fields of digital video, computer networks, digital and interactive TV and Middleware. Lavid's international partners are the Information Society Technologies and the DIDA GROUP; among the several national partners are Cnpq, FINEP and FAPESQ. In the regional spectrum, it is important to mention UFPB's actions in researches focused on the Semiarid area of Brazil's Northeast region, the Atlantic Forest biome and the Caatinga biome, to attain sustainable development, such as sheep and goat production, Africanized bees, cuniculture, among others. In the social context, we highlight the extension actions such as the "UFPB in Your City Project), which partnered with 55 municipalities in Paraíba to help managers find solutions to fight poverty based on the development of cooperative incubators; to fight illiteracy; to optimize managerial mechanisms to raise capital, among other initiatives. UFPB adhered to the Sustainable Development Goals Network (*Pacto de Constituição da Rede Objetivos do desenvolvimento Sustentável (ODS) Universidade Brasil*, in Portuguese) and is home to research networks on the issue.

## Weaknesses

### Title

Foreign language proficiency

### Justification

Despite its long history of internationalization and even though UFPB has opened the first International Office of Brazil, UFPB still faces difficulties to receive foreigners. At UFPB, the process of welcoming foreign students and professors is executed much more individually than institutionally. The environment is hardly international, there are no signs in foreign language (preferably in English) at the institution's campuses and few international events are carried out here. In addition, Also, UFPB has no policy of promoting itself at international fairs and events for attracting professors and students to the institution. It is highly necessary to bring international aggregators into UFPB, foreign professors to participate and collaborate in undergraduate and graduate programs, to teach on campus and teach distance courses, as well as tutor/advise students both face to face and online. UFPB's biggest weakness is by far the communication in foreign language, for both the staff and faculty. Although UFPB has passed a Resolution for joint Ph.D. programs (co-tutelle), the number of Ph.Ds obtained in joint supervision is still low. Adhering to the Languages Without Borders (*Idioma sem Fronteiras*, in Portuguese) is an opportunity to counter this weakness. Note that the institution embraced the program between 2016 and 2018 and over 6,000 places have been opened for the academic community to study English, French and Spanish in the institution.

**Title**

Infrastructure conditions

**Justification**

Since 2014, the National System of Science, Technology and Information (*Sistema Nacional de Ciência Tecnologia e Informação*, in Portuguese) and education as a whole have faced deep budgetary cutbacks by the federal government. At UFPB, these cutbacks have generated a large number of physical infrastructure constructions that could not be executed and/or finished. For example, right now, UFPB has several stalled infrastructure works for research and graduate programs/studies, such as the construction of the materials engineering research labs, the applied pharmacology lab, which will be home to the firms' incubator of the Paraíba Development Institute (*Instituto de Desenvolvimento da Paraíba*), IDEP/UFPB, among others. Given the governmental funding constraints and considering the recent Regulation of the Science and Technology Legal Framework – Decree 9.283/18, of February 08, 2018, we are now prospecting partners to conclude several works and purchase equipment for laboratories, prioritizing the facilities designed to be shared, to minimize the hardships inflicted on UFPB's graduate programs and research activities.

**Title**

Scientific Production on international co-authorship and on academic-corporate partnerships.

**Justification**

According to data retrieved from Scival, UFPB faculty/researchers published 3,891 papers in impactful journals between 2013 and 2016. For the same period, 7,965 citations were found on an average impact of 0.71. Of the total 3,891 papers, 20.9% were produced in co-authorship with foreigners, which is below the national average (29.8% for the same period). At a closer look at our scientific production, the papers published in national co-authorship have an average impact factor of 0.63, which is below UFPB's average. The average impact factor of the institution's scientific production on foreign co-authorship is 1.28, that is, nearly twice as much as the institution's average (and over twice as large as the average in national co-authorship alone), which indicates the importance of boosting the cooperation with foreign HEI groups. By the end of PrInt at UFPB, scientific production in foreign co-authorship is expected to grow to 30%, minimum. The important point regarding the production in foreign co-authorship is that several UFPB researchers have intense and fruitful cooperation with foreign partners, which demonstrates that our existing potential must be strengthened and solidified. Another negative point is the low percentage of scientific production in academic-corporate partnerships. Brazil's average is 1.1% whereas at UFPB it is 0.4%. However, it is worth mentioning that this action will greatly benefit from admitting foreign professors/researchers, a process which is currently underway at UFPB; apart from the specific academic-scientific requisites, candidates must demonstrate they are able to raise funds and can develop projects with Brazilian firms and HEIs to register patents in the country. Lastly, Article 5, item XI, of Resolution no. 06/2018, recently passed at UFPB, encourages new agreements and partnerships with both national and international firms and corporations.

### **Well-defined institutional vocation?**

No

### **Describe other relevant information on your institution's internationalization status**

Internationalization requires that the institution be committed to promoting its academic and administrative structure and training its personnel. This process encompasses constructing a common curriculum along with foreign institutions, producing learning, policies and university practices towards mobility, collaboration and partnerships, as well as identifying the fields of knowledge and institutions that can elevate Brazilian science to international standards. Since its foundation UFPB has focused on internationalization: UFPB opened the first International Office in a Brazilian HEI; besides, many agreements have been signed, especially with European and Latin-American universities. As of today, UFPB has 85 active cooperation agreements with foreign institutions and a continuous flow of inbound (foreign) and outbound (Brazilian) students. The biggest group to benefit from this mobility are undergraduate students, however, between 2012 and 2016, 1,012 graduate students went abroad for a Sandwich Ph.D. It is worth mentioning that in 21% of the graduate programs over 10% of professors have some experience abroad. Although the number is still small, it is believed that the Capes PrInt program can help change this reality by creating more opportunities for UFPB in the international scenario.



## **INSTITUTIONAL PROJECT REGISTRATION - PII**

**Project Coordinating Institution**

FEDERAL UNIVERSITY OF PARAIBA

**General Objective**

UFPB'S INSTITUTIONAL INTERNATIONALIZATION POLICY. The discussion on the Institutional Internationalization Project started in March 2017, when UFPB's Dean of Graduate Studies (PRPG) and the Dean of Research Activities (PROPESQ) invited the institution's Graduate Programs to fill out a form that would become our HEI's internationalization status Diagnosis. Next, data were put together, published and discussed with the HEI's 76 Graduate Programs (106 *stricto sensu* programs) and the directors of the 16 Centers in sector meetings conducted at each center at all four campuses located in the cities of João Pessoa, Areia, Bananeiras and Rio Tinto/Mamanguape, to connect the Graduate Program Coordinators and Center Directors and start the process of creating the internationalization projects at each and every unit of the institution. The outcome of this prospection, which finished in July 2017, was each unit's internationalization plans. This set of data allowed for the creation of two Resolution drafts, each of them to regulate, respectively, UFPB's Institutional Internationalization Policy with proposals for important changes to plan an internationalization program capable of consolidating individual initiatives or those from existing research groups, as well as encouraging other projects, based on the stimulus intended for specific axes of action and partnerships, with the institution overlooking the actions, mapping the Cooperation Agreements, potentializing the results around transverse research and innovation activities, generating research connections with the due publicization of the scientific production thereafter. This new format of internationalization embodies the program designed in UFPB's Institutional Development Plan – PDI. This way, UFPB's University Council passed Resolution no. 06/2018 to regulate the university's Internationalization Policy, based on article 25, items I and XIV, of UFPB's Statute, process no. 23074.084753/2017-58, which expands the possibilities of support and incentives for mobility, the consolidation of research networks, internal support, finding external financing partners, following up the steps concerning the internationalization program, admitting and retaining researchers, gaining access to institutional programs, among other factors. The Resolution that regulates the Institution's International Policy provides for the international cooperation at UFPB, deemed essential to foster the formation of teaching, research and extension networks, both at undergraduate and graduate level, as well as in vocational and technological education, involving strategic partnerships, for promoting the knowledge that emerges from academic activities. This process encompasses two essential strands: (i) fostering top quality scientific and cultural production, training faculty, students and administrative staff; (ii) the permanent normalization of the rules that guide UFPB's internationalization policy, based on a concept that is integrated to the institution's organizational culture, with well-defined guidelines, objectives, roles and responsibilities.

The INSTITUTIONAL INTERNATIONALIZATION PROJECT – CAPES PRINT CALL. After concluding the preliminary phase and consolidating the institutional legal framework, UFPB focused on the outcomes, such as changing the specific norms, as well as on meeting the requisites set out by Call 41/2017 – Capes Print, which provides support to the Institutional Internationalization Projects on the set parameters. UFPB adopted the following themes: (i) interventions, technologies, products and processes applied to health; (ii) Diversity Territories: education, mediation, languages, cultures and public policies; (iii) The Caatinga Biome, biodiversity and sustainability.

OBJECTIVES The general objective of the Institutional Internationalization Project within the Capes Call is to consolidate and expand the internationalization of Graduate Programs at UFPB, as to the selected groups, guided by the three thematic axes indicated in the project. The unfolding of this objective involves actions such as academic mobility and exchanges; joint research and innovation projects on the thematic content adopted, in international cooperation; formation of networks, bi/multinational nuclei or laboratories; planning the staff training and qualification, with the constitution of human resources to meet the HEI's internationalization demands; joint publication in highly-impactful international journals and publishing houses; increasing the basic and applied research; adapting the existing curriculum and creating new ones that allow for the planned mobility; identifying our research vocations, as per field of knowledge, and stimulating their development, among others. In this context, the formulation of procedures and operational flows to plan and execute the internationalization actions must be boosted, as well as the establishment and/or improvement of infrastructures for research, teaching and extension activities that may provide sustainability to the process. We may list other specific objectives: internationalize the classes in undergraduate and graduate programs, through updating and loosening the curriculum by adopting cosmopolite teaching practices and by using virtual learning environments; prioritizing language support to UFPB faculty and students, by adopting curriculum components and/or courses taught in foreign languages, in order to reach appropriate language proficiency levels; establishing, strengthening and forming international partnerships, through cooperation agreements, memorandums of understanding, or any other instrument; forming teaching networks, innovation or excellence clusters, academic chairs, programs in association, academic plans and projects of strategic value, with the exchange of curriculums and new education models; adopting Language Policy Plans, as part of the formed groups, as a strategy of internationalization and promotion of interculturality; intensifying the institutional contact with State, market and society agents.

METHODOLOGY The methodology adopted by UFPB towards this Call encompassed: (i) the initial process of identifying the priority thematic axes, based on the mapping drawn from the Diagnosis conducted in 2017, the researches and actions developed by the Graduate Programs regarding internationalization; (ii) concomitantly, we grouped the selected Graduate Programs around each thematic axis based on the interdisciplinarity concerning their international actions and researches; (iii) as part of a substantial seminar, Thematic Groups (TG) were formed that chose each a respective coordinator to raise the data on materials and interaction around the subtheme chosen by the group; (iv) after the Seminar, weekly meetings were held by the Deans/Provosts and the TG coordinators, to organize and build proposals within the Capes call, adjusting the conceptual issue and the relative partnerships to the formal aspects of setting the objectives, actions, goals and indicators, concluding with the budgetary split of resources among the Graduate Programs and the thematic projects among themselves, according to their demand. Therefore, the resources are not equally split, since there are Graduate Program groups which, given their nature, need more resources. After that followed an a-priori evaluation by an ad-hoc Committee formed by 5 Ph.D. Professors invited by the Deans/Provosts, four of which were external and one an internal member, all of them with experience in evaluating institutional projects, experienced researchers, including the President of the Research Support Foundation (FAPESQ) and the Secretary of Science and Technology for the State of Paraíba, to involve these support and innovation agents to the HEI's internationalization plan, which may generate financing. This movement allowed circumscribing the themes to issues insistently analyzed at UFPB, with potential interest to external agents, such as the State, market and civil society. This preliminary evaluation led to the consolidation of the indicated themes, which have in common the approach and the transverse formative processes that comprise a group of graduate programs, distributed over UFPB's teaching centers; the international partnerships to develop multi- and interdisciplinary research; the research infrastructure, some with equipment that can be shared by multiple users. In all cases, the pioneering spirit of UFPB and the involved graduate programs, their history and research vocation were taken into consideration, especially regarding highly complex problems in the fields of health, environment, education and policy. Another important drive that is common to the programs participating in the proposals, which is explicit in the chosen research lines, was raising the technology innovation goals through the presentation of award-winning patents that each group holds. The report is attached herewith.

THEMES AND SPECIFI ISSUES OF THE PROJET	
Theme	Partner countries-
HEALTH INTERVENTIONS, TECHNOLOGIES, PRODUCTS, AND PROCESSES	United Kingdom; Spain; Sweden; Italy; France; Belgium; Australia; Canada; United States of America.

**Justification** - The subject “Health Interventions, Technologies, Products, and Processes” offers a transversal approach that encompasses 13 Graduate Programs (GPs), distributed among 5 Academic Centers of UFPB. According to the World Health Organization (OMS), health is defined as a “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”. An unbalance within any of these dimensions, either individual, collective, or environmental, results in less life quality of individuals or communities. There has been a great deal of efforts in the world to develop interventions, establish technologies, prospect and develop product and processes aimed at health state recovery or maintenance. In consonance with global efforts, the GPs partaken on this subject have historically maintained/consolidated international collaborations to explore multidisciplinary or interfacial research areas, such as: A) Interventions, by applying theories and methodologies for the prevention, treatment, and control of chronic diseases (such as, cancer, cardiometabolic disorders, diabetes, and neurodegenerative diseases) in different populations and age groups; B) Human behavior, palliative care, complementary therapies, and evaluation of services and environmental factors (such as, urbanization and climate changes) on human health; C) Development of technologies, such as software, support systems for decision making, virtual environment, clinical and pre-clinical studies for diagnosis, therapy, and health care and analytical technologies for prevention and control; and E) Prospection and development of products and processes based on probiotics, synthetic compounds, natural products, therapeutic formulations, molecular modeling, diagnostic kits and dental biomaterials. These approaches are potentially able to foster actions in public health, in particular in drug discovery, nursing, and gerontology. It is noteworthy the excellence of participant GPs on Health human resource training and knowledge production within Northeastern Brazil. The associated infrastructure is comprised by modern equipment, mostly of multi-user nature. Of note, some laboratories have already an international multi-user character. Additionally, faculties of 6 GPs belong to Brazilian-wide National Institutes of Science and Technology (INCT), one of which is headquartered at UFPB.

## GOALS

**Goal I** - To consolidate and expand UFPB internationalization on prospection, improvement, and design of technologic products and processes of Health interest.

### Description

This goal meets the research aims of 5 GPs, i.e.: Graduate Program on Natural and Synthetic Bioactive Products, Chemistry, Biotechnology (Renorbio), Development and Technological Innovation in Medicines, and Dentistry. The prospection, improvement, and design of technologic products and processes of Health interest comprise a transversal objective that aggregate the interests of these GPs. Research regarding this goal involves collaborations established with major centers in the world, optimizing the Brazilian insertion in promising Health areas and contributing to the formation of qualified human resources. It is worth noting, for instance, the recent publication of a Nature Methods paper in collaboration with US researchers. In this context, we seek: (1) To expand the domain of new research tools in medicines, with the aim of improving and developing new methodologies and/or protocols for obtaining products, with emphasis on quality management and technology transfer. Design of processes using synthetic, chromatographic and spectroscopic methods for the verification of pharmacological properties and investigation of the biological and/or pharmacological and toxicological action of compounds in in vitro and in vivo assays, in animals and in humans. (2) To investigate the chemistry of natural products by developing botanical and ecophysiological studies, phytochemical characterization and standardization of plant drugs from the medicinal plants to produce chemically standardized dry and liquid extracts of use as phytotherapeutic feedstock. (3) To contribute to Pharmacology and Toxicology areas by developing non-clinical studies with plant-derived drugs and chemically standardized dry or liquid extracts to evaluate the dose-dependence effect and to estimate toxic doses and possible therapeutic doses. (4) To carry out development in theories to implement them in software for modeling and simulation of biomolecular systems aimed at the rational design of drugs and inhibitors and the study of life-relevant biochemical processes; (5) To contribute to cardiac regenerative medicine studies with emphasis on stimulation of cardiomyocyte proliferation; (6) To investigate the development of technologies and products applied to mineralized and non-mineralized structures of oral cavity.

**Goal 2** - To consolidate and expand UFPB internationalization on the studies of biological, psychological, social, and environmental factors and processes related to population health.

**Description** - This goal meets the research aims of 5 GPs, i.e.: Graduate Program in Linguistics, Health Decision Models, Physical Education, and Master's Program in Professional Gerontology. All GPs have internationalization history and aim at strengthening their international collaborations to increase the impact on both UFPB research and formation of qualified human resources. The actions undertaken here aim to increase the evidences on the influence of interventions on biological, psychological, social, and environmental factors and processes related to the health of special populations, particularly those with cardiovascular problems, elderly, and individuals with voice and speech disorders. In this context, we seek: (1) To detect levels of physical activity, social and psychological conditions, and its conditioning factors in elderly and/or cardiovascular disease-bearing populations, in order to provide data to determine the best decision models for multidisciplinary interventions in these populations; (2) To investigate the effect of interventions in the area of Public Health that use either qualitative or quantitative information and/or data collected from mathematical models for decision-making, using also models for management, analysis and decision making based on information from Public Health processes; (3) To carry out research on the potential of interventions for the treatment of cardiovascular diseases and for maintenance of healthy state in the elderly; (4) To investigate factors related to voice production conditions, and social and behavioral factors controlling and sustaining both voice and speech disorders.

**Goal 3**

To consolidate and expand UFPB internationalization on the investigation of pharmacological and non-pharmacological interventions for chronic diseases and human development.

**Description** - The investigation of pharmacological and non-pharmacological interventions for chronic diseases and human development is a transversal goal that combines the interests of 7 GPs, i.e.: Natural and Synthetic Bioactive Products, Nursing, Multicenter Program in Physiology, Cognitive Neuroscience and Behavior, Physical Education, Dentistry, and Nutrition Sciences. All GPs have internationalization history and aim at strengthening their international collaborations to increase the impact on UFPB research, product and process development, and formation of qualified human resources. In this context, we seek: (1) To integrate scientific, technological and innovative knowledge in phytopharmaceuticals exploring the sustainable use of biodiversity for the production of active pharmaceutical ingredients of plant origin and their respective phytomedicines, phytocosmetics, and phytonutrients within a GP that has been carrying out such research for 40 years; (2) To identify neuropsychological changes associated with the preclinical and clinical phases of dementia, contributing to early diagnosis and non-pharmacological therapies of dementias, such as Alzheimer's and Parkinson's, and Levy's Body Disease; (3) To investigate effective physical activity training methods for non-pharmacological treatment of hypertension, diabetes, sleep disorders, respiratory tract diseases and obesity; (4) to investigate processes of neurophysiology, cardiovascular physiology, and immunology of infectious diseases; (5) To develop pharmacological therapies for the main diseases of the oral cavity, focusing on antimicrobial, immunomodulatory, analgesic, reparative and/or osteogenic strategies; (6) To investigate molecular and cellular mechanisms of nutritional interventions for the prevention and/or treatment of chronic diseases, notably obesity, type 2 diabetes mellitus, and hypertension; (7) To develop new technologies for nursing care, with a interdisciplinary perspective, for individuals with chronic diseases and their complications, in different populations and spaces of health care.

Theme	Partner countries-
<b>TERRITORIES OF DIVERSITY: EDUCATION, LANGUAGES, MEDIATION, CULTURAL AND PUBLIC POLICIES</b>	United Kingdom; Australia; Spain; Portugal; United States; France; Mexico; Canada; Argentina; South Africa; Switzerland; Italy; Germany; Colombia.

**Justification –**

The theme brings together research regarding different cultural, social, informational and language mediation, taking as the transversal axis the educational processes, the public policies and human rights. The different researches developed by each program share a pathway, which highlights the need to discuss the construction and application of scientific knowledge in contexts marked by diversity. Researchers in these programs are equally interested in the discussions that rethink boundaries, spatial planning and the territories, which are important issues to the contemporary world, be they geared to the management, to the discussion of public policies or to the actions of mediation. Mediation is here understood, from a social perspective, as an integrative practice and as an educational function which considers information and knowledge as processes of transversal formation. This is an educational practice in its broad sense, which articulates aspects of social pedagogy, social psychology, linguistics, humanities, human rights, scientific field of information and of public policies. Education, mediation and political processes are also understood as processes cross-cut by languages and their expressions, by the actions and claims, by informational aspects and by the (re)construction of spaces in their relationship with time. From the methodological point of view, quantitative and qualitative aspects are articulated as mechanisms for the construction of new models, new cross-cut scientific viewpoints, able to produce both theoretical and practical innovation. The choice of the subject is justified by the pioneering spirit of UFPB and of the graduate programs represented in discussions, proposals and actions in the field of public policies and human rights (Education, PPGDH, PPGCJ, PPGPS, PPGS and Economics); researches about cultures, religion, and literatures of minorities (PPGL, PPGCR, PPGM); in the consolidated experiences of programs that analyze phenomena of inclusion and exclusion in social, informational and technological contexts (PPGA, PPGCI, PPGPS, PPGS).

## GOALS

**Goal 1** - To solidify and expand the internationalization of programs that investigates the social, educational, cultural, linguistic, and political mediation.

**Description** - The interest for social, educational, cultural, linguistic, and political mediation groups the interests of ten graduate programs: PROLING, PPGPS, PPGEd, MPLE, PPGM, PPGCR, PPGS, PPGL, PPGCJ and PPGDH. Studies on integrative practices as training strategies will be developed. As a consequence of this broader objective, which involves the educational, social, cultural and political processes, studies on the following areas will be carried out: i) socio-discursive interactions identifying the various sociocultural contexts in which the different forms of language take place; ii) translation processes and cultural exchanges in diasporic contexts; iii) impacts of national and international related to music as human expression; iv) relations between Religion, Culture and Symbolic Systems; v) the way language serves as a mediator in interpersonal relations, and constructs socio-cultural representations substantiated in the discourses; vi) the participation of social actors in the management contexts with a focus on emotional and sustainability aspects; vii) the psycho-social and sociological processes related to the phenomena of inclusion/exclusion.

**Goal 2** - To consolidate and to expand the internationalization of programs that discuss the conceptions of spaces, territories and networks, as well as the construction and the evaluation of public policies.

**Description** - The complex processes of conception, materialization and appropriation of the spaces permeate the research proposed and are of interest to the following graduate programs: PPG Economics, PPESP, PPGL, PPGDH, PPGAU and PPGS. The studies on public policies and its evaluations, carried out by means of networks, are also part of the objectives here described. Cultural and symbolic productions carried out in diasporic contexts are highlighted, as well as the appropriation of spaces and territories and the economic issues related to public policies and their evaluations in the network society. In this context, statistics and other measurement processes will be used to build knowledge and map the borders to consolidate transversal networks with portability, interoperability and accessibility.

**Goal 3** - To consolidate a policy of network dissemination of research developed in the programs that participate in the territories of the diversity project in the perspective of internationalization.

**Description** - Researches developed by PPGCI, PPGA and PPGCC are related to the processes of formation of social actors aiming at a better understanding of their role in the construction and dissemination of information and knowledge on the perspective of social inclusion and human rights. Discussions about the training of managers, educators, information professionals and researchers are also important, providing the deepening of theoretical and practical knowledge. The relations about information, management and technology in the network society are also part of this goal. In addition to the aspects of dissemination of information and scientific knowledge, innovative experience of the construction of social clinics will be dealt with as a strategy for understanding and debating about human and social relationships.

Theme	Partner countries-
<b>CAATINGA BIOME, BIODIVERSITY AND SUSTAINABILITY</b>	United Kingdom; Spain; Sweden; Italy; France; Belgium; Australia; Canada; States United of America.

**Justification –**

The Caatinga biome is a unique semi-arid vegetational type, almost exclusively present in the northeast region of Brazil. It is the fourth most common vegetation of the country, covering 800,000 km<sup>2</sup> or 8.6% of the country, and 50% of the Northeast region. Despite of its great extension and economic and social importance, the biome is suffering anthropic action due to high levels of devastation, resulting in loss of native fauna and flora. The choice of the theme "Caatinga biome, biodiversity and sustainability" reflects the need for developing cross-cutting actions that address problems regarding biodiversity and sustainability of this biome in the event of climate change. Another important aspect is that there is a common conductor axis to the participants of the proposal, explicit in its research lines that consider the need to discuss the construction and the application of scientific knowledge to the bioma. It is also of interest to researchers of these programs to discuss bioeconomy, a growing segment of the global economy that is among the priorities of various governmental policies, due to its considerable potential for growth and the various added socio-economic benefits, such as innovative health products, renewable chemicals, increase in agricultural and energy productivity, development of industrial processes with lower environmental impact and the creation of biotechnological basis. Research contributes for the development of solutions for human health, hydric, food and energy security and for mitigation and adaptation to climate change, always considering the preservation and sustainable use of biodiversity of the biome. It is important to emphasize that the programs integrating this proposal have developed solid collaborations with different international institutions, such as the Ohio State University, McGill University, University of Illinois, University of Montreal, University Nottingham, New Jersey Audubon Society, cebas / csic from Spain, University of Florida, Botanical Garden of Kew, London, UK, USDA-ARS, Missouri Botanical Garden, Autonomous University of Mexico (UNAM), Universidad Sevilla, Spain. The research that will be developed seeks to promote the sustainable development of the semiarid and the country.

## GOALS

**Goal 1** - Consolidate and expand the internationalization of programs that focus on researches on sustainable agriculture and food security in the Caatinga biome.

**Description** - This objective is according to the research lines of 5 Graduate Programs, namely: Zootechnics, Agronomy, Animal Science, Food Science and Technology, and Geography. Research will be developed to improve the competitive capacity of semiarid productive farming systems, in order to guarantee a prominent place in the production and availability of safe and high-quality food products. These actions will also promote innovation with new agricultural, agroindustrial and agroforestry products based on the sustainable use of the biome's socio-biodiversity and adequate agriculture inputs for sustainability, based on agroecology and organic production.

**Goal 2** - Consolidate and expand the internationalization of programs that study biodiversity, bioeconomy and the impacts caused by climate changes in the Caatinga biome.

**Description** -



This objective meets the research lines of 5 Graduate Programs, namely: Zootechnics, Development and Environment, Agronomy, Biological Sciences, and Civil and Environmental Engineering. Researches are related to biodiversity and the bioeconomy of the Caatinga biome. This objective will as a consequence result in researches involving the survey, characterization and diversity of species of microorganisms, plants, vertebrates and invertebrates of the biome in terrestrial and aquatic environments. Microbial biodiversity will be investigated through state-of-the-art genomic methods. Bioprospecting projects will be carried out on bioactive compounds, phytotherapeutic preparations, cosmetics and biofungicides. Another field of studies refers to bioeconomy, a growing segment of the world economy and strategic for Brazil. In this sense, biodiversity should not only be considered a natural capital for income generation, but also as a source of environmental services such as protection of soils and watersheds, rainfall distribution, seed dispersal, carbon sequestration and maintenance of the world's climatic conditions.

**Goal 3** - Consolidate and advance the internationalization of programs that investigate sustainable development, including the Caatinga biome

#### **Description –**

This objective os according to research lines of 6 Graduate Programs, namely: Development and Environment, Anthropology, Biological Sciences (specific área: Zoology), Civil and Environmental Engineering, Architecture and Urbanism, and Chemistry. Researches are related to sustainable development, which is understood as the management and conservation of natural resources and the orientation of technological and institutional change about the needs of present and future generations. However, the path to sustainability presents complex associated challenges, encompassing economically viable and socially acceptable arrangements and technologies, enabling development while ensuring environmental integrity. Because it is a complex and challenging problem, it is necessary to act in different lines of action. In this sense, this proposal was built using the transversality and interdisciplinarity of the theme by different graduate programs to face extreme climatic events, which catalyze conditions of biodiversity decrease, desertification processes and losses in human productive processes. Also will be developed processes and techniques of sustainable management of the local riches aiming at the best social balance, and finally, the proposition of solutions for the adaptation of productive models to reduce the intensive use of natural resources and the development and application in clean technologies.

### **GRADUATE PROGRAMS LINKED TO THIS PROPOSAL**

Theme I
<b>HEALTH INTERVENTIONS, TECHNOLOGIES, PRODUCTS, AND PROCESSES</b>

**Graduate Program I – HEALTH DECISION MODELS (PPGMDS)**  
**Capes evaluation (2017 evaluation grade) - 5**

**Justification –** The Graduate Program in Health Decision and Models has an interdisciplinary character. It carries out research to allow the best decision-making strategies to address health problems in an innovative way, using statistics, probability and decision theory and fuzzy logic tools. It maintains collaborations with the University of Toronto (Canada) and University of Texas (United States).

**Graduate Program 2 - MULTICENTER PROGRAM IN PHYSIOLOGY (PMPGCF)  
Capes evaluation (2017 evaluation grade) -4**

**Justification** -The Multicenter Program in Physiology develops projects related to chronic diseases, such as blood pressure disorders, metabolic disorders and diabetes, as well as immunologically-based research on arboviral diseases with potential to lead to chronic damage to patients, such as the persistent symptoms of Chikungunya. Five faculties of the Multicenter Program in Physiology have proven internationalization track-records on cardiometabolic diseases and arbovirus-related immunology studies, with collaboration in Sweden, the United States and the United Kingdom. The CAPES/PVE program funded three of these overseas projects, whereas two others resulted from a direct partnership between the GP researchers and the institution abroad. Particularly, the CAPES/PVE program allowed two “sandwich” doctorate studies abroad and funded the visit of two international research scholars to UFPB, resulting in joint publications.

**Graduate Program 3 - DEVELOPMENT AND TECHNOLOGICAL INNOVATION IN MEDICINES  
(DITM)**

**Capes evaluation (2017 evaluation grade) -4**

**Justification** - The Graduate Program in Development and Technological Innovation in Medicines promotes human resource training at doctoral level in main areas related to medicine development, allowing possibilities to achieve proficiency in new scientific investigation tools, quality management, and technology transfer in topics of relevance to their professional career. It also qualifies and updates professionals of different backgrounds involved in pharmaceutical drug manufacturing, who work or wish to work within the main areas of Production, Development and Innovation (PD&I) of medicines. It empowers human resources in PD&I techniques to foster scientific and technological development. Of note, the GP has recently established a scientific partnership with the University of Nottingham, England, which shall provide mutual collaboration and exchange of information on obtaining new bioproducts.

**Graduate Program 4 - NUTRITION SCIENCES (PPGN)**

**Capes evaluation (2017 evaluation grade) -4**

**Justification** - The Graduate Program in Nutrition Sciences fosters research relates to the development and characterization of nutritional interventions for treatment and/or prevention of cardiometabolic disorders. It has established overseas collaborations (joint publications, exchange of researchers) with American (The State University of New Jersey), Canadian (Memorial University of Newfoundland), and French (Université Lyon I) universities. The GP has currently a “sandwich” doctoral student enrolled in a scientific exchange program (via PDSE) with the University of Lyon, France.

**Graduate Program 5 - LINGUISTICS(PROLING)**

**Capes evaluation (2017 evaluation grade) -6**

**Justification –**

The Graduate Program in Linguistics carries out researches to develop two systems: a) a computerized system for vocal evaluation and diagnosis; b) a portable system for daily vocal monitoring (24h) of dysphonic individuals and/or those at risk of dysphonia. The studies on these two systems are carried out in collaboration with the Graduate Program in Computer Science (UFPB), Graduate Program in Electrical Engineering (IFPB, Brazil), Harvard Medical School (USA) and Boston University (USA). The GP has maintained Faculty exchange missions with Harvard Medical School and Boston University. The development of such systems shall enable more accurate data collection on the determinants of voice disorders and the use of new vocal rehabilitation processes through daily monitoring and biofeedback.

#### **Graduate Program 6 - CHEMISTRY (PPGQ)**

##### **Capes evaluation (2017 evaluation grade) - 5**

**Justification** - The Graduate Program in Chemistry develops theoretical and experimental research related to the development and study of products and processes intended to health applications, such as: rational design and synthesis of molecules for treatment and diagnosis of various diseases and molecular modeling of biomolecules and relevant biochemical processes. The GP has established overseas collaborations (joint publications, exchange of researchers) with the Universities of Illinois and Duke in the USA, France (University of Sorbonne/Université Pierre et Marie Curie), Spain (Autonomous University of Madrid) and Scotland (University of Aberdeen). The GP has maintained continuous faculty/student exchange missions abroad with Universities in France (via PDSE and CAPES/COFECUB programs), Spain (via CAPES-DGPU program), Finland (via bilateral CNPq/AKAA program, University of Turku), and Argentina (via CNPq/CONICET-UNS e CNPq/SECyt PPCP-MERCOSUR programs, Universidad Nacional del Sur).

#### **Graduate Program 7 - BIOTECHNOLOGY – RENORBIO NETWORK**

##### **Capes evaluation (2017 evaluation grade) - 5**

**Justification** - The Graduate Program in Biotechnology of the Northeastern Brazil Network of Biotechnology (Renorbio) within the UFPB, has been carrying out different projects on the development of products and processes applied to human health. More specifically, collaborations have already been established with universities in the United States, France, England and Australia, focused on the prospection of proteins of biotechnological interest; collaborations with universities in the United States to prospect and develop molecules for cancer and cardiovascular applications, as well as partnerships with institutions and universities in the United States, Australia and Sweden to understand mechanisms associated with blood pressure control and sleep dyspnea. Some collaborations are associated with programs such as CAPES/PVE, which allow direct exchange interactions among researchers.

#### **Graduate Program 8 -NURSING (PPGEN)**

##### **Capes evaluation (2017 evaluation grade) - 5**

**Justification** –

The Graduate Program in Nursing develops the areas of Nursing and Health Care, with focus in Nursing and Health Care in Adult and Elderly Care, Care Policies and Practices, and Theoretical-Philosophical Foundations of Nursing and Health Care. In particular, it is worth noting the studies of active theories and methodologies for prevention, treatment and control of chronic diseases in different populations and age groups; development of health technologies, such as the Standardized Terminology System for Nursing (the only GP in Brazil to integrate the Center for International Classification for Nursing Practice); development of software for use in health care, preventive and therapeutic technologies for wound care; light-hard technology for communications and health education; studies on aging and social representations (integrating the International Network of Research on Social Representation of Health), human behavior, palliative care, complementary therapies and evaluation of services.

**Graduate Program 9 - COGNITIVE NEUROSCIENCE AND BEHAVIOR (PPGNeC)**

**Capes evaluation (2017 evaluation grade) - 4**

**Justification** - The Graduate Program in Cognitive Neuroscience and Behavior develops health research in the following themes: 1) Chronic aging diseases, involving Alzheimer's and Parkinson's Neurocognitive Disorders using non-pharmacological intervention methods (Transcranial Direct-Current Stimulation and Cognitive Intervention); 2) Clinical evaluation of the emotion recognition in stroke patients; 3) Relationships among sex hormones, anxiety, and tinnitus in women and their clinical aspects. The GP is involved in joint publications, exchange of researchers with groups abroad and carries out CNPQ- and FAPESQ-funded projects in collaboration with the University of Salamanca and the University of Barcelona in Spain. The GP has also stimulated researcher exchange missions abroad, including a visiting faculty, with the University of Manchester in England, with which there is a current research project.

**Graduate Program 10 – DENTISTRY (PPGO)**

**Capes evaluation (2017 evaluation grade) - 4**

**Justification** - The Graduate Program in Dentistry is focused in actions and investigations to lead to innovate health products and therapeutic processes, with emphasis on the development of biomaterials and the discovery of bioactive molecules for pharmacological or non-pharmacological dentistry treatments and applications. The GP holds collaborations overseas (joint publications, graduate thesis shared supervision and exchange of researchers) with the Massachusetts Institute of Technology, Cambridge, USA, University of Florida, Gainesville, USA, Universities of Manchester (USA) and University of Vienna (Austria), as well as University of Bern (Switzerland). Some research developments within the GP are also funded by private initiative, such as Colgate-Palmolive (USA).

**Graduate Program 11 - MASTER'S PROGRAM IN PROFESSIONAL GERONTOLOGY (PMPG)**

**Capes evaluation (2017 evaluation grade) - 4**

**Justification –**

The Master's Program in Professional Gerontology develops research with an interdisciplinary approach capable of contributing to innovative proposals in the context of elderly people's health, promoting the development of skills, creating innovative technologies for gerontological intervention processes, disseminating creative and innovative knowledge and technologies to encourage scientific research, aiming at science and technology development, in effective cooperation with the Center for Research in Health Sciences and Technologies (CIC&TS) of the University of Evora in Portugal; Centre Interfacultaire de Gerontologie (CIG) of the Université de Genève in Switzerland (SUPSI); National University of Luján-Argentina; School of Nursing of Lisbon - Portugal (ESEL-PT); University of Padova-Italy; Higher Institute of Labor and Enterprise Sciences (ISCTE-Portugal) and the Mercy Hospital and Medical Center - MCCM / CT-USA

### **Graduate Program 12 - NATURAL AND SYNTHETIC BIOACTIVE PRODUCTS (PGNSB)**

**Capes evaluation (2017 evaluation grade) - 6**

**Justification** - The Graduate Program in Natural and Synthetic Bioactive Products carry out researches related to product and process developments using starting materials of vegetal origin to yield quality medicinal products of both pharmacological and toxicological safety for the population that makes use of medicinal plants. It holds overseas collaborations (joint publications, exchange of researchers) with Universities in Sweden, France, United States, Scotland, Pakistan, and Spain. The GP maintains an exchange program (via the "Sandwich" Doctorate Program, PDSE) with universities in Spain and France. Within the scope of Print/CAPES, the GP intends to expand its international activity to consolidate itself as an international program.

### **Graduate Program 13 - PHYSICAL EDUCATION (PPGEF)**

**Capes evaluation (2017 evaluation grade) -4**

**Justification** - The Graduate Program in Physical Education develops research related to population lifestyle, particularly regarding the sedentary aspects, its conditioning factors and impacts on physical and mental health. The research interests also include the evaluation of the physical exercises as a means to aid the treatment of major chronic diseases. The GP has overseas collaborations with the University of Porto (Portugal), University of Oklahoma (United States), University of Newfoundland (Canada), Faculty of Kinesiology and Physical Education (Canada), Université Montpellier (France), and University of Toronto (Canada).

Theme II
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<b>TERRITORIES OF DIVERSITY: EDUCATION, LANGUAGES, MEDIATION, CULTURAL AND PUBLIC POLICIES</b>
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### **Graduate Program I – LITERATURE (PPGL)**

**Capes evaluation (2017 evaluation grade) - 4**

**Justification**

The graduate Program in Literature has a history of more than 40 years of contribution to the training of professionals oriented to the teaching of Languages and Literatures. Currently, it has two areas of concentration (Literature, culture and translation and Literature, theory and criticism) with lines of research directed to research on translation processes in diverse political contexts; indigenous, Afro-Brazilian literatures, as well as those of woman authorship; interdisciplinary studies on literature and education, cinema and theatre, deaf cultures and their literature, and formation of professionals for Brazilian Sign Language courses. The Program has consolidated partnerships with the University of Alberta (Canada), Texas University (USA), among others. Researches developed in these fields show the binding of the program to the theme.

### **Graduate Program 2 – ECONOMICS (PPGE)** **Capes evaluation (2017 evaluation grade) - 5**

**Justification** – The objective of the Economics Program is to train with excellence, professors, researchers and professionals of Economics, developing in-depth studies within the research lines of Economy of Work, Regional Economy and Public Policies and Applied Quantitative Methods that are articulated to the various research instances of this project. This last line of research is directly related to the theme of this project. The program has around 40% of the professors with doctorates or postdoctoral degrees abroad preferably in the United States, France, Belgium and England. The program has an agreement with the University of Tennessee (USA) for student and professors training and joint scientific production since 2011, aiming to increase the research potential of professors and graduate students. Under the agreement, which has a Brazilian coordinator who is a professor at UFPB and the University of Tennessee, two professors have already been sent for postdoctoral fellowship and two professors to hold a doctorate sandwich in the USA.

### **Graduate Program 3 – LINGUISTICS (PROLING)** **Capes evaluation (2017 evaluation grade) - 6**

**Justification** – PROLING is linked to the theme, especially in terms of studies carried out in the following lines of research: a) Applied Linguistics, centered on the study of the relationship between language and education, professor education, and social representations of teaching practices; b) Discourse Analysis, emphasizing the social mediations established by discourse; c) Language Processing and Acquisition, focusing on the study of the development of linguistic competence, its effective use and its role in teacher education. PROLING has implemented activities of internationalization in two main fronts: (I) one geared towards student and professor education by means of participation in sandwich programs for doctorate students and post-doctorate studies for professors; and (II) another (more advanced) one aimed at full international insertion through agreements signed between PROLING and various international institutions, which include: cooperation with foreign institutions; participation in organizations and/or scientific committees of international events held in Brazil; participation in the board of directors and/or committees of scientific associations and international organizations. With regard to item (I), the Program has been granting annually PDSE scholarships to at least 2 (two) doctorate students to study abroad in sandwich programs since 2012; in this same period of time, 5 (five) professors have also concluded post-doctorate studies abroad. In relation to item (II), a number of agreements have been signed, of which we can highlight the research partnerships among PROLING, the University of Minho and the University of Lisbon, the academic partnership with the University of Massachusetts, the UNESCO Chair for Latin America agreement, an inter-institutional agreement signed by UFPB, Unicamp and The University of Johannesburg, among others mentioned in this project.

**Graduate Program 4 – Social Psychology (PPGPS)  
Capes evaluation (2017 evaluation grade) - 5**

**Justification** – The Social Psychology program (PPGPS) is linked to the theme through the following lines of research and projects: a) Social Development Psychology, whose research focuses on the contexts of childhood and adolescence in situations of risk and social vulnerability; b) Social Psychology of Values and Social Inequalities, which is dedicated to the study of normative and socio-political factors that motivate attitudes and social behaviors. History of the main international cooperations of the Program: Universidad Complutense de Madrid (from 2006 to 2017) - programs / covenants: CAPES-DGU, CAPES-PVE, International Mobility Program of the Universidad Complutense de Madrid; University of Valencia (2010-2017). Programs: co-insurance and PDSE; University of Santiago de Compostela (2016-2017) - co-tutelage and double titration.

**Graduate Program 5 – EDUCATION (PPGE)  
Capes evaluation (2017 evaluation grade) - 4**

**Justification** – With 40 years of experience in educational research, the Graduate Program in Education is based on theoretical-methodological research that integrates educational subjects into Brazilian social modernity. It investigates socio-cultural, educational and economic priorities that express social advances based on the principles of organization of global training systems. Nowadays, the program also investigates cultural mediations as training strategies, and is therefore linked to the theme. The Program develops a cooperation project with Spain (University of Valencia), together with the following programs: PPGCI / UFPB, PPGE / UFPB, PPGCJ / UFPB, PPGFIL / UFSC and PPGICH / UFSC. Agreements have already been signed and doctoral students are already developing network surveys. There have already been 3 qualification boards with the participation of professors from the partner institutions and research missions are planned for 2018.

**Graduate Program 6 – ARCHITECTURE AND URBANISM (PPGAU)  
Capes evaluation (2017 evaluation grade) - 4**

**Justification** –

The Graduate Program in Architecture and Urbanism is a program of multi and transdisciplinary character, due to the various interactions produced in the field of Architecture and Urbanism, concentrated on Architecture and City: Process and Product. It is the object (architectural and urban) as part of a complex process of conception, materialization and appropriation in space. We highlight the line of research called "Production and appropriation of the building and the city" - which objective is to study the forms of production of the city and the building, based on several possibilities of analysis and appropriation of its spaces, focusing on the patrimonial, imagery and cultural issues. This is the line that establishes more links to the chosen theme. Main foreign partner universities: 1. Spanish Universities: University of Barcelona, University of Basque Country, University of Leida, Universitat Politecnica de Catalunya: events and Geocritical Magazine of the University of Barcelona; Historical Atlas of Cities. Funded by CAPES / MEC-DGU: Interchange with the Department of Architectural Composition of the Technical School of Architecture of Barcelona / Polytechnic University of Catalonia. This project will have a post-doc scholarship at the UPC of Catalonia. 2. England: Northumbria University will fund the Future of the City Center Project and international research and meetings. 3. Portuguese Universities: University of Lisbon, University of Minho, University of Porto. 4. Colombian and Chilean Universities: Catholic University of Chile, Catholic University of Valparaíso (Chile), Santo Tomas University (Colombia), Universidad Antonio Nariño (Colombia). 5. USA: School of Architecture of the University of Texas at Austin collaborates with a permanent professor in the teaching staff of the Program, in addition to the mobility of fellows (doctoral and postdoctoral) between the Program and UTA, USA; 6. French universities: INSA de Lyon, Rhône-Alpes and INP / Univ. Grenoble Alpes: CAPES BRAFITEC Program - Project 187/15; Progr. PIRD / PIBIC International INSA de Lyon / UFPB and AAI-UFPB student mobility; ARCUS Program - France / Brésil; Coopéra-France / Rhône-Alpes Program; Progr. Enseignant / Chercheur INSA de Lyon; Agreements / Research with INP / Univ. Grenoble Alps. All with teaching and student mobility (graduation and doctoral-sandwich of the Program).

#### **Graduate Program 7 – PUBLIC SECTOR ECONOMICS (PPESP) Capes evaluation (2017 evaluation grade) - 4**

**Justification** – The Professional Master's Degree in Economics of the Public Sector (MESP) has as public target the federal, state and municipal public servants. This is the first professional master's degree in Economics of the Public Sector in Paraíba and in the Northeast region of Brazil. It is linked to the topic through research developed in the line of public policies, linked to the line of research entitled "Public Policies and Development". It has a group of about 40% of professors with doctorates or postdoctoral degrees abroad in 2018, in countries such as the United States, Belgium, France and Portugal. It should be noted that the program was invited by the Society for the Study of Emerging Markets (SSEM) to host an international conference to discuss challenges and opportunities in the global economy for Latin American countries.

#### **Graduate Program 8 – ADMINISTRATION (PPGA) Capes evaluation (2017 evaluation grade) - 4**

**Justification** –



The Graduate Program in Administration has a concentration in Administration and Society and over the years has been developing studies involving education and culture, teaching and learning, consumer education as well as school management. There has already existed a project funded by CNPq (Applied Social Announcement - 2014) in partnership with the CNR and University of Naples (Italy) and a postdoctoral fellowship abroad (University of Valencia - Spain). There are also ongoing actions for management education at the Polytechnic University of Valencia (UPV). Through the lines "Organizations and Society" and "Information and Market" Program is linked to the theme of this project. The research focuses on the strategies of internationalization and technological innovation, leadership and managerial and organizational learning, human behavior and subjectivity, relations between culture, power and society, finance and information technologies, focusing on the use of classical methodological approaches and innovative. In recent years, the Program has sent 5 professors to undertake postdoctoral training in the United States (3), Australia (1) and Spain (1); 4 students did a doctorate sandwich abroad, being 2 in Portugal, 1 in England and 1 in France. Specifically, in Italy and Spain is a research collaboration about school management since 2014 involving the UFPB, the CNR and the University of Naples Federico II. Two work missions were carried out, one research project funded by CNPq, two master's dissertations and one doctoral thesis in progress. In Spain, with the University of Valencia and the Polytechnic University of Valencia there has been a work assignment, a postdoctoral professor, the elaboration of articles in conjunction with the Spanish partners, as well as the offer of a course graduate studies by UFPB professor at the University of Valencia and at the Polytechnic University of Valencia.

**Graduate Program 9 – SCIENCES OF RELIGIONS (PPGCR)  
Capes evaluation (2017 evaluation grade) - 4**

**Justification –** The Graduate Program in Science of Religions is an multi and transdisciplinary program. The lines of research dialogue with the theme proposed here, especially the Religion, Culture and Symbolic Systems and Education and Religion lines. In addition, the various existing religious systems and the various forms of spirituality integrate the various cultures and processes of mediation in religious languages. Currently there is a “sandwich” doctorate in the final phase of the Complutense University of Madrid; a second “sandwich” doctorate at the University of Iceland, in progress; a virtual work group called Afro-American religions, transnationalization, stigmatization, identities, rituals approved by the Association of Social Scientists of the Mercosur Religion (ASCRM) that brings together several researchers from Brazil and abroad.

**Graduate Program 10 – INFORMATICS (PPGI)  
Capes evaluation (2017 evaluation grade) - 4**

**Justification –**

In this Program, the research line "Signals, digital systems and graphics" involves areas such as: Computer Networks, Data Banks, Signal and Image Processing, Computer Architecture, Digital Television Applications, Software Engineering, Security, Optimization, Computer Graphics, among others. This group communicates with the language proposal inserted in the work group, how to produce knowledge and develop technologies emphasizing its incorporation in other areas. This is a highly interdisciplinary field with academic production strongly integrated with the 3 themes of the UFPB project due to the strong integration of the IT tools with the other areas, such as Health, Environment Preservation and Language. There is an award-winning patent for software generated for Human Rights. The program integrates the Digital Video Applications Laboratory (LAVID), which develops research projects in hardware and software focused on Digital Video, Computer Networks, Digital and Interactive TV and Middleware. Currently LAVID is a national and international reference in technology development for Digital TV and counts on the collaboration of more than 40 researchers, among Ph.D., masters and undergraduates. The developed researches are carried out in partnership with other universities, research institutes and companies of private initiative. Since it is an active laboratory in the development area, it receives funding from partner institutions such as the National Research and Education Network (RNP), Funding of Studies and Projects (FINEP) and National Council for Scientific and Technological Development (CNPq).

### **Graduate Program I1 – LINGUISTIC AND TEACHING (MPLE)**

**Capes evaluation (2017 evaluation grade) - 4**

**Justification** - The participation of the Professional Master's Degree in Linguistics and Teaching (PMDL) is justified by the field of action in teaching and formation in the area of linguistic education. The studies on literacy and their several possibilities via TIC, enable connections with the subject matter. The pair language/languages is the macro object in which lies the main concerns of the researches of the program. The research lines "Structures and Dynamics of the Language in Activities of Linguistic Learning" and "Linguistic Theory and Linguistic and Teaching Methods" are linked to this project through their researches. In 2015.2, after a meeting at the Simelp event of the Portuguese language in Lecce, Italy, Professor Denilson Matos and professor Otilia Encarnação Sousa held a meeting at the University of Lisbon, planning a partnership between the MPLE and the University of Lisbon. In 2016, the mentioned Brazilian professor of the UFPB/CCHLA/DLCV, staff professor of the PROLING program and MPLE took part with other members of the Group of Base Linguistic Theories – BLT at the 8th Meeting of Portuguese Language / 1st Thematic Meeting of the APL/ESE Formation for promotion of Competence in the Native Language. In the two weeks following the event, the professor and members of the TLB, participated in other events at the University of Lisbon and at the University of Setubal.

### **Graduate Program I2 – INFORMATION SCIENCE (PPGCI)**

**Capes evaluation (2017 evaluation grade) - 4**

**Justification –**

The Graduate Program in Information Science works through the Information, Knowledge and Society area and is linked to this project through its three lines of research, in particular the Information, Memory and Society lines that work with elements related to issues of cultural diversity, mediation, representation, memory and languages, technologies and public policy management processes, from the informational perspective. Special highlight to the investigations on Information Technologies in Communication Networks. Internationalization Actions: I Involved Researchers: Dr. Ann Bishop - University of Illinois (United States). Dr. Sandra Braman - University of Texas Dr. Marynice Autran - University of Porto. 2 PDSE: i. Fabiana da Silva França - Universitat Pompeu Fabra (Spain) - Co-adviser: Dr. Rosa Estopá Bagot. ii. Rosilene Agapito da Silva Llarena - University of Zaragoza (Spain) - Co-adviser: Dr. Miguel Angel Esteban Navarro. iii. Juliane Teixeira e Silva - University of Murcia (Spain) - Co-Advisor: Dr. Isidoro Gil Leiva. iv. Edilene Maria da Silva - University of Wisconsin Milwaukee (United States) - Co-Advisor: Dr. Sandra Braman. v. Adriana Carla Silva - University of Tennessee (United States) - Co-Advisor: Dr. Carol Tenopir. vi. Thais Catoira Pereira - University of Coimbra (Portugal) - Co-Advisor: Dr. Maria da Conceição Lopes. vii. Mariza de Oliveira Pinheiro - University of Coimbra (Portugal) - Co-Advisor: Dr. Maria da Graça de Melo Simões. 3 Partnerships / Agreements a. University of Minho - Dr. Ana Alice Baptista b. University of Porto - Dr. Armando Malheiro c. University of Tennessee (United States) - Dr. Carol Tenopir d. University of Coimbra (Portugal) - Dr. Maria da Conceição Lopes. and. University Pompeu Fabra - Dr. Rosa Bagot Estopá f. Interdisciplinary Network of Studies on Violence (RIEV) Integrated Research Project: Describing Memories of Perpetrators of Human Rights Violations in Military Regime in Brazil. University of Valencia.

### **Graduate Program 13 – HUMAN RIGHTS, CITIZENSHIP AND PUBLIC POLICY (PPGDH) Capes evaluation (2017 evaluation grade) - 4**

**Justification** - The Graduate Program Human Rights, Citizenship and Public Policy is structured according to two inseparable pillars: the interdisciplinary character of the formation and the articulation between teaching, research and extension. The three lines of research condense investigations related to the theme of this project. Namely: Line 1 - Human Rights and Democracy: Theory, History and Politics, Line 2 - Public Policies in Human Rights Education, Line 3 - Territories, Human Rights and Diversity. Lines 2 and 3, amalgamate to this project in a productive way. The internationalization actions of the Program cover the realization of ten editions of the International Seminars of DH of the UFPB with courses and joint publications with the international partners. All this is in partnership with the Department of Theory and Storia del Diritto, University of Florence, through the project ALFA - HUMAN RIGHTS FACING SECURITY. Between 2012 and 2016, PPG signed an agreement with the Lelio Foundation and Lisle Basso in Rome, sponsored by the Amnesty Commission of the Ministry of Justice, to digitize the files of the Russel II Court, publishing 4 international books. The Program integrates the Latin American Network of Education in HD. Comprises the "International PhD Network in HR, Society and Multilevel Governance" with the Universities of Western Sidney University (Australia), Zagreb University (Croatia), Panteion University (Greece), University of Nicosia (Cyprus). Permanent Professor Timothy Ireland (English) is the coordinator of the UNESCO Chair in Youth and Adult Education

### **Graduate Program 13 – LAW (PPGCJ) Capes evaluation (2017 evaluation grade) - 4**

**Justification** –

The Graduate Program in Legal Sciences began in 1996 with an area of concentration in Economic Law. In 2005, with the approval of the Master's Degree in Human Rights proposal by the Ford Foundation Financing Memorandum (UFPB Agreement, Ford Foundation and Carlos Chagas Foundation), the second Human Rights concentration area was implanted, an area specially linked to the theme. In 2010, the Ph.D. was opened with the following lines of research: a) Social Rights, Economic Regulation and Development; b) Social Inclusion, Protection and Defense of Human Rights; c) Theory and History of Human Rights. All of these have consolidated internationalization actions. The Program has 84% of its permanent professors staff with masters, doctorates or postdocs abroad, in Universities in the USA, Belgium, France, UK, Spain, Mexico, Portugal, Germany and Italy. The partnership with the University of Florence, Italy, generated the creation of research line n. 3 of the doctorate. All the students in this line receive double degrees, joint final seats (UFPB and UNIFI) and carry out part of the studies in Florence. There is a permanent foreign lecturer from the University of Ruhr-Universität Bochum - Germany, member of the International Law Association (ILA) and permanent collaborator of *Humanitäres Völkerrecht-Informationsschriften / Journal of International Law of Peace and Armed Conflict*. There are 4 permanent faculty members of the ILA, one of whom, Marcílio Franca, was the president of the Latin American branch of the ILA, in the last 3 years. The Program has 3 foreign visiting professors from the Universities of Florence, Seville and Mexico National and a PNPD from the Université de Namur / Belgium. The Program Participated of two ALFA projects, with Italy, Spain, France and countries of Latin America. He is a member of the Latin American Consortium of HR. Developed research funded by Capes with Un. Eduardo Mondlane, Moçambique and the Open Society Foundation with the Lusíada de Angola, being responsible for the creation of the first master's degree in HR of that country. It should also be noted that the Laboratory of Interconstitutionality (LABIRINT) of the Program translated, to Portuguese, in partnership with the University of Minho, the unprecedented set of rules of Soft Law that regulates the international market of Art.

**Graduate Program I4 – MUSIC (PPGM)**  
**Capes evaluation (2017 evaluation grade) - 4**

**Justification -**

The Graduate Program in Music has produced studies with national and international impact, related to music as a human expression linked to the various dimensions of culture. It has contributed to the advancement of knowledge about creation, interpretation and musical aesthetics; the insertion of music in society; of the complex network of contexts and educational processes related to this phenomenon; of the relations of music with different fields of knowledge. In this sense, research on educational contexts and mediation strategies provided by music, in contexts of subalternity and exploration, are directly linked to the theme of the project. It is linked to the present project, mainly by the researches developed in the line of research Music-Educative Processes and Practices on of the Area of concentration: Music Education. The Program develops research on the specificities of music education in Brazil and in other Latin American countries and the United States, based on the processes of coloniality and exclusion that have marked the trajectory of the area in the continents.

Partnerships: Örebro University (Sweden) - agreement (2017), participation of music professors at the II International Chamber Music Festival of PPGM (2018). Project of Professor Felipe Avellar de Aquino; Georgia University (USA) - collaboration in several recitals and in the 1st Chamber Music Festival of PPGM (2017). Project of Professor Felipe Avellar de Aquino; University of Texas (USA) - agreement with the Research Group on Ethnomusicology - Prof. Luis Ricardo Queiroz - Post-doc at UTA (USA): Prof. Luis Ricardo Queiroz (to start in August); IRCAM (Paris, France) - agreement with research group MUS3 - Prof. Didier Jean Georges Guigue; University of California (USA) - chair with fullbright scholarship - Prof. Hermes Cuzzuol Alvarenga (to start in August 2018); University of Aveiro (Portugal) - sandwich scholarship (6 months - beginning in August 2018): PhD student in musicology: Bibiana Maria Bragagnolo; University of Toronto (Canada) - sandwich scholarship (6 months - beginning in August 2018): doctoral student in ethnomusicology: Daniel Vilela.

#### **Graduate Program 15 – SOCIOLOGY (PPGS) Capes evaluation (2017 evaluation grade) - 4**

**Justification** - The Graduate Program in Sociology is linked to this project through researches developed in the following lines: a) Cultures and Sociabilities, which addresses issues related to contemporary cultural practices aimed at youth, diversity, memory, violence and the media; b) Social Markers of Difference, which deals with Racial Relations, Religion and Childhood and c) Gender Theory and Studies of Sexuality.

International partnership, with participation of professors in programs of Southern Oregon University. Forms by which the members of the Programs have been increasing their opportunities of international exchanges are: 1) Participation of Prof. Roberto Vêras (Line Work, Social Policies and Development) in the following networks / international groups / programs: - postdoctoral internship at the University of California Los Angeles, UCLA, United States, Institute for Research on Labor and Employment - IRLE, with funding from CAPES between the end of 2015 and the end of 2016. - coordination of a cooperation agreement with the Graduate Program in Intercultural Studies of the University of Aguascalientes, Mexico, signed in 2013, involving joint research (labor relations in clothing industry in Brazil and Mexico), co-orientation, participation in banking, reciprocal visits of students and researchers, joint participation in international events and publications. - Collaboration with the Ph.D. Program of Sociology of Work of the University of Coimbra, Portugal. - Participation in the construction of the LATWORK network, involving the University of Alicante (Spain) and the Center for Social Studies of the University of Coimbra (Portugal), the European Work and Employment Research Center - University of Manchester (UK). the National University of Rosario (Argentina) or Universidad Viña del Mar (Chile) or UNICAMP - joint project construction with Gerald Rodgers (since 2008, Visiting Professor, Institute for Human Development, New Delhi), Janine Rodgers (Visiting Research Fellow, Institute for Human Development, New Delhi, since 2008.) and Alexandre Barbosa (USP) on regional development and labor relations. - Member of the Board of Directors of the Latin American Association of Sociology of Labor (ALAST).

#### **Graduate Program 16 – ACCOUNTING SCIENCES (PPGCC)**

**Capes evaluation (2017 evaluation grade) - 4**

**Justification** - The Graduate Program in Accounting Sciences (PPGCC), with its origin in the Multi-institutional and Interregional Program of Graduate Studies in Accounting Sciences UFPB / UnB / UFRN, works in the area of accounting information for external, internal users and the public sector. The program develops research on discursive strategies for the training of professors in the accounting area to work in internationalized markets, an area directly linked to the project theme. The following lines of research are linked to this project: 01: Accounting Information for Internal Users, whose purpose is to develop studies on measurement systems, information and support to the process of planning, control and decision making of organizations; Line 02: Accounting Information for External Users, which aims to identify, evaluate and propose solutions based on conceptual and/or empirical aspects related to the identification, measurement and disclosure of accounting information; and Line 03: Accounting Information for the Public Sector, which develops studies on Accounting Applied to the Public Sector. The main international partnership of the Program is with the University of Queensland (UQ), Australia, started in 2015, with the postdoctoral training of Professor Márcio André Veras Machado, under the supervision of Professor Robert Faff, aims to contribute to the insertion of the academic production of the Program at the international level. The partnership has already resulted in joint publication, participation of doctoral students and confirmed the visit of Professor Robert Faff, from June 7 to 12, 2018, for the participation of Research Forum.

Theme III
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<b>CAATINGA BIOME, BIODIVERSITY AND SUSTAINABILITY</b>
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**Graduate Program I – CHEMISTRY (PPGQ)****Capes evaluation (2017 evaluation grade) - 5**

**Justification** – The PPGQ/UFPB hold international collaboration regarding the environmental restoration involving projects on atmospheric de-pollution (University of Aberdeen - UK), aquatic de-pollution (Université de Rennes 1 (FR) / Université Pierre et Marie Curie - FR) and monitoring of emerging pollutants (Universidad Nacional del Sur – AR). There are 2 (two) projects CAPES(BR)/COFECUB(FR), 5 (five) sandwich PhD scholars, 1 (one) PhD dual-degree, two pos-doc scholars from PPGQ and 15 (fifteen) published papers in international journals

**Graduate Program 2 – DEVELOPMENT AND ENVIRONMENT (PRODEMA)****Capes evaluation (2017 evaluation grade) - 4**

**Justification** –

PRODEMA has prioritized actions focused on internationalization through tight partnerships with institutions in France, Bolivia, USA, Mexico, Portugal and Spain. Over the last few years, it has fostered the exchange of students and their professors / researchers, reverting direct benefits to the quality of research and development actions. Professors and researchers from these international institutions have carried out internships here in the program, as well as collaborating with and teaching courses both in person and through the web conference system. The program also develops interdisciplinary research in development, sustainability, territory management and socio-environmental. The partnerships include: Missouri Botanical Garden - USA with Dr Rainer Wollinger Bussmann, articles publication, co-orientation of PhD student and doctorate sandwich; Save Knowledge Institute in Laz Paz - Bolivia with Dra Narel Paniagua-Zambrana and Dr Rainer Willi Bussmann; Universidad Autonoma de México UNAM, with Dr Alejandro Casas - actions: publication of scientific articles and book chapters, co-orientation of PhD students and research projects. Colégio de Postgraduados (COLPOS) in Texcoco in Mexico with Dr Oliverio Hernández Romero. In 2017, ProdeMA held a CAPES/Escola de Altos Estudos sponsorship for Dr. Alejandro Ferrez Rincón of UNAL in Colombia, who participated in defense of master's degree of the student Laura Lozada of ProdeMA. Dra Maria Elena Martinez Torres of the Center for Research of Higher Studies in Social Anthropology of Mexico also came in 2017 to ProdeMA in the scope of the Capes/Escola de Altos Estudos program.

#### **Graduate Program 4 – GEOGRAPHY**

##### **Capes evaluation (2017 evaluation grade) - 4**

**Justification** – PPGG have been developing international projects that involve the environmental planning and the territorial planning with the support of geotechnologies. In this research, researchers are involved in the areas of biogeography, geomorphology, hydrology, geology, pedology, climatology, soil use, geoprocessing, remote sensing, among others. Some researches have been developed in partnership with groups from Spain, Portugal, France, Mexico, Argentina, Colombia, Australia and England. The PPGG is part of the Ibero-American Network for Territorial Observation, composed of research groups from Argentina, Colombia, Cuba, Mexico, Venezuela, Spain and Portugal. This network has as main objective to study initiatives of planning and planning of territorial development, as well as work in the perspective of territorial observation and governance.

#### **Graduate Program 5 – ZOOTECHNICS**

##### **Capes evaluation (2017 evaluation grade) - 5**

**Justification** – Graduate Program in Zootechnics (PPGZ/PDIZ) has prioritized internationalization by means of solid partnership with institutions in the United States, Mexico, Portugal, Spain and Italy. In the last years, international missions have been promoted and encouraged for both students and researchers, resulting in immediate and direct benefits on research quality and development actions. Currently, all permanent professors of PPGZ have a CNPq productivity scholarship. PPGZ/PDIZ: USA: Ohio State University, McGill University, University of Illinois, New Jersey Audubon Society, United States Department of Agriculture - Agricultural Research Service (USDA-ARS). Canada: Université de Montreal. United Kingdom: University of Nottingham

#### **Graduate Program 6 – AGRONOMY (PPGA)**

##### **Capes evaluation (2017 evaluation grade) - 5**

**Justification** –

For more than a decade, PPGAgro has prioritized actions towards its internationalization through partnerships with institutions in the USA, Mexico, Portugal, Spain, Canada, United Kingdom. The Program also has a tight link to the theme, since students and researchers of the PPGAgro have developed research on the Caatinga biome since 1979, in topics related to its area of concentration in Tropical Agriculture and its fields of research: Biotechnology, Breeding and Protection of Cultivated Plants; Science and Technology of Culture Production; Seed Science and Technology, Post-Harvest Biochemistry and Physiology; and Ecology, Management and Conservation of Natural Resources. More than 400 dissertations and 200 PhD theses related to this subject have already been produced. It currently has 174 students enrolled, 70% of whom are PhDs and about 80% of the permanent professors are PK scholarship holders from CNPq. Australia: University of Melbourne Spain: Center for Edafoclimatology and Biotechnology of Segura / CSIC. USA: University of Florida, Michigan State University, University of Texas, Plant Bioactive & Bioprocessing Research Laboratory. Mexico: Universidad Nacional Autonoma del Mexico (UNAM), Universidad del Chapingo Portugal: University of Coimbra, University of Lisbon Polytechnic, Universidad Tras os Monte, School of Biotechnology of the Portuguese Catholic University. United Kingdom: Kew Gardens.

**Graduate Program 7– ANTHROPOLOGY (PPGAn)**  
**Capes evaluation (2017 evaluation grade) - 4**

**Justification** - The PPGA contemplates 2 lines of research that involve development and sustainability: 1. Territory, Identity and Environment; and 2. Social Policies and Development. These lines shelter theoretical questions and ethnographic research with traditional populations, notably problematizing: socio-environmental impacts on territories and local populations; models of development and public and social policies, among others. PPGA and PRODEMA (UFPB and UFC) hosted in 2017 the by Capes sponsored School of Higher Studies Society (EAE): "Society of Culture and Environment: Faces of Sustainable Development" that brought two professors from Mexico who discussed the theme in partnership with the College of Graduates at the UFPB (AAI) and the partnerships with the Center for Research and Studies in Social Anthropology (Ciesas), as well as joint publications and participation in international events in July. 2018. Partnerships with the University of Porto and with UNSAM-Argentina are in progress. In addition, PRODEMA and PPGA are processing in the PRPG / UFPB process of co-insurance with the Universidad Autónoma de Madrid. thematic area of the project.

**Graduate Program 8 – ANIMAL SCIENCE (PPGCaN)**  
**Capes evaluation (2017 evaluation grade) - 4**

**Justification** - The PPGCaN professors have a solid international cooperation, such as the development of joint projects; publication of articles; missions and postdoctoral studies abroad; coordination in the organization of international events. Recently, APCN was sent to create the PhD, which will expand the perspectives of inter-institutional engagement.

**Graduate Program 9 – BIOLOGY (PPGB)**  
**Capes evaluation (2017 evaluation grade) - 5**

**Justification –**



The Graduate Program in Biological Sciences, Area of Concentration in Zoology (PPGCB) was created in 1980 at master's level and in 1999 expanded to doctoral level, with the objective of training researchers and professors specialized in Zoology. The main focuses of the Program are Systematic Zoology and Animal Ecology, mainly of groups representing the fauna and ecosystems of northeastern Brazil. Four lines of research are currently active: Animal Behavior and Genetics of Populations; Conservation and Biodiversity; Ecology of Ecosystems and Communities; Systematics and Phylogeny, all of which are directly related to the theme proposed here. Research in the lines of the Program is essential for the knowledge of the environment and evaluation of its health status, constituting a fundamental tool in the process of environmental management. PPGCB: Germany: Landwirtschaftliche Fakultät, Inst Landwirtschaftliche Zoologie Und Bienenkunde, University of Freiburg, Argentina: University of Buenos Aires, Belgium: Université Libre de Bruxelles (Belgium), Univ. Antwerpen, USA: American Museum of Natural History of New York, University of Oklahoma, Colorado State University, University of Connecticut, University of Texas at Austin, George Washington University, Louisiana Tech University, Auburn University at Montgomery France: Université Toulouse III Paul Sabatier Mexico : National University of Mexico, Portugal: University of Coimbra, Austria: University of Vienna.

**Graduate Program 10 – CIVIL AND ENVIRONMENTAL ENGINEERING (PPGECAM)**  
**Capes evaluation (2017 evaluation grade) - 5**

**Justification** - PPGECAM has been putting itself ahead in the national and international scenario in the accomplishment of studies on environmental modeling in scale of basins involving analyzes of droughts, production of sediments, space-time analysis of flows, water balance, evapotranspiration and soil temperature in partnership with various institutions in Portugal, the United Kingdom, France, Germany, Georgia, Iran, the United States, Japan, India and Malaysia, supported by international agreements and exchanges. It also develops research related to sustainable development and environmental impacts with respect to the interface of these issues with the built environment; consumption of materials and energy, emission of pollutants and waste and environmental quality. It presents partnerships (joint publications, exchange of researchers) with universities in Exeter, Edinburgh, Leeds, Sheffield and Portsmouth in the UK, Portugal (University of Minho and Porto) and the United States (Cornell University)

**Graduate Program 11 – ARCHITECTURE AND URBANISM (PPGAU)**  
**Capes evaluation (2017 evaluation grade) - 4**

**Justification** – In the Architecture and Urbanism Program (PPGAU) are developed researches that involves environmental planning and territorial planning with the support of geotechnologies. In this research, researchers are involved in the areas of biogeography, geomorphology, hydrology, geology, pedology, climatology, soil use, geoprocessing, remote sensing, among others. Some researches have been developed in partnership with groups from Spain, Portugal, France, Mexico, Argentina, Colombia, Australia and England. The Program is part of the Ibero-American Network for Territorial Observation, composed of research groups from Argentina, Colombia, Cuba, Mexico, Venezuela, Spain and Portugal. This network has as main objective to study initiatives of ordination and planning of territorial development, as well as work in the perspective of territorial observation and governance. PPGAU partner's, Spain: University of Barcelona, University of the Basque Country (Bilbao), University of Leida, Polytechnic University of Catalonia. United Kingdom: Northumbria University, Northumbria University Australia: University of Newcastle Portugal: University of Lisbon, University of Porto Colombia: Santo Tomas University, Antonio Nariño University.

**Graduate Program 12 – SCIENCE AND FOOD TECHNOLOGY (PPGCTA)  
Capes evaluation (2017 evaluation grade) - 4**

**Justification** – PPGG develops researches that involve the environmental planning and the territorial planning with the support of geotechnologies. In this research, researchers are involved in the areas of biogeography, geomorphology, hydrology, geology, pedology, climatology, soil use, geoprocessing, remote sensing, among others. Some researches have been developed in partnership with groups from Spain, Portugal, France, Mexico, Argentina, Colombia, Australia and England. The PPGG is part of the Ibero-American Network for Territorial Observation, composed of research groups from Argentina, Colombia, Cuba, Mexico, Venezuela, Spain and Portugal. This network has as main objective to study initiatives of planning and planning of territorial development, as well as working in the perspective of territorial observation and governance. PPGAU Spain: University of Barcelona, University of the Basque Country (Bilbao), University of Leida, Polytechnic University of Catalonia. United Kingdom: Northumbria University, Northumbria University Australia: University of Newcastle Portugal: University of Lisbon, University of Porto Colombia: Santo Tomas University, Antonio Nariño University.

**Activities Linked to the Themes**

**Theme I - HEALTH INTERVENTIONS, TECHNOLOGIES, PRODUCTS, AND PROCESSES.**

**Goal I** - To consolidate and expand UFPB internationalization on prospection, improvement, and design of technologic products and processes of Health interest.

**Activity I** - Internationalization of participant GPs on prospection, improvement, and design of technologic products and processes of Health interests via Visiting Professorship Abroad.

**Start date – 08/2018**

**End date – 07/2022**

**Description** – Within this action, activities related to Visiting Professorship Abroad in the United States will be of research interest to and carried out by the GPs in Chemistry and Biotechnology (Northeastern Brazil Network on Biotechnology). In this context, the collaborations should foster, for example: (I) consolidation of collaborations abroad to contribute to the development of Quantum Scenery, a molecular modelling software developed at UFPB for quantum-mechanical calculation on biomolecules to be implemented in Multi-CPU/Multi-GPU heterogeneous clusters, including: (i) Programming of main parallel code (ii) Implementation of parallel sparse linear algebra libraries; (iii) programming of linear scaling algorithms, low-cost quantum chemistry methods, implicit solvent models, treatment of noncovalent interactions, vibrational and thermochemical properties; (iv) Building a module to calculate molecular quantum-chemical descriptors (global and local) and analyse them by using their numerical and graphical details (v) Building interfaces between the Quantum Scenery software and docking, molecular dynamic, Monte Carlo, and GUI software (such as, DockThor, AutoDock Vina, Gromacs, Dice, NAMD, Chimera, VMD, JMol, Avogadro, Gabedit); (ii) consolidation of collaborations abroad for development of new products and processes for cardiac regeneration, including, for example, in vitro experiments as a rapid activity screening for stimulation of isolated cardiomyocytes proliferation, as well as in vivo experiments, based on the induction of cardiac lesions and animal treatment with molecules/products/test procedures to verify cardiomyocyte proliferation and cardiac regeneration. These experimental protocols shall rely on cell cultures, cellular and molecular biology techniques, such as confocal microscopy and real-time PCR, and histological and echocardiographic analyses

**Activity I - Indicators**

Type	Indicator	Current situation	Goal for the 2nd year	Final goal
Quantitative	Patent filing number of products, processes, techniques and software registrations among others	2	3	6
Quantitative	Number of technical visits of professors and students to foreign institutions	4	3	8
Quantitative	Number of foreign students enrolled in Graduate Programs	0	0	1
Quantitative	Number of foreign professors with an academic link, as a visiting, permanent or collaborating professor, to the Graduate Programs	0	1	2
Quantitative	Number of Scholarships implemented, quantified in number of months	24	18	18
Quantitative	Number of titles of bibliographic material of each Graduate Programs in another language	1	2	3
Quantitative	Number of visits of foreign students to the Graduate Programs	1	1	2
Quantitative	Number of professors and administrative staff trained to teach in other languages	15	15	16
Quantitative	Number of calls that the Graduate program presents to support the actions of internalization	1	2	2
Quantitative	Number of existing agreements with international institutions	0	2	3
Quantitative	Number of international articles with foreign co-authorship	32	17	44
Quantitative	Number of articles in international journals qualified in the strata A1, A2 e B1	50	27	60
Quantitative	Number of visits of foreign professors to the Graduate Program	3	3	4
Quantitative	Number of calls that Graduate Program in Chemistry participates internationally	4	2	4
Quantitative	Capturing resources in calls for internationalization actions	4	6	6

**Activity 2** - Strengthening of the internationalization of participant GPs on prospection, improvement, and design of technologic products and processes of Health interests via Doctoral "Sandwich" Scholarships Abroad.

**Start date – 08/2018**

**End date – 07/2022**

**Description** – Within this action, activities related to Doctoral “Sandwich” Scholarship Abroad in the United Kingdom, United States or Sweden will be of research interest to and carried out by the GPs in Natural and Synthetic Bioactive Products, Development and Technological Innovation in Medicines, and Chemistry. In this context, student training activities abroad in technics and procedures are expected, which may contribute to GP consolidation a variety of themes, such as: (i) the development of pharmacological products and processes through analytical and productive technologies, accompanied by biological/pharmacological evaluation in pre-clinical and clinical trials; (2) the development of technologies for production and analysis of synthetic compounds or natural source isolates and evaluation of their biological, pharmacological and toxicological activity in vivo and in vitro experimental protocols; (3) the chemical characterization of medicinal plants to yield products of health interest, including botanical and plant ecophysiological studies, phytochemical characterization, and standardization of medicinal plant-based drugs and production of dry or liquid extracts chemically standardized to use as phytotherapeutic feedstock; (4) the development of low-cost and high-throughput point-of-care analytical devices for diagnostics.

## Activity 2 - Indicators

Type	Indicator	Current situation	Goal for the 2nd year	Final goal
Quantitative	Number of foreign calls that the program participate in	1	4	4
Quantitative	Patent filing number of products, processes, techniques and software registrations among others	25	16	35
Quantitative	Number of technical visits of foreign professors at the program	4	8	8
Quantitative	Number of foreign professors with an academic link, as visiting professor, permanent or collaborator		2	2
Quantitative	Number of teaching and administrative staff able to teach classes in other languages	11	11	11
Quantitative	Number of grants implemented, quantified in number of months	151	142	151
Quantitative	Number of existing agreements with foreign institutions	2	2	3
Quantitative	Number of technical visits by professors and students to foreign institutions	3	6	6
Quantitative	Number of foreign students enrolled in the Graduate Programs	12	13	24
Quantitative	Number of titles of bibliographic material of each course in other languages	0	2	2
Quantitative	Number of articles in international journals qualified in strata A1, A2 and B1	211	110	250
Quantitative	Number of visits of foreign students to PPGs	2	5	5
Quantitative	Number of international articles with foreign co-authorship	12	13	24
Quantitative	Number of foreign students enrolled in the Graduate Program	2	4	4
Quantitative	Number of calls that the Graduate Program presents for support for internationalization actions	0	0	4
Quantitative	Fundraising in calls for actions internationalization	0	0	2

**Goal 2** - To consolidate and expand UFPB internationalization on the studies of biological, psychological, social, and environmental factors and processes related to population health.

**Activity 1** – Internationalization of participant GPs on the studies of biological, psychological, social, and environmental factors and processes related to population health via Visiting Professorship Abroad.

**Start date** – 08/2018

**End date** – 07/2022

### Description

Within this action, activities related to Visiting Professorship Abroad in the United States and United Kingdom will be of research interest to and carried out by the GPs in Linguistics, Physical Education and Master's Program in Professional Gerontology. In this context, consolidation of collaborations abroad should foster, for example: (1) studies on public policies for the elderly, in the context of health practices, management and use of innovative technological tools to contribute to changes in elderly people's health work in Brazil and abroad, as well as research on violence against the elderly of different age groups; (2) quantification of levels of physical activity in several populations through multicenter studies in an attempt to associate these levels of physical activity with the epidemiology of chronic diseases; (3) selection of factors conditioning population choices between active or sedentary lifestyles to disclose the best strategies to stimulate the population to adopt a physically active lifestyle; (4) investigation of the relationships between physical activity and health in the studied populations, verifying possible differences to finding early markers of health damage caused by the sedentary lifestyle, and factors that condition people toward adopting an active or sedentary lifestyle; (5) investigation of the relationship between acoustic-articular manifestations of speech production and perception and its connections with social, linguistic, stylistic factors and with voice and speech disorders.

### **Activity I- Indicators**

Type	Indicator	Current situation	Goal for the 2nd year	Final goal
Quantitative	Number of titles of bibliographic material of each Graduate program in other languages	3	4	5
Quantitative	Number of technical visits of professors and students in foreign institutions	24	13	18
Quantitative	Number of articles in international journals qualified in strata A1, A2 and B1	230	118	286
Quantitative	Patent filing number of products, processes, techniques and software registrations among others	1	4	8
Quantitative	Number of international articles with foreign co-authorship	17	25	36
Quantitative	Number of visits of foreign professors to the Graduate Program	11	9	12
Quantitative	Number of visits of foreign students to the Graduate Programs	3	5	6
Quantitative	Number of foreign students enrolled in the Graduate Programs	2	3	4
Quantitative	Number of foreign professors with an academic link, as a visiting, permanent or collaborating professor, to the Graduate Programs	8	7	11
Quantitative	Number of calls that the Graduate Programs participate internationally	2	5	6
Quantitative	Number of notices that the Graduate Program presents to support the internationalization actions	3	6	8
Quantitative	Number of professors and administrative staff trained to teach in other languages	4	14	19
Quantitative	Number of scholarships implemented, quantified in number of months	36	50	62
Quantitative	Capturing resources in calls for internationalization actions	3	6	7
Quantitative	Number of existing agreements with international institutions	9	16	17

**Activity 2** – Strengthening of the internationalization of participant GPs on the studies of biological, psychological, social, and environmental factors and processes related to population health via Doctoral “Sandwich” Scholarships Abroad

**Start date – 08/2018**

**End date – 07/2022**

**Description -**

Within this action, activities related to Doctoral “Sandwich” Scholarship Abroad in the United States and Canada will be of research interest to and carried out by the GPs in Linguistics and Health Decision Models. In this context, student training activities abroad in technics and procedures are expected, which may contribute to GP consolidation a variety of themes, such as: (1) investigation of Public Health case studies and situations, in which there is a need to decision-making supported by qualitative or quantitative information and/or data, using models for the management, analysis and decision making based on information from Public Health processes; (2) investigation of information processing mechanisms in several areas of Health, based the use of mathematical, statistical, and computationally intelligent models to support decision-making; (3) investigation of the relationship between acoustic-articular manifestations of speech production and perception and its connections with social, linguistic, stylistic factors and with voice and speech disorders.

### Activity 2 - Indicators

Type	Indicator	Current situation	Goal for the 2nd year	Final goal
Quantitative	Number of foreign professors with academic ties, as visiting or permanent professor or collaborator, to Graduate Programs	1	3	4
Quantitative	Number of calls the Graduate Program participates internationally	0	1	3
Quantitative	Number of calls that the Graduate program presents to support the internationalization actions	2	4	5
Quantitative	Number of visits of foreign professors to Graduate Programs	1	3	4
Quantitative	Number of visits of foreign students to the Graduate Program	2	4	5
Quantitative	Number of foreign students enrolled in the Graduate Program	0	2	4
Quantitative	Number of existing agreements with international institutions	3	5	6
Quantitative	Number of international articles with foreign co-authorship	1	4	9
Quantitative	Number of professors and administrative staff trained to teach in other languages	3	3	5
Quantitative	Number of articles in international journals qualified in strata A1, A2 and B1	11	16	28
Quantitative	Number of technical visits of professors and students in foreign institutions	3	4	6
Quantitative	Number of titles of bibliographic material of each Graduate Program in other languages	0	2	3
Quantitative	Number of scholarships implemented, quantified in number of months	24	36	48
Quantitative	Capturing resources in calls for internationalization actions	0	2	2

### Goal 3 -



To consolidate and expand UFPB internationalization on the investigation of pharmacological and non-pharmacological interventions for chronic diseases and human development.

**Activity I** -Internationalization of participant GPs on the investigation of pharmacological and non-pharmacological interventions for chronic diseases and human development via Training Fellowship and Visiting Professorship Abroad.

**Start date – 08/2018**

**End date – 07/2022**

**Description** - Within this action, activities related to Faculty training and Visiting Professorship Abroad in Canada, the United States, United Kingdom and Sweden will be of research interest to and carried out by the GPs in Nursing, Cognitive Neuroscience and Behavior, and Dentistry. In this context, consolidation of collaborations abroad should foster, for example: (1) study of the relationship between tinnitus, anxiety, and sexual hormones and their clinical aspects; (2) evaluation and neurocognitive intervention for Alzheimer's Disease, investigating the efficacy of non-pharmacological therapies on AD individuals cognition and functionality, and analyzing the variables that produce a better cognitive-functional response after intervention; (3) investigation of non-pharmacological therapy efficacies on stroke patient cognition and functionality, aiming at analyzing the variables that produce better cognitive-functional responses after non-pharmacological therapies based on multicomponent methods, new technologies (videogames or virtual reality) or transcranial direct-current stimulation (tDCS); (4) development of joint projects with foreign institutions in Nursing focused on learning and using interventions and new technologies for prevention and treatment of chronic wounds; (5) development of joint projects with foreign institutions in Nursing to use light-hard technology for health education and communication, as strategies to induce healthy behaviors; among other aspects associated with the research subject.

**Activity I - Indicators**

Type	Indicator	Current situation	Goal for the 2nd year	Final goal
Quantitative	Number of international articles with foreign co-authorship	40	42	85
Quantitative	Number of titles of bibliographic material of each Graduate Program in other languages	0	1	3
Quantitative	Number of visits of foreign professors to the Graduate Program	7	9	14
Quantitative	Number of articles in international journals qualified in strata A1, A2 and B1	466	317	569
Quantitative	Number of visits of foreign students to the Graduate Program	0	3	7
Quantitative	Number of calls the Graduate Program participates internationally	4	7	11
Quantitative	Number of foreign professors with academic ties, as visiting or permanent professor or collaborator, to Graduate Programs	1	2	3
Quantitative	Number of professors and administrative staff trained to teach in other languages	7	9	12
Quantitative	Number of existing agreements with international institutions	8	11	15
Quantitative	Patent filing number of products, processes, techniques and software registrations among others	12	14	24
Quantitative	Number of calls that the Graduate program presents to support the internationalization actions	2	3	5
Quantitative	Number of foreign students enrolled in the Graduate Program	0	1	5
Quantitative	Capturing resources in calls for internationalization actions	1	4	8
Quantitative	Number of technical visits of professors and students to foreign institutions	9	15	24
Quantitative	Number of scholarships implemented, quantified in number of months	27	30	60

**Activity 2 -** Strengthening of the internationalization of participant GPs on the investigation of pharmacological and non-pharmacological interventions for chronic diseases and human development via Doctoral “Sandwich” Scholarships Abroad

**Start date – 08/2018**

**End date – 07/2022**

**Description –**

Within this action, activities related to Doctoral “Sandwich” Scholarship Abroad in the United Kingdom, Spain, United States, France, Italy and Sweden will be of research interest to and carried out by the GPs in Nursing, Natural and Synthetic Bioactive Products, Nutrition Sciences, Physical Education, and Multicenter Program in Physiology. In this context, student training activities abroad in technics and procedures are expected, which may contribute to GP consolidation a variety of themes, such as: (1) the development of joint projects with foreign institutions in Nursing focused on learning and using interventions and new technologies for the prevention and treatment of chronic wounds; (2) development of joint projects with foreign institutions in Nursing to use light-hard technology for health education and communication, as strategies to induce healthy behaviors in chronic diseases context; (3) pharmacological and toxicological prospection of Bioactive Products in collaboration with foreigner consolidated groups to improve both qualified bibliographic production and human resource training; (4) non-clinical studies with plant drugs and chemically standardized dry and liquid extracts to assess dose-dependent relationships and to estimate both toxic and therapeutic doses; (5) consolidation of international collaborations to investigate central and peripheral mechanisms involved in arterial hypertension, with emphasis on the study of mechanisms of action and metabolic, cardio-renal and central effects of inorganic nitrates on the development and/or maintenance of blood pressure in hypertensive and normotensive animals; (6) consolidation of international collaboration toward the investigation of the profile of arboviruses (in particular dengue and Chikungunya) circulating in the State of Paraíba (Brazil) and their effects on patients affected by these diseases.

## **Activity 2 - Indicators**

Type	Indicator	Current situation	Goal for the 2nd year	Final goal
Quantitative	Number of foreign professors with academic ties, as visiting or permanent professor or collaborator, to Graduate Programs	0	6	11
Quantitative	Number of existing agreements with international institutions	9	12	14
Quantitative	Patent filing number of products, processes, techniques and software registrations among others	26	19	35
Quantitative	Number of calls that the Graduate program presents to support the internationalization actions	8	10	12
Quantitative	Number of scholarships implemented, quantified in number of months	196	217	225
Quantitative	Number of technical visits of professors and students in foreign institutions	11	16	19
Quantitative	Number of international articles with foreign co-authorship	47	70	84
Quantitative	Number of visits of foreign professors to the Graduate Program	17	21	23
Quantitative	Number of foreign students enrolled in the Graduate Program	4	8	9
Quantitative	Number of professors and administrative staff trained to teach in other languages	21	26	29
Quantitative	Capturing resources in calls for internationalization actions	7	9	12
Quantitative	Number of calls that the Graduate program presents to support the internationalization actions	4	6	11
Quantitative	Number of articles in international journals qualified in strata A1, A2 and B1	528	300	655
Quantitative	Number of visits of foreign students to the Graduate Program	3	8	9
Quantitative	Number of titles of bibliographic material of each Graduate Program in other languages	1	6	7

### **Theme 3 - TERRITORIES OF DIVERSITY: EDUCATION, LANGUAGES, MEDIATION, CULTURAL AND PUBLIC POLICIES**

**Goal 1 - To solidify and expand the internationalization of programs that investigates the social, educational, cultural, linguistic, and political mediation.**

**Activity I** – Strengthening the internationalization of the program, by offering scholarships to improve students' (PDSE) and professors' (Visiting Professors) qualifications in social area, education, culture, linguistic, and political mediation.

**Start date – 08/2018**

**End date – 07/2022**

**Description** - This action will include training activities for professors and students in the following countries: Portugal, USA, Canada, Spain, Argentina, Italy, Venezuela and Mexico. In this sense, the demands of the following theme lines and programs will be met: 1) PROLING - study on the relationship between language and education, the training of professors and social representations of the teaching practice; on the processing and acquisition of Language; 2) PPGPS – comparative studies (Spain and Brazil) about the contexts of childhood and adolescence at risk and social vulnerability; 3) PPGEd, in partnership with PPGCI, PPGCJ, UFSC and the University of Valencia: investigations on the memories of perpetrators of crimes of rape, torture and murder against women and homosexuals; 4) MPLE - mapping of successful virtual (or not) learning tools, in Brazil and in Portugal, able to assist in literacy of Portuguese as a social practice; 5) PPGM – research on the specificities of formation in music in Brazil and in other countries of Latin America and the USA, from the colonial processes and exclusions that marked the trajectory of the area in the continent; 6) PPGCR - investigations on the diversity of the religious phenomenon in different cultural contexts from the ethnographic and historical perspective; study about the myths, the history and culture of Medieval Scandinavia, especially from the Viking Age; 7) PPGS - Investigations coordinated between/in Brazil and Spain on racism and xenophobia; 8) PPGL – studies on violence in contemporary indigenous narrative; cultural studies and theories of gender in the literatures of ethnic minorities; organization of events in association with the Midwest Modern Language Association, the Brazilian Studies Association and the Latin American Studies Association; 9) PPGCJ - investigations on (trans)judiciality, democracy, and economic effects of the power, diversity of the legal systems in jus-political spaces; research on policies of humanization of the civil rights, constitutional and social; 10) PPGDH - research on human rights in the perspective of the activism and the defense of victims of fundamental rights violations; strengthening of relations between the partners of the Unesco Chair; construction of an international research network, aiming at encouraging exchanges of educational experiences and cross-cutting research ; 11) PPGA research on the formation and activities of the school managers in Brazil and in Italy.

#### Activity I - Indicators

Type	Indicator	Current situation	Goal for the 2nd year	Final goal
Quantitative	number of existing agreements with the international institutions	17	27	45
Quantitative	number of foreigners professors visiting the program	8	24	50

**Goal 2** - - To consolidate and to expand the internationalization of programs that discuss the conceptions of spaces, territories and networks, as well as the construction and the evaluation of public policies.

**Activity I** – Strengthening of the internationalization of the graduate programs that discuss the conceptions of spaces, territories and networks, by offering scholarships to improve students' (PDSE), and professors' (Visiting Professor) qualifications.

**Start date – 08/2018**

**End date – 07/2022**

**Description** - This action will be carried out training through activities for professors and students in the following countries: France, USA, Portugal, UK, Italy, Venezuela and Mexico. In this sense, demands of the following thematic lines developed in the programs of Architecture and Urban planning, Letters, Economics, Human Rights, Sociology and the Public Sector will be met: actions in the field of multi-and transdisciplinary research and development in the area of Architecture and Urbanism, Urban Sociology, Urban Geography, Planning and Urban and Regional Development, Art and Urban Culture, among other branches of academic knowledge that work in synergy within the approaches focused on the complex interactions between people and space; actions on the materialization, spatial appropriation, cultural, historical, social, economic, imagnetic manifestations, territoriality or networks. The following partner Universities will participate in this action: the University of Texas, Northumbria University, University of Lisbon, University of Porto. Grenoble Alpes, University of Alberta, INSA of Lyon, Rhône-Alpes and the INP/ Univ. Grenoble Alpes, the University of Tennessee (USA), University of Florence, University of Pisa, University of Camerino, University of Padua (Italy), Central University of Caracas (Venezuela), National Autonomous University of Mexico (Mexico).

### Activity I – Indicators

Type	Indicator	Current situation	Goal for the 2nd year	Final goal
Quantitative	number of existing agreements with the international institutions	15	25	40

**Goal 3** - To consolidate a policy of network dissemination of research developed in the programs that participate in the territories of the diversity project in the perspective of internationalization.

**Activity I** – Strengthening of the internationalization of graduate programs that discuss the dissemination of information in the network, by offering scholarships to improve students' (PDSE), and professors' (Visiting Professor) qualifications.

**Start date** – 08/2018

**End date** – 07/2022

**Description** –

This action will include training activities for professors and students in the following countries: Italy, Spain, Australia, Portugal and the USA. The following programs participate in this action: PPGCI, PPGA and PPGCC. The partner institutions are the following: CNR - Istituto di Ricerca sulla Popolazione e Le Politiche Sociali; Università Degli Studi Di Napoli Federico II, University of Valencia and the Polytechnic University of Valencia; University of Queensland (Australia). University of Minho, University of Coimbra, University of Porto (Portugal), University of Pompeu Fabra, University of Barcelona, University of Murcia (Spain), University of Tennessee, University of Wisconsin-Milwaukee (USA). One of the main challenges faced by the graduate programs is the effective international insertion, which involves the international influence, the importance of the interlocutors, the preparation of students for the international market, the participation of researchers in research groups outside of Brazil, and scientific publishing in international journals. In this sense, the Graduate Programs aim to encourage professors and students to publish in international journals with an impact factor, so that the programs do not rely on only one or on a few professors, thus ensuring high level performance over time. To address this challenge, the graduate programs in the area of Applied Social Sciences, especially Accounting Science (PPGCC) and Administration (PPGA) aim, based on the Pitching Research Template, at conducting research forums with the participation of international researchers. The purpose is to improve the research developed in the framework of the graduate programs of UFPB, improving the quality of scientific productions to be published in international journals with high impact factor. In addition, the following actions are planned: (1) conduct seminars and courses given by foreign researchers, aiming at disseminating advanced tools, softwares and methods; (2) foster participation of professors and students in lectures, seminars, congresses and courses held in other countries; (3) offer workshops of scientific production in English, with the collaboration with the Graduate Program in Literature and Prolog; and (4) use a foreign language, preferably English, to teach courses. Creation of the International Laboratory of Architecture of Information.

#### Activity I - Indicators

Type	Indicator	Current situation	Goal for the 2nd year	Final goal
Quantitative	number of existing agreements with the international institutions	5	15	30

**Description** – In this action, activities for human capacity building, both for students and professors, will take place in the following countries: USA, Spain, Mexico and Belgium. This will meet the demands of the theme lines 1) Development of actions focused on the One Health approach with the objective of helping professors and students in the development of a holistic thinking and of competences needed to conduct cross-sectional and interdisciplinary research to solve complex problems. Actions will take place together with the Global One Health Initiative/Ohio State University, using the semiarid Northeastern Region, including the Caatinga, as a study model. In this sense, specifically, the integration between researchers of different Graduate Programs should be emphasized in order to develop strategies to solve the main problems of the Caatinga, resulting in knowledge and technologies to promote global health that can support the development of public and educational policies to improve biodiversity preservation and the social, economic and cultural development of the population in that region. 2) Projects focusing on the innovation and that add value to the integrated production of Caatinga fruits by means of using coating biofilms that contain ionic liquids and phytochemical nanoemulsions with fungicide properties, increasing the shelf-life of fruits. This is an ongoing project since 2015, involving Prof. Randolph Beaudry from the Michigan State University and the Graduate Program of Agronomy (PPGAgro). The partnership has provided mobility of students between the Postharvest Laboratory of the Department of Horticulture in Michigan State University and Laboratory of Postharvest Biology and Technology from CCA/UFPB.

### Activity I - Indicators

Type	Indicator	Current situation	Goal for the 2nd year	Final goal
Quantitative	High-quality scientific production in journals (papers) and international editors (books)	10	8	21
Quantitative	Overseas sabbatical or Post-Doc Positions	0	2	2
Quantitative	Number of co-advising of thesis and sandwich programs abroad	6	6	10

**Goal 2** - Consolidate and expand the internationalization of programs which scopes include biodiversity, bioeconomy and the impacts caused by the climatic changes in the Caatinga biome.

**Activity I** – Strengthening the internationalization of the Graduate Programs in the assessment of biodiversity in the Caatinga Biome and the impacts caused by climatic changes, by means of capacitation scholarships for students (PDSE) and professors (Visiting Professors abroad)

**Start date** – 08/2018

**End date** – 07/2022

**Description** –



In this action, activities for human capacity building for students and professors will take place in the following countries: Spain, Portugal, United Kingdom, France, Argentina, USA, Mexico and Belgium. This will meet the demands of the theme lines 1) Bioprospection of active compounds originated from the Caatinga Biome (flora, fauna, microorganisms) with economic potential, by means of the development of innovative products for public health, industry and agriculture, associated with the preservation and sustainable use of the biodiversity of this biome. In this sense, the research of alternative antimicrobials should be emphasized, since the dissemination of multi-drug resistant pathogenic agents is considered as a worldwide threat to humanity by the World Economic Forum; 2) assessment of the socio-biodiversity and the impacts caused by climatic changes in rural areas of the Caatinga; 3) studies on the management and domestication of natural and genetic resources made by farmers and producers in the semiarid region of Paraiba; 4) researches on the trend of time series of rain and drought and the proposition of future pessimist and optimist precipitation scenarios, with emphasis on the desertification process; 5) studies on genetic diversity of the Caatinga plants using genomic tools to assess the impacts of climatic changes and to select plants with economic potential that are resilient to hydric and saline stress; 6) examination of the invertebrate and vertebrate species in the Caatinga, both in aquatic and terrestrial environments and relating the community composition to local factors, assessing the influence of natural and anthropic environmental variables in the local communities. Additionally, the relationship between human and other animal communities will be assessed by Ethnozoology; 7) Investigations on the changes of the use and occupation of the soil and changes in the landscape due to anthropic pressure, which cause the formation of desertification onsets in which the human actions cause intense degradation due to the substitution of Caatinga for agriculture, extensive animal production and wood harvesting for coal and firewood production, estimation of future scenarios of land use and occupation from 2046 to 2064 and from 2081 to 2100; 8) researches about the dynamics of the Caatinga, hydric resources and human activities, seeking support of international experiences in areas with similar environmental characteristics.

#### Activity I - Indicators

Type	Indicator	Current situation	Goal for the 2nd year	Final goal
Quantitative	High-quality scientific production in journals (papers) and international editors (books)	29	33	50
Quantitative	Number of trainings during the project	0	1	2
Quantitative	Number of overseas work missions	2	5	6
Quantitative	Number of co-advising of thesis and sandwich programs abroad	8	14	16

**Goal 3** - Consolidate and expand the internationalization of programs whose scopes include sustainable development, including the Caatinga biome.

**Activity I** – Strengthening the internationalization of the Graduate Programs by means of capacitation scholarships for students (PDSE) and professors (Visiting Professors abroad) in territorial and socioenvironmental management, and technologies of environmental control

**Start date** – 08/2018

**End date** – 07/2022

**Description** –

In this action, activities for human capacity building for students and professors will take place in the following countries: Spain, Argentina, United Kingdom, Australia, South Africa, Colombia, Portugal, USA, Mexico, Belgium, Austria and France. This will meet the demands of the theme lines 1) territorial and social-environmental management of auto-organization that fit criteria of sustainability by indigenous people, farmer and “quilombola” communities and other traditional communities (gypsies) in their natural environment and considering their necessities, production practices and associated local knowledge, providing information to elaborate development policies that decrease negative social, environmental and economic impacts, resulting in sustainable development. 2) investigations of the environment and welfare in the tropical climate, management and research of the territory and the relationships between built environment, society and environment, as well as the analyses and identification of the necessary actions for the survival and quality of these areas, that will become attractive and sustainable. 3) assessment of the urban and edification compactness, energy use, consumption and production, life quality, life cycle of the buildings and cities; 4) biological research and assessment of the anthropic impacts on the biota, amongst those the fragmentation of habitats, including deforestation and dam construction, the cultivation of domestic species with pesticide use, effects of polluting agents on the biota and permeability on the matrix of anthropized areas, which affect the biodiversity and other natural resources, such as hydric resources; 5) analyses of the structure and composition of species from areas under different stressors, assessing the correlation between biotic and abiotic variables of the environment; 6) assessment of the effect of the ecological succession on the biota of degraded areas, considering the specific studies in biodiversity groups, as well as the alterations of some natural resources, in terrestrial and aquatic environments.

### Activity I - Indicators

Type	Indicator	Current situation	Goal for the 2nd year	Final goal
Quantitative	Overseas sabbatical or Post-Doc Positions	1	2	3
Quantitative	High-quality scientific production in journals (papers) and international editors (books)	24	26	53
Quantitative	Number of co-advising of thesis and sandwich programs abroad	24	22	36

### STRATEGIES

**1. Strategy for the consolidation of existing international partnerships, as well as the construction of new partnerships and cooperation projects to increase the relationship between the Brazilian institution and research groups abroad.**

There are now 85 active cooperation agreements signed by the UFPB with partner countries. These partners are mostly universities, but also consulates and embassies. Of these agreements, more than half were made with European and North American countries. The policy of implementing agreements, memorandum of understanding has been poorly institutionalized and is basically done by a small number of professors who have been taking doctoral or postdoctoral studies abroad. In the last two years and to modify this process we are sending documents in a foreign language, sending students on international mobility conditions for short visits. In addition, the UFPB launched a program to attract visiting professors, especially foreigners with a prolific academic production, as intermediaries to sign Agreements of Academic and Scientific Cooperation with Universities of their country of origin; as well as to fulfill the activities provided for by law or in the contract for his position in his area of activity. Other international strategies for partners attraction and maintenance are:

- Continuous monitoring of academic mobility of edicts promoted by the Brazilian government, foreign governments, international organizations and other educational and research institutions;
- Search for possibilities of international internship, to complement and better qualify undergraduates, graduates, professors and other employees of the institution; - Expansion and consolidation of the double degree through the co-tutelle system of dissertations and theses, promoting partnerships between the UFPB and foreign universities;
- Encouraging the participation of students, Professors and administrative staff in the calls for international mobility promoted by the UFPB; - Advisory students, professors and other staff of the selected UFPB and foreigners in international mobility programs, providing information on academic and civilians issues necessary to stay in Brazil and abroad.

## **2. Strategy to attract foreign students to Brazil.**

The UFPB has extensively discussed various strategies to attract foreign students to our institution. From this debate, several actions were proposed that will be important for this attraction process, among which we highlight:

- production of institutional material for dissemination of the UFPB in other languages, especially in English. In this same sense, another action concerns the modernization and translation of all the academic and administrative websites of UFPB and, above all, graduate programs, aiming to increase the international visibility of the UFPB;

- encourage the provision of foreign language courses for academic purposes and professional qualification, as well as Portuguese language for foreigners.

At the graduate level the expectation is that in 4 years, 72% of UFPB's graduate programs will offer at least 1% of classes in another language;

- stimulate the presence of foreign professors in undergraduate and graduate courses at UFPB. This will start to happen in September this year, when the approximately 80 foreign visiting professors hired by the UFPB will begin to work;

- encourage courses, debates, classes and other academic-scientific and cultural events at the undergraduate and graduate level, entirely in a foreign language;

- encourage writing/presentation of academic-scientific works of the UFPB in foreign languages, aiming international diffusion. This action has already become possible with a recent regimental change;

- expand partnerships between the UFPB and other international universities to extend the double degree through the thesis co-tutelle regime.

## **3. Strategy to attract faculty and researchers with international experience.**

Currently, 2.9% of the acting professors in graduate studies are foreigners. However, we have already started a strong action of attracting foreign professors to the UFPB. This action is aimed at hiring Visiting Professor for the UFPB, in all areas of knowledge, with 90 vacancies to be offered in the Simplified Selection Process. In search of excellence in internationalization, the main objective of this Call is the temporary staying at the Graduate Programs (GP) of the Federal University of Paraíba-UFPB, of specialists (mainly foreigners) of recognized academic-scientific competence in their fields of knowledge. The performance of these foreign professors will contribute to the strengthening of research, graduate and institutional internationalization, the transversality of teaching, research, extension and innovation in the UFPB, as well as the attendance to the demands of areas of excellence in UFPB research. Some actions are foreseen for this attraction to be realized, among which:

- encouragement for ALL calls and internal calls of the UFPB to be published in Portuguese and English, as in recent events in relation to the foreign visiting professor contest;
- to promote the provision of Portuguese as a foreign language courses for visiting foreign professors;
- production of institutional material of dissemination of the UFPB in other languages, especially in English. In this same sense, another action is urgently needed, which concerns the modernization and translation of all the websites of the institutional graduate programs (action currently underway), aiming to increase the international visibility of the UFPB;
- to produce promotional material in several languages with the presentation of the UFPB and its main actions of teaching, research, innovation, culture, extension and university management; - promote efforts to include the UFPB in the major university internationalization programs, with continuous promotion of cooperation to foster the establishment of research networks that promote the mobility of researchers and the realization of projects of strategic value.
- stimulate the participation of managers, students, professors and technicians-administrative in the calls for international mobility promoted by the UFPB or other institutions;
- advise selected foreign students and professors on mobility programs, offering information on academic and civil issues.

#### **4. Strategy to prepare the scholarship holders for the period abroad as well as for their return, especially in order to increase the knowledge appropriation by the institution.**

To stimulate students and professors to spend a period abroad it is regarded as necessary to promote awareness events about the importance of academic internationalization. In addition, it is necessary and quoted in the Institution Internationalization Policy that "the academic experience acquired abroad by the beneficiaries of the actions of the Institutional Internationalization Plan should be widely encouraged and publicized through reports, lectures, workshops, participation in academic weeks (scientific initiation, initiation to teaching, extension, graduation, etc.), discussion with Forum of Undergraduate and/or Graduate Coordinators, among other institutional events. "The objective of this action is to generate an institutional culture focused on internationalization and appropriation of the benefits generated".

#### **5. Describe innovative strategies that will be used by the institution that were not mentioned above.**

Resolution 06/2018 CONSUNI UFPB also includes as strategies: STRATEGIES FOR THE IMPLEMENTATION OF THE OBJECTIVES OF INTERNATIONALIZATION Article 5 For the achievement of the specific objectives set forth in art. 4 of this Resolution, the following strategies are defined: VI - intensification of extension activities in areas of social and technological development, fostering actions that promote the international mobility of professors, technical-administrative and students of the UFPB and foreigners (in the case of students, especially during vacations) for the follow-up of extension actions. This is an innovative action, from instrumentalization of the extension axis to effective advances in internationalization process. VIII - use of technological tools of information and distance learning for the development of courses and other academic activities with national and international partner institutions. Here, the use of the virtual UFPB is being provided to guarantee, in the on-line Teaching regime, the qualification and offer of courses in another language. IX - implementation and/or maintenance of institutional programs to ensure public calls. Here, the invitation to hire a visiting professor was announced for the hiring of 90 professors, of which 81 were open to foreigners. XII - implementation of programs for the reception of foreign students and professors, with continuous monitoring and guidance, especially regarding bureaucratic procedures; XIII - expansion of institutional programs for scientific and technological initiation, so that such programs can provide the students adequate and compatible formation with the internationalization activities. Another innovative action is: - use of the Scientific Initiation Program (IC), in partnership with the graduation, to attract foreigners. XV - Establishment of a Communication Plan for national and international promotion of the UFPB; XVI - adoption of a permanent policy to stimulate learning in foreign languages; XVII - systematic and scheduled monitoring of the professors, students or administrative staff, on international mobility, creating ways to enjoy their experiences when they return; XX - Incentive to the hiring of visiting foreign professors; XXI - equitable distribution between the GP of the exchanges and the benefits related to the internationalization actions, considering the evaluation statements (notes), the areas considered as strategic policies or another objective approved by the competent Board of Directors.

## **POLICIES**

- 1. Policy for selection of foreign partners, considering that 70% (at least) of the resources should be earmarked for partnerships with institutions based on countries that Capes maintains effective cooperation (listed in Annex I of the call).**

First, to compete for the PrInt Call, the policy of choosing strategic partners of the UFPB involved the prospecting, in the scope of Graduate Programs (GPs), of partnerships in progress, consolidated or with potential for consolidation. The proposal covers mobility, research and development (R&D) generation, high impact scientific production, among other actions described in the project.

The GPs related to the theme: Interventions, technologies, products and processes applied to health. Identified as strategic partners are: United Kingdom; Spain; Sweden; Italy; France; Belgium; Australia; Canada and the United States. All is detailed in the GPs tab. To exemplify, the GP in Decision and Health Models has collaborations with the University of Toronto (Canada) and University of Texas (United States); the Nutrition Program with The State University of New Jersey; the Memorial University of Newfoundland (Canada) and the French Université Lyon I. The GP in Linguistics, which is mainstreamed in this health group, has partnerships for joint actions with Harvard Medical School (USA) and Boston University (USA). GP in Chemistry with the Universities of Illinois and Duke, USA; University of Sorbonne / Université Pierre et Marie Curie, France; Universidad Autónoma de Madrid and Scotland (University of Aberdeen). The Program has Bilateral Agreement CNPq / AKA - Finland (University of Turku), through projects CNPq / CONICET-UNS and CNPq / SECyt PPCP - MERCOSUR with Argentina (Universidad Nacional del Sur).

In the case of PPGs linked to topic 2, the partnerships listed in the research lines that interface with the theme are located in: United Kingdom, Australia, Spain, Portugal, USA, France, Mexico, Canada, Argentina, South Africa, Switzerland, Italy, Germany and Colombia.

For example, GP in Literature and partnerships with the Universities of Alberta (Canada), Texas University (USA); the GP in Economics maintains an agreement with the University of Tennessee (USA) for professors' qualification and joint scientific production, with professors providing interchange classes.

GPs linked to the Biome Caatinga, biodiversity and sustainability have developed partnerships with Germany, Belgium, Portugal, Denmark, Mexico, Italy, France, Canada, United Kingdom, Australia, Argentina, Colombia, Spain, the United States, Austria and Japan. There is strong interlocution, with funding from Ohio University. Thus, most of the UFPB partnerships, brought to PrInt, are included in the countries with which Capes develops effective cooperation.

**2. Grant policy and internal selection process for specific actions, within the funding lines of the Capes-PrInt program. In the case of cooperation projects with foreign institutions, the proposer should specify the application of funds, the plan of activities, reciprocal funding, academic mobility, technical - scientific production, counterparts in the partner institutions, among others.**

The Institutional Program of Internationalization of the UFPB will include the following benefits: sandwich doctorates, short courses abroad, junior visitor professor, senior visiting professor, visiting professor in Brazil, young talent with experience abroad, PNPB with experience abroad.

The selection of the beneficiaries of these actions complying with the provisions of Capes regulations and Resolution n. 07/2018, which states in its art. 2, Section VI, principle of internationalization as publicity and transparency of processes, under the terms of the Open Data Policy of the Federal Executive Branch, in accordance with Decree n° 8.777/2016, on digital and virtual bases and through a direct response to the proponents, encouraging exchange of data between organs, entities of the federal public administration.

The UFPB, for presentation, analysis and judgment of the candidacies to the actions must adopt:

- a) Transparency in the disclosure of funding opportunities, so the actions should be published and disclosed through a public notice, approved by the law committee, and detailing the deadlines of resources, names of members of evaluation commissions, the merit criteria for selection of beneficiaries;
- b) In the case of scholarships, the criteria for eligibility and ineligibility of candidates will be published in the call, in accordance with the normative instruments for granting scholarships in force at Capes, as well as those provided for in the Resolution of the Institution's Internationalization Policy. All in compliance with Decree 7203, dated June 4, 2010 and Binding Precedent n° 13/STF, regarding the prohibition of granting scholarships to relatives or spouses;
- c) Unapproved candidates will be entitled to lodge an administrative appeal and respond to appeals;
- d) The internal selection of beneficiaries will depend on the presentation of cooperation projects with foreign institutions, with a plan for the application of resources, plan of activities, proof of reciprocal financing and counterparts by the foreign team, prediction of academic mobility and joint technical-scientific production among others.

### **3. Policy for hiring faculty with recognized scientific performance at an international level.**

The policy of contracting Professors with international scientific performance at the UFPB, in the terms set forth in the recently adopted internationalization policy (Article 5, paragraph n. XX of Resolution 06/2018 - Encouraging the contracting of foreign visiting professors), involves the adoption of evaluation criteria in selective processes and competitions, which punctually differ factors such as international scientific production, intellectual property and others that identify this objective; acceptance of the curriculum in English; of the project or individual work plan in English, the international publication of calls, a partnership was formed with EURAXESS for this purpose.

To meet the objective, as a strategy to attract professors and researchers with international experience, the UFPB launched a Public Call for the contracting of 90 (ninety visiting professors), for the Graduate Programs, with priority for the contracting of foreign professors.

The methodology of this Institutional Action indicates the priority given to Graduated. The Call takes two steps. In the first step, GPs projects with concepts 4, 5 and 6 were selected, to be considered with up to 4 vacancies of visiting professors. To compete, the GPs had to present a project in which they indicated the need and the conditions of merit of the number of vacancies requested. GPs concepts 3 were entitled to apply for 1 position, since they provide that they met previous admissibility criteria, such as TMC; publication with QUALIS, for the four years in courses, according to the criteria of courses 4 of their respective area; updated homepage among others. 47 GPs were approved, among the 76 programs of the UFPB.

In the second stage of the action, the chosen GPs contemplated, the Pro-Rector of People Management launched a call opening the hiring process, with a candidate evaluation form compatible with the requirements of internationalization, punctuating the greater the items that represent this objective. All is executed in Portuguese and English and all the measures to support the arrival, recognition of the title and contracting, with longer deadlines, are being carried out.

Among the adopted strategies of attraction, the PRPG decided to carry out summary recognition processes of the title, retaining the previous commitment of the GPs to carry out the evaluation in a timely manner. Other linguistic and operational support measures are handled by International Relations Office.

#### **4. Policy to increase proficiency in foreign languages for students, graduate faculty and technical staff that have a direct relationship with the proposed Internationalization Project.**

Among the objectives of the Internationalization Policy is the proposal of Linguistic Policy Plans, in line with the assumptions of the internationalization of teaching, research, extension and management, to promote the linguistic and intercultural competence of the student and professors, in an in and out direction, strengthening language learning as an internationalization strategy.

The UFPB joined the Language Without Borders Program of the Secretary of Education's Ministry of Education (SESu/MEC) in partnership with the Coordination for the Improvement of Higher Education Personnel (Capes), with face-to-face and distance actions in foreign languages in order to strengthen the internationalization process. The Languages Without Borders/English, at UFPB offers three great permanent actions: the online course (My English Online); the international TOEFL ITP exam, offered free to the academic community; and face-to-face classes, through the Isuc Language Center (NuCLI). The UFPB program also offers weekly TOEFL ITP workshops and English spoken workshops with the participation of the Professors and English Teaching Assistants of the CAPES/Fulbright/IsF agreement. Between 2006 and 2017 were applied around 5360 TOEFL ITP exams at the UFPB in 47 offers and in 2018 there were 4 offers with 480 offered vacancies. In this period 235 classes were opened for English, 5 for French and 3 for Spanish at UFPB.

Portuguese for foreigners functions as an extension project, linked to the Department of Classical and Vernacular Letters of the UFPB, the PLEI (Linguistic-Cultural Program for International Students), and aims to deepen knowledge about the teaching/learning process of Portuguese Foreign Language (PLE), in order to promote courses in Portuguese Foreign Language and Brazilian Culture for exchange students with the UFPB; agreed to the PEC-G Program; and foreigners residing in Brazil, with a permanent visa. It also aims to apply the exam to obtain the Certificate of Proficiency in Portuguese for Foreigners (CELPE-Bras).

The internationalization policy of the institution provides for the publication of documents, preparation and defenses of final works and administration of classes in a foreign language.

#### **5. Policy for recognition of academic and scientific activities performed by faculty and students abroad.**

Among the objectives of the UFPB's internationalization policy is the chief goal of internationalizing undergraduate and graduate education, by updating and curricular flexibilization, adopting cosmopolitan teaching practices and using virtual learning environments, allowing the construction of knowledge about other cultures and prioritizing the linguistic support to UFPB professors and students, by adopting curricular components and/or courses taught in foreign languages, in order to achieve adequate levels of language proficiency.

There is also the proposal of Linguistic Policy Plans, in line with the assumptions of the internationalization of teaching, research, extension and management, in order to promote the linguistic and intercultural competence of the student body and teacher, in an in and out way, strengthening language learning as an internationalization strategy.

In addition, for graduate courses the UFPB has instituted a system for the use of studies that if the foreign student has a document issued by a competent body in the country of origin, which proves the studying at a higher education institution, it may be used in Brazil, provided that the document is authenticated by the Brazilian diplomatic representative of the country in which it was issued, with an officially recognized translation in Portuguese. For foreign students in Brazil, it is possible to obtain an academic record in English and a certificate of enrollment (Resolution 16/2015 of CONSEPE UFPB)

For graduate students from the submission and appreciation of the collegiate of the program, the processes for the use of studies and the transfer of students can be carried out (Resolution 79/2013 of the UFPB CONSEPE).

#### **6. Policy for hosting and support of foreign faculty, researchers and students.**



The UFPB Reception and Integration Policy for Foreign Students and Researchers (PAIEPE-UFPB) is conceived as a strategy of the UFPB Internationalization Policy (Art 5º, XII). The initiatives in this area aim to promote both the initial reception of foreigners in the academic and administrative environment of the institution, as well as its continued integration in the context of the university and social culture of the locality where it will be developing its activities. This double dimension (reception and integration) consists of an innovation in academic mobility present in the UFPB proposal, to be implemented within the framework of the actions planned in the institution's participation in the PrInt Call, since the current focus of the actions at the foreign university, in general, is mainly at the reception with a view to regularize their stay in the country and register at the university administration.

The reception and integration actions involve five specific axes: 1- "What to do when arriving in Brazil and the UFPB"; 2- "Knowing the UFPB"; 3- "Living in Brazil"; 4- "Living in Paraíba"; and 5) "Living in Joao Pessoa", "Living in Areia", "Living in Bananeiras", "Living in Rio Tinto" or "Living in Mamanguape", (the latter varying according to the campus where the student or researcher is placed). Each axis counts on a set of academic and recreational activities with participation of members of the university community and society in general, as well as the access to didactic and informative material.

In addition, it is planned to create two important complementary hosting and integration programs that are the "International Friend Project" (aimed to offer dedicated support of a student, professor or server of the institution abroad) and the "International Guest Project" (Aims to provide support for the foreigner to be welcomed in the house of a student, professor or server of the institution).

The insertion in these molds allows broadening the contact of the UFPB's university community with foreign students and researchers, stimulating the exchange of knowledge and extending the experiences of intercultural experience. Likewise, it has the potential to systematize the development of research, teaching and extension projects aimed at better understanding and meeting the needs that involve passive and active academic mobility. These actions will be scaled, continuous and coordinated.

## **7. Policy for the appropriation of knowledge and experience acquired abroad by the beneficiaries of the actions of the Institutional Internationalization Project.**

Until last year (2017), the policy of absorbing an international academic experience of UFPB professors and students was focused only on the request of: 1) technical reports, 2) publication of articles and books, and 3) inclusion of students and professors in the GPs to improve the institutional programs, since the report constitutes a requirement of egress from the development institutions, that is, for all beneficiaries, technical and scientific reports are required to complete the process with the respective development agency (Capes, CNPQ, FAP, etc.). This reveals that the report only does not indicate the real appropriation of knowledge. Therefore, this policy has become ineffective and inefficient from the point of view of the real appropriation of the knowledge and experiences acquired abroad, thus generating the need for a reformulation. Through a broad, participatory and democratic process, we started the discussion with the university community, resulting in several proposals that were taken to the University Council (CONSUNI) of the UFPB. This year, Resolution 06/2018 of Consuni was approved, which stipulates in its Article 7 - paragraph 1, that all academic experience acquired abroad by the beneficiaries of Internationalization actions should be widely encouraged and publicized, not only through scientific reports and publications, but mainly through lectures, workshops, participation in academic weeks (initiation, initiation to teaching, extension, graduation, etc.), discussion with Forum of graduate and/or Graduate Coordinators, scientific fairs, among other institutional events. This wide diffusion of the experiences acquired abroad will be decisive for fomenting the formation of networks, increasing academic mobility (professors and students) and foreign partnerships, which will have a positive repercussion in the elevation of the concept of DGs and institutional research. This will result in a virtuous cycle for the institution, as greater need for training and partnership with foreign universities will bring more benefits to the UFPB.

## **8. Policy for management and operationalization of the Institutional Internationalization Project.**

Under the terms of Article 7 of Res. 06\2018, internationalization actions, within the scope of the UFPB, include, among others: I – international agreements; II - undergraduate and graduate academic mobility programs and technical and technological basic education in the linked and free modalities; IV - public calls, as edicts and others, for international programs and projects; V - Institutional Plan of Internationalization and sectoral plans; IX - special attention to the issue of language training, offering courses in foreign languages to Brazilians and courses in Portuguese for foreigners in the undergraduate and graduate curricular structure; X - consolidation and expansion of the actions of the Languages without Borders Program, or of similar programs in the UFPB; XI - strengthening and expansion of foreign language reading programs.

The management of the institutional project PrInt will involve the actions of two Pro-Rectorates, namely PRPG and PROPESQ, AAI, as well as the monitoring by the Steering Committee. A specific room will be assigned to the PRPG, with its own assistant for the execution of the works.

The choice of beneficiaries will follow the procedure outlined in this project. And the actions of the groups of GPs, in each thematic area, will be stimulated by a large initial seminar, with sequenced developments and discussions followed by the Forum of Graduate Coordinators, as well as by the Pro-Rectorates involved. They may include previous analysis for consolidation of diagnoses, followed by actions with clear objectives and goals to be achieved, as stated in the project.

In general, coordination and implementation of the Internationalization Policy, within the UFPB, involves the guidelines provided by the High Councils (Consepe and Consuni) as with PrInt. The performance of demands and actions of PrInt will involve participation and coordination of the Pro-Rectorates, the management group and the International Counsel, including within the scope of the Centers. It is in the process of creating the UFPB International Cooperation Agency, replacing the AAI.

## **9. Policy for monitoring and internal evaluation of the goals of the Institutional Internationalization Project.**

The internal evaluation of the goals will be regularly monitored by the Pro-Rector's Office for Graduate Studies (PRPG) and Research (PROPESQ), as well as by the International Affairs Office, which will become the UFPB Agency for International Cooperation. The project covers joint research goals of a transversal nature with joint publications, research missions, scholarships for various modalities, among other items; it includes logistic actions and administrative actions to launch calls and evaluation of work plans etc.

Academic goals will be monitored through events such as Seminars and periodic meetings to plan and fix actions, to regularize agreements and partnerships, and to identify counterparts, among others. The goals of launching of public calls and administrative execution will be monitored by the Pro-Rectorates and the Steering Group, all under supervision and the possibility of recourse to the higher Councils. Mobility logistics, attraction, publicity, disclosure, bureaucratic visa follow-up and other goals will be conducted by AAI.

There will be a team of assistants and infrastructure for this, under the supervision of the Pro-Rectorates.

## **10. Policy for the conciliation of national development programs supported by Capes to the internationalization effort.**

To optimize the institutional effort of internationalization, the UFPB approved, through Resolution 006/2018, several guidelines to enable the use of the promotion of actions by national programs and also with the institution's own resources. Among the various actions we can highlight:

- Expansion of the transversal actions of development with own resources and / or coming from PROAP / CAPES: 1) for translation of scientific articles to be submitted for publication in periodicals with QUALIS A1, A2 and B1, and 2) payment of the fees for articles published in periodicals A1, A2 and B1, especially in the "open access" mode;
- Establishment of criteria for the distribution of institutional funding obtained from Capes to the DGs of the UFPB, including grants and other forms of development (missions, project assistance, etc.) related to internationalization actions. In this regard, meritorious/strategic parameters will be considered, such as: a) the performance of the GP in the Capes evaluation; and b) the strategic areas foreseen in the Institutional Development Plan-IDP, or contained in the Strategic Plan for Internationalization of the UFPB, among others;

Merit distribution between the GPs of the exchanges and the benefits derived from CAPES resources (PROAP, Bolsas Demanda Social, etc) focused on internationalization actions, considering the evaluation statements (grades/concepts), the areas considered as strategic policies and institutional priorities, contained in the UFPB internationalization policy;

- Expansion of institutional programs for scientific and technological initiation (PIBIC, PIBITI CNPQ and UFPB), so that such programs can provide students with adequate training and compatible with internationalization activities;
- Encouraging the presentation of institutional projects of internationalization to compete in calls and announcements, such as Pró-Equipamentos/Capes, PROINFRA/FINEP, among others;
- Encouraging the participation of researchers belonging to lines and institutional research groups in the large bilateral development projects approved by the UFPB, such as: Capes-BRAFITEC, BRAFAGRI, CAPES-COFECUB, DAAD, MATH AmSud/Capes, Capes DGPU, among others.

#### **11. Describe here other innovative policies that will be adopted by the institution**

The UFPB has two highly important agencies for the expansion of the internationalization process of the UFPB: the Innovation Agency and the creation of the Internationalization Agency. INOVA-UFPB is the Nucleus of Technological Innovation (NTI) of the Federal University of Paraíba (UFPB) in accordance with Law n° 10.973/2004 and Law n°. 13.243/2016. Its mission is to plan, coordinate and control all activities of technological innovation, such as incubations of technology-based companies, intellectual property, transfer and licensing of technologies maintained by the UFPB. Since its creation, it has been noticed that patent applications are being promoted and the portfolios of technologies protected by the UFPB are related to the areas of food and beverages, fuels, chemicals, materials, energy, machinery and equipment, health and care. At this moment of internationalization, the presence of Inova represents a safety for the national production for presenting to the scientists and local producers of new technologies the way for the patenting and divulgation.

In addition, the creation of the Internationalization Agency is being voted by the UFPB Higher Education Board (CONSEPE). This agency will replace the current UFPB Advisory Services for International Affairs, following the model of other higher education institutions that have appropriately implemented their internationalization projects. Its main task will be to implement the internationalization policy within the UFPB, as well as externally, in partnership with other university institutions, public agencies, private entities and society in general, with regard to academic cooperation in management, teaching, research, culture, innovation and university extension, whether at the national or international level. In addition, the International Cooperation Agency (ICA) will be an agent which aims at promoting and fostering the collection of resources that can maintain and expand the internationalization actions of the UFPB. In general terms, ICA's strategies of action will be to modernize and translate the academic and administrative websites of the UFPB; international propagation of the UFPB to attract students and professors; reception, support and incentive to the presence of foreigners in the undergraduate and graduate courses of the UFPB; stimulating the writing/defense of academic-scientific works of the UFPB in foreign languages, aiming at international diffusion; creation of academic-scientific events at the UFPB, in which professors and students can present their work in a foreign language; promotion of effective interaction with international scientists and researchers and better circulation of local research; contacts with embassies, consulates, international organizations, multinational companies, universities and research centers abroad; implementation of international cooperation agreements with governmental and non-governmental institutions to establish strategic partnerships; and fundraising.

## FURTHER INFORMATION

<b>Number of graduate courses taught in English between 2013 and 2016</b>	20
<b>Number of joint supervision graduate programs between 2013 and 2016</b>	5
<b>Number of double degree graduate programs between 2013 and 2016</b>	0
<b>Number of bilateral graduate programs between 2013 and 2016</b>	0
<b>Number of products derived from research projects and contributions to international databases between 2013 and 2016</b>	0
<b>Number of Capes' development programs from which the institution benefited between 2013 and 2016</b>	85

**Number of Capes' international cooperation projects from which the institution benefited between 2013 and 2016** 135

### **Insertion of materials, themes and subjects in foreign language in the graduate program curricular structure.**

The UFPB approved the internationalization policy of the institution (Resolution 06/2018 of the UFPB University Council) which deals with the proposal of Linguistic Policy Plans, in accord with the goals of internationalization of teaching, research, extension and management to promote the linguistic and intercultural competence of the students, professors and technical-administrative staff of the UFPB, consolidating and strengthening the quality for teaching and learning languages as a strategy of internationalization and promotion of interculturality. Resolution 06/2018 of the UFPB University Council in its 7th chapter shows that – the Notices or other institutional documents necessary to affect the integration between the partners universities must be translated into English or another language in accordance with Law 12,686 /2012. – It is essential to electronic dissemination of documents as much as on the official websites of the UFPB, and sent by e-mail to the partner institutions. – The disciplines of major programs may be taught in a foreign language if authorized by the collegiate of the program. – Final papers of undergraduate and graduate programs (monographs, dissertations and theses) may be written and presented in Portuguese, English, French and Spanish, or in another language, at the discretion of the collegiate of the course/program, as long as they contemplate title, abstract and keywords in Portuguese and in English. From this point of view, all undergraduate and graduate courses must present in their curricular structure materials, subjects and subjects in a foreign language.

### **EXPECTED BENEFITS**

**Theme** INTERVENTIONS, TECHNOLOGIES, PRODUCTS APPLIED TO HEALTH

### **INTERNATIONAL COOPERATION PROJECTS**

**Name of the project:** Prospection, improvement, and design of technologic products and processes of Health interest.

**Start date** 01/08/2018

**End date** 31/07/2022

**Description** - This project represents the joint effort of 5 Graduate Programs, distributed in 3 UFPB academic Centers. Overall, the internationalization efforts within this project aim at meeting chemical, pharmacological, and social demands of interests to, for example, chronic disease, oral health, and speech disorder interventions and diagnoses. In this context, the project has 4 main axes: Axis 1 - Prospection of natural products: botanical plant and ecophysiological studies, phytochemical characterization, and standardization of the medicinal vegetal drugs and production of chemically standardized dry and liquid extracts of use as phytotherapeutic feedstock. Axis 2 - Computational modeling: development of chemical quantum methods and computational strategies (algorithms and software) to allow the computational study of life-relevant biochemical processes and biomolecular systems with potential use in new pharmacological and medical therapies of impact on human health. Axis 3 - Experimental therapeutics and formulations: development of pharmacological products and processes of clinical implications for drug therapeutic efficacy, combined with the development of technologies for production and analysis of compounds and implementation of in vivo and in vitro experimental protocols for evaluating product biological, pharmacological, and toxicological activity. Axis 4 - Dental biomaterials: development and evaluation of biomaterials applied to pathophysiological processes of mineralized and non mineralized tissues of the oral cavity, with emphasis on ceramic, metallic, and polymeric materials, exploring the use of nanotechnology to improve existing materials and to develop new materials; physical, mechanical, and biological characterization of such materials, aiming at applying them to teeth, bone, and support tissue rehabilitation, as well as prosthetic materials.

<b>Resources to maintenance the projects</b>			
<b>Year</b>	<b>Value</b>		
2019	10,000.00		
2020	10,000.00		
2021	10,000.00		
2018	10,000.00		
<b>Scholarships related to the cooperation project</b>			
<b>Year</b>	<b>Modality (Quantity)</b>	<b>Quantity</b>	<b>Value</b>
2021	Sandwich Doctorate Fellowship (12 months)	1	76,276.80
2019	Sandwich Doctorate Fellowship (12 months)	1	76,276.80
2020	Junior Visiting Professorship Abroad (12 months)	1	113,716.80
2020	Sandwich Doctorate Fellowship (12 months)	6	457,660.80
2019	Junior Visiting Professorship Abroad (6 months)	1	60,638.40
2020	Senior Visiting Professorship Abroad (12 months)	1	123,076.80

**Name of the project:** Biological, psychological, social, and environmental factors and processes related to population health.

**Start date** 01/08/2018

**End date** 31/07/2022

**Description** - This project encompasses the research carried out in 4 Graduate Programs of 3 UFPB academic Centers. Biological, psychological, social and environmental factors and processes of Health impact will be investigated under the perspective of, for example: (1) To detect the levels of physical activity in various populations through multicenter studies in an attempt to associate these levels of physical activity with the epidemiology of chronic diseases. Thus, it is expected to verify the relationships between level of physical activity and health in the studied populations, verifying possible differences to finding early markers of health damage caused by the sedentary lifestyle and factors that condition people toward adopting an active or sedentary lifestyle. Populations from Brazil and abroad will be monitored with respect to physical activity measures using gold-standard instruments and health status assessment (blood pressure, blood glucose, markers of systemic inflammation and oxidative stress). (2) To carry out studies to understand the acoustic-articulatory manifestations of speech production and their relationships with social, linguistic, stylistic factors and with voice and speech disorders. To analyze the perception of different speech productions, including the identification of linguistic variants, perceptual-auditory judgment of vocal quality, auditory processing of voice and speech information, social (attitude) and physiological responses of listeners to different speech materials, as well as the perception and judgment of speech signal in voice and speech disorders. To analyze the determinants and the development of the perception of segmental, prosodic, and vocal quality aspects in the context of voice and speech variations and disorders.

#### Scholarships related to the cooperation project

Year	Type (Quantity)	Total	Value
2020	Senior Visiting Professorship Abroad (12 months)	1	123,076.80
2021	Senior Visiting Professorship Abroad (12 months)	1	123,076.80
2019	Sandwich Doctorate Fellowship (12 months)	1	76,276.80
2020	Sandwich Doctorate Fellowship (12 months)	2	152,553.60
2021	Junior Visiting Professorship Abroad (6 months)	1	60,638.40
2019	Junior Visiting Professorship Abroad (6 months)	1	60,638.40

**Name of the project:** Pharmacological and non-pharmacological interventions for chronic diseases and human development.

**Start date** 01/08/2018

**End date** 31/07/2022

**Description** - The project encompasses 8 Graduate Programs of 4 UFPB academic Centers and is focused on the evaluation of pharmacological and non-pharmacological interventions for diagnosis and treatment of negative effects during development of and impairment by chronic diseases. Among the non-pharmacological interventions, research should include: the use of care technologies for chronic-wound patients; use of strategies to stimulate healthy behaviors; evaluation of physical training or exercise sessions as a means to improve indicators of the most common cardiometabolic and respiratory diseases; the automatic design of interventions, based on the knowledge accumulated in medical enter databases; patient off-site monitoring via image and vital sign analyses; evaluation of neurostimulation and cognitive intervention effects on the elderly with Alzheimer's Disease; clinical evaluation of emotion recognition in stroke-affected patients; investigation of the relationships among sex hormones, anxiety, and tinnitus in women. Among the non-pharmacological interventions, research should include: non-clinical studies with plant drugs and chemically standardized dry and liquid extracts to assess dose-response effect and to estimate toxic and likely-therapeutic doses; investigation of the mechanisms of action and metabolic, cardio-renal and central effects of inorganic nitrates on the development and maintenance of blood pressure in hypertensive and normotensive animals; analysis of the interaction between lactate and astrocytes in the modulation of hydro electrolytic and cardiovascular balance in animals with heart diseases, such as hypertension and acute myocardial infarction; translational study to test a polyphenol/probiotic (polypro®) combination as a likely strategy to attenuate cardiometabolic disorders induced by maternal dyslipidemia, as well as in conditions of hypertension, type 2 diabetes and dyslipidemia; molecularly evaluate samples of suspected cases of dengue and Chikungunya in the state of Paraíba, including evaluation of immunological markers of susceptibility to these diseases; use of synthetic and natural products with antimicrobial, immunomodulatory, analgesic, reparative, and osteogenic properties in diseases that affect the oral cavity.

<b>Resources to maintenance the projects</b>			
<b>Year</b>	<b>Value</b>		
2019	10,000.00		
2020	10,000.00		
2021	10,000.00		
2018	10,000.00		
<b>Scholarships associated to the Research Project</b>			
<b>Year</b>	<b>Modality (Quantity)</b>	<b>Quantity</b>	<b>Amount</b>
2020	Senior Visiting Professorship Abroad (3 months)	1	39,866.40
2020	Senior Visiting Professorship Abroad (12 months)	2	246,153.60
2019	Senior Visiting Professorship Abroad (3 months)	1	39,866.40
2021	Sandwich Doctorate Fellowship (12 months)	3	228,830.40
2019	Sandwich Doctorate Fellowship (6 months)	2	80,956.80
2020	Sandwich Doctorate Fellowship (12 months)	3	228,830.40
2018	Senior Visiting Professorship Abroad (3 months)	1	39,866.40
2019	Sandwich Doctorate Fellowship (12 months)	2	152,553.60
2020	Junior Visiting Professorship Abroad (6 months)	2	121,276.80



**Theme TERRITORIES OF DIVERSITY: EDUCATION, LANGUAGES, MEDIATION,  
CULTURAL AND PUBLIC POLICIES**

**INTERNATIONAL COOPERATION PROJECTS**

**Name of the project: Social, educational, cultural, linguistic, and political mediation in contexts marked by diversity.**

**Start date** 01/08/2018

**End date** 31/07/2022

**Description** - The project involves 11 post-graduate programs and has as its focus research on the social, educational, cultural, linguistic and public policies mediation related mainly to the violation of human rights. In this sense, the following researches will be developed: 1) on violations of human rights, crimes and mass genocides that have been perpetrated in various countries; 2) mapping of perpetrators of violations of human rights and crimes against humanity in important national and international documents, in the fields of art, literature, philosophy, memory, information, and media culture; 3) deepening the theoretical aspects of historical and social dimensions that have influenced the trajectory of music education institutionalized in Brazil, showing inclusions, exclusions and other marks left by colonialism that has outlined such a process in Brazil and other Latin American countries and the USA; 4) deepening of the discussions, from a comparative perspective, on literatures of minorities, indigenous and afro-Amerindian, involving professors and researchers working in the Universities of Arizona (USA) and Alberta (Canada); 5) research on the relationship between language and education, the formation of teachers and social representations of the teaching practice; on the processing and acquisition of language linked to the knowledge of the development of language competences; 6) investigations on the different forms of expression of the religious phenomenon, their languages, the mythic dimensions, the social integration of religions, its presence in education, relations with other spheres of society, the imaginary constructed in different cultural contexts, under the historical and ethnographic perspectives; 7) research on the interference and influence of ICTs in the construction of proposals able to boost the didactic-pedagogical actions in the direction of success in education, promoting knowledge through digital literacy; 8) investigations coordinated between/in Brazil and Spain on racism and xenophobia; 9) Research on (trans)judiciality, democracy, and economic effects of power, diversity of legal systems in jus-political spaces; 10) studies on various sectors of civil society with the actions of human rights commissions and the strengthening of relations between partners of Unesco Chair; 11) on the formation and the activities of school managers in Brazil and in the countries involved to share experiences and develop joint solutions.

<b>Work missions related to the cooperation project</b>			
<b>Year</b>	<b>Quantity</b>	<b>Amount</b>	
2019	4	115.516,00	
2021	4	115.516,00	
2022	4	115.516,00	
2020	5	130.516,00	
<b>Resources to maintenance the projects</b>			
<b>Year</b>	<b>Value</b>		
2019	10,000.00		
2021	10,000.00		
2018	7,500.00		
2019	10,000.00		
2022	10,000.00		
<b>Scholarships associated to the Research Project</b>			
<b>Year</b>	<b>Modality (Quantity)</b>	<b>Quantity</b>	<b>Amount</b>
2021	Sandwich Doctorate Fellowship (6 months)	2	80,956.80
2019	Sandwich Doctorate Fellowship (6 months)	2	80,956.80
2020	Sandwich Doctorate Fellowship (6 months)	2	80,956.80
2022	Sandwich Doctorate Fellowship (6 months)	2	80,956.80

**Name of the project: Conceptions of spaces, territories and networks in contexts marked by diversity**

**Description** - The project involves 6 graduate programs and has as its focus research on conceptions of spaces, territories and networks in territories marked by diversity. In this sense, the following research projects will be developed: "Future of the City Centre" (Northumbria University, UK; Institute for Future Cities, University of Strathclyde; University of Newcastle, Australia, and the University of South Africa), funded by the Art and Humanities Research Council (AHRC), United Kingdom (2018-2020); Environments of knowledge: the adequacy of the infrastructure of higher education in Portugal and in Brazil; research on the narratives of migrants that redefine spaces and boundaries in Brazilian, Canadian, American and indigenous literature; research on public policies and redefinition of the spaces of power and investigations about diversity of legal systems in jus-political spaces.

<b>Work missions related to the cooperation project</b>			
<b>Year</b>	<b>Quantity</b>	<b>Amount</b>	
2022	2	57,758.00	
2019	3	86,637.00	
2021	2	57,758.00	
2020	3	72,758,00	
<b>Resources to maintenance the projects</b>			
<b>Year</b>	<b>Value</b>		
2020	5,000.00		
2022	5,000.00		
2018	5,000.00		
2021	5,000.00		
2019	7,500.00		
<b>Scholarships associated to the Research Project</b>			
<b>Year</b>	<b>Modality (Quantity)</b>	<b>Quantity</b>	<b>Amount</b>
2019	Sandwich Doctorate Fellowship (6 months)	1	40,478,40
2021	Sandwich Doctorate Fellowship (6 months)	1	40,478,40
2020	Sandwich Doctorate Fellowship (6 months)	1	40,478,40
2022	Sandwich Doctorate Fellowship (6 months)	1	40,478,40

**Name of the project: Areas of diversity: systems of learning, reflexive practices and network dissemination of information.**

**Description** - The project involves 3 graduate programs and has as its focus investigations on strategies for dissemination of network research results. In this sense, the following research will be developed: 1) conducting research on the formation and the activities of school managers in Brazil and in involved countries to share experiences and develop joint solutions; 2) development of a learning in action system and education for sustainability (strategies for active learning, learning styles, learning environment, and reflexive practice) in the context of the undergraduate courses of the universities involved in the project. 3) analyze the processes of emotional education in a multi-professional perspective involving students, professors and managers linked to the educational context; 4) analyze, from the perspective of information science, issues related to the subjectivity, more specifically, anxiety and stress, in the context of intense production, access and use of information in digital formats by means of digital technologies of information and communication, in particular from information circulating in social media through mobile devices. This is a transversal study that interconnects the areas of Information Science (PPGCI-UFPB), Linguistic and Health (Pompeu Fabra University); 5) research strategies to increase the publication of results of researches carried out by non-English-speakers, with the central focus of the strategy the application of reverse engineering, developed by Faff (2015, 2017). Currently, the model is in 33 languages. In addition, all members of the group will feed a research data bank which serves for the evaluation of the results and continuity of the research.

<b>Work missions related to the cooperation project</b>			
<b>Year</b>	<b>Quantity</b>	<b>Amount</b>	
2021	2	57,758.00	
2019	2	57,758.00	
2020	2	57,758.00	
<b>Resources to maintenance the projects</b>			
<b>Year</b>	<b>Value</b>		
2021	5,000.00		
2019	5,000.00		
2020	5,000.00		
<b>Scholarships associated to the Research Project</b>			
<b>Year</b>	<b>Modality (Quantity)</b>	<b>Quantity</b>	<b>Amount</b>
2020	Sandwich Doctorate Fellowship (6 months)	1	40,478,40
2019	Sandwich Doctorate Fellowship (6 months)	1	80,956,80
2021	Sandwich Doctorate Fellowship (6 months)	1	40,478,40

**Theme CAATINGA BIOME, BIODIVERSITY AND SUSTAINABILITY**

**INTERNATIONAL COOPERATION PROJECTS**

**Name of the project:** “Omic” Sciences applied to the prevention of antimicrobial resistance at the human-animal-environment interface and the promotion of health and food safety in the Caatinga Biome: a One Health Approach.

**Start date** 01/08/2018

**End date** 31/07/2022

**Description** - The present project will consolidate the ability to carry out state-of-the-art research, enabling our Graduate Programs to follow the global revolution of the Omic Sciences, a term established to designate technologies of high throughput analyses, including genomics, functional genomics (transcriptomic), proteomics and metabolomics. These tools allow the complete sequencing of animal, plant and microorganism genomes, opening possibilities for researchers to identify the molecular basis related to economic traits of productivity and disease resistance. Transcriptomic studies provide detailed information on the influence of diverse factors on the expression or inhibition of determined genes, allowing the understanding of underlying mechanisms related to nutrition, metabolism and behavior. Furthermore, proteomics and metabolomics are approaches to determine proteins and metabolites in many biological systems and how these correlated with production traits. These will also be used in system biology studies, in order to clarify the complex interaction between genotypes and the environment. This is a topic of crucial relevance to semiarid studies, especially in the Caatinga, which is the main focus of our Graduate Programs and where the agriculture and farming activities and wealth generation must occur in consonance with the characterization and conservation of genetic resources, which is the basis for sustainable development. Research actions will also be developed using genomic methods to investigate the dynamics of resistance genes in the Caatinga and bioprospecting activities of alternative antimicrobial products. The spread of multidrug-resistant agents is a global threat and is at the intersection between environmental, hospital, community and food areas. The 2013 Global Risks Report of the World Economic Forum indicated antimicrobial resistance as a problem with global magnitude and threat. Activities will be executed in conjunction with the Global One Health Initiative/Ohio State University, adopting the Caatinga Biome as a pioneer study model to present results on the utilization of the “One Health” platform.

<b>Work missions related to the cooperation project</b>			
Year		Quantity	Amount
2020		1	28,879.00
2019		1	28,879.00
<b>Resources to maintenance the projects</b>			
Year			Amount
2019			10,000.00
2021			10,000.00
2020			10,000.00
<b>Scholarships associated to the Research Project</b>			
Year	Type	Number	Total Amount
2020	Sandwich PhD (6 months)	2	80,956.80
2021	Senior Visiting Professor - Foreign (6 months)	1	65,678.40
2019	Sandwich PhD (6 months)	2	80,956.80
2021	Sandwich PhD (6 months)	1	40,478.40

**Name of the project:** Innovation in materials, products and processes associated with environmental conservation and sustainability

**Start date** 01/08/2018

**End date** 31/07/2022

**Description** - This research project aims, through scientific and technological exchange and cooperation, to promote the consolidation, expansion and internationalization of science and technology, innovation and competitiveness in the development of materials, products and processes associated with environmental conservation and sustainability, which are highlighted as follows: i) development of new materials and use of nanotechnology in the post-harvest conservation of fruit trees produced in the semi-arid region destined for the export market in Northeast Brazil, aiming to increase their competitiveness; ii) development of innovative products with biological activity of economic interest in the agri-food chain, especially in dairy products and yoghurts, through an international scientific and technological partnership; iii) development of photocatalysers based on niobium and tantalum applied to the photocatalytic degradation of organic contaminants, mainly effluents from network dyeing processes in the Santa Luzia / PB microregion, using as main source of energy the solar radiation so abundant in the region ; iv) implementation of technically feasible alternatives for the recycling of waste materials from agroindustry and civil construction for the development of Portland cements and their technologies; v) study of the association of photocatalytic materials, in particular TiO<sub>2</sub>, cement and concrete for the most diverse environmental applications, among them the reduction of air pollution, especially NO<sub>x</sub>, CO and SO<sub>x</sub> gases; vi) to test the use of biofilm and aquatic macrophytes (BioMac), as water quality bioremediators, in natural systems (rivers, lakes, reservoirs, etc.) and in aquaculture

<b>Work missions related to the cooperation project</b>			
Year	Quantity	Amount	
2020	2	57,758.00	
2021	2	57,758.00	
2019	3	86,637.00	
<b>Resources to maintenance the projects</b>			
Year	Amount		
2019	10,000.00		
2020	10,000.00		
2018	10,000.00		
2021	10,000.00		
2022	10,000.00		
<b>Scholarships associated to the Research Project</b>			
Year	Type	Number	Total Amount
2022	Sandwich PhD (6 months)	1	40,478.40
2021	Sandwich PhD (6 months)	1	40,478.40
2019	Sandwich PhD (6 months)	1	40,478.40
2022	Capacity building (3 months)	1	25,466.40
2020	Sandwich PhD (6 months)	1	40,478.40
2019	Capacity building (3 months)	1	25,466.40
2018	Sandwich PhD (6 months)	1	40,478.40

**Name of the project:** Sustainability and quality of urban centers and territorial and socio-environmental management.

**Start date** 01/08/2018

**End date** 31/07/2022

**Description** - The concentration of population in urban centers is now 54%, with the prospect of increasing to 66% by 2050. The challenge for cities in the coming decades is several, including sustainability and environmental quality. Thus, this project focuses on the centers of cities as places of greater population concentration, services and commerce. With the aim of analyzing and identifying actions necessary for the survival and quality of these spaces, especially in the sense of making them attractive and sustainable, issues such as urban compactness and buildings (shape, density and configuration of the environment built on the scale of the building and urban), uses, consumption and production of energy, quality of life, the life cycle of buildings and cities, among others will be confronted. It is also the objective of this project to research (and / or deepen research) on territorial and socio-environmental management experiences of indigenous peoples, quilombola communities, farmers and other traditional communities (such as gypsies) in their territory of establishment, considering their needs, their productive practices, their associated local knowledge, which meet the criteria of sustainability and environmental quality.

<b>Work missions related to the cooperation project</b>			
Year	Quantity	Amount	
2020	2	37,789.00	
2018	1	22,000.00	
2021	2	37,789.00	
2019	2	37,789.00	
<b>Resources to maintenance the projects</b>			
Year	Amount		
2019	10,000.00		
<b>Scholarships associated to the Research Project</b>			
Year	Type	Number	Total Amount
2021	Sandwich PhD (6 months)	1	40,478.40
2020	Sandwich PhD (6 months)	1	40,478.40

**Name of the project:** Impacts of the climatic changes on the management of the vegetal cover and on the (socio)biodiversity in the Caatinga Biome in Northeast Brazil

**Start date** 01/08/2018

**End date** 31/07/2022

**Description** - The Project's aim is to understand the dynamics of the Caatinga, hydric resources and human activities, seeking support in international experiences in areas with similar environmental characteristics and their changes as a function of climate change. The activities associated with the project will consist of evaluating the biodiversity of the plant species and microorganisms of the caatinga, prospecting genes related to biotic and abiotic stresses of interest using state-of-the-art (genomic, transcriptomic, proteomic and metabolic) assessment of the effects of climate change on species diversity, particularly in the adaptation of species to the biome. The actions will be developed in a scientific and technological partnership, promoting the bilateral mobility of students and professors of the UFPB and international partners, based on SNP (Single Nucleotide Polymorphism) molecular markers, which detect mutation of a single base at DNA level and seek to establish effects of climate change on species diversity, particularly in the adaptation of species to the biome. The project also aims to study the trends in rainfall and flow time series, and the proposition of optimistic and pessimistic future precipitation scenarios, as well as the investigation of reservoir water balance behavior and water shortage during drought periods by modeling rain-flow. In addition, population projection and future water demand growth will be carried out in addition to studies on the influence of land use and land use typologies on the spatial and temporal variability of evapotranspiration and surface temperature. The project also aims at the mapping of vegetation cover, the evaluation of drought events from the remote sensing of observed changes in vegetation health, as well as hydroerosive monitoring in experimental plots and water, thermal, electrical conductivity and flow regimes of soil CO<sub>2</sub>, and the detection and validation of soil moisture via remote sensing

<b>Work missions related to the cooperation project</b>			
Year		Quantity	Amount
2021		1	28,879.00
2019		2	57.758,00
2022		2	57.758,00
2020		1	28,879.00
<b>Resources to maintenance the projects</b>			
Year		Amount	
2022		5,000.00	
2021		5,000.00	
2019		10,000.00	
2020		10,000.00	
<b>Scholarships associated to the Research Project</b>			
Year	Type	Number	Total Amount
2021	Capacity building (3 months)	1	25,466.40
2020	Sandwich PhD (6 months)	1	40,478.40
2021	Sandwich PhD (6 months)	1	40,478.40
2019	Sandwich PhD (6 months)	1	40,478.40
2021	Capacity building (3 months)	1	25,466.40



**Name of the project:** Taxonomic and ecological aspects and evaluation of the anthropogenic actions in the Caatinga biodiversity

**Start date** 01/08/2018

**End date** 31/07/2022

**Description** - Taxonomic and ecological aspects and evaluation of anthropic actions in the Caatinga biodiversity. This project aims to survey vertebrate and invertebrate species in the Caatinga Biome, understand their relationship with the environment and man, and evaluate the impact of different human activities such as deforestation and pollution on the biological communities of aquatic and terrestrial environments. Studies will be carried out to survey invertebrate and vertebrate species in terrestrial and aquatic environments. For various animal groups (including mammals, reptiles, amphibians, fish, insects, among others), community composition will be related to local factors, assessing the influence of natural and anthropogenic environmental variables in local communities. In addition, the relationship between human communities and other animals will be evaluated from the point of view of ethnozoology. This action intends to insert biological research and evaluate the effects of anthropogenic impacts on biota, among them: the fragmentation of habitats, including deforestation and dam construction, the cultivation of domestic species with the use of agrochemicals, the effects of pollutants on biota and permeability in the matrix of anthropogenic areas that directly affect biodiversity and other natural resources such as water resources. The structure and composition of species of areas under different stressors will be analyzed, making a correlation between the biotic and abiotic variables of the environment. In addition, the effect of ecological succession on biota in degraded areas will be evaluated. The assessment will take into account specific studies on biodiversity groups, as well as changes in some natural resources, in terrestrial and aquatic environments.

<b>Work missions related to the cooperation project</b>			
Year	Quantity	Amount	
2021	1	28,879.00	
2019	1	28,879.00	
2020	1	28,879.00	
<b>Resources to maintenance the projects</b>			
Year	Amount		
2020	5,000.00		
2021	5,000.00		
2019	10,000.00		
<b>Scholarships associated to the Research Project</b>			
Year	Type	Number	Total Amount
2020	Sandwich PhD (6 months)	1	40,478.40
2019	Sandwich PhD (6 months)	1	40,478.40
2019	Sandwich PhD (6 months)	1	40,478.40

## COUNTERPART

1. Internationalization of the curriculum - Incorporation of international themes in graduate classes.

Extract from Resolution 006/2018/Consuni/UFPB Art. 5 for the achievement of the specific objectives set forth in the art. In this Resolution, the following strategies are defined: II - proposing the changes required and permitted by current legislation, teaching, extension and research, undergraduate and graduate, for the development of partnerships proposed and approved by institutional bodies; VIII - use of technological tools of information and distance learning for the development of courses and other academic activities with national and international partner institutions; XII - implementation of programs for the reception of foreign students and teachers, with continuous monitoring and guidance, especially regarding bureaucratic procedures; XVI - adoption of a permanent policy to stimulate learning in foreign languages; XX - Incentive to the hiring of visiting foreign teachers. Art. 9 The disciplines of graduate programs may be taught in a foreign language, provided that they are authorized by the collegiate of the program. Art. 10. Work on completion of undergraduate and graduate programs (monographs, dissertations and theses) may be drafted and defended in Portuguese, English, French and Spanish, or in another language, at the discretion of the college course/program, as long as they contemplate title, abstract and keywords in Portuguese and English.

## **2. Production of international publicity material in other languages, including course websites.**

In addition to the determination in Resolution Res. 006/2018: OF THE USE OF FOREIGN LANGUAGE IN OFFICIAL DOCUMENTS Art. 8 The edicts or other institutional documents necessary to affect the integration between the agreed universities must be translated into English language or another in accordance with Law no. 12,686/ 2012. Single paragraph. It is essential to make the electronic disclosure of the documents on the official websites of the UFPB, as well as by e-mail sent to the partner institutions. In addition to this determination, the PRPG has engaged, contracted and is running the translation service of all PPG homepages for English and Spanish, as well as the PRPG and the Newspaper Portal.

## **3. Training and qualification of staff for institutional internationalization.**

Besides the proposition be one of the objectives of the internationalization policy of the Language Policy Plan; The UFPB joined the Language Without Borders Program of the Higher Education Secretariat's Ministry of Education (SESu / MEC) in partnership with the Coordination for the Improvement of Higher Education Personnel (Capes), and offers three major permanent actions: the online course English Online); the international TOEFL ITP exam, offered free to the academic community; and face-to-face classes, through the Isuc Language Center (NucLI). The UFPB program also offers weekly TOEFL ITP workshops and English spoken workshops with the participation of the Teachers and English Teaching Assistants of the CAPES / Fulbright / IsF agreement. In addition to these, the Pro-Rector's Office for People Management (PROGEP) was requested to offer advanced language courses.

## **4. Counterparts offered by foreign partnership institutions, when applicable.**

In general, the foreign counterparts can cover, depending on the project, expenses regarding passage and lodging, research funding, publication of material, sharing of equipment, installation of laboratories, publications abroad in periodicals with a high impact factor, among others. Specifically, UFPB and Ohio State University-OSU are proposing a virtual center to give impetus to the activities of the Global Initiative - in the concept of single health, with the objective of building innovative research capacity, maximizing application (as communication and marketing leadership) of research results and to expand collaboration between researchers and industries in Brazil and the US. For this action, we are agreeing with Ohio State University on a bilateral intramural funding combined with each partner. This promotion provides for an equal monetary contribution between USO and a Brazilian entity (we are negotiating with the Research Foundation of the State of Paraiba) with an estimated value of US \$ 100,000 (one hundred thousand dollars) for each side, for a total of US \$ 200,000 (two hundred thousand dollars) to start the priority activities. The Joint Center is being created as a virtual platform initially, an approach to encourage the development and/or strengthening of OSU research and training partnerships with the UFPB to enable strategic collaboration. The funding will support the mobility and exchange of researchers and students to increase planned programs and support research and training activities. The Center should include a central research and training program supported by a series of partnership activities between OSU and UFPB, providing opportunities for faculty, students and staff. Where applicable, project partners should align existing resources and infrastructure to augment research programs, thereby building new links or strengthening existing links. The main outcome of the Virtual Joint Center will be the conduct of new innovative research and the strengthening of bilateral strategic capacity building relations between UFPB and OSU.

#### 5. Other counterparts, when applicable.

The programs linked to axis 3 of the project (Bioma Caatinga, Biodiversity of Sustainability) develop a project with Ohio State University that may include the construction of Virtual Center (binational laboratories) in the UFPB. Activities to be potentially supported by the UFPB-OSU Global Joint Initiative Center will include:

- Joint research projects between researchers from partner institutions in common strategic research areas including, exact sciences, arts and humanities, agriculture, business, health, etc;
- Exchange of academics, staff and students, including short- and long-term visits by academics, postdoctoral researchers or visiting scholars. The exchange of graduate students will be strongly supported.
- Establishment of conditions that allow researchers to conduct joint research in laboratories of collaborators (both American and Brazilian) and contribute to teaching and / or training activities;
- Joint projects involving collaboration with industries will be strongly encouraged;
- Sharing of key resources among partner institutions;
- Development of robust interfaces for data management and data sharing between partner institutions;
- Support wider activities to strengthen links, such as holding symposia, workshops, seminars, meetings, etc.

#### DOCUMENTS

Description	Type	Date
Executive Summary ( <a href="https://bit.ly/2Gr4MA1">https://bit.ly/2Gr4MA1</a> )	Executive Summary, in English, of the Institutional Plan aligned with the Project presented in Print	10/05/2018 15:54:16
Letter n° 245 2018 R GR UFPB ( <a href="https://bit.ly/2Gr4MA1">https://bit.ly/2Gr4MA1</a> )	Letter of presentation issued by the maximum authority (8.2.4 of the Final Tender Protocol)	10/05/2018 15:50:05
Executivte Summary	Executive Summary of the	10/05/2018

( <a href="https://bit.ly/2Gr4MA1">https://bit.ly/2Gr4MA1</a> )	Institutional Plan aligned to the Project presented in PrInt	14:09:00
Runi06_2018 (4).pdf ( <a href="https://bit.ly/2Gr4MA1">https://bit.ly/2Gr4MA1</a> )	Institutional Plan of Internationalization of the HEI or document congener	10/05/2018 14:01:55
GebreyesW_CV_042518.pdf ( <a href="https://bit.ly/2Gr4MA1">https://bit.ly/2Gr4MA1</a> )	Curriculum Vitae - foreign members	10/05/2018 14:00:10