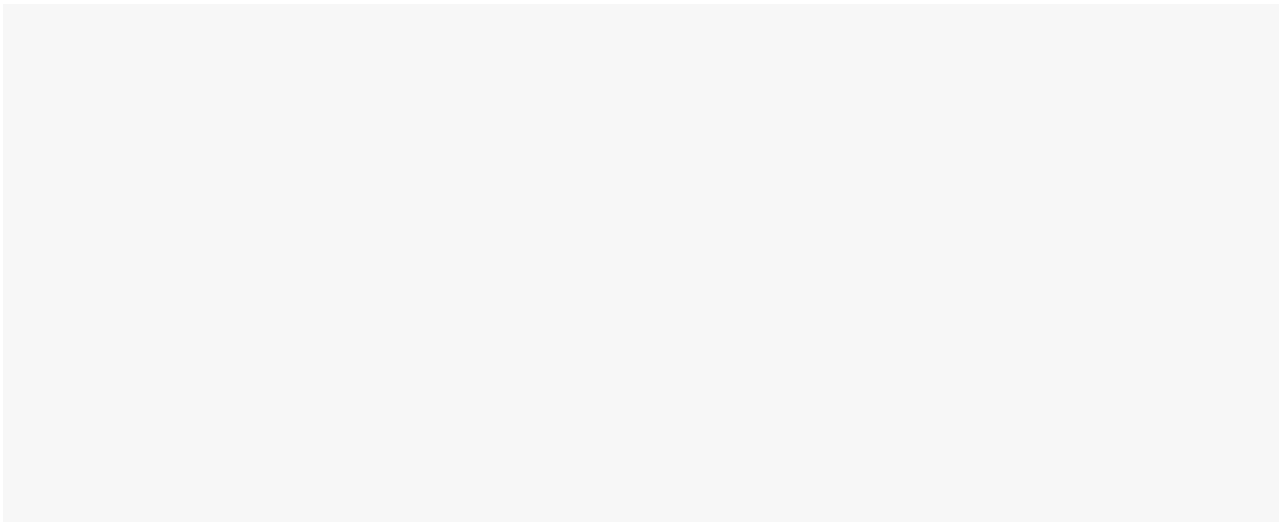


# UNIVERSIDADE FEDERAL DE SÃO PAULO

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**PRO-RECTOR ESPER ABRAO CAVALHEIRO**



**DATA OF THE CALL FOR PROSPOSAL****Call for Proposal  
Call Abreviation**

The Program aims at the selection of Institutional Projects of Internationalization of Higher Education Institutions or Research Institutes that have at least four Postgraduate Programs (PPG) recommended by Capes in the triennial

CAPES-PRINT

CAPES-PRINT

**Registration Data**

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INFECTIOUS DISEASES	INFECTIOUS AND PARASITIC DISEASES	01/01/2010 12:00:00
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SOCIAL SCIENCES	SOCIOLOGY	01/09/2010 12:00:00
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MOLECULAR BIOLOGY-BIOMEDICAL SCIENCES	MOLECULAR BIOLOGY	01/02/1974 12:00:00
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## DIAGNOSTICS

### STRONG POINTS

#### Title

University hospital with global leadership in health science research.

**Justification** São Paulo Hospital (HSP) is the largest hospital in the network of Brazilian university hospitals. It is responsible for the coverage of a large part of São Paulo metropolis and the expanded metropolitan complex. It also attends patients from other states of the country in its most diverse specialized areas. Its mission is to provide health care for the population, with quality and safety, aiming for their well-being, as well as providing the necessary conditions for teaching and research. This mission is aligned with the vision of being a teaching hospital that, apart from being recognized for the quality of the care offered, is a socially relevant space for knowledge production. The HSP is characterized by the diversity of its installed capacity, technological incorporation and wide coverage of its service, seeking to guarantee better efficiency standards, which is made available to the population. The

HSP offers hospitalization, urgency and emergency care services with high number of attendances, outpatient clinics and highly complex diagnostic and therapeutic resources. In this university hospital activities are also developed for teaching of undergraduate students, graduate students, medical residents and multiprofessional residents. The hospital has 96 medical residency programs and 17 multiprofessional residency programs that are institutionally linked to the Pró-Rectorio of Extension and Culture (PROEC). In Postgraduation *stricto sensu*, the Paulista School of Medicine (EPM) and the Paulista School of Nursing (EPE) offer 34 PhD Programs; 34 of Academic Master's and 6 of Professional Master's Degree, which have 2400 students in total. The CEDESS - Center for the Higher Education in Health Development, an additional center linked to EPE, develops the Master's Degree Program in Teaching Health Sciences. Created in 2003, the program has consolidated itself as a reference space for the training of professionals in this area of knowledge.

**Title**

Quality of undergraduate and postgraduate courses recognized nationally and internationally.

**Justification**

In the national and international institutional evaluations and rankings, Unifesp has been in a prominent position, which favors its insertion in teaching, research and extension networks in a leading position. In the renowned Times Higher Education (THE) ranking in 2017, Unifesp was considered the best Brazilian federal university and ranked in the third position among all national institutions, behind only the State University of Campinas (Unicamp) and the University of São Paulo (USP). In the MEC (Ministry of Education) General Course Index (IGC) (an instrument based on a weighted average of the evaluation of undergraduate and postgraduate degrees from each institution, which thus synthesizes in a single indicator the quality of all undergraduate courses, master's and doctorate programs from the same educational institution), since it was created in 2007, Unifesp is continuously in the evaluation range of excellence. The IGC grade varies from 1 to 5, with 4 and 5 being considered excellent and grades below 3, unsatisfactory. The last IGC calculated was in 2016 and only 12 universities in the country obtained concept 5, being Unifesp one of them, maintaining the maximum concept obtained in the last four years. At postgraduate level, in its more traditional areas, such as basic research in biological and biomedical sciences and in some clinical and interdisciplinary areas, Unifesp has international leadership. Three of the 34 EPM programs currently have grade 7 in CAPES (Biological Sciences - Molecular Biology, Microbiology and Immunology and Psychobiology) and six grade 6 (Translational Surgery, Pharmacology, Neurology and Neurosciences, Nutrition, Psychiatry and Medical Psychology). Campus São Paulo also has eleven other programs evaluated with grade 5 that cover the most important research areas in the field of human biology and health. In addition to excellence and impact and research in the medical field, Unifesp has a set of new postgraduate programs producing innovative research in the human sciences area such as the Guarulhos Campus, with emphasis in the areas of Social Sciences, Art History and Education. In the technological area, the new post-graduation programs of Computer Science, Biotechnology and Engineering and Material Sciences, in Campus São José dos Campos and programs in the environmental area such as Science and Sustainability Technology, in Campus Diadema, are examples of cutting-edge training programs.

**Title**

Geographic location in São Paulo macrometropolis, the largest urban concentration in Southern Hemisphere.

**Justification** Unifesp, from the regional point of view, is located in the largest urban concentration in the Southern Hemisphere, the São Paulo macrometropolis, with a population of 33.6 million inhabitants. The region concentrates 18% of the Brazilian population and 27% of the country's GDP, although its area corresponds to only 0.48% of the national territory. It is in this complex cluster that is concentrated the main high technology industrial park, the availability of complex services, the most diversified commerce, as well as cutting-edge agrobusiness and some of the most important remaining areas of Atlantic Forest. In addition, in the region are the largest ports and airports in the country and the largest knowledge production poles and innovation. The presence in this strategic region is challenging for Unifesp at several levels. Each of their campuses has important contributions to be given to the cities and / or the micro-region in which they are inserted, but also challenges to face, so that their teaching, research, extension and assistance activities have a transforming social role. Unifesp in every city that operates has institutional cooperation agreements with municipalities and its new undergraduate and postgraduate courses have been carefully planned to meet local development demands. As an example, Diadema Campus, given its location in the midst of one of the largest remaining areas of Atlantic Forest, concentrates courses related to the area of environment and sustainability. At Baixada Santista, the courses in the health area came to meet a historical demand of the population of improvements in the health services provided in the region. The Sea Institute, in turn, points to the challenges of economic development and sustainability presented by this coastal region. The São José dos Campos Campus concentrates Unifesp exact sciences courses and contributes locally to the development of the local regional technology industrial park. The Osasco Campus and Guarulhos Campus, located in the São Paulo metropolitan region, play an important role in the development of the cities in which they are located by means of agreements for the planning of public policies and community extension actions. In addition to MSc and PhD academic courses, Unifesp has created new professional masters courses in several areas of knowledge, not only in areas of its tradition, but also in areas of Exact and Human sciences.

### **Title**

Institutional structure for the management of internationalization..

### **Justification**

The first initiative aimed at creating a specific sector for Unifesp International Relations occurred after the transformation of Paulista Medical School (EPM) into university in 1994. In 1995, its was created the Unifesp International Advisory office that later, in 2011 would become, the International Relations Office (SRI). Over the years with varying degrees of involvement, SRI has been central in developing support for the students and faculty mobility from Brazil to abroad and vice-versa at Unifesp, in supporting cooperation agreements and participation in cooperation networks. In addition, SRI has played a role in the interinstitutional relations articulation in internationalization through participation in events, meetings and hosting of international activities that may result in the construction of mobility and cooperation programs, as well as in the dissemination of calls for proposals of other institutions in the area of internationalization. Currently, SRI, by the institution's bylaw has an International Relations Secretary, a Deputy Secretary and three Coordinations: Institutional Relations, Academic Mobility and International Agreements. The internationalization structure of the university also counts on a Coordinator of International Programs and Projects, at the Postgraduate and Research Pro-Rector and an Advisor on International Affairs at the Graduate Pro-Rector. Regarding administrative staff, SRI has four Level D employees who are responsible for attending the internal and the external communities and implementing mobility and agreement policies.

**Title**

**Highly qualified faculty, national reference in its fields of activity and with scientific production of international standard.**

**Justification**

Unifesp's exceptional quality of undergraduate and postgraduate courses is a byproduct of a faculty committed to teaching, research and extension. The postgraduate programs in health sciences area were all pioneers in the development of clinical procedures that did not exist in Brazil until then as well as in the creation of innovative surgical techniques and technologies. In addition, the programs were responsible for clinical training at the residency level, the training at master and PhD level of students who work throughout the national territory, in Latin America and in other countries of the globe. The quality of this training is due to the excellent laboratory for health research that became the HSP that allowed Unifesp, in the process of training professionals and researchers in assistance, to combine teaching and research. This articulation is reflected in the quality of the publications in the most important national and international journals of the lecturers in their respective areas of activity and with significant impact among peers. The publication in international journals, often in partnership with foreign researchers, is an institutional tradition that refers to the first dialogues and research collaborations established by the institution's lecturers with foreign centers since the 1960's. In turn, it has brought a body of young lecturers to the institution, most of them with meaningful experiences abroad, foreign language mastery and strategic partnerships with researchers from the main international research centers of present time. These junior researchers have already arrived at the university with consolidated research trajectories throughout their training, publications in international journals and adapted to the new academic order that emerged in this last globalization period. This is reflected in all new university campuses and has given support to the institution's innovative projects in terms of graduate studies and can also be visualized in the construction of a vigorous extensionist policy committed to the most serious social problems of the São Paulo macrometropolis such as the management of water and environmental resources, sustainable development, the confrontation of urban problems and the planning of public policies on health, education and housing.

**Weaknesses****Title**

Institutional budget.

**Justification**

The cuts and contingencies in the Education Ministry (MEC) budget for the Higher Education Institutions (HEI) have been a constant threat to the development of their activities. Since 2015, there have been repeated reductions in the amounts transferred for funding and maintenance, which has impacts on working conditions, infrastructure and student permanence policies. The National Association of Rectors of Federal Institutions of Higher Education (Andifes) in 2017 indicated a decrease of 1.7% in resources for funding and a 40.1% drop in investment resources. There have also been problems in releasing all the resources that are already insufficient. Without a process of recapitalization of higher education institutions over the next years, the resources needed to expand internationalization policies may be compromised, since the institutional resources currently available will be insufficient to face the increased demand.

**Title**

Infrastructure for the reception of foreign researchers.

### **Justification**

One of the university main problems to expand its internationalization has been the lack of infrastructure for the reception of foreign researchers. The university, for example, does not have university housing in any of its campuses and due to budget cuts in recent years, it has no projection for solving this issue. The space in the campuses for offices is restricted, which may possibly hinder the development of the foreign researcher activities in the unit. Unifesp also has no institutional policy for granting transportation tickets and installation assistance, as well as support for consular matters to the visitor upon their arrival in Brazil. The institution has as a horizon to project a special provision in relation to this last issues, exclusively designed to meet these demands.

### **Title**

Registration system of internationalization activities.

### **Justification**

One of the biggest problems identified by Unifesp in the internationalization area is the lack of registration of the activities developed by the institution's faculty. As the researchers relationship with their research partner is established directly, often these connections are not recorded internally. This is particularly noticeable in the case of projects developed with financial support from FAPESP, but also in relation to the resources granted by CNPq and CAPES. The institution works at the moment so that the researchers can register systematically in the institutional Intranet all its internationalization activities.

### **Title**

Language and curriculum internationalization policies.

### **Justification**

Although the language policy construction and the promotion of curriculum internationalization have been on the institution's agenda for some years, they have only recently become priorities in the institution. Over the last ten years, with the creation of the new campuses, the institutional priority was the pedagogical planning to put in operation the undergraduate courses, the construction of the infrastructure for the classes, the creation of a student permanence policy and the hiring of new lecturers. With the partial conclusion of these new campuses implementation, the university began to focus on policies to improve undergraduate and postgraduate training. However, in 2016, it was approved the regulation for the offer of undergraduate courses in foreign languages, and in 2017, a Language Policy Working Group was created with the objective of implementing a broad and systematic policy of teaching foreign languages articulated to to the curriculum internationalization. Throughout 2018, there will also be a discussion about the Unifesp's Institutional Pedagogical Project, International Programs and Projects Coordination of the Postgraduate and Research Pro-Rectorate (PROGPPq) and the International Advsor of the Undergraduate Pro-Rectorate (PROGRAD) that will be actively engaged in the debates process on the curriculum internationalization.

### **Do you have a well defined institutional vocation?**

Yes

### **Describe the vocation of your institution**



Unifesp was distinguished by the formation of highly qualified human resources in the area of health sciences and the range of its research activities, published in the most prestigious journals. The recent process of expansion of the institution has extended this tradition, incorporating new thematic and theoretical groups in a convergent and effective way - which guarantees the permanence of its historical vocation: to serve the public interest by promoting the activities of the university trivet (teaching, research and extension) articulated to relevant social demands.

## **Describe other relevant information about the level of your institution internationalization**

There are several ways in which foreign students can come to Unifesp. The data available on the international portal <https://unifesp.br/world> provide information of interest to foreign academics in English. Students can apply for a full undergraduate program through the PEC-G Program or for an exchange mobility period of six months to one year. Since its adherence to the PEC-G Program, Unifesp has trained 79 students from 17 countries. Students can also apply Master's or PhD degrees by Programs such as PEC-PG or PAEC-OEA. Research internships are sought by foreign postgraduate students and carried out according to the research project, accepted by a professor from Unifesp with the accordance of the foreign advisor. Another way to attract foreigners is the doctorate in international supervision (co-tutelle). There are institutional requirements and procedures for this modality, which has 16 students enrolled. In addition, the Paulista School of Medicine (EPM) is highly sought by students and foreign medical doctors to undertake short-term internships in various medical specialties. Between 2015 and 2017, EPM received 32 residents for internship. EPM has also held, since 2011, the Student Medical Congress - Braincoms, which attracts students from various countries. Another example is the Lasse - Latin American School of Summer on Epilepsy, held 12 years ago, which attracts, annually, 50 students from all over Latin America. Considering the mobility to its undergraduate and medical residency, between 2010 and 2017, Unifesp received 181 foreigners. As it is common throughout the country, the flow of exchange is still unbalanced - the coming of foreign students is smaller than the exit of our students, which has led the university to implement actions to make it more attractive to foreigners. In November 2016, foreign language courses in undergraduate courses was regulated. This initiative facilitates the coming of foreign students and benefits Brazilian students, who may have the opportunity to learn the content in another language. In the scope of postgraduate and research, the use of foreign languages is current in terms of the literature adopted, conferences and research activities involving postgraduate students and foreign researchers. Unifesp believes that the institutional effort associated with the government support will create the perfect environment for the increase of foreign academics at Unifesp.

## **REGISTER OF THE INSTITUTIONAL PROJECT- PII**

Institution of the Project Coordinator  
UNIVERSIDADE FEDERAL DE SÃO PAULO

### **General Goal**

Throughout its decades of activities, the Universidade Federal de São Paulo (Unifesp) has been characterized as an institution viscerally committed to the national development, advancing scientific knowledge of excellence and counteracting the Brazilian society asymmetries. Among other dimensions, the graduates technical quality, the innovative repercussions of the research carried out by their groups and the transformative reach of their extension activities testify the fulfillment of this commitment. However, the intense and dynamic life transformations in society in the last decades constitute a great challenge for Unifesp to continue honoring its identity and the scientific excellence motto as an enabler of social engagement. The difficulties experienced in this new scenario are not unique to the institution, since the paradigm in which the Brazilian public university based its protagonism is incapable of responding to the contemporary yearnings and the needs of the country. The current model disregards the plurality of approaches to solve complex current problems. The tradition of specialized and segmented research, closed within hermetic areas and generally echoing a departmental structure is insufficient to face the current reality. Thus, it is up to the national scientific community to construct more plastic-theoretical frameworks capable of dealing with hybrid issues in a multidimensional and coherent way. The convergent approaches promotion is seen as the most appropriate way to deal with a series of current phenomena, also a way to allow institutions committed to the advancement of scientific knowledge to remain referenced socially. The generalization of the practice of looking at complex problems under a mix of articulated lenses allows for more accurate analysis and more effective results - creating

possibilities for reinvention of teaching and research practices in institutions. As will be shown, in due course, the institutional effort for renewal is something that Unifesp has been doing for some years, with profound changes in its organization and following the express mandate of its Institutional Development Plan (IDP 2016-2020). A fundamental component of this necessary change in thinking and doing science in Brazil is a vigorous connection to the global state of art in various knowledge areas. By one side, in this direction, to be complete, national scientific advances requires a strategic and mature international insertion, in order to dialogue in the fronts of scientific discovery, to transgress dated conceptions and eventually to assert international leadership. By the other side, regarding the research activities quality and scope, the satisfaction of the national public interest requires also sharing the sharing, techniques, methods and theories with worldwide protagonism. Thus, comes up a two-way internationalization, in which national institutions can: i) give global visibility to their achievements and internalize foreign achievements; (ii) to bring together talents of any nationality and to qualify their staff at various levels abroad; and (iii) to develop thematic networks with wide circulation of data, techniques and results. In this context, the advent of the Capes - PrInt should be understood as a potential catalyst for efforts to renew scientific production in Brazil, creating space for universities in the country to contribute to the international insertion of national science and to rethink the role of its priority research themes. In this way, Unifesp understands the opportunity consolidated in 41/2017 call and responds to such call through this institutional project. Thus, the general objective of this proposal is to contribute to the establishment of a thematic agenda considered as a priority for national science - with the consequent achievement of results that foster innovation and critical reflection on the topics covered. Subsidiarily, the success of this application will consolidate the recent Unifesp's Institutional Policy regarding postgraduate and research, which points out for a centrality to internationalization actions. Consistently with Unifesp's identity traits and the IDP provisions, the university has presented a series of themes and problems that have been institutionally considered as fundamental to the national current situation, without measuring efforts for the formation and development of groups of plural and convergent researches specific to such questions. Due to its characteristics, resources and history, the institution intends to contribute in a more incisive way to the national research advancement in this set of subjects. Thus, the thematic areas brought up in this application are precisely the priority niches already designed and in motion by Unifesp. Thus, the concern with the synergistic relationship between "Cities and Sustainable Development" is fundamental, as the destabilization of the climate enhances the numerous crises experienced today in urban groups. Similarly, the theme "Emerging, Infectious and Neglected Diseases" refers to a variety of problems to which the most vulnerable portion of national society is exposed. Still on the public health subject, studies on "Oncology" must be deepened, since malignant neoplasias are the second main cause of death in the country. Also considering the impact on the Brazilian reality, it is imperative to recognize the centrality of the issues related to "Promoting well-being to address issues related to violence and drug use." In addition, given the speed of demographic changes in the country, it is urgent to deepen interdisciplinary studies in the area of "Longevity". Through the theoretical repertoire of Human Sciences, the motto "Studies of Contemporaneity" organizes a series of typical challenges of our time: mobilities, identities, inequalities and authoritarianism. Equally important task is to clarify some of the main factors that hinder the national education advancement through the knowledge integration presented by the theme "Neuroscience, Cognition and Education". Finally, it is worth pointing out a challenge identified with the frontier of knowledge: to analyze how biological mechanisms related to "Inflammation" allow thinking diagnoses and therapies for a wide range of diseases. In addition to these themes merit and their approaches presented in this application, the eventual success of the proposal is strategic to reinforce the institutional changes engendered by Unifesp recently. Since 2006, the university has undergone intense expansion, and its numbers of students, faculty, undergraduate and postgraduate programs have multiplied several

times - a vibrant movement that has not impacted the institution's actions quality: Unifesp is currently considered the best Brazilian federal university, according to the prestigious Times Higher Education (THE). In any case, this process made strategic planning imperative in the face of the new reality. In research terms and postgraduate studies, the programs and courses created in addition to Health Sciences (the institution's primary field of action for decades) has created distinct institutional spurs, enriched the thematic scope of the university and created new possibilities for interaction and action. Emblematic of that moment, Unifesp's IDP coined the importance of a new treatment to knowledge promotion, expressly naming areas of convergent research as priorities - as already mentioned, all the themes present in this application reverberate this process. The document established the university internationalization as an unavoidable option, finding support in the Institutional Internationalization Policy and in Unifesp's proposal to become a Global South University (that is, an institution that asserts its role in building bridges between the traditional centers of scientific excellence of the globe and the developing world vicissitudes). By recognizing these strategic themes, the Institutional Internationalization Policy is aligned with the horizon of inductive measures for the repositioning of the university's research activities. The main one, already in motion, consolidates the planning and creation of the Convergent Studies Institute (CSI), an academic unit exclusively dedicated to the acute issues treatment of the national reality - of which the themes presented in this application are the starting point. In order to be highly internationalized, the CSI joins other initiatives of the same nature: the recent institutional regulation on the hiring of visiting professors and researchers; initiatives to expand curricular units in foreign languages; studies for the use of distance learning apparatus in internationalization challenges; and the establishment of indicators aimed at assessing the university international insertion. From the abovementioned, it is possible to glimpse how the reception of this application to Capes - Print can energize, expand and consolidate an institutional movement already underway at Unifesp. However, the present proposal has its ultimate goal to foster and enroot the central themes in the national scientific agenda - something fundamental for the justification and maintenance of the relevance of the research developed in the country in the eyes of Brazilian society. Hereupon, it is not possible to think of an action that fully satisfies the national public interest without connection with the unfolding of scientific research around the globe. This time, the internationalization actions proposed here are nothing more than initiatives that aim to ensure the scientific contemporaneity of the country at its historical time.

## THEMES AND SPECIFIC GOALS OF THE PROJECT

Theme	Partner countries
Inflammation	Canada; Australia; United Kingdom; Italy; Norway; Germany; U.S; France; Chile; Costa Rica; Portugal.

### Justification

Inflammation is an answer to infection or tissue damage that occurs to eradicate microorganisms or irritating agents and to potentiate tissue repair. When excessive or persistently activated, inflammation can cause commitment of organs and systems, leading to decompensation, organic dysfunction, and death. Currently, it is recognized that inflammation is involved in different diseases, infectious or not, understanding diseases caused by protozoans and bacteria, osteoarthritis, cardiovascular system diseases, neuropathies, pulmonary diseases, multiple sclerosis and cancer, which generate, every year, high cost to health systems in the country. Despite this knowledge, the cellular and molecular mechanisms involved in the pathogenesis of these diseases are not fully elucidated, which leads to

diagnostic limitation and application of more effective therapies. Thus, the continuous investment in research and training of human resources in the technical / scientific field is fundamental for the advancement of the identification of new targets for the development of more effective therapeutic strategies to the treatment of these inflammatory natural diseases. In this context, the research currently developed in this institution, in the field of inflammation, encompass three main issues: 1) molecular and cellular bases of inflammatory diseases; 2) identification of molecular targets involved in inflammatory diseases and 3) development of treatments and therapies for inflammatory diseases. In view of the complexity of this theme, activities that promote the internationalization of our Institution will contribute strongly to the extension of knowledge, establishment of new technologies, disclosure and exchange experiences with other centers of excellence in that area of knowledge. In addition, we stress that the internationalization process will encourage the strengthening and establishment of new external partnerships, by exchange of faculty and students, achievement of courses, workshops and symposia, which contribute to the enhancement of highly trained staff and involved in the development of research in this theme.

## GOALS

### Goal

To increase the visibility of research lines related to the inflammatory processes developed at Unifesp.

### Description

To promote diverse actions aimed at the dissemination of the research developed at Unifesp in the proposed theme, through workshops, seminars (face-to-face or at distance), summer / winter courses and elaboration of contents (videos, texts, web page) related to the lines of research for wide publication.

### Goal

To strengthen the exchange of experiences and scientific knowledge on issues related to inflammation.

### Description

To develop projects focused on the study of the pathophysiological and molecular mechanisms involved in inflammatory diseases in partnership with universities and research institutes of excellence abroad, fostering new collaborations and strengthening existing collaborations.

### Goal

To stimulate the training of human resources for research in the field of inflammatory processes.

### Description

To foster in the postgraduate programs, the concretization of activities to attract students and faculty from international teaching and research institutions. To create a network of collaboration between researchers from UNIFESP and other countries in the scope of co-tutelle and exchanges of students and faculty. Joint actions would also involve the creation of postgraduate courses and courses to improve and create new technologies.

Theme	Partner countries
PROMOTION OF WELL-BEING TO FACE ISSUES RELATED TO VIOLENCE AND DRUG USE	Argentina, Australia, Canada, France, Germany, Netherlands, New Zealand, Norway, Switzerland, United Kingdom, United States of America, United States of America and Switzerland, Spain, Portugal, Mexico, India, Uruguay

### Justification

The problems associated with the use of drugs and violence stand out among the main challenges in the area of public health, education and security policies. There is an important interface between drug use and violence, demonstrated by the strong association between episodes of violence and substance use. In addition, these conditions share similar factors of individual and social vulnerability. Numerous attempts to address these problems based on repression and focusing on the associated pathologies, were fruitless. In the last decades, new approaches have been proposed, focused on promoting well-being, as part of preventive or therapeutic actions. Several research groups from Unifesp develop research related to this subject. In recent years, these groups have participated in joint discussions to develop collaborative and convergent projects and have identified the need to establish international partnerships to accelerate scientific advancement in these areas. There is a need for in-depth studies to evaluate and compare the impact of different types of public policies already used in different countries, as well as to study the biological, psychological and social vulnerability factors in different contexts and cultures, to develop new approaches appropriate to the Brazilian reality. This proposal has as its initial step the promotion of a scientific meeting integrating the different areas (Health, Education, Security,

Justice, Social Assistance) with national and foreign researchers who have been outstanding in the study of this subject and have the readiness to develop international partnerships in research and extension projects. After the event, we will organize courses to be given at Unifesp by researchers from several countries to deepen the knowledge on specific issues. Before or after the courses, they will participate in research missions to develop international multi-center projects. These partnerships are expected to develop a strong network of international collaboration; increase innovative and high quality scientific production, as well as train Unifesp human resources in this area.

## GOALS

### Goal

To deepen the knowledge on drug use, violence and well-being, with a focus on modern research methodologies and techniques in biological areas and other areas of knowledge.

### Description

Researchers linked to several research institutions and universities will be invited to conduct courses of general interest, focusing on methodologies of experimental planning, analysis of quantitative and qualitative data applicable to: Epidemiology and Public Policies, Health Economics; Research methodologies for Big Data/Big Analysis. Specific workshops will also be held on biological and clinical research methodologies, with emphasis on genetic data analysis; neuroimaging and neurochemistry techniques; development of biomarkers; methodologies for the development and evaluation of intervention models.

### Goal

To establish international partnerships for the development of multicentric research projects.

### Description

We intend to attract senior researchers from other countries to promote the exchange of knowledge and experiences with groups of researchers from Unifesp, aiming at the development of international multi-center projects and fundraising for them. We intend to promote the advancement of knowledge and the implantation of networks of scientific collaboration in the areas of basic, clinical, epidemiological and public policy research in this thematic area.

### Theme

EMERGING, INFECTIOUS AND  
NEGLECTED DISEASES

### Partner countries

Canada; Israel; United States of America;  
Italy; Russia; Saudi Arabia; Australia;  
Spain; Argentina; United Kingdom;  
Germany.

## Justification

The program of Emerging, Infectious and Neglected Diseases aims to contemplate the development and internationalization of research focused on the needs of patients and the development of tools for prevention (vaccines), diagnostics (methodology), treatment (Drug development) and patient monitoring (infection control). These processes are carried out by our University, particularly the postgraduate programs in Microbiology and Immunology (concept 7), infectious (concept 5), Ophthalmology (concept 6) and nursing (concept e 5) and through various international collaborations and encompass researchers from different areas (Basic, Applied and clinical). The research currently developed in our institution in the area of infectious diseases encompass studies ranging from basic biology to pathological aspects and patient management, in viruses, bacteria, fungi and parasites. In this respect, international collaborations are important for the transfer of new technologies and the sharing of epidemiological information Diseases. This thematic It also offers countless possibilities to form and consolidate collaborative networks between the Unifesp and several universities and international companies. We intend within the internationalization project to promote this congregation of efforts and to create locally a high-level environment of research and teaching to attend the specific goals within the concept of internationalization.

## GOALS

### Goal

To strengthen and integrate the research lines of Unifesp through the formation of networks that include International collaborations In the area of infectious diseases.

### Description

Within the area of infectious diseases, we intend to bring together more effectively a form of research from the needs of patients to the development of tools for prevention (vaccines), diagnostics (methodology) and treatment (development of medicines), followed by extending these aspects to the attention of patients. These processes will be effective if carried out in a common agreement with researchers from different areas (basic, applied and clinical) in collaborative networks with universities and international companies. We aim within the internationalization project to promote this congregation in order to achieve specific targets within the area of infectious diseases.

### Goal

To stimulate the formation of human resources for research and development in the area of infectious diseases.

### Description

Basic research, as well as hospital monitoring of infectious disease patients has been the routine in several sectors of the Paulista School of Medicine (EPM). We have already established several programs of collaborations, exchanges both at national, as at international level. In addition, the EPM is associated with the Hospital São Paulo, which attend in and out-patients, of which a good proportion is of patients with infectious diseases of the public network. These facts will allow us to associate the graduate programs performing activities that will attract new students, residents and faculty from international institutions according to the CAPESP program. This goal will thus allow you to effectively implement a new stage of internationalization.

### Goal

To acquire updated knowledge in the areas of infectious diseases.

### Description

In recent years the development of research, including the numerous technological advances occur very quickly. Interaction with international entities and the attraction of students and lecturers from abroad will allow our programs to be constantly updated. This will be possible through missions, internships, courses and scientific meetings in this thematic area. In addition, it will allow the dissemination of the work carried out at Unifesp by increasing its impact and visibility at the national, and most important, international level.

### Theme

ONCOLOGY

### Partner countries

Ireland; Canada; France; Italy; Belgium; Germany; Chile; Australia; Spain; United States of America; Netherlands; United Kingdom; Portugal.

### Justification

Oncology is dedicated to the study and treatment of cancer, whose development is related to environmental factors and life habits, being 10% hereditary. The multidisciplinary treatment, focusing on prevention, diagnosis and treatment, is



fundamental. The national cancer institute estimates 600,000 new cases of cancer in the biennium 2018-2019 in Brazil. With the exception of non-melanoma skin cancer, the most incident cancers in men will be prostate, lung, intestine, stomach and oral cavity, and in women, cancers of the breast, intestine, cervix, lung and thyroid. Despite great advances in the knowledge of the etiopathogenesis of cancer, it continues to take millions of lives every year, being the second cause of death in Brazil. 90% of these tumors could be cured if they were diagnosed early and treated properly. Although this pathology is quite complex in its mechanisms of development and responses to therapeutic application, few medical schools have a specific oncology discipline in their curriculum. The diagnosis and treatment of different types of tumor has progressed in the last 15 years. Imaging methods allowed the identification of increasingly smaller tumors and biomarkers allowed the diagnoses to be more accurate. The inclusion of molecular and cellular biology has resulted in the identification of potential therapeutic targets and risk markers for tumor development. However, knowledge about cancer is extremely dynamic. The challenges for establishing more specific treatments with fewer side effects and drug resistance are currently present. Thus, the improvement and exchange of knowledge of the molecular and cellular mechanisms of cancer, the search for new biomarkers and antitumor therapies, and the care for patients and their relatives are fundamental. Unifesp is a center of excellence in research, teaching and clinical care and needs to develop a broad and multidisciplinary vision in the field of oncology with the training of highly qualified human resources. In addition, it needs to stimulate the formation of international research networks in order to improve the quality of the academic production linked to the postgraduate study on the subject.

## GOALS

### Goal

To improve the quality of academic production and human resources linked to postgraduate programs.

### Description

The exchange of experience with international researchers and the improvement of the knowledge of faculty, post-graduates and administrative technicians in education will have as a consequence the formation of new doctors and nurses with a specialty in the different areas of knowledge of oncology. This will be important not only for the health system of the state of São Paulo, but for the whole country. The international insertion of our Graduate Programs will provide high-quality scientific output with publications in high impact journals, not only for Programs with grades 6 and 7 in CAPES, but also for Programs with lower grades, contributing to the improvement publication and training of highly skilled resources. In addition, the viability of co-tutelage between the postgraduate courses participating in the theme and foreign groups will be extremely important. The motivations from a multidisciplinary group for the conduction of scientific research will also be used as instruments for the creation of a Postgraduate Program in Oncology, aiming at the different areas of knowledge on the subject.

### Goal

To improve the exchange of experience and the scientific knowledge of faculty, postgraduates and administrative technicians in education in the area of oncology.

### Description

The theme Oncology aims to improve the knowledge of faculty, postgraduates and administrative technicians in education on basic, translational and clinical aspects of cancer in order to provide subsidies to improve the patient's quality of life. To this end, it will be important to consolidate existing international partnerships, as well as to build new partnerships and cooperation projects. International cooperation is of fundamental importance for the expansion of: - knowledge of existing techniques

and learning new methodologies for molecular and cellular understanding of cancer. The information generated will allow a better knowledge about the pathophysiology of the different types of cancer and will contribute to the identification of biomarkers, essential in the detection, diagnosis, treatment and prognosis of cancer; the use of bioinformatics resources, such as genomics, transcriptomics, epigenomics, proteomics, degradometry, segregation, interatomics, metabolomics, pharmacogenomics, based on experimental techniques, software and databases. This process is closely related to technological innovation, acquired through biotechnology and bioinformatics, - the development of new drugs and immunotherapeutics, and the improvement of minimally invasive surgical procedures for diagnoses, - the improvement of care for cancer patients and their families, discussions on risk management and adverse events; quality strategy associated with clinical practice; development of indicators; participation of the patient in their own safety; social and economic impacts of quality management; training of human resources: leadership, communication, teamwork, decision-making and management and planning.

### Theme

NEUROSCIENCE, COGNITION AND EDUCATION

### Partner countries

Ireland; Switzerland; Canada; United States of America; United Kingdom; Netherlands; France; Italy

### Justificativa

Neuroscience encompasses knowledge from health sciences, human sciences and exact sciences ultimately applied to clinical, industrial and educational areas. Learning is influenced by disability, low cognitive stimulation, low socioeconomic level, stress and genetic susceptibility to disorders affecting neuronal development. Considering that Brazil has low performance in the international ranking of education, it is pressing to minimize the impact of factors that harm cognitive development through the integration of knowledge of the neurosciences. We propose approaches backed by scientific evidence together with the best global centers which will allow us: a) to analyze manifestations of cognitive behavioral b) improve the detection factors causing cognitive impairment c) to perform interventions that promote improvement of cognition and education d) to enhance international projection in scientific production. Therefore, translational, behavioral, educational, statistical, epidemiological and neurotechnological techniques will be employed through three axes. In this setting, the university proposes the establishment of 3 strategies of research for internationalization in the themes: 1-neural plasticity in teaching-learning processes: neuroplasticity implies in evaluating the educational means to develop the learning potential of the individual. Therefore, professionals from different areas will act to develop translational research to enhance educational practices; 2-new paradigms for diagnosis and intervention in neurodevelopment and neurodegenerative disorders: the focus on prevention, diagnosis and intervention in development and neurodegenerative disorders is important for the clinical prognosis and development of health policies. The translational aims to develop and improve innovative techniques for the promotion of positive neuroplasticity. Neural restructuring (recovery of lost neuronal functions or increased efficacy) is crucial for the treatment of these disorders; 3- Technologies for Modulation, Recording and for Neurocognitive Therapies: computer processing applied mathematical procedures capable of simulating physiological processes, developing techniques capable of mimicking cognitive processes and expand functionality. The development of neurotechnologies in our country depends on the interaction between different sectors of basic and applied neuroscience, as well as on the international cooperation with centers of excellence, focusing on scientific and technological "deliverables".

## GOALS

### Goal

To establish a network of international collaboration in the areas of Neuroscience, Cognition and Education.

### Description

The main objective of this project is to create an international collaborative network with the objective of implementing a general strategy that allows integration between the most basic aspects of the understanding of functions and cognitive dysfunctions associated to the functioning of the nervous system, allowing the development of new technologies and improvement of educational practices. In this way, it is necessary to understand the neurobiological mechanisms involved in learning, in all its instances (molecular, cellular and in networks) and what are the best ways of presenting environmental stimuli to favor efficient learning, balancing and respecting social particularities and biological characteristics of each individual. Thus, there is an increase in the equality of educational opportunities, including more vulnerable people, whether due to socioeconomic conditions or developmental and / or neuropsychiatric disorders. We propose here the following approaches: 1. to understand the molecular and cellular brain and interverbal mechanisms of development and neuroplasticity, which mediate learning processes, including both the typical physiological and behavioral mechanisms, and those altered by different disorders 2 - to delineate instructional principles based on the concepts of neuroscience in order to maximize learning throughout the life cycle 3 - to establish and seek therapeutic solutions that offer better conditions of school learning for children and young people with or without learning disorders , thus contributing to an inclusive policy in which all citizens have equal opportunities to reach their full potential; 4 - to develop instructional resources considering the best evidence at the educational level, outlining and implementing actions for the professional development of lecturers, in order to incorporation of this knowledge into the daily routine of teaching, inducing positive changes in institutional teaching; 5- to study mechanisms related to the progression of neurocognitive disorders in search of possible targets and time points of intervention to improve treatments and new prevention proposals.

### Goal

To train academics in the areas of Neuroscience, Cognition and Education in order to increase the number and quality of publications on the area.

### Description

We aim to enable students, counselors and professor to participate in postgraduate programs to develop robust scientific methodologies, to improve the writing of scientific articles and develop technologies or techniques for patents in the area of Neuroscience, Cognition and Education. The approximation with editors, creation of symposia and creation of courses in the Graduate Programs in the English language, an initiative already feasible in some Departments, will raise the general level and impact of publications, increasing the international competitiveness of our University. With the development of these initiatives and other internationalization proposals, we expect that Graduate Programs will increase their triennial grades as well as those that already have grade 7 to maintain and increase their potential even more.

**Theme**  
**LONGEVITY**

**Partner countries**  
Israel; United States of America;  
Netherlands; United Kingdom; Canada.

**Justification**

The increase of human longevity along with the aging of the population (proportional increase of the elderly) can be considered the most important phenomenon in the world today, with serious social, economic, social security and health implications. Countries such as Brazil have been experiencing this phenomenon since the middle of the last century, but much faster than developed countries that began this process more than a century ago. The low socioeconomic and educational level of the majority of the Brazilian population should be seen as an aggravating factor in the equation of survival needs with health and quality of life of the growing elderly population. Public policies are necessary, but require knowledge about the living and health conditions of this population. Researches about the subject are incipient and specialized professionals do not even meet the existing demand. The exchange with countries and academic institutions that have experienced this problem for longer is a vital strategy so that we can move forward faster in finding solutions that fit our reality.

**GOALS**

**Goal**

To improve knowledge of the faculty in the area of Human Longevity through the exchange with centers of excellence abroad.

**Description**

With international cooperation, Unifesp will move to the state of the art in the theme of human longevity, with the creation and development of a postgraduate program in the area, with classes that will be taught by trained and foreign attracted faculty members.

**Goal**

To Increase the production of qualified theses and publications on the topic Human Longevity

**Description**

With international cooperation, Unifesp will be better able to develop research projects that feed the graduate programs involved, both existing and new programs specifically focused on the theme of Human Longevity. A strategy to boost knowledge production in this area, with an increase in the number of theses and qualified publications.

**POSTGRADUATE PROGRAMS LINKED TO THIS PROPOSAL**

**Theme**

INFLAMMATION

**Postgraduate Program**

MEDICINE (OTOLARYNGOLOGY)

**Quadriennial evaluation**

4

**Justification**

Among the lines of research developed in the PPG in Otolaryngology, the approach of inflammation is present. Mainly in infectious processes that do not lead to hearing loss, which affects more than 360 million people worldwide and whose cause is the cellular damage caused by inflammation in the inner ear. However, the mechanisms of injury remain unclear making its diagnosis and therapy a major challenge. The Postgraduate Program in Medicine (Otolaryngology) develops projects for the investigation of cytokines and inflammatory receptors involved in sudden sensorineural hearing loss. Aiming at regenerative therapy, we investigated, in an animal model, the auditory impact and the additional location of the transplanted mesenchymal stem cells. PPG has international collaboration with several experts in the field.

Postgraduate Program	Quadriennial evaluation
MEDICINE (HEMATOLOGY)	5

### Justification

Within the research lines of the PPG in Medicine (Hematology), there is one related to Sickle Cell Disease (SCD). SCD, considered a public health problem in Brazil, is characterized by extreme clinical variability. Recent studies suggest an important role of the inflammatory process in modulating the clinical manifestations of SCD. Because of this, the products of intravascular hemolysis (free hemoglobin and heme) are responsible for several inflammatory alterations, such as: endothelial dysfunction, chronic vascular injury, reduction of NO bioavailability, increased ROS formation, NET release, TLR4 and the inflammasome. The better understanding of SCD and its clinical variability will lead to improvement in the treatment of its patients. However, there are still few groups interested in this aspect, both in Brazil and abroad. The exchange with these researchers makes it desirable to increase research capacity in this area.

Postgraduate Program	Quadriennial evaluation
INTERDISCIPLINARY IN HEALTH SCIENCE	5

### Justification

The Program aims at the qualification and granting of academic title to researchers in various areas of knowledge covered by the Health Sciences. It has an integrated system of laboratories and thematics that allow the execution of projects in collaboration between faculty of several intra and inter-Campus areas of Unifesp, as well as external partnerships. It involves multidisciplinary studies of inflammation processes and their implications in the pathogenesis of diseases. It is dedicated to the development of experimental models of diseases, as well as clinical studies, aiming at the resolution or attenuation of inflammation and the evaluation of therapeutic or prophylactic procedures that are capable of adding better clinical results. The program presents international cooperation related to the theme, as well as continuously seeking partnerships with institutions abroad. In this way, its internationalization will provide consolidation and subsequent strengthening of this line of research.

Postgraduate Program	Quadriennial evaluation
NEUROLOGY AND NEUROSCIENCES	6

### Justification

The program was created in 1978 and today has a multidisciplinary format that enables the training of professionals from all areas of knowledge interested in developing research in the areas of Neurology and Neuroscience. The program made a progress when it was able to integrate basic research with the clinics around problems related to central and peripheral nervous system. It has 32 faculty supervisors all with their own research lines and cutting-edge infrastructure to develop projects aimed at the increasing of the knowledge of the

pathophysiology and therapeutic approaches of complex diseases of the nervous system, such as tumors, neurodegenerative diseases in general, infectious diseases, among others. The study of neuroinflammation has been of interest in several of these diseases. The program fulfills the criteria to participate in Capes-Print Internationalization call created to broaden and strengthen research groups that are interested in studying inflammation in the most varied approaches.

**Postgraduate Program**

MICROBIOLOGY AND IMMUNOLOGY

**Quadriennial evaluation**

7

**Justification**

The Postgraduate Program in Microbiology and Immunology began in 1971 and counts on faculty linked to the Department of Microbiology, Immunology and Parasitology and other Departments of the University and other Institutions. Since its beginning, it has consistently received a maximum concept of excellence (grade 7) by the Examining Committees of Capes, making up about 828 Masters and Doctors. The Program also encourages the exchange of faculty and students with other national and international institutions, which has provided considerable scientific enrichment over the years. Currently, the Program has 38 accredited professors with consolidated lines of research, many of them focused on the subject of inflammation. In these lines, inflammation is studied both in terms of molecular mechanisms involving cells and receptors, and their role in the resistance / susceptibility to the development of infectious diseases caused by bacteria, viruses, fungi and protozoa and sterile pathologies such as neurodegenerative processes and cancer.

**Postgraduate Program**

NURSING

**Quadriennial evaluation**

5

**Justification**

The Nursing Graduate Program is aligned with the issue of inflammation, especially in lines related to cardiology and infectious diseases. It develops international cooperation activity with great potential for expanding knowledge and partnerships. The group related to Cardiology has experience in research on risk factors for cardiovascular diseases. The control of these risk factors reduces the inflammatory responses and helps in the treatment and prevention of these diseases. Another group works with prevention, control, and therapies for infections and risk groups. With a focus on epidemiological analysis, clinical contributions on the risk factors for infections caused by the most prevalent microorganisms, especially those related to sepsis, inflammatory mechanisms and related mortality.

**Postgraduate Program**

MEDICINE (CARDIOLOGY)

**Quadriennial evaluation**

4

**Justification**

The topic of inflammation is recurrent in the research lines of Postgraduate Program (PPG) in Cardiology, since most cardiovascular diseases are caused by chronic inflammatory processes. Thus, coronary artery disease and heart failure are responsible for most of the deaths of people in the Western world. The PPG research line includes several areas linked to inflammation, such as cardiovascular surgery, which has focused primarily on this topic. The associated internationalization process will promote the consolidation and expansion of the research line of inflammation in cardiovascular diseases, which has already resulted in lines of original research and great repercussion in the community.

**Postgraduate Program**

NUTRITION

**Quadriennial evaluation**

6

**Justification**

Among the research lines studied in Postgraduate Program in Nutrition, we can

mention pathophysiological processes involving inflammation, as is the case of obesity, a chronic imbalance between ingestion and energy expenditure, considered a chronic disease of multifactorial origin. The profile of dietary lipids is related to the onset of diseases, such as diabetes, hypertension, cardiovascular diseases, and chronic conditions of inflammation, characterized by deregulation of the production of proinflammatory adipokines in different tissues and cells. In contrast, the need for alternative and natural therapeutic methods to combat and prevent these diseases is highlighted. In this sense, several studies have demonstrated the beneficial effect of the phenolic compounds present in some nutrients, but are still limited the studies that elucidate the possible mechanisms by which these bioactive compounds promote their beneficial effects. Postgraduate Program 9- Structural and Functional Biology Capes evaluation (2017 evaluation grade): 5 Justification: The Program has 23 supervisors whose networks include collaborations with several national and international universities. Its intrinsic characteristic is multidisciplinary and it prizes for the formation of highly qualified personnel, able to work in the best teaching and research institutions in Brazil and in the world. In the topic of Inflammation, high impact researches are developed, highlighting the following lines: mechanisms of cellular signaling and control of the genetic expression of Trypanosomes that are relevant in the infection of different hosts; cellular and molecular mechanisms involved in the remodeling processes of mineralized tissues in cardiovascular diseases, Alzheimer's and neoplasias, especially gastric and thyroid cancer, focusing on possible molecular markers. In addition, studies of proteins with anti or proinflammatory activities, and the use of stem cells from human dental pulp are developed in the search for new therapeutic forms in acute, chronic, allergic as well as neurodegenerative and hematopoietic inflammatory diseases.

### **Postgraduate Program**

Structural and Functional Biology

### **Quadriennial evaluation**

5

### **Justification**

The Program has 23 supervisors whose networks include collaborations with several national and international universities. Its intrinsic characteristic is multidisciplinary and it prizes for the formation of highly qualified personnel, able to work in the best teaching and research institutions in Brazil and in the world. In the theme Inflammation, high-impact researches are developed, highlighting the following lines: mechanisms of cell signaling and control of the genetic expression of Trypanosomes that are relevant in the infection of different hosts; cellular and molecular mechanisms involved in the remodeling processes of mineralized tissues in cardiovascular diseases, Alzheimer's and neoplasias, especially gastric and thyroid cancer, focusing on possible molecular markers. In addition, studies of proteins with anti or proinflammatory activities and the use of human dental pulp stem cells are developed in the search for new therapeutic forms in acute, chronic, allergic as well as neurodegenerative and hematopoietic inflammatory diseases.

### **Postgraduate Program**

PHARMACOLOGY

### **Quadriennial evaluation**

6

### **Justification**

The Postgraduate Program in Pharmacology of EPM-UNIFESP, since its creation in 1970, promotes the integration of the areas of Physiology and Pharmacology. The joint effort of our counselors and graduate students allowed the PPG in Pharmacology to reach a quality standard of 6 CAPES with the training of more than 660 Masters and Doctors. Currently, the program has 28 supervisors with consolidated research lines, many of them focused on the study of inflammatory mediators, innate immunity and the pathophysiology of cardiovascular, renal, pulmonary, neurodegenerative and endocrine



inflammatory diseases. It is also the topic of the research developed in the Program to search for new molecular targets for the development of more selective anti-inflammatory therapeutic strategies that result in a lower incidence of side effects. At that moment, at least 25% of the program leaders are included in the Theme - Inflammation, with a wide international insertion.

**Postgraduate Program**

MOLECULAR BIOLOGY

**Quadriennial evaluation**

7

**Justification**

The Graduate Program in Biological Sciences (Molecular Biology) began its activities in 1971, and in all its evaluations this Program obtained maximum concept of Capes. Several projects and scientific publications of the Program are related to the theme Inflammation, especially in the lines: 1) Remodeling of the extracellular matrix in chronic diseases and cancer, lysosomal enzymes and matrix metalloproteinases; 2) Blood coagulation, fibrinolysis and angiogenesis; 3) Cell Death; 4) Cell signaling in inflammation: role of heparan sulfate proteoglycans, integrins; purinergic receptors; protease-activated receptors; bradykinin receptors and kallikrein-kinin systems; angiotensin receptors; cytokines; 5) Glycosphingolipids in inflammatory processes; 6) Antimicrobial peptides; 7) Control of inflammatory mediators by genes, cells and peptides for the treatment of ischemic diseases and cancers.

**Theme**

PROMOTION OF WELL-BEING TO FACE ISSUES RELATED TO VIOLENCE AND DRUG USE

**Postgraduate Program**

PSYCHOBIOLOGY

**Quadriennial evaluation**

7

**Justification**

The theme "Promotion of well-being to face problems related to the use of drugs and violence" has already been consolidated as one of the research lines of the Graduate Program in Psychobiology. The Program has a specific area of concentration on Medicine and Sociology of Drug Abuse, which seeks to integrate knowledge in Medicine, Biology, Psychology and Sociology into the study of drug use behavior and associated problems. Research on neuroadaptive processes, genetic, epigenetic, psychosocial and environmental risk factors, development and / or evaluation of innovative pharmacological and psychosocial interventions are highlighted. The interface with violence is one of the topics that have been studied by some researchers of the Program, as well as preventive and therapeutic approaches based on health promotion and well-being. Among the interventions studied are mindfulness for the promotion of well-being, brief interventions and virtual interventions. The Program was evaluated by Capes receiving the highest possible grade (7), attributable to Programs with good level of internalization. For this reason, it must continue to invest in its internationalization process. This Program can contribute to the progress of programs in consolidation phase, in a synergistic way, considering an international perspective.

**Postgraduate Program**

PATHOLOGY

**Quadriennial evaluation**

4

**Justification**

The group of Molecular Pathology of the Program of Pathology of UNIFESP acts in a line of research on violence, in particular using diagenesis in exhumed bones (aiming at the analysis of genetic links and human identification) as well as sexual crimes. In the line of research in population genetics, studies on polymorphisms of drug susceptibility and metabolism are carried out, which may be vulnerability factors for drug use and

violence. Another line of research is on Bioethics.

### **Postgraduate Program**

### **Quadriennial evaluation**

STRUCTURAL AND FUNCTIONAL BIOLOGY 5

### **Justification**

The Graduate Program in Structural and Functional Biology had the masters level recognized and recommended by CAPES in 1988 and the doctorate one in 1992. It has 23 supervisors whose networks of work include collaborations with several national and international universities. It has two major areas of concentration: 1) "Cell and Molecular Biology", whose lines of research are 'Cellular and Molecular Biology Applied to Aging Diseases' and 'Structural and Applied Functional Biology'; 2) "Genetics" which includes the lines 'Genetics and Epigenetics of Cancer' and 'Human and Medical Genetics' which includes Mental Health. The program has as intrinsic characteristic the multidisciplinary approach and it prizes for the formation of highly qualified personnel, able to work in the best institutions of education and research of Brazil and the world. Its goal is to expand the frontiers of knowledge in the areas of cell and molecular biology, structural and functional biology, histology, anatomy, developmental biology, genetics and epigenetics through the training of individuals capable of developing innovative research and integrating the labor market in the best teaching and research institutions, to disseminate knowledge and contribute to a better education in our country. It currently has concept 5 by CAPES.

### **Postgraduate Program**

### **Quadriennial evaluation**

EDUCATION AND HEALTH IN CHILDHOOD  
AND ADOLESCENCE 4

### **Justification**

Postgraduate Program in Education and Health in Childhood and Adolescence presents two lines of research for the Master's Degree: "The physical, emotional and intellectual integrity of children and adolescents" and "Childhood and adolescence issues for training health and education professionals" and one line of research for the Doctorate " Education and Health in Childhood and Adolescence: chronic problems and current perspectives ". The program has 26 permanent lecturers who work in teaching-research-extension, with projects related to childhood and adolescence as well as in relation to the different aspects that, in some way, interface with these populations, namely: family, school, educators, among others. PPGES has initiated some internationalization actions, which should be amplified and strengthened.

### **Postgraduate Program**

### **Quadriennial evaluation**

NURSING 5

### **Justification**

The Graduate Program in Nursing is aligned with the theme of Promoting Well-being to address problems associated with drug use and violence. It develops international cooperation activities with great potential for expanding knowledge and partnerships. The group has experience in research on well-being, drug use, family, violence and mindfulness, working in health institutions and education in prevention, promotion, intervention and rehabilitation.

### **Postgraduate Program**

### **Quadriennial evaluation**

PUBLIC HEALTH 4

### **Justification**

The Graduate Program in Collective Health (PPGSC) of the Federal University of São

Paulo has as main objective to train, from an interdisciplinary and multi professional perspective, masters and doctors qualified to act as researchers, lecturers or managers of services in the health area. The Program has three areas of concentration: a) Epidemiology; b) Social and Human Sciences in Health; c) Health Policy, Planning and Management. There are more than 15 registered lecturers and several masters, doctoral and postdoctoral students. Different projects evaluate students' quality of life, mindfulness and education. The program develops research projects aimed at evaluating drug prevention programs, factors associated with the initiation of alcohol and other drug use by adolescents, violence in school settings, evaluation of the implementation of various interventions based on mindfulness in the Brazilian health system, as well as anthropological studies of drug use and violence in the Cracolândia region of São Paulo, and evaluation of the mental health and quality of life of students of the institution. In recent years, the Program has sought to improve its international relations in research and teaching partnerships, receiving lecturers and students from several internationally recognized universities. Despite the efforts made, the program still needs a close training of the student body and faculty to expand its international publications, since some specific groups are still in the phase of exclusive production in national magazines. In order to reverse this situation, it is necessary to train the team by providing courses that offer specialized training in the writing of articles and projects in the field of knowledge that covers more than 50% of the teaching staff of the program: drugs, violence and well-being. In this way, we propose to bring lecturers from the main North American and European universities that work on these topics, proposing courses to train students and lecturers.

**Postgraduate Program**

**Quadriennial evaluation**

SOCIAL SCIENCES

4

**Justification**

The Postgraduate Program in Social Sciences integrates several researchers who develop studies on issues related to violence and its social interfaces based on approaches and methodologies specific to anthropology, sociology and political science. Research on crime can be mentioned, addressing both prevention and combat; police and policing; prisons and incarceration; drug consumption; public policies aimed at serving vulnerable populations; victimization, pain and suffering, all related to the more general theme of violence. By encompassing three areas of knowledge in the humanities, PPGCS encourages network research and the interdisciplinary approach of its research objects. The Program is new, started its activities in 2010 and its first quadrennial evaluation (2013-2016) obtained grade 4. Activities that reinforce internationalization are fundamental to the consolidation of the program which, in the last four years, sent half of their accredited professors to carry out post-doctoral internships at university institutions abroad.

**Postgraduate Program**

**Quadriennial evaluation**

PHARMACOLOGY

6

**Justification**

Among the several lines of research of the Graduate Program in Pharmacology, we highlight the study of the neurobiology of dependence on drugs of abuse, which aims to broaden the understanding of the molecular mechanisms involved in the development, maintenance and relapse to the use of drugs of abuse. These researches can contribute significantly to the discovery of new therapeutic targets and consequently to the development of new drugs more effective for the treatment of this significant medical and psychosocial problem. The PPG of Pharmacology needs to consolidate and expand its collaborations with foreign researchers who work in this area and who possess advanced technologies, especially in relation to the study of molecular alterations in the

neurons involved in the circuits associated with drug dependence and animal models of dependence. These researchers are also interested in convergent thematic projects.

### Postgraduate Program

### Quadriennial evaluation

HEALTH SCIENCES

5

### Justification

The theme "Promotion of well-being to face problems related to the use of drugs and violence" has been developed by the professors linked to this Graduate Program seeking to integrate knowledge from diverse areas: neuroscience; psychopharmacology; human behavior; mental health and drug policy. They study issues involved in drug use and associated problems, as well as their relationship with traumas and violence. The research areas of this program that stand out are: studies on neuroadaptive processes, genetic, psychosocial and environmental factors, development and / or evaluation of pharmacological, psychological and social interventions. Studies on the relationship between violence and drugs have been developed by some researchers, as well as studies of preventive and therapeutic approaches based on health promotion and well-being. The Program was evaluated as grade 5 by Capes and must continue to invest in its internationalization process in order to improve its quality and evaluation.

### Postgraduate Program

### Quadriennial evaluation

PSYCHIATRY AND MEDICAL PSYCHOLOGY

6

### Justificativa

The theme "Promotion of well-being to face problems related to violence and drug use" has already been consolidated as one of the lines of research of the Postgraduate Program in Psychiatry and Medical Psychology. The Program has an area of concentration in Epidemiology and Social Psychiatry in a multidisciplinary approach, acting on the spectrum of anthropology to basic and applied neuroscience, with a strong epidemiological component. The use of and dependence on substances and the psychiatric consequences of violent experiences are two main focuses of the Program, which presents the following lines of research: "Multidisciplinary approach in the treatment and prevention of drug addiction" and "Violence against women, children and adolescents ". These lines include works evaluating the efficacy of interventions for the prevention of both drug use and the consequences of stressful events on the mental health of the population. In this way, coping strategies and welfare promotion are part of the Program's front line of action. The Program is evaluated as grade 6 by Capes and must continue to invest in its internationalization process. Its strengths are the recruitment of human resources and international funding, with more than 15 foreign students. It can therefore contribute significantly to the advancement of Programs in the process of consolidation and with little experience in internationalization.

### Postgraduate Program

### Quadriennial evaluation

EDUCATION AND HEALTH IN CHILDHOOD  
AND ADOLESCENCE

4

### Justification

Postgraduate Program in Education and Health in Childhood and Adolescence presents two lines of research for the Master's Degree: "The physical, emotional and intellectual integrity of children and adolescents" and "Childhood and adolescence issues for training health and education professionals" and one line of research for the Doctorate " Education and Health in Childhood and Adolescence: chronic problems and current perspectives ". The program has 26 permanent lecturers who work in teaching-research-extension, with projects related to childhood and adolescence as well as in relation to the different aspects that, in some way, interface with these populations,

namely: family, school, educators, among others. PPGES has initiated some internationalization actions, which should be amplified and strengthened.

### Theme

EMERGING, INFECTIOUS AND NEGLECTED DISEASES

#### Postgraduate Program

NURSING

#### Quadriennial evaluation

5

#### Justification

The Nursing graduate Program is aligned with the thematic infection and develops international cooperation activities with great potential for broadening knowledge and partnerships. The group works with prevention, control and therapies for infections and risk groups. It focuses on epidemiological analysis, clinical contributions on risk factors for infections caused by microorganisms most prevalent in particular those related to sepsis, inflammatory mechanisms and related mortality.

#### Postgraduate Program

INFECTIOUS DISEASES

#### Quadriennial evaluation

7

#### Justification

Since 1983, it has a select group of advisors with international academic training, conducting research in the clinical, epidemiological and basic research areas, with a great capacity to produce and disseminate knowledge in an area of Infectious Disease. The program maintains as a fundamental focus the formation of high quality human resources, and by the end of the year 2016, granted 390 Masters and 184 Ph.D. titles, with considerable contingent of graduates who stand out in the national academic environment and centers of Excellence abroad. The post-graduation in Infectious at was consolidated by a mixture of clinical research, epidemiology and basic research. His excellency has been related to work in collaboration with several reference centers in Brazil and abroad, in the active search for resources to support it, as well as to our commitment to academic excellence in the formation of human resources and knowledge production.

#### Postgraduate Program

OPHTHALMOLOGY AND VISUAL SCIENCES

#### Quadriennial evaluation

6

#### Justification

In 38 Years of existence, the program formed 558 masters, doctors and post-doctors. The program maintains concept 07 (seven) by Capes-Medical Area III, among the graduate courses in ophthalmology in Brazil, with performance equivalent to the most important international education and research centers. A strong feature of the program is the international exchange, characterized by an expressive number of theses and joint publications with research institutions abroad, which promotes among our student body growing interest in doctorate Sandwich, as well as in the international postdoctoral. In the area of infectious diseases, the program stands out in ocular infection studies caused by protozoa and bacteria, where basic studies are performed and applied to diagnosis and treatment.

#### Postgraduate Program

STRUCTURAL AND FUNCTIONAL BIOLOGY

#### Quadriennial evaluation

5

**Justification**

The program has 23 advisors whose and include collaborations with several national and international universities. It has as an intrinsic characteristic of multidisciplinary and cherishes the formation of highly qualified personnel, able to act in the best institutions of teaching and research in Brazil and the world. It develops research in the area of infectious diseases including the following areas: cellular signaling mechanisms and control of Expression of Trypanosoma That are relevant in the infection of different Hosts.

**Postgraduate Program**

MICROBIOLOGY AND IMMUNOLOGY

**Quadriennial evaluation**

7

**Justification**

The Post-Graduate Program in Microbiology and Immunology received uninterrupted, maximum concept of excellence (note 7) by the Examining Committees of Capes, having already trained 828 Masters and Doctors. The program includes counselors who develop different lines of research, including the search for understanding how changes in the immune system can compromise other organs and tissues, and how strategies that maintain the integrity of the immune system can contribute to healthy longevity.

**Theme**

ONCOLOGY

**Postgraduate Program**

MEDICINE (PNEUMOLOGY)

**Quadriennial evaluation**

5

**Justification**

Among all the program's supervisors, 1 counselor, who participates in the oncology theme, develops a line of research within the area. The following topic is under development: lung neoplasm aimed at the association between gastroesophageal reflux disease and lung cancer and the evaluation of the histological subtypes of lung cancer and its impact on overall survival.

**Postgraduate Program**

PHARMACOLOGY

**Quadriennial evaluation**

6

**Justification**

Among all the program's advisors, 6 counselors, who participate in the oncology theme, develop lines of research within the area. The following topics are under development: Estrogen receptors: intracellular signaling pathways and function in prostate and testicular cancer; glycogen synthase kinase-3 (GSK-3) and its interrelationship with autophagy in leukemias; possible pharmacological targets; studies of the pharmacological and molecular bases of autophagy and its contribution in metabolic diseases, cancer and neurodegeneration; calcium homeostasis and mechanisms of cell death by apoptosis in cancer; role of the microenvironment in tumor transformation and progression; relationship between cellular stress, epigenetic changes and malignant transformation; integrated analysis of transcriptome, methylome, hydroxymethylome, metabolome, miRnoma and exome in melanoma progression model; pharmacogenomics and biomarkers in cancer.

**Postgraduate Program**

PATHOLOGY

**Quadriennial evaluation**

4

**Justification**

Among all the program's supervisors, 2 counselors, who participate in the oncology theme, develop lines of research within the area. The following topics are under development: clinical oral physiology and pathophysiology of the stomatognathic system and salivary markers; studies of melanocytic lesions and other sites from the clinical, anatomopathological, immunohistochemical and molecular point of view.

**Postgraduate Program**

BIOLOGICAL SCIENCES (MOLECULAR BIOLOGY)

**Quadriennial evaluation**

7

**Justification**

Among all the program's leaders, 9 counselors, who participate in the oncology theme, develop lines of research within the area. The following topics are under development: biochemical pathways and cellular interactions that regulate proliferation, differentiation and resistance of solid and hematopoietic tumors to drugs; interaction between integrins and the urokinase receptor and the influence of the kallikrein-kinin system and proteoglycans in breast cancer; action of nitric oxide, free radical with signaling properties, on pro-oncogenic signaling pathways: EGFR, Src kinase, Ras-ERK  $\frac{1}{2}$  MAP kinases, PI3K-Akt- mTOR; role of glypican-1 in the process of human glioblastoma tumorigenesis; heparanase and neoplastic transformation in different types of cancer; fragments derived from proteins with selectivity for inhibition of mammalian enzymes, mechanism of action and their role as anti-inflammatory, antithrombotic and antitumor agent; chemical synthesis of peptides and combinatorial libraries of peptides with application in the study of proteolytic enzymes: evaluation of proteome and degradoma in tumor cells and development of immunotherapeutics for adjuvant use in oncology: antibodies against tumor markers and antibodies with target on angiogenic factors.

**Postgraduate Program**

NURSING

**Quadriennial evaluation**

5

**Justification**

Among all the program's advisors, 6 counselors, who participate in the oncology theme, develop lines of research within the area. The following topics are under development: quality of life in patients with advanced diseases and cancer; health education of vulnerable populations: intervention studies for the construction of self- management skills in the cancer patient to understand illness, decision making, self- care, favoring adaptive processes and family relationships; quality of life (QL), cancer impact (HF), and signs and symptoms of oncological treatments and cancer survivors; analysis of interventions, methods and instruments in pediatric and adult vascular access in cancer patients; studies promoting safe practices in infusion therapy and drug stability studies and prevention of medication errors in critical care.

**Postgraduate Program**

Medicine (Gynecology)

**Quadriennial evaluation**

4

**Justification**

Among all the program's supervisors, 2 counselors, who participate in the oncology theme, develop lines of research within the area. The following topics are under development: detection of Human Papillomavirus - HPV RNA and microRNA at different stages of progression; minimally invasive surgical techniques and cancer; quality of life assessment (QoL): oncoimaging, physical activity, reconstruction of the areola by micropigmentation; integrative medicine in the treatment of cancer (acupuncture, meditation).

**Postgraduate Program****Quadriennial evaluation**

TRANSLATIONAL MEDICINE	5
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**Justification**

Among all the program's supervisors, 1 counselor, who participates in the oncology theme, develops a line of research within the area. The following topic is under development: digestive tract neoplasias aimed at the identification of biomarkers.

**Postgraduate Program****Quadriennial evaluation**

MEDICINE (HEMATOLOGY)	5
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**Justification**

Among all the program's supervisors, 1 counselor, who participates in the oncology theme, develops a line of research within the area. The following topic is under development: identification of tumor markers and possible therapeutic targets in B cell proliferative diseases.

**Postgraduate Program****Quadriennial evaluation**

STRUCTURAL AND FUNCTIONAL BIOLOGY	5
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**Justification**

Among all the program's advisors, 3 counselors, who participate in the oncology theme, develop lines of research within the area. The following topics are under development: investigation of genetic events associated with the genesis and progression of different subtypes of thyroid carcinoma occurring in adulthood or in the pediatric age group; effects of microRNAs on super expressed genes in thyroid carcinomas; gene regulation of global expression as a consequence of genomic imbalances caused by chromosomal rearrangements, both in gene regions and non-coding regions of the genome; study of the genetic, molecular and cellular bases of thyroid diseases such as thyroid cancer and congenital hypothyroidism.

**Postgraduate Program****Quadriennial evaluation**

CHEMICAL BIOLOGY	4
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**Justification**

Among all the program's supervisors, 2 counselors, who participate in the oncology theme, develop lines of research within the area. The following topics are under development: establishment of the zebrafish model and application of this model in studies of tumorigenesis and antitumor therapy, focusing on the study of the autophagy process; mechanisms of regulation of transcription, epigenetics, nuclear organization and retrotransposons in cancer.

**Postgraduate Program****Quadriennial evaluation**

MEDICINE (UROLOGY)	4
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**Justification**

Among all the program's supervisors, 1 counselor, who participates in the oncology theme, develops a line of research within the area. The following topics are under development: bladder and prostate cancer and minimally invasive techniques.

**Theme**

NEUROSCIENCE, COGNITION AND EDUCATION



<b>Postgraduate Program</b>	<b>Quadriennial evaluation</b>
NURSING	5

### **Justification**

This Program is aligned with the topics of neuroscience, cognition and education, especially with regard to aspects of well-being, mindfulness and early childhood education. Initiatives have been carried out with international cooperation and great potential for expanding knowledge and partnerships in the area. Professors and supervisors are experienced with research including elementary and basic education, as well as with university students and educators. In addition, there are professionals who develop studies related to family care and interpersonal and marital relationships. Therefore, we aim to integrate to the general proposal and to increase the international collaboration and advisory in the next years.

<b>Postgraduate Program</b>	<b>Quadriennial evaluation</b>
TEACHING IN HEALTH SCIENCES	4

### **Justification**

This Program started in 2003 and has three lines of research: Evaluation, Curriculum and Training in Health; permanent Education in Health and Health Education in the Community. The internationalization could improve the technical and scientific production and subsidize the creation of the first doctorate in the country in the area of Health Teaching. The teaching practice is not only based on the evidences on educational issues, but is also based on NCE knowledge, which partially explains the frailty of current interventions. Several researchers of the this PGP have investigated teaching learning for health education, funded by national agencies, and are currently coordinating a multicenter research on lecturer education in three regions of the country. The partnership with international researchers involved with teaching-learning actions is important for the advancement of our practices and will also enable us to advance our scientific production in this area of knowledge. In addition, we have narrowed partnerships with the objective of participating in systematic reviews for health education through the methodology Best Evidence Medical Education (BEME) Collaboration.

<b>Postgraduate Program</b>	<b>Quadriennial evaluation</b>
PHARMACOLOGY	6

### **Justification**

This Program's main objective is the training of qualified human resources to perform in the area of Pharmacology and Physiology. Update, constant training and multidisciplinary are some of program's goals. Through new methodologies and the search for the state of the art, new trends in the area have been incorporated. In this sense, we have carried out internationalization actions, such as exchanges, visits and fellowship abroad that have resulted in collaborations, agreements and resources from international agencies. However, strengthening our international insertion has been one of the PGP most important goal, and compliance to these initiatives has been strongly encouraged, aiming to consolidate the PGP. In the scope of this project, we developed projects in neuropsychopharmacology and neuroplasticity, which would benefit from the exchange of students and researchers with international reference groups.

<b>Postgraduate Program</b>	<b>Quadriennial evaluation</b>
PUBLIC HEALTH	4

### **Justification**

This Program's main objective is to train, from an interdisciplinary and multi professional perspective, qualified post-graduate students to act as researchers, professors or directors of services in the health area. The Program has three areas of concentration: a) Epidemiology; b) Social and Human Sciences in Health; c) Health Policy, Planning and Management. There are more than 15 professors and several post-graduate and postdoctoral students. Different studies assess quality of life of students, mindfulness and techniques in education. Thus, this Program is aligned with projects in the main subject of NCE. Improving the training of our administrative technicians, professors and students through exchange and internationalization has been the goal of our Program.

### **Postgraduate Program**

Human Communication Disorders

### **Quadriennial evaluation**

5

### **Justification**

This PGP aims to contribute to the advancement of scientific knowledge in the area of human communication promotion, as well as the prevention and rehabilitation of its disorders. From six different lines of research, scientific projects are developed focusing on Diagnosis, Prevention and Intervention in Hearing Disorders; of Speech and Language; Deglutition and Stomatognathic System; of Body Balance; the Voice, and ongoing studies in the interface between Speech and Hearing Therapy and Public Health. The PGP has researchers who collaborate and work with other professionals in the Health and Sciences Rehabilitation, as well as Exact and Humanities, which characterizes its multidisciplinary aspect. The integration between Neuroscience, Cognition and Education is not only appropriate to this PGP, as it has been actively established by its professors and supervisors. It has been achieved by the development of scientific studies and the association with the National Network of Science for Education - Rede CpE).

### **Postgraduate Program**

PSYCHOBIOLOGY

### **Quadriennial evaluation**

7

### **Justification**

The PGP in Psychobiology includes four areas Cellular and Molecular Bases of Behavior, Medicine of Drug Abuse, Medicine and Sleep Biology, and Neurobiology. This PGP offers a large number of courses, including English courses. The student's collaboration with professors and researchers from different departments and other national and international institutions is encouraged. It is intended that the Master's student egress from the Program able to teach and to carry out research projects that follow ethical standards. At the end of the PhD, the student should be able to write scientific papers and act as a trainer for new students. At least 63% of PGP graduates develop teaching and research activities in Higher Education Institutions. Some of the graduates underwent post-doctoral fellow abroad or with international collaboration. Since 2007 this PGP has been evaluated with excellence in the Area of Medicine II by CAPES. Thus, internationalization and the maintenance of collaboration with other countries is fundamental to maintain the excellence of the program and to integrate the main proposal here presented.

### **Postgraduate Program**

INTERDISCIPLINARY IN HEALTH SCIENCES

### **Quadriennial evaluation**

5

### **Justification**

This PGP was intended for the training of lecturers and researchers in the various areas of knowledge covered by the Health Sciences. It was the first PGP in the area of public university health in the Santos SP Campus. By 2017 this PGP was recognized as

promising since its grade evaluation was significant rising. . In this scenario, continuity of growing is based on the internationalization process. In this context, the Neurosciences and Behavior of Santos Campus, includes 7 professors, being 4 better graded according to national Index, with focus in five areas: neuroimmunology, neuroendocrinology, neuropsychophysiology, neuropsychopharmacology and behavior, including molecular , physiological and pathological aspects of development and learning processes Currently, the group has developed collaborations and connections with international researchers, aiming to improve the quality of research and teaching within the national and international scenario of our University in the coming years.

**Postgraduate Program**

**Quadriennial evaluation**

NEUROLOGY - NEUROSCIENCES

6

**Justification**

This Program integrates basic and clinical research. The investigations evaluate mechanisms involved in the pathophysiology and therapeutics of neurological diseases. The Program aims to train human resources and to develop research. As a result, efficiency and quality in the treatment of neurological diseases will be achieved. The infrastructure includes sectors for patient care and laboratorial and other tests for research. These laboratories use techniques in electrophysiology, biochemistry, molecular biology, microscopy, cell biology, cell culture, animal models, among others. There are projects funded by major agencies in the country. This PGP is linked with Biomedical Engineering enabling the development and improvement of instruments for monitoring and for interventions in neurophysiology, as well as application of mathematical-computational methods for quantification and data analysis. There are more than 30 supervisors with high annual publication rates. Therefore, internationalization and exchange with other Universities will incentive to the publication and will acquisition and development of new techniques.

**Theme**

LONGEVITY

**Postgraduate Program**

**Quadriennial evaluation**

HUMAN COMMUNICATION DISORDERS

5

**Justification**

To study the relationship between audibility changes in the elderly with cognition, education, mood and quality of life. The justification for this line of research is the increase in the elderly population and life expectancy around the world, the low educational level of the elderly, especially in developing countries such as Brazil, and its consequent impact on health, humor and cognition. It is a recent concern to study about the cognitive aspects associated with auditory processing and speech comprehension. These are fundamentally important for the establishment of diagnoses and strategies of interventions, for the selection of appropriate treatments and improvement of the auditory health quality of the geriatric population. The association of impaired audibility with mood changes (depression) is considered as a consequence of social isolation due to the impairment of the verbal communication process.

**Postgraduate Program**

**Quadriennial evaluation**

MEDICINE (NEPHROLOGY)

7

**Justification**

The program has a professor who develops renal function in aging, with monitoring of renal parameters. It analyzes the renal function in the elderly correlating with sociodemographic, clinical aspects, quality of life, functional, physical and mental in elderly individuals with deficit of renal function. Evaluates risk factors (clinical, physical and mental sociodemographic) for loss of renal function in the elderly. It evaluates interventions that may reduce the progression of loss of renal function in the elderly with or without chronic kidney disease. Evaluates strategies that better the adherence of elderly individuals to medications or healthy lifestyle, in relation to renal outcomes, other cardiovascular comorbidities and mortality. Epidemiological studies of elderly patients with chronic renal disease undergoing substitutive treatment, including decisions about the initiation of renal replacement therapy in this population.

**Postgraduate Program****Quadriennial evaluation**

INTERDISCIPLINARY HEALTH SCIENCES

5

**Justification**

Experience in the area of Occupational Therapy, with emphasis in geriatric neuropsychiatry, working mainly in the following subareas: evaluation and intervention in the occupational / functional performance of the elderly with Alzheimer's disease and related disorders; orientations and support to caregivers / relatives of elderly people with Alzheimer's disease and related disorders, development, evaluation and implementation of non-pharmacological / behavioral interventions for the elderly with cognitive alterations.

**Postgraduate Program****Quadriennial evaluation**

PUBLIC HEALTH

4

**Justification**

The program has the research line "Epidemiology of Aging", which is based on a population cohort study of the elderly followed 25 years ago, called the EPIDOSO Project. Among the program supervisors 4 lecturers participate in the project being one the general coordinator. This project aims to identify risk factors for mortality and functional losses of the elderly, and to promote interventions that reduce these risks and promote longevity with quality of life. From this follow-up resulted several collaborative projects with the areas of neurocognition, nutrition, sleep, communication disorders and nephrology.

**Postgraduate Program****Quadriennial evaluation**

MICROBIOLOGY AND IMMUNOLOGY

7

**Justification**

There are several changes that occur in organs and tissues during the process of human aging. Changes that occur in the Immune System are indicated as cause and / or consequence of various diseases related to aging. The two arms of the immune response (innate and adaptive) undergo changes and as a result less effectiveness in responding to infections, immunization after vaccination and tumors, and increased autoimmune responses are observed. It is also reported a discrete process of chronic peripheral inflammation that has been related to diabetes, cardiovascular complications, Alzheimer's, sarcopenia, among other diseases. Our group has evaluated peripheral blood cells from "healthy" individuals over the age of 60 to evaluate possible immune system changes. Preliminary results show changes in proliferation rate, cytokine production, and T cell phenotype in individuals aged 60-65 years, as well as in individuals aged 80 to 100 compared to individuals aged 20-

30 years. In individuals between 60 and 65 years of age, the changes are more evident in men, while in the elderly over 80 years this difference disappears, but the changes are more vigorous. The next step is to assess the impact of strategies such as physical activity, supplements, and vaccine adjuvants on the immune response. Our project can be inserted in several other lines of research seeking the understanding of how changes in the Immune System can compromise other organs and tissues, and how strategies that maintain the integrity of the Immune System can contribute to healthy longevity.

## ACTIVITIES

### Theme

INFLAMMATION

### Goal

To increase the visibility of research lines related to inflammatory processes developed at Unifesp.

Activity	Start date	End date
Achievement of symposia and workshops.	01/2019	07/2022

### Description

To promote Symposiums and workshops with the participation of visiting professors to exchange scientific and technological experiences in the topic of Inflammation.

### Activity Indicators

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Quantitative	Symposiums and workshops held with the participation of visiting researchers on mission	0	10	17
Qualitative	Integration between researchers working on the topic of inflammation.	Good	Great	Excellent

Activity	Início	Término
Attraction of foreign graduate students	01/2019	07/2022

### Description

Promotion of winter and summer courses to attract foreign postgraduate students to work on the theme of Inflammation.

### Activity Indicators

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Quantitative	Attracting foreign post-graduate students and postdocs	3	6	9
Quantitative	Summer courses for foreign students and post-docs.	0	10	20
Quantitative	Winter courses for foreign students.	0	8	14

**Goal**

To strengthen the exchange of experiences and scientific knowledge on issues related to inflammation.

<b>Activity</b>	<b>Start date</b>	<b>End date</b>
To promote the coming to Brazil of Visiting Professor with excellence in the area of inflammation.	01/2019	07/2022

**Description**

To promote the coming of visiting professors with wide experience in different biological processes involving inflammation. The visits would aim to promote regular meetings with lecturers and postgraduate students of the different Post-Graduate Programs, as well as their participation in courses and seminars.

**Activity Indicators**

<b>Type</b>	<b>Indicator</b>	<b>Current Situation</b>	<b>Goal for the 2nd year</b>	<b>Final Goal</b>
Quantitative	Incoming visiting professors	0	12	21
Quantitative	Improvement of knowledge on the subject by faculty, postgraduates (master's and doctoral), post-doctors and technical staff in education.	Good	Great	Excellent

<b>Activity</b>	<b>Start date</b>	<b>End date</b>
Training of faculty lecturers who develop lines of research involving inflammation	01/2019	07/2022

**Description**

Promoting the mobility of lecturers abroad.

**Activity Indicators**

<b>Type</b>	<b>Indicator</b>	<b>Current Situation</b>	<b>Goal for the 2nd year</b>	<b>Final Goal</b>
Quantitative	Trained faculty	0	12	21
Qualitative	Impact of published articles related to the projects benefited by this call.	Good	Great	Excellent
Quantitative	Creation of new disciplines when returning to UNIFESP for the capillarization of the acquired knowledge.	0	5	30
Qualitative	Motivation of the faculty benefited by this call	Good	Great	Excellent

**Goal**

To stimulate the formation of human resources for research in the area of inflammatory processes.

Activity	Start date	End date
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To promote the coming to Brazil of Visiting Professor with excellence in the area of inflammation.

01/2019

07/2022

### Description

To train postgraduates by the experience in excellent laboratories abroad in the area of inflammation, promoting the mobility of PhD students (Ph.D. sandwich).

### Activity Indicators

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Quantitative	Number of postgraduates trained with a doctorate degree awarded in co-tutel.	0	2	7
Qualitative	Enhancement of knowledge about inflammation by postgraduate students.	Good	Great	Excellent
Quantitative	Number of postgraduates trained with a doctorate degree awarded by Unifesp.	0	8	14
Qualitative	Motivation of the students that concluded the internship.	Good	Great	Excellent

Activity	Start date	End date
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To stimulate the learning, abroad, of leading technologies involving the thematic inflammation

01/2019

07/2022

### Description

Promoting the participation of lecturers, post-graduate students (doctoral level) and administrative technicians in education in courses and workshops abroad.

### Activity Indicators

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Quantitative	Number of courses and workshops created at UNIFESP	0	5	11
Quantitative	Number of courses taken by administrative staff	0	2	4
Qualitative	Implementation of models of organotypic cultures (2D and 3D)	Good	Great	Excellent
Quantitative	Number of courses held by postgraduate students	0	4	11
Qualitative	Domain of technology of genetic manipulation based on CrisPr Cas9.	Good	Great	Excellent
Qualitative	Domain of different methodologies "omics" and bioinformatics by the professionals benefited by this call.	Good	Great	Excellent
Quantitative	Number of courses held by faculty	0	2	6

### Theme

## PROMOTION OF WELL-BEING TO FACE ISSUES RELATED TO VIOLENCE AND DRUG USE

**Goal**

To deepen the knowledge on drug use, violence and well-being, with a focus on modern research methodologies and techniques in biological areas and other areas of knowledge.

Activity	Start date	End date
Broaden the technical and scientific research in areas of drug use, violence and promotion of well-being.	01/2019	06/2022

**Description**

Through short courses and research missions, it is intended to expand technical and scientific knowledge in the thematic area. With this, it is intended to increase the quality of the research projects and the interdisciplinary activities of the PPGs involved in this theme. These courses and missions will enable the contact of students and professors of the Post-graduate programs involved with external researchers, expanding the opportunities for elaboration of advanced studies and international multicentric projects. In this way, it is hoped to reduce endogeneity, increase the attractiveness of postgraduate programs and the impact of scientific production with international partners.

**Activity Indicators**

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Quantitative	Number of lecturers trained through courses and missions	0	30	100
Quantitative	Number of scientific events, missions, visits of faculty and courses performed	0	15	26
Quantitative	Number of postgraduate students trained through courses, internships abroad and visiting professors from abroad.	0	100	150

**Goal**

To establish international partnerships for the development of multicentric research projects

Activity	Start date	End date
To promote exchange of knowledge and experiences among researchers to deployment of international networks of collaboration.	01/2019	06/2022

**Description**

Experienced researchers from other countries will be invited to participate in events and with this promote exchanges of knowledge and experiences with groups of researchers from UNIFESP. As a result of this, it is expected to develop international multicentric projects and submit them for national and international funding. In this way, we intend to promote the advancement of knowledge and the implantation of networks of scientific collaboration in the areas of basic, clinical, epidemiological and public policy research in this thematic area.

**Activity Indicators**

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
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Quantitative	Number of thematic research and extension projects prepared and submitted to research granting agencies.	0	2	5
Quantitative	Preliminary results of the projects submitted to publication in indexed journals and with a good impact index, with co-authorship of researchers from UNIFESP and other countries.	0	2	6

## Theme

EMERGING, INFECTIOUS AND NEGLECTED DISEASES

## Goal

To strengthen and integrate research lines of Unifesp through the formation of international networks in Infectious Diseases to improve the quality and internationalization of teaching in the area.

## Activity

To establish academic cooperation agreements and doctoral agreements in in the field of infectious diseases.

## Start date

01/2019

## End date

06/2022

## Description

To visit the main research centers in infectious diseases, where the possibilities of interaction will be established. This mission will allow to discuss the details on the exchange and to promote the internationalization aspect within this area, which has interest in several countries due to the presence of patients and cases of local diseases.

## Activity Indicators

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Quantitative	Number of co-doctoral in doctoral programs in this area.	2	4	8
Quantitative	Number of institutional and technical cooperation agreements at institutional level	2	4	6

## Activity

To develop an international research network on infectious diseases

## Start date

01/2019

## End date

06/2022

## Description

Receive and nucleate locally new groups reinforced with the coming of visiting professors. The approaches will be in the areas of virology, microbiology and basic parasitology, necessary for the consolidation of the project.

## Activity Indicators

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Qualitative	Establishment of joint scientific activities with joint publications.	There are few international groups that come to the institution on an ongoing	To initiate the nucleation of local centers attracting visitors with postdoctoral students and	Nucleation of a new research group in the area.

		basis	young talents	
Qualitative	Implementation and transfer of technology for use and training in local services.	Existing services are out of date	To start updating diagnostic services within international parameters	Established bases for the implementation of an international standard service for molecular diagnostics of infectious diseases

**Goal**

To stimulate the training of human resources for research in the area of Infectious Diseases

**Activity****Start date****End date**

To train, in Brazil, young lecturers and postgraduates in relevant topics in the area of infectious diseases.

01/2019

06/2022

**Description**

Conducting joint courses and receiving postgraduate students from other countries.

**Activity Indicators**

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Quantitative	Number of courses conducted with the presence of local and international lecturers.	0	2	3
Quantitative	Training of international students at UNIFESP in the area of infectious diseases.	6	10	12

**Activity****Start date****End date**

To train, abroad, young faculty and postgraduate students in relevant topics in the area of infectious diseases.

01/2019

06/2022

**Description**

Qualify junior faculty for training in 2019, essential for learning and updating technology, and postgraduate students.

**Activity Indicators**

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Qualitative	Qualification of personnel through doctoral theses defended in joint programs	Good	Great	Excellent

**Goal**

To acquire pushing edge knowledge in the area of Infectious Diseases.

**Activity****Start date****End date**

To consolidate research groups on infectious diseases.

01/2019

06/2022

**Description**

To nucleate research groups stimulated by the coming of young researchers and postdoctors with experience abroad and who carry out projects related to infectious diseases.

### Activity Indicators

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Qualitative	Quality of joint publications resulting from joint scientific activities	Good	Great	Excellent

### Theme

ONCOLOGY

### Goal

To improve the quality of academic production and human resources linked to Postgraduate Studies.

### Activity

Enabling PhD in International Co-tutel.

### Start date

01/2019

### End date

07/2022

### Description

To carry out visits to foreign universities by members of the coordination of the thematic group or representatives indicated for the feasibility of co-insurance between the stricto sensu Postgraduate courses in the subject and foreign universities.

### Activity Indicators

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Quantitative	Number of co-tutels with foreign universities	0	1	5

### Activity

To stimulate the formation of international research networks in order to improve the quality of the academic-scientific production linked to the Graduate Program

### Start date

01/2019

### End date

07/2022

### Description

To undertake missions to study the subject by lecturers and post-graduates (doctorate) with participation and presentations of research results in congresses, symposiums and workshops, international events of greater expression in the area of knowledge with the possibility of technical visits in Institutions.

### Activity Indicators

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Quantitative	Number of researchers and post-graduate (Ph.D) participants	0	22	58
Qualitative	Publications in journals with a good level of impact in the area	Qualis CAPES: B2 (<1,606 to 2,297) and B1 (<2,297 to 3,413)	B2 (<2,297 to 3,413) and A2 (<3,413 to 4,667)	A2 (<3,413 to 4,667) and A1 (<4,667)

**Goal**

To improve the exchange of experience and the scientific knowledge of the faculty, postgraduate students.

<b>Activity</b>	<b>Start date</b>	<b>End date</b>
Promoting visiting lecturers in Brazil	01/2019	07/2022

**Description**

To promote the arrival of Visiting professors with extensive experience in Oncology working in the different specialties of the subject to give lectures in Symposiums, specific courses and seminars and to teach courses in the Postgraduate Programs participating in the topic Oncology. In addition to technical training for postgraduates and administrative technicians in education.

**Activity Indicators**

<b>Type</b>	<b>Indicator</b>	<b>Current Situation</b>	<b>Goal for the 2nd year</b>	<b>Final Goal</b>
Qualitative	Improvement of knowledge on the subject by lecturers, postgraduates (master's and doctoral), postdoctoral and administrative technicians in education.	Good	Great	Excellent
Quantitative	Number of Visiting Professors	0	9	25

<b>Activity</b>	<b>Start date</b>	<b>End date</b>
To train, abroad, lecturers of the different Post-Graduate Programs, participants of this call, which develop research lines within the topic Oncology.	01/2019	07/2022

**Description**

To promote the mobility of professors (Senior and junior visiting professor).

**Activity Indicators**

<b>Type</b>	<b>Indicator</b>	<b>Current Situation</b>	<b>Goal for the 2nd year</b>	<b>Final Goal</b>
Quantitative	Number of trained professors	22	26	34
Qualitative	Implantation of different "omics" and bioinformatics methodologies when returning to UNIFESP	Regular	Good	Excellent

<b>Activity</b>	<b>Start date</b>	<b>End date</b>
To Attract Post-Doctors to Unifesp.	01/2019	07/2022

**Description**

To promote the coming to UNIFESP of Brazilian or foreign researchers who have relevant academic-scientific experience abroad in the different specialties of Oncology to carry out research activities in the laboratories of the professors of the different Postgraduate Programs, participants in this call.

**Activity Indicators**

<b>Type</b>	<b>Indicator</b>	<b>Current Situation</b>	<b>Goal for the 2nd year</b>	<b>Final Goal</b>
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Quantitative	Number of postdocs at Unifesp with experience abroad	0	2	6
Qualitative	Quality of publications	Good	Great	Excellent

**Activity**

To train abroad administrative administrative technicians in education, supervised by professors of the different Post-Graduation Programs, participants of this call, within the theme Oncology.

**Start date**

01/2019

**End date**

07/2022

**Description**

To promote the mobility of administrative technicians in higher education to the outside world.

**Activity Indicators**

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Quantitative	Trained administrative education technicians	35	43	59
Qualitative	Implantation of different methodologies of molecular and cellular biology	Regular	Good	Excellent

**Activity**

To qualify, abroad, PhD students (doctorate sandwich), guided by professors of the different Post-Graduate Programs, participants of this Call, under the theme Oncology.

**Start date**

01/2019

**End date**

07/2022

**Description**

To promote the mobility of postgraduate students (doctoral level) abroad.

**Activity Indicators**

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Quantitative	Postgraduate students with a doctorate degree obtained in international co-tutel.	0	10	25
Quantitative	Postgraduate students with a doctorate degree obtained in international co-tutel	39	47	63

**Activity**

To promote the coming to Brazil of Young Talents

**Start date**

01/2019

**End date**

07/2022

**Description**

To promote the arrival of young researchers residing abroad with relevant academic-scientific experience in the different specialties of Oncology to carry out research

activities in the laboratories of the professors of the different Post-Graduate Programs, participants in this Call for Proposals. In addition to the research, the young researcher should teach classes in UNIFESP undergraduate courses, under the supervision of a Discipline lecturer.

### Activity Indicators

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Quantitative	Number of young talents with experience abroad.	0	2	6
Qualitative	Improvement of knowledge on the subject by postgraduates (master's and doctoral), postdoctoral and undergraduate medical students, biomedical, nursing and biology.	Good	Great	Excellent

### Theme

NEUROSCIENCE, COGNITION AND EDUCATION

### Goal

To establish a network of international collaboration in the areas of Neuroscience, Cognition and Education.

Activity	Start date	End date
Approaching reference centers in the areas of Neuroscience, Cognition and Education.	01/2019	06/2022

### Description

Approaching centers involved in the production of educational evidence (Example: BEME Collaboration -Best Evidence Medical and Health Professional Education) for formulating guiding principles of the teaching- learning process and education policies.

### Activity Indicators

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Qualitative	Partnerships with excellent centers in the field.	Good	Great	Excellent

Activity	Start date	End date
Approaching researchers from the different postgraduate programs participants of theme with excellent international researchers from the area of Neurosciences.	01/2019	06/2022

### Description

Conducting an international symposium "The International Symposium on Neuroscience, Cognition and Education". This symposium will have as invited the proposed international collaborators to integrate the concepts and groups belonging to the various Departments and Campuses of UNIFESP. After the end of the symposium, in the time sequence, workshops and discussion groups will be held with the international faculty guests. These workshops aim to consolidate international collaboration and to foster the formation of an international collaborative network on the subject, besides favoring the elaboration of research protocols that solidify such partnerships with our groups, in addition to outlining work strategies and data collection among Universities or Departments. The result of the exchange of

knowledge and discussions will provide the outlining of more effective approaches that exist in other countries in order to improve the learning process and to bring and implement the technologies proposed in UNIFESP.

### Activity Indicators

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Qualitative	Interaction with international partners	Good	Great	Excellent

### Goal

To train academics in the areas of Neuroscience, Cognition and Education in order to increase the number and quality of publications in the area.

Activity	Start date	End date
Promoting the coming of international faculty to Unifesp	01/2019	06/2022

### Description

To promote the coming of Visiting professors with large experience in Neurosciences, Cognition and Education to give lectures in Symposia, specific courses and seminars and courses in the Postgraduate Programs.

### Activity Indicators

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Quantitative	Number of visiting professors.	0	18	31

Activity	Start date	End date
To update academics about expectations of editors of high-impact journals in the area.	01/2019	06/2022

### Description

Invite publishers of indexed journals of high international impact (A1 Capes level) to discuss and keep the academic community up to date on what publishers have valued in recent years in terms of good science and good articles for their journals.

### Activity Indicators

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Qualitative	Quality and quantity of publications in the area	Good	Great	Excellent

Activity	Start date	End date
To train faculty and students of the different Postgraduate Programs involved in the theme, in international centers of excellence.	01/2019	06/2022

### Description

To promote the mobility of lecturers and students to centers of excellence in the areas of Neuroscience, Cognition and Education

### Activity Indicators

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Qualitative	Human Resources training	Good	Great	Excellent

### Theme

LONGEVITY

### Goal

To improve the knowledge of professors in the area of Human Longevity through exchanges with centers of excellence abroad.

Activity	Start date	End date
To train abroad lecturers of different Postgraduate Programs participants in this call which develop lines of research within the area of Longevity.	01/2019	07/2022

### Description

Promotion of mobility of faculty (junior and senior visiting professor) abroad.

### Activity Indicators

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Quantitative	Number of trained faculty	4	6	10

Activity	Start date	End date
Attraction of Postdoctors to Brazil	01/2019	07/2022

### Description

To promote the coming to UNIFESP of Brazilian or foreign researchers who have relevant academic and scientific experience abroad in the different approaches to Longevity for conducting research activities in the laboratories of different Postgraduate Programs participants in this Call for Proposals.

### Activity Indicators

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Quantitative	Number of postdoctors in Brazil with experience abroad	0	1	2

Activity	Start date	End date
To promote the coming of Visiting Professors to Brazil	01/2019	07/2022

### Description

To promote the coming of Visiting professors with extensive experience in study on



aging and longevity acting in the different specialties of the subject to realize symposia, specific courses and seminars and to give courses for Postgraduate students participating in the theme of Longevity. In addition, they will offer technical training for postgraduates and administrative technicians in education.

### Activity Indicators

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Quantitative	Number of Visiting Professors	0	4	8

### Activity

### Start date

### End date

To train, abroad, doctorate students (sandwich doctorate), guided by faculty from the different Postgraduate Programs participants of this Call within the theme of Longevity.

### Description

Promoting the mobility of postgraduates students (doctoral level) abroad.

### Activity Indicators

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Quantitative	Number of postgraduate students with PhD degree	6	8	12

### Goal

To increase the production of qualified theses and publications on the topic Human Longevity.

### Activity

### Start date

### End date

To stimulate the creation of an international research networks in order to improve the quality of the academic-scientific production linked to Postgraduate Programs

### Description

To carry out missions of studies on the subject by faculty and postgraduate students (doctorate) with participations and presentations of the results of the research in congresses, symposia and workshops, international events of greater expression in the area of knowledge with the possibility of technical visits in Institutions.

### Activity Indicators

Type	Indicator	Current Situation	Goal for the 2nd year	Final Goal
Quantitative	Number of researchers and postgraduate students participants.	0	6	10
Qualitative	Publications in journals with good impact level in the area	Qualis CAPES: B2 (<1,606 to 2,297) e B1 (<2,297 to 3,413)	B2 (<2,297 to 3,413) e A2 (<3,413 to 4,667)	A2 (<3,413 to 4,667) e A1 (<4,667)

**STRATEGIES****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.**

One of the goals of Unifesp's Institutional Internationalization Policy is to map and understand the dynamic profile of the internationalization at the institution, strengthening existing partnerships and expanding collaboration in strategic areas for the university. From this mapping the idea is to improve the character of the cooperation activities with the establishment of agreements. The definition of the priority areas of research in the above-mentioned document is important also in order to direct the prospection of new partnerships for collaboration research, as well as to attract researchers from centers of excellence abroad to Brazil. With this definition, the bodies responsible for the internationalization and the entire academic community may also, at the international level through its consolidated research networks, attract researchers from regions considered as strategic in the Unifesp Institutional Internationalization Policy, such as Latin America, Africa and BRICS. Another important aspect to consolidate partnerships is the simplification of procedures for the signing of agreements that do not involve financial resources and the regulation of resources that are administered in partnership with the Foundation of Support of Unifesp, FAP. Unifesp also intends to diversify its financing sources for the development of international initiatives in the field of education, research and extension with an active strategy for resource prospection and support to researchers in this task, through its Institutional Research Support Office (EIAP) restructured in 2018. This office's mission is to support all institutional research, helping researchers at all stages of the development of their projects, including, support for purchases, tickets, stay and other activities inherent to the development of national and international connections. In addition, the EIAP has in its structure the academic integrity office which works with researchers and students in issues related to research ethics, with important educational and preventive action. Lecturers and researchers who will participate in the Capes-PrInt will have also access to specific software aimed at detecting possible similarities of the documents offered by the EIAP, with the aim of avoiding plagiarism.

**Strategies to attract foreign students to Brazil.**

An important goal of Unifesp's Institutional Internationalization Policy is what has been called in the literature, internationalization "at home". The focus of these policies is the creation of a multicultural and multilingual environment in the institution. Unifesp considers important to discuss the profile of its undergraduate and postgraduate curricula, in terms of their cultural aspects, which will be done in the coming years in the framework of the debates about the Institutional Pedagogical Project. Another important issue is the planning of an offer of courses in the two official national languages: the Portuguese language and Libras for foreign students, professors and visiting researchers. In the same direction, another aspect to be considered is the organization of the curricular offer of courses, in different institution teaching modalities, in a foreign language, with a focus on attracting the international public. In November 2016, Unifesp regulated this offer in undergraduate courses. In the scope of postgraduate and research, the use of foreign languages is very common considering the literature adopted, in the organization of conferences, seminars and research activities involving post-graduate students and foreign researchers. In addition to these initiatives, Unifesp intends in the coming years to articulate a reception program in order to facilitate the reception of students for mobility short-term and long-term education and to follow the training such as PEC-G, PEC-PG and PAEC.

**Strategies to attract faculty and researchers with international experience for a period of activities in Brazil.**

The main new strategy to attract researchers from abroad was the definition of the priority research topics for the institution. The idea of this initiative is to contribute for

researchers from the main research centers in the priority areas to get interests to know more about Unifesp and establish partnerships with the university. As Unifesp's research networks are going to be linked to the Convergent Studies Institute (CSI) - its advanced research space - it is expected that the institution will become an active research hub of cutting-edge science. Parallel to this, the strengthening of the agreements policy, with the stimulation of its formalization, will contribute to make the institutional research collaboration more effective. This will have as a result more scientific exchange activities as short and long-term visits for the promotion of training, workshops and postgraduate teaching. On the other hand, less frequent initiatives of Unifesp that involves the participation of foreign researchers, such as the systematic invitation of foreigners to evaluate thesis, and other activities that represent more plural contributions to the internationalization of the university will be stimulates. Finally, Unifesp also intends to encourage the institution postgraduate programs to prioritize the invitation of foreign lecturers to the available institutional positions of Visiting Lecturer.

**Strategies 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.**

In addition to building a reception program for students, researchers and foreign lecturers that includes the offer of Portuguese language and Libras, Unifesp considers that is important to prepare its lecturers and students for periods abroad. The institution intends to implement a policy for teaching foreign languages in face-to-face and online distance learning, according to the needs and demands of the faculty and students of the institution. The university will also promote institutional spaces to enable lecturers who participated in activities outside the country to share what they have learned in terms of training and / or aspects of their experience abroad, involving teaching, research and extension. Unifesp also intends to organize periodic meetings of lecturers and students who have participated in mobility programs in order to enable the sharing of their experiences, the knowledge they acquired and produced during these periods. The idea is that these activities take place in a decentralized way promoting the internationalization in all the campuses of the institution.

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

In addition to the strategies outlined above, taking into consideration the objective of Unifesp to occupy a leading position in the Global South, without losing its connection with main international research agenda in the central countries of knowledge production, the institution intends to articulate cooperation initiatives in two directions to consolidate this objective. The first direction is the creation of international cooperation policies that may contribute to broadening access to human rights and counteracting racism and gender inequality globally. To this end, Unifesp intends to cooperate with developing countries, mainly African and Latin American countries, with a focus on universities that has consistent inclusion policies of historically excluded people from access to higher education. The second direction involves participation in a position of leadership in the inter-university cooperation programs that the institution already participates as the Coimbra Group of Brazilian Universities (GCUB) and the Brazilian International Education Association (FAUBAI), but also evaluate the possibility of insertion into other networks such as WUN (Worldwide Universities Network), Universitas 21, AUGM (Association of Universities of the Grupo Montevideo), the Tordesillas Group, among others. In the view of the leadership role that Unifesp has as an objective, the institution also intends to evaluate the possibility to create a Network of Global Southern Research Universities.

**POLICIES**

**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), which collaborations have shown relevant results in quantitative and**

The orientation for researchers at Unifesp, in relation to the Institutional Internationalization Project, was in the direction of strengthening their already existing research links. Therefore, the choice of foreign partners of the institution researchers reflected in the decades-long interinstitutional collaboration with research centers in the most scientifically developed countries. It is in that sense the mobility flows envisaged by the institution researchers for the achievement of its objectives in the Capes-PrInt project involve sending and bringing researchers from these centers. Analyzing the institutional choices profile for the present proposal, the most significant flow of connections involves institutions from the United States. The researchers from Unifesp have listed more than fifty leading research centers to develop collaborative partnerships. In the Anglo-Saxon America, the researchers enumerated also the leading universities that have the most important research centers in Canada. The second most important flow involve institutions from European countries like the United Kingdom, Germany, France, Italy, Spain, the Netherlands, according to the number of institutions listed in each of these countries. There were also references to institutions in Switzerland, Belgium, Norway, Ireland and Russia. At Latin America, the main partnerships are with centers in Argentina and Chile, but there are institutions located in Uruguay, Costa Rica and Mexico. Of other parts of the globe, the researchers listed institutions from Australia, New Zealand, Israel, Lebanon and South Africa. Although there is a considerable diversity of countries selected, if we consider the location of the institutions cited by the researchers, more than 90% of the collaborations will take place with countries listed in Annex 1.

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

The organization of Unifesp researchers around major research themes was result of a process initiated with the discussions of the last Institutional Development Plan (2016-2020), in which the institution drew as a future horizon the construction of convergent themes of research. Since then, groups of researchers have been meeting to face this challenge and for this reason the Unifesp Institutional Internationalization Project was conceived as part of a strategy to strengthen these networks of researchers and the emergence of new research groups. However, it is worth noting that in each one of the networks and / or groups of researchers there are subgroups organized according to more specific demands for funding their activities. Capes - PrInt resources will be aimed at strengthening the research of these different subgroups on each of the major themes. With this in mind, the Manager of Institutional Internationalization Project and the Management Group of the proposal will be responsible for the guidelines for the selection of beneficiaries, mobilizing the support structure of PROPGPq and SRI to organize the selection processes. Annual public notices will be published in the pages of the institution so that the subgroups in the major themes can make detailed proposals for the use of the resources made available for internationalization by Capes - PrInt funding. The subgroup activity plans will include the objectives and academic justification for the exchange activities, the details of actions to be carried out, the implementation plan resources (grants and missions), proof of reciprocal funding from the partner

institution and other counterparts and the forecast of joint publications. The evaluation of proposals will be made based on the academic curriculum of the proponents, the proof of the linguistic proficiency necessary to achieve the activities of the participants and the academic quality of the proposal. The Manager and the Management Group shall be monitoring and evaluating the development of the research to ensure the best use of the resources. It will be ineligible for funding any members of the management involved directly in the selection processes. The restrictions of the National Decree 7.203, dated June 4 2010, will be strictly observed in order to guarantee the suitability of the selection processes.

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

As mentioned earlier in the strategies, the main initiative to attract researchers was the definition of priority research topics for the institution. Unifesp already prioritizes the use of the institutional positions of Visiting Lecturers to strengthen local research with international guest with a very high profile in research. The university also considers the possibility of organizing selections processes for lecturers at the institution in the English language, in order to increase the possibility of foreigners to participate in them. In relation to Capes - PrInt, lecturers and visiting researchers to be invited to Brazil will be only those who have broad international recognition in their research areas. The proposals to invite lecturers to come to Brazil will be evaluated according to the framework designed above for the institutional calls and will be evaluated by the aforementioned merit criteria.

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

Unifesp is planning to develop a set of initiatives to build a multilingual and multicultural university environment. For this, an information gathering has been made to understand the demands of language teaching. A project to implement a Virtual Language Teaching Center with the aim to promote the learning of the basic levels of English and Portuguese as a second language, especially for postgraduate students has been discussed. There is also the project to implementation a Language Center, in the Guarulhos Campus with the offer of teaching Portuguese as additional language, Libras, English, French and Spanish. In the future, the unit could become responsible for the production of teaching materials and the pedagogical supervision of language teaching to be developed in the various campuses of the institution. In the scope of this policy, an important strategy would be to establish a professional postgraduate program with scholarships, for students trained in Language Teaching, with the objective to enable the expansion and / or constitution of the offer of face-to- face classes in English, Spanish and at the different university campuses. To give broader dimensions to the project would be made available scholarships for undergraduate students, who are proficient in foreign languages to give support for the teaching and the organization of learning clubs at Unifesp various campuses. The staff of the Language Center of Guarulhos Campus could also train the institution lecturers to teach reading and academic writing in a foreign language, with a particular focus on the English language, contributing in this way to a more effective process of internationalization. The institutional articulation of these policies would be the responsibility of the Language Policy Coordination, to be created in the International Relations Office (SRI) and a Language Policies Committee to be organized at the institution. Although these policies are being planned for the university as a whole, in the case of approval of the Unifesp proposal for Capes - PrInt, those involved in the project would have priority in the allocation of places in these courses.

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

The institution still needs more in-depth debates on the recognition of the activities carried out abroad, in addition to what is formally required. For graduation, Unifesp requires the revalidation of credits abroad. In the case of postgraduate studies, this revalidation analysis of disciplines is attributed at the discretion of the relevant Graduate Program. In the university Institutional Internationalization Policy, approved by its competent authorities, there is the project of instituting a tab on the intranet for the systematic registration of all activities with foreign partners and in foreign institutions. The idea is that in the future this can be an institutional tool for the evaluation of internationalization activities and the production of data for scientometric evaluation, including the possibility of this to be accounted for career progression.

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

The Unifesp's academic structure attracts and enables the reception of students and researchers in mobility, even if traditional reception resources are not offered such as accommodation. The institution also does not have the resources to provide grants for flight tickets or temporary accommodation. The spaces are restricted and the institution does not have work spaces for foreigners. However, the institution is planning to offer Portuguese language courses and to build a reception program by bringing together existing policies that can benefit lecturers, researchers and foreign students. The institution also considers the possibility of an employee to assist foreign researchers, with guidance about consular matters and support to the visitor upon their arrival in Brazil. In the Capes-PrInt more specific context, the idea is to establish a program of solidary accommodation to host the foreign researchers visiting Brazil for short periods. In this proposal, each of the themes would organize a vacancy list for the reception of visiting researchers.

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

As previously mentioned, the university will promote institutional spaces so that lecturers who participated in activities abroad related to training or teaching, research and extension can share what they have learned and / or the aspects of their experience abroad. This can be done by offering postgraduate courses focused on the themes studied abroad, workshops for the sharing of learned techniques, lectures to disseminate research results, among others forms of activities. Unifesp also intends to organize annual meetings within the framework of Convergent Studies Institute, of all researchers who have participated in activities funded by the Capes - Print program so that they can share and synthesize the advances of their researches, also pointing out to the development of the discussions on the subject in the world scenario.

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

The coordination of the implementation of the Institutional Internationalization Project will be under the responsibility of the Pro-Rector of Graduate Studies and Research, with the support of the Coordination of International Projects, Graduate Programs and Research and the Institutional Researcher Support Office (EIAP). The project implementation will also involve the International Relations Office (SRI) and its coordination of Institutional Relations, Academic Mobility and International Agreements. In relation to administrative staff, SRI currently has four Level D employees that are responsible for serving the internal and external community and the implementation of mobility and agreement policies. A new employee will also be available to researchers orientation in relation to consular affairs and to support in the arrival of foreign visitors. This team will be involved in supporting Capes - PrInt, in addition, SRI will be awarded a Level E employee who will be responsible for the executive secretary of the office and

will act as one of the executive secretaries of Capes - PrInt program. As an additional support team, FAP, the foundation of support for the university, will make available also a specialized consultant to be allocated at PROPGPq to assist in Capes-PrInt and to collaborate with its development, in particular with regard to the management of financial resources. The executive secretary of SRI and the specialized consultant from FAP will be responsible for the assistance of what will be called the Executive Group of Management (formed by the Manager of the Institutional Internationalization Project, the International Relations Secretary, the above- mentioned coordinators of PROPGPq and SRI). They will be responsible for the adequate development of Capes-PrInt. The secretary and the consultant will also assist the Capes - PrInt Management Council and the Research Projects Coordinators promoting the internal circulation of information among all those involved in the program. The instructions for researchers to apply for the calls in Capes- PrInt, the organization of mobility, the preparation for missions will be made by SRI's technical staff.

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

The Executive Management Group mentioned above - formed by the Manager of Institutional Internationalization Project, the International Relations Secretary, the coordinators of PROPGPq and SRI will be responsible for monitoring the development of the Institutional Internationalization Project during the year. They will ask for the Research Project Coordinators, the annual report of the activities developed, specifying the objectives and goals achieved according to the planning of each theme and its subgroups for the Management Council evaluation. The Management Council, made up of renowned experts from various areas of the knowledge will be responsible for indicating the necessary adjustments in the development of the activities to maximize the use of the resources of Institutional Internationalization Project.

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

Unifesp believes that Capes - PrInt will be a great opportunity to expand its relations with Capes. Over the last few years, the main resources that Unifesp has received from Capes are from the traditional post-graduate funding programs (PROAP and Social Demand Program), responsible respectively for supporting the activities of the postgraduate courses and scholarships. In addition to this support, the PROEX budget has been also fundamental for the maintenance of the research programs with grades 6 and 7 in the institution. The PNPD has played also an important role in the fostering of innovative research activities in postgraduate programs. Parallel to these programs, Capes - PrInt will provide for postgraduate programs, opportunities for internationalization beyond the traditional mobility PhD scholarships of PDSE. The opportunity offered by the program to establish a flow of international mobility of researchers from abroad to Brazil and vice versa will strength up the research collaboration activities that will give greater visibility to Unifesp in the international arena. They will play an important role in the consolidated research areas of the institutions, like, for example, in the postgraduate programs of excellence, but will contribute also to help the postgraduate programs that are in the process of consolidation to strengthen their international scientific production. It is for this reason that there is a balance in the Institutional Internationalization Project between programs of international and national excellence. One of the Capes programs that Unifesp intends to align with the effort for internationalization is the Interinstitutional PhD, since the university believes that excellence postgraduate programs must assume the responsibility of spreading the knowledge developed in partnership with institutions abroad with postgraduate programs in consolidation of other Brazilian regions.

**Describe here other innovative policies that will be adopted by the institution that were not addressed in the above items.**

An important aspect of Unifesp's Institutional Internationalization Policy is the decentralization of internationalization operation activities in the institution with the creation of support centers in each of the campuses. The first step towards this will be the organization of workshops to explain how internationalization policies work in these campuses. From this initiative, the idea is to discuss the interests of each one in relation to internationalization and to organize support groups that will include lecturers, employees and students. As a result of this initiative, Unifesp intends to raise the awareness of the university community about the importance of building collaborative research and organize related initiatives to internationalization, like, for example, activities that can help in the expansion of linguistic proficiency and the internationalization of the undergraduate and postgraduate curriculum. The expectation with these actions is also to strengthen the academic community understanding of the relevance of promoting the scientific knowledge produced in Brazil and the Brazilian research system abroad.

**FURTHER INFORMATION**

<b>Number of postgraduate courses taught in English between 2013 and 2016.</b>	15
<b>Number of cotutelle <i>stricto sensu</i> postgraduate programs between 2013 and 2016.</b>	16
<b>Number of double degree <i>stricto sensu</i> postgraduate programs between 2013 and 2016.</b>	0
<b>Number of bilateral postgraduate <i>stricto sensu</i> programs between 2013 and 2016.</b>	0
<b>Number of products derived from research projects and contributions to international databases.</b>	0
<b>Number of Capes' financing programs from which the institution benefited between 2013 and 2016.</b>	21
<b>Number of Capes' international cooperation projects from which the institution benefited between 2013 and 2016.</b>	398

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

The approach to international issues in postgraduate programs of the institution is a hallmark of all the courses at Unifesp, including the use of materials in foreign language and the use of these languages in teaching practices. On a informal gathering of information about curricular units offered exclusively in foreign language in postgraduate courses, at least fifteen subjects were mentioned in various postgraduate programs in the past years. Recently, a normative resolution was approved for the offer



of undergraduate courses in this modality, and a specific resolution will be also built for postgraduate courses, stimulating the use of different languages in the courses of the institution. One of the central goals of the Institutional Internationalization Policy is to promote initiatives that contribute to the construction of a curriculum that values cultural and linguistic diversity and a critical global citizenship. Within the scope of this goal, discussions will be promoted within debates about the Institutional Pedagogical Project (PPI), which will be the document that will state the curricular guidelines of the institution, formalizing definitely the relevance of the use of foreign languages in Unifesp. Another objective is to create initiatives to promote online distance education programs and in the COIL format (Collaborative Online International Learning). For the purposes of Capes - PrInt, PROPGPq intends to organize an institutional seminar to evaluate the existing curricular practices that favor internationalization at postgraduate level and point out its expansion. As Capes - PrInt resources will help Unifesp to bring a considerable number of foreign researchers, the idea is that the institution could be already prepared to organize the insertion of these researchers in teaching activities, internationalizing even more the postgraduate programs.

## EXPECTED BENEFITS

### THEME

INFLAMMATION

### INTERNATIONAL COOPERATION PROJECTS

Name of the project	Start date	End date
Molecular and cellular bases of inflammatory diseases	01/01/2019	30/06/2022

### Description

In this line of research it will be contemplated studies aimed at clarifying the mechanisms underlying the participation of inflammatory mediators in psychopharmacological conditions and the establishment of the inflammatory process from the cell to the organ, in different pathological conditions. Inflammation is present in several pathological processes and has been an important therapeutic target; however, our understanding of how to establish and whether inflammation is the cause or consequence of the pathological process is still limited. In this sense, in our institution several research groups are already developing studies that have the main to investigate the mechanisms and systemic repercussions of inflammation. The present proposal is convergent in the sense of grouping these different institutional groups with multidisciplinary and translational characteristics, as well as include international collaborators of recognized reputation in the area who will allow the advancement in scientific knowledge and innovation, besides promoting the formation of human resources of high quality and advance in internationalization. The main topics to be addressed are molecular, cellular, functional, and integrative mechanisms related to inflammation in various experimental models (in vitro, in vivo, in situ, ex vivo) including: cardiovascular, respiratory, renal, metabolic diseases (obesity and diabetes), infectious bacterial or parasitic, neurodegenerative, autonomic and hematological, endocrine and reproductive. The aim is to identify the acute and chronic molecular mechanisms of inflammation, its repercussions and interactions, investigating processes such as autophagy, inflammasome, protein acetylation, epigenetic changes, angiogenesis, oxidative stress, neurohumoral alterations, repercussions of interventions such as physical exercise, diet and nutraceutical effect, innate immunity, signaling network of nuclear receptors, among others. One focus will be the translational approach, for example, the study of patients undergoing cardiac surgery and revascularization, as well as patients with inflammatory diseases of the male reproductive tract and those with sickle cell disease. It is important to highlight that the development of this subproject entitled "Molecular and cellular bases of inflammatory pathologies"; will be important and convergent to the other two subprojects involved in the present proposal.

### Work missions related to the cooperation project

Year	Quantity	Amount
2019	5	90.800,00
2020	5	90.800,00
2021	5	90.800,00
2022	2	36.400,00

### Resources to maintenance of the projects

Year	Amount
2019	10.000,00
2020	10.000,00
2021	10.000,00
2022	5.000,00

### Scholarships related to the cooperation project

Year	Modality	Quantity	Amount
2020	Senior Visiting Professor (6 months)	1	65.678,40
2020	Junior Visiting Professor (6 months)	1	60.638,40
2019	Ph.D Sandwich (12 months)	2	152.553,60
2019	Training in short-term courses (2 months)	2	40.924,80
2020	Ph.D Sandwich (12 months)	2	152.553,60
2020	Training in short-term courses (2 months)	2	40.924,80
2021	Ph.D Sandwich (12 months)	2	152.553,60
2021	Training in short-term courses (2 months)	2	40.924,80
2022	Training in short-term courses (2 months)	1	20.462,40
2022	Visiting Professor in Brazil (1 month)	1	23.155,29
2019	Junior Visiting Professor (6 months)	1	60.638,40
2019	Visiting Professor in Brazil (1 month)	2	46.310,58
2021	Junior Visiting Professor (6 months)	1	60.638,40
2021	Senior Visiting Professor (6 months)	1	65.678,40
2022	Senior Visiting Professor (6 months)	1	65.678,40
2021	Young Talents - A (12 months)	1	116.110,58
2019	Young Talents - A (12 months)	1	116.110,58
2019	Post-Doctorate (12 months)	1	69.310,58
2020	Post-Doctorate (12 months)	1	69.310,58
2021	Visiting Professor in Brazil (1 month)	2	46.310,58

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2019	Senior Visiting Professor (6 months)	1	65.678,40
2020	Visiting Professor in Brazil (1 month)	2	46.310,58
2021	Post-Doctorate (12 months)	1	69.310,58

Name of the project	Start date	End date
Identification of molecular targets involved in inflammatory diseases	01/01/2019	30/06/2022

**Description**

In this area of knowledge, the studies are aimed at understanding the actions of mediators of various natures and the characterization of biological targets, or biomarkers, involved in inflammatory disorders or diseases, aiming at the development of new drugs with anti-inflammatory activity. These studies are part of two research fronts: 1) studies of the pathophysiological role of anti- and pro-inflammatory agents and their molecular mechanism on the cellular response in certain organs or systems; 2) identification and characterization of pharmacological targets or exogenous compounds, with potential regulatory effect on the inflammatory response. For this, experimental protocols are used in vivo and in vitro, which include models of acute inflammation of tissue and dermatological lesions and of chronic inflammation of the airways, neural and sensorial. Also, molecular biology, microscopic and functional techniques are used, as well as analysis of systems biology, such as metabolomics and lipidomics.

**Work missions related to the cooperation project**

Year	Quantity	Amount
2019	5	90.800,00
2021	5	90.800,00
2022	2	36.400,00
2020	5	90.800,00

**Resources to maintenance of the projects**

Year	Amount
2019	10.000,00
2020	10.000,00
2021	10.000,00
2022	5.000,00

**Scholarships related to the cooperation project**

Year	Modality	Quantity	Amount
2019	Junior Visiting Professor (6 months)	1	60.638,40
2021	Junior Visiting Professor (6 months)	1	60.638,40
2022	Senior Visiting Professor (6 months)	1	65.678,40
2021	Ph.D Sandwich (12 months)	2	152.553,60
2021	Young Talents - A (12 months)	1	116.110,58
2019	Training in short-term courses (2 months)	2	40.924,80
2020	Training in short-term courses (2 months)	2	40.924,80
2020	Post-Doctorate (12 months)	1	69.310,58
2021	Training in short-term courses (2 months)	2	40.924,80
2019	Ph.D Sandwich (12 months)	2	152.553,60
2020	Ph.D Sandwich (12 months)	2	152.553,60
2019	Young Talents - A (12 months)	1	116.110,58
2022	Training in short-term courses (2 months)	1	20.462,40
2021	Visiting Professor in Brazil (1 month)	2	46.310,58
2022	Visiting Professor in Brazil (1 month)	1	23.155,29
2019	Post-Doctorate (12 months)	1	69.310,58
2021	Post-Doctorate (12 months)	1	69.310,58
2019	Senior Visiting Professor (6 months)	1	65.678,40
2020	Senior Visiting Professor (6 months)	1	65.678,40
2019	Visiting Professor in Brazil (1 month)	2	46.310,58
2020	Visiting Professor in Brazil (1 month)	2	46.310,58
2021	Senior Visiting Professor (6 months)	1	65.678,40
2020	Junior Visiting Professor (6 months)	1	60.638,40

Name of the project	Start date	End date
Development of treatments and therapies for inflammatory diseases	01/01/2019	30/06/2022

### Description

Acute inflammation is defined as the human body's immune reaction aimed at defense against foreign elements - these include microorganisms and toxins. This process occurs in several stages (being single or multiple) with lesions and tissue repairs in search of return to the normal physiological state. Not infrequently, in mild to moderate inflammatory processes of short duration, tissue repair occurs without sequelae, however, severity with chronicity of the inflammatory process can lead to tissue changes of various degrees and contribute to the induction of various diseases, the bankruptcy of the affected organs and even the death of the patient. This project aims to the physiopathological understanding with a focus on the treatment and development of therapies of several types of inflammatory diseases, which include ischemic diseases (eg, cerebral, cardiac, limb and sensory structures of the inner ear); respiratory diseases caused by environmental pollution, allergies; metabolic diseases (such as diabetes and its consequences) and toxic (ex: accidents with toxins from venomous animals). Thus, taking advantage of the knowledge generated by research in basic and translational sciences, we intend to develop therapies based on the modulation of genes that control the activity of inflammatory cells (such as monocytes and macrophages), the use of stem cells among other approaches that aim potential anti-inflammatory and regenerative treatments.

### Work missions related to the cooperation project

Year	Quantity	Amount
2021	5	90.800,00
2022	2	36.400,00
2020	5	90.800,00
2019	5	90.800,00

### Resources to maintenance of the projects

Year	Amount
2019	10.000,00
2020	10.000,00
2021	10.000,00
2022	5.000,00

### Scholarships related to the cooperation project

Year	Modality	Quantity	Amount
2020	Visiting Professor in Brazil (1 month)	2	46.310,58
2021	Visiting Professor in Brazil (1 month)	2	46.310,58
2022	Visiting Professor in Brazil (1 month)	1	23.155,29
2019	Junior Visiting Professor (6 months)	1	60.638,40
2019	Post-Doctorate (12 months)	1	69.310,58
2021	Young Talents - A (12 months)	1	116.110,58
2019	Training in short-term courses (2 months)	2	40.924,80
2020	Post-Doctorate (12 months)	1	69.310,58
2020	Training in short-term courses (2 months)	2	40.924,80
2021	Ph.D. Sandwich (12 months)	2	152.553,60
2021	Training in short-term courses (2 months)	2	40.924,80
2020	Ph.D. Sandwich (12 months)	2	152.553,60
2022	Training in short-term courses (2 months)	1	20.462,40
2019	Ph.D. Sandwich (12 months)	2	152.553,60
2021	Junior Visiting Professor (6 months)	1	60.638,40
2020	Junior Visiting Professor (6 months)	1	60.638,40
2020	Senior Visiting Professor (6 months)	1	65.678,40
2019	Young Talents - A (12 months)	1	116.110,58
2021	Post-Doctorate (12 months)	1	69.310,58
2021	Senior Visiting Professor (6 months)	1	65.678,40
2022	Senior Visiting Professor (6 months)	1	65.678,40
2019	Senior Visiting Professor (6 months)	1	65.678,40
2019	Visiting Professor in Brazil (1 month)	2	46.310,58

**WORK MISSIONS**

Year of work missions	Quantity of work missions per year	Amount of work missions
2019	1	18.160,00
2021	1	18.160,00
2022	1	18.160,00
2020	1	18.160,00

**SCHOLARSHIPS**

Year	Modality	Quantity	Amount
2021	Senior Visiting Professor (6 months)	1	65.678,40
2021	Visiting Professor in Brazil (1 month)	1	23.155,29
2020	Young Talents - A (12 months)	1	116.110,58
2021	Junior Visiting Professor (6 months)	1	60.638,40
2020	Senior Visiting Professor (6 months)	1	65.678,40
2020	Ph.D Sandwich (12 months)	3	228.830,40
2022	Senior Visiting Professor (6 months)	1	65.678,40
2019	Training in short-term courses (3 months)	1	25.466,40
2022	Ph.D Sandwich (12 months)	1	76.276,80
2021	Young Talents - A (12 months)	1	116.110,58
2020	Junior Visiting Professor (6 months)	1	60.638,40
2022	Junior Visiting Professor (6 months)	1	60.638,40
2020	Visiting Professor in Brazil (1 month)	1	23.155,29
2022	Visiting Professor in Brazil (1 month)	1	23.155,29
2020	Post-Doctorate (12 months)	1	69.310,58
2022	Post-Doctorate (12 months)	1	69.310,58
2019	Ph.D. Sandwich (12 months)	1	76.276,80
2021	Post-Doctorate (12 months)	1	69.310,58
2020	Training in short-term courses (3 months)	1	25.466,40
2022	Training in short-term courses (3 months)	1	25.466,40
2021	Training in short-term courses (3 months)	1	25.466,40
2021	Ph.D Sandwich (12 months)	3	228.830,40

**OTHER PROGRAM ACTIONS**

Year	Actions	Description	Amount
2019	Support for the implementation of projects	Payment of daily, services rendered by individual or legal entity, and the acquisition of material to meet the needs of the projects	50,000.00
2020	Support for the implementation of projects	Payment of daily, services rendered by individual or legal entity, and the acquisition of material to meet the needs of the projects	50,000.00
2021	Support for the implementation of projects	Payment of daily, services rendered by individual or legal entity, and the acquisition of material to meet the needs of the projects	50,000.00
2022	Support for the implementation of projects	Payment of daily, services rendered by individual or legal entity, and the acquisition of material to meet the needs of the projects	50,000.00

**THEME**

PROMOTION OF WELL-BEING TO FACE ISSUES RELATED TO VIOLENCE AND DRUG USE

**INTERNATIONAL COOPERATION PROJECTS**

<b>Name of the project</b>	<b>Start date</b>	<b>End date</b>
Analysis of the Influence of Genetic Polymorphism Associated with Reward and Stress Neurosurgeons and Environmental Stress in the Development of Alcohol Dependence (Funding: FAPESP)	01/01/2019	30/06/2022

**Description**

Drug dependence is a worldwide and a frequent problem involving young people and adults, with alcohol being the drug most commonly used and associated with numerous social and health problems. However, not all people who drink alcohol become dependent. The transition from occasional use to dependence is influenced by positive reinforcements (pleasure resulting from use) and negative reinforcement (relief of unpleasant symptoms such as stress or depression or withdrawal symptoms). There is a lack of knowledge about the factors responsible for this transition. Several neuroadaptation processes are triggered by the chronic use of the drug, including tolerance and sensitization, involving several neurotransmission systems. Understanding the genetic basis underlying changes in reward and stress systems may contribute to understanding the mechanisms involved in the reinforcement that leads to dependence on alcohol and other drugs. This project aims to study the association between the presence of polymorphism in genes associated with reward and stress neurocircuits, the presence and perception of stressful events in childhood and adulthood, and alcohol dependence. The study will include 400 individuals, 200 people diagnosed as dependent on alcohol (in life) and 200 people not dependent. The presence of polymorphism in the genes associated with the neurotransmitters, receptors, enzymes and transporters of the Dopaminergic, CRFergic and Noradrenergic systems, history of stressful events in life through the Life Experiences Survey (LES), the experience of traumatic experiences through the Trauma Questionnaire in Childhood (QUESI), the current condition of perceived stress through the Perceived Stress Scale (PSS-10) and which situations trigger drinking through the Inventory of Situations of Drinking (ISB).

**Work missions related to the cooperation project**

<b>Year</b>	<b>Quantity</b>	<b>Amount</b>
2021	2	46.600,00
2019	1	23.300,00
2020	2	46.600,00

**Resources to maintenance of the projects**

<b>Year</b>	<b>Amount</b>
2019	10.000,00
2020	10.000,00
2021	10.000,00
2022	5.000,00

**Scholarships related to the cooperation project**

<b>Year</b>	<b>Modality</b>	<b>Quantity</b>	<b>Amount</b>
2021	Ph.D Sandwich (12 months)	1	76.276,80
2020	Senior Visiting Professor (3 months)	2	79.732,80
2021	Senior Visiting Professor (3 months)	1	39.866,40
2021	Junior Visiting Professor (3 months)	1	36.986,40
2021	Visiting Professor in Brazil (3 months)	1	51.955,29
2019	Junior Visiting Professor (3 months)	2	73.972,80
2019	Training in short-term courses (1 months)	2	30.916,80
2021	Young Talents - A (12 months)	1	116.110,58
2021	Training in short-term courses (1 months)	1	15.458,40
2021	Post-Doctorate (12 months)	1	69.310,58
2020	Junior Visiting Professor (3 months)	2	73.972,80
2019	Senior Visiting Professor (3 months)	1	39.866,40
2019	Visiting Professor in Brazil (3 months)	1	51.955,29
2019	Ph.D Sandwich (12 months)	1	76.276,80
2019	Post-Doctorate (12 months)	1	69.310,58
2019	Young Talents - A (12 months)	1	116.110,58
2020	Ph.D Sandwich (12 months)	1	76.276,80
2020	Post-Doctorate (12 months)	1	69.310,58

2020	Visiting Professor in Brazil (3 months)	1	51.955,29
2020	Young Talents - A (12 months)	2	232.221,16
2020	Training in short-term courses (1 months)	1	15.458,40



Name of the project	Start date	End date
Well-being program in schools. Project FAPESP process 14 / 50282-5: Center for Applied Research in Welfare and Human Behavior - FAPESP / Natura	01/01/2019	30/06/2022

### Description

The intervention in Mindfulness has been shown to be one of the main practices promoting wellness, aiming to regulate not only the attention but also the emotions, facilitating the dealing with the possible feelings of frustration that arise, and also alternative forms of self- motivation. These qualities do not refer only to developing attention and emotional self-regulation, but also pro-social dispositions such as empathy and compassion, self-representations, ethical sensitivity, creativity and problem coping/ solving skills, allowing the preparation for future challenges. In this way, the school welfare program is part of the proposal of the Center for Applied Research in Welfare and Human Behavior. The purpose of this research is to develop and test the effectiveness of a program of interventional practices oriented to emotional education in schools, integrating Mindfulness techniques with teachers, students and assess the repercussion of Mindfulness techniques with the families of the children in schools of the municipality of São Paulo. Internationalization can facilitate the expansion of knowledge in the area and the elaboration of new proposals that include school, family and community in the management of prevention and health promotion bequeathed to well-being.

### Work missions related to the cooperation project

Year	Quantity	Amount
2020	1	23.300,00
2021	2	46.600,00
2019	2	46.600,00

### Resources to maintenance of the projects

Year	Amount
2019	10.000,00
2020	10.000,00
2021	10.000,00
2022	5.000,00

### Scholarships related to the cooperation project

Year	Modality	Quantity	Amount
2020	Senior Visiting Professor (3 months)	1	39.866,40
2020	Ph.D Sandwich (12 months)	1	76.276,80
2020	Junior Visiting Professor (3 months)	1	36.986,40
2020	Post-Doctorate (12 months)	1	69.310,58
2020	Visiting Professor in Brazil (3 months)	1	51.955,29
2020	Young Talents - A (12 months)	1	116.110,58
2019	Senior Visiting Professor (3 months)	2	79.732,80
2019	Training in short-term courses (1 months)	2	30.916,80
2019	Junior Visiting Professor (3 months)	1	36.986,40
2020	Training in short-term courses (1 months)	2	30.916,80
2019	Post-Doctorate (12 months)	1	69.310,58
2019	Visiting Professor in Brazil (3 months)	1	51.955,29
2019	Ph.D Sandwich (12 months)	1	76.276,80
2019	Young Talents - A (12 months)	1	116.110,58

Name of the project	Start date	End date
Innovative interventions in the face of problems related to alcohol consumption in Brazil: Search for new approaches to an old public health issue (FAPESP theme 2015 / 19472-5)	01/01/2019	30/06/2022

### Description

This project involves several researchers from UNIFESP and researchers from the USA, Australia, the Netherlands, India, Mexico and the United Kingdom. Problems related to alcohol consumption stand out as priorities in public health. This is an old question which, despite the scientific advances, still involves numerous challenges, such as the risks among young people, the difficulty of early detection of dependence, stigma, relapses and the articulation of the network of multiprofessional care. In the last decades, there has been great technological advance; new models of education have gained prominence, as well as the promotion of health and well-being, harm reduction and family and community approaches. In line with current perspectives, this thematic project aims to develop, adapt and evaluate innovative interventions aimed at some of the most challenging problems related to alcohol consumption, based on the experience and articulation between national and international researchers with a solid technical and scientific background from different areas of knowledge. The approaches to be studied were selected from international scientific evidence and theoretical assumptions valued in our culture. Methods: The interventions will be developed or adapted by qualitative techniques of data collection and analysis. Efficacy evaluations will be performed by randomized controlled clinical or community trials with inferential statistical analysis. Technical and scientific meetings are also planned for the discussion of results and potential practical applications. As a result of the project, we expect to expand the range of interventions evaluated to our reality, as well as to strengthen the research and training network in the area.

### Work missions related to the cooperation project

Year	Quantity	Amount
2019	1	23.300,00
2021	2	46.600,00
2020	1	23.300,00

### Resources to maintenance of the projects

Year	Amount
2019	10.000,00
2020	10.000,00
2022	5.000,00
2021	10.000,00

### Scholarships related to the cooperation project

Year	Modality	Quantity	Amount
2020	Senior Visiting Professor (3 months)	1	39.866,40
2020	Young Talents - A (12 months)	2	232.221,16
2020	Visiting Professor in Brazil (3 months)	2	103.910,58
2019	Training in short-term courses (1 months)	2	30.916,80
2019	Ph.D. Sandwich (12 months)	2	152.553,60
2020	Ph.D. Sandwich (12 months)	2	152.553,60
2019	Senior Visiting Professor (3 months)	2	79.732,80
2019	Visiting Professor in Brazil (3 months)	2	103.910,58
2019	Post-Doctorate (12 months)	1	69.310,58
2021	Visiting Professor in Brazil (3 months)	1	51.955,29
2021	Senior Visiting Professor (3 months)	1	39.866,40
2021	Training in short-term courses (1 months)	1	15.458,40
2021	Post-Doctorate (12 months)	1	69.310,58
2019	Junior Visiting Professor (3 months)	1	36.986,40
2019	Young Talents - A (12 months)	1	116.110,58
2020	Junior Visiting Professor (3 months)	2	73.972,80
2020	Training in short-term courses (1 months)	1	15.458,40
2021	Young Talents - A (12 months)	1	116.110,58
2020	Post-Doctorate (12 months)	1	69.310,58
2021	Ph.D. Sandwich (12 months)	1	76.276,80
2021	Junior Visiting Professor (3 months)	1	36.986,40

Name of the project	Start date	End date
Integrator Project: Interfaces between violence and drugs (a collaborative proposal between PGPs Interdisciplinary in Health Sciences, Social Sciences and Psychobiology, some with funding)	01/01/2019	30/06/2022

#### Description

Interfaces between violence and drugs (collaborative proposal in the design phase (among the Interdisciplinary PGPs in Health Sciences (B. Santista), Social Sciences (Guarulhos) and Psychobiology) based on individual projects already under way, some with funding. The interfaces between violence and drugs are multiple. With the national drug policy as a common transversal guideline, it is intended, in the present study, to investigate and reflect on some aspects of this relationship. The use of drugs is an ancient cultural practice in the history of humanity, and the socio-historical and cultural context in which it is inserted interferes with the meaning of its use, as well as with the consequences of this use. The current drug policy model focused on reducing drug demand and supply has been ineffective, contributing to increased violence, as well as incarceration, health risks to drug users, and targeted stigma and prejudice to this population, especially among those who present greater social vulnerability. The relationship between violence and drugs can also be understood from the epidemiological approach and also from the concept of biological and social vulnerability. Genetic characteristics may contribute to different types of reactions in situations of violence, especially in the early stages of development (childhood and adolescence), which is known to increase vulnerability to problems with drug use. On the other hand, violence is also a consequence of the problematic use of drugs. This thematic project has as main objective to bring together researchers from different areas of knowledge to propose more effective interventions to deal with this problem. It is intended to develop and / or adapt interventions that have not yet been studied in Brazil, but which have proved effective in the international scientific literature both for the prevention of violence and drug abuse and for the treatment of those who already have substance-related problems, victims or perpetrators of violence. This objective will be achieved through a partnership with national and international researchers with technical and scientific recognition from different areas of knowledge. Method: People with problems associated with drug use and / or violence in relation to genetic, psychological and social characteristics will be studied in the search for risk factors. Interventions will also be developed and their effectiveness tested by means of randomized controlled clinical trials with inferential statistical analysis. Throughout the development of this project, meetings will be held to plan new approaches and discuss results, aiming at the implementation of innovative, tested and adequate interventions in the Brazilian context. This study is expected not only to increase knowledge about the relationship between violence and drugs, but also to develop more effective ways to prevent violence and drug abuse, as well as to promote the well-being of the population vulnerable to these problems. Part of this study is already in the advanced phase of data collection.

#### Work missions related to the cooperation project

Year	Quantity	Amount
2019	1	23.300,00
2021	2	46.600,00
2020	1	23.300,00

#### Resources to maintenance of the projects

Year	Amount
2022	5.000,00
2019	10.000,00
2021	10.000,00
2020	10.000,00

#### Scholarships related to the cooperation project

Year	Modality	Quantity	Amount
2019	Junior Visiting Professor (3 months)	1	36.986,40
2019	Post-Doctorate (12 months)	1	69.310,58
2020	Training in short-term courses (1 months)	2	30.916,80
2020	Visiting Professor in Brazil (3 months)	2	103.910,58
2021	Ph.D Sandwich (12 months)	2	152.553,60
2019	Ph.D Sandwich (12 months)	1	76.276,80
2020	Senior Visiting Professor (3 months)	2	79.732,80
2019	Visiting Professor in Brazil (3 months)	1	51.955,29
2021	Training in short-term courses (1 months)	2	30.916,80
2019	Senior Visiting Professor (3 months)	1	39.866,40
2021	Junior Visiting Professor (3 months)	2	73.972,80
2019	Young Talents - A (12 months)	1	116.110,58
2020	Ph.D Sandwich (12 months)	2	152.553,60
2021	Visiting Professor in Brazil (3 months)	2	103.910,58
2019	Training in short-term courses (1 months)	1	15.458,40
2021	Post-Doctorate (12 months)	1	69.310,58
2020	Young Talents - A (12 months)	1	116.110,58

2021	Senior Visiting Professor (12 months)	1	123.076,80
2021	Young Talents - A (12 months)	1	116.110,58
2020	Post-Doctorate (12 months)	1	69.310,58
2020	Junior Visiting Professor (3 months)	1	36.986,40

**WORK MISSIONS**

Year of work missions	Quantity of work missions per year	Amount of work missions
2020	1	18.160,00
2022	1	18.160,00
2021	1	18.160,00
2019	1	18.160,00

**SCHOLARSHIPS**

Year	Modality	Quantity	Amount
2020	Senior Visiting Professor (6 months)	1	65.678,40
2020	Junior Visiting Professor (6 months)	1	60.638,40
2022	Senior Visiting Professor (6 months)	1	65.678,40
2020	Training in short-term courses (3 months)	1	25.466,40
2021	Post-Doctorate (12 months)	1	69.310,58
2022	Ph.D Sandwich (12 months)	2	152.553,60
2020	Ph.D Sandwich (12 months)	2	152.553,60
2022	Training in short-term courses (3 months)	1	25.466,40
2021	Visiting Professor in Brazil (1 month)	1	23.155,29
2020	Young Talents - A (12 months)	1	116.110,58
2021	Young Talents - A (12 months)	1	116.110,58
2020	Post-Doctorate (12 months)	1	69.310,58
2022	Junior Visiting Professor (6 months)	1	60.638,40
2019	Ph.D Sandwich (12 months)	1	76.276,80
2021	Ph.D Sandwich (12 months)	2	152.553,60
2020	Visiting Professor in Brazil (1 month)	1	23.155,29

**OTHER PROGRAM ACTIONS**

Year	Actions	Description	Amount
2019	Support for the implementation of projects	Payment of daily, services rendered by individual or legal entity, and the acquisition of material to meet the needs of the projects	200,000.00
2020	Support for the implementation of projects	Payment of daily, services rendered by individual or legal entity, and the acquisition of material to meet the needs of the projects	200,000.00
2021	Support for the implementation of projects	Payment of daily, services rendered by individual or legal entity, and the acquisition of material to meet the needs of the projects	200,000.00
2022	Support for the implementation of projects	Payment of daily, services rendered by individual or legal entity, and the acquisition of material to meet the needs of the projects	100,000.00

**THEME**

EMERGING, INFECTIOUS AND NEGLECTED DISEASES

Name of the project	Start date	End date
Pathogenic mechanisms of infectious agents	01/01/2019	30/06/2022

**Description**

There are already within our graduate programs of excellence groups that seek to understand the mechanisms involved in the development of infections caused by microorganisms. The programs involve studies of morphological characterization, biochemistry, cellular of infectious agents up to the mechanisms of response and adaptation in human host. In addition, there is a major focus on the clinical aspects of these pathologies enabling us to correlate the clinical data with the virulence mechanisms. In this way, the objective this project will be to congregate the different research groups on platforms that characterize virulence determinants by identifying clones, or isolated highly virulent strains disseminated in Brazilian hospitals linked to our University. These clones will be characterized by large-scale sequencing, today applied to many micro-organisms. The obtaining of these lineages will be made in a multicentric way, enabling a continuous interaction with international centres. In this sense, the missions, exchanges and internships will allow us to consolidate these interactions.

**Work missions related to the cooperation project**

Year	Quantity	Amount
2019	1	24.500
2021	1	21.800
2020	1	24.500

**Resources to maintenance of the projects**

Year	Amount
2019	10.000,00
2020	10.000,00
2021	10.000,00
2022	5.000,00

**Scholarships related to the cooperation project**

Year	Modality	Quantity	Amount
2021	Training in short-term courses (1 month)	1	15.458,40
2021	Visiting Professor in Brazil (3 months)	1	51.955,29
2022	Ph.D Sandwich (6 months)	1	40.478,40
2019	Senior Visiting Professor (3 months)	1	39.866,40
2021	Post-Doctorate (12 months)	1	69.310,58
2021	Ph.D Sandwich (6 months)	1	40.478,40
2021	Young Talents A (12 months)	1	116.110,58
2020	Visiting Professor in Brazil (3 months)	1	51.955,29
2020	Ph.D Sandwich (6 months)	1	40.478,40
2019	Post-Doctorate (12 months)	1	69.310,58
2019	Training in short-term courses (1 month)	1	15.458,40
2020	Post-Doctorate (12 months)	1	69.310,58

Name of the project	Start date	End date
Drug resistance and new medicines	01/01/2019	30/06/2022

**Description**

The availability of treatments against infectious diseases is very limited in the case of neglected and emerging diseases and microbial resistance also represents an important public health problem in Brazilian hospitals. Although most of the population depend on the public health system, a growing fraction of people is assisted by private institutions, reflecting on different practices of health care and prevention of control of healthcare- related infections. As a result, the absence of treatments and different standards of antimicrobial resistance may arise, or already exist in the country. In this project, several groups of graduate programs have been working with agents pathogenic such as protozoa, viruses, bacteria and fungi through existing international collaborations. The project will allow us to create internal collaborations and consolidate them as a network of international institutions. In addition, access to different patient cuts will serve to attract international groups, making it possible to provide better local training in both the basic and health- related areas.

**Work missions related to the cooperation project**

Year	Quantity	Amount
2019	1	24.500
2020	1	24.500
2021	1	21.800

**Resources to maintenance of the projects**

Year	Amount
2019	10.000,00
2020	10.000,00
2021	10.000,00
2022	5.000,00

**Scholarships related to the cooperation project**

Year	Modality	Quantity	Amount
2019	Visiting Professor in Brazil (3 months)	1	51.955,29
2019	Post-Doctorate (12 months)	1	69.310,58
2020	Ph.D Sandwich (6 months)	1	40.478,40
2019	Junior Visiting Professor (6 months)	1	60.638,40
2020	Training in short-term courses (1 month)	1	15.458,40
2020	Post-Doctorate (12 months)	1	69.310,58
2021	Senior Visiting Professor (3 months)	1	39.866,40
2021	Post-Doctorate (12 months)	1	69.310,58
2022	Ph.D Sandwich (6 months)	1	40.478,40
2019	Ph.D Sandwich (6 months)	1	40.478,40

Name of the project	Start date	End date
Development and diagnostic applications for infectious diseases	01/01/2019	30/06/2022

**Description**

The diagnosis for infectious diseases mainly caused by emerging or neglected infections, that is, those that affect mainly developing countries like Brazil, are not yet adequately established. Brazil is the fifth largest country in the world in the area and population with more than 192 million of people. The country has heterogeneous demographic distribution and it has been submitted to rapid economic, social and environmental changes. Despite the reductions pronounced in the number of deaths from infectious diseases, mainly due to HIV infections and tropical diseases in the last six decades, the resurgence of diseases such as dengue, Chikungunya, Zika, and more recently, yellow fever has been observed. The impact of parasitic diseases, such as Leishmania, Chagas disease and Malaria is also increased. In the area of diagnosis numerous limitations and difficulties that comes from local variability, difficulty of collecting and processing samples and interpretation of results are still prevalent. It is also precarious the prognosis, after identification of the agent and during the treatment. Several research lines at UNIFESP Focus on infectious agents, such as virus studies (HIV, Dengue, Zika, Influenza), bacteria, pathogenic fungi, and parasitic protozoa. There is great potential for attracting international groups for the establishment of new diagnostic and prognosis techniques, many already made in international networks. This project seeks to create an environment of information sharing and diagnostic technologies from the characterization of antigens to the use of new molecular tests contributing to fill this Important gap in the health area. Our goal will also be strengthening and internationalizing the research line related to infection among nursing researchers. In this way, this project will focus on epidemiological analyses, description of risk factors and prevention. The activities of the nurse professionals in centers of high complexity, hospital surveillance, environmental community, schools and vulnerable and special populations.

**Work missions related to the cooperation project**

Year	Quantity	Amount
2021	1	21.800
2019	1	24.500
2020	2	49.000

**Resources to maintenance of the projects**

Year	Amount
2019	10.000,00
2020	10.000,00
2021	10.000,00
2022	5.000,00

**Scholarships related to the cooperation project**

Year	Modality	Quantity	Amount
2019	Young Talents A (12 months)	1	116.110,58
2019	Post-Doctorate (12 months)	1	69.310,58
2020	Senior Visiting Professor (3 months)	1	39.866,40
2020	Young Talents A (12 months)	1	116.110,58
2020	Post-Doctorate (12 months)	1	69.310,58
2019	Ph.D Sandwich (6 months)	1	40.478,40
2020	Junior Visiting Professor (6 months)	1	60.638,40
2021	Junior Visiting Professor (6 months)	1	60.638,40
2021	Ph.D Sandwich (6 months)	1	40.478,40
2021	Post-Doctorate (12 months)	1	69.310,58

**WORK MISSIONS**

Year of work missions	Quantity of work missions per year	Amount of work missions
2021	1	18.160,00
2019	1	18.160,00

**SCHOLARSHIPS**

Year	Modality	Quantity	Amount
2021	Ph.D Sandwich (12 months)	1	76.276,80
2020	Visiting Professor in Brazil (1 month)	1	23.155,29

2021	Visiting Professor in Brazil (1 month)	1	23.155,29
2021	Young Talents - A (12 months)	1	116.110,58
2020	Ph.D Sandwich (12 months)	1	76.276,80
2020	Post-Doctorate (12 months)	1	69.310,58
2021	Senior Visiting Professor (6 months)	1	65.678,40
2020	Training in short-term courses (3 months)	1	25.466,40
2022	Ph.D Sandwich (12 months)	1	76.276,80
2020	Junior Visiting Professor (6 months)	1	60.638,40

**OTHER PROGRAM ACTIONS**

<b>Year</b>	<b>Actions</b>	<b>Description</b>	<b>Amount</b>
2019	Support for the implementation of projects	Payment of services and materials to support visitors and local researchers.	100.000,00
2020	Support for the implementation of projects	Payment of services and materials to support visitors and local researchers.	100.000,00
2021	Support for the implementation of projects	Payment of services and materials to support visitors and local researchers.	100.000,00
2022	Support for the implementation of projects	Payment of services and materials to support visitors and local researchers.	50.000,00



**THEME**

ONCOLOGY

**INTERNATIONAL COOPERATION PROJECTS****Description**

Early and accurate diagnosis of cancer is essential for its proper treatment. Knowledge of the molecular and cellular mechanisms of hereditary and sporadic tumors will allow individualized diagnosis that will result in follow-up and personalized treatment. The constant replication of tumor cells requires a lot of energy and to sustain this process, the neoplastic cell needs to adjust its metabolism, which leads to cellular energy deregulation. In addition, the neoplastic cell must acquire the ability to evade the immune response, i.e., to exit the surveillance mechanisms and acquire resistance to the effector mechanisms of the immune system. Having established, tumor needs nutrients and oxygen. Then, there will be important interaction with the circulatory system through the induction of angiogenesis. Finally, disease progresses by invading and metastasizing. This capability is one of the most lethal of cancer since, despite advances in science and medicine, the treatment of metastatic disease in most cases is not successful. All these processes are being studied by researchers from different UNIFESP disciplines. It is fundamental to improve the knowledge of these mechanisms and to develop new methodologies, recently available in international centers of excellence in the oncology area. Among the tools available are: new generation sequencing (NGS) and the development of pipeline analysis (Bioinformatics). Once the events are identified, it is necessary to distinguish the genes associated with cancer (drivers) from those that do not play a fundamental role in genesis and progression. In addition to enhancing our knowledge of 3D cell culture and other biological and biochemical assays, CRISPR-Cas9 technology-based gene editing tools need to be deployed in our labs. To obtain the biological material, technical improvement projects in minimally invasive surgery need to be developed at UNIFESP. The discovery of new immunotherapeutics and drugs for the treatment of cancer will depend on the molecular and cellular characterization of the different cancers, but mainly on pre-clinical studies and well-designed clinical trials for patients characterized by its molecular profile.

**Work missions related to the cooperation project**

Year	Quantity	Amount
2020	8	121.600,00
2022	1	15.200,00
2021	8	121.600,00
2019	8	121.600,00

**Resources to maintenance of the projects**

Year	Amount
2019	10.000,00
2020	10.000,00
2021	10.000,00
2022	5.000,00

Name of the project	Start date	End date
Molecular and Cellular Mechanisms of Cancer	01/01/2019	30/06/2022

**Scholarships related to the cooperation project**

Year	Modality	Quantity	Amount
2020	Training in short-term courses (3 months)	3	76.399,20
2020	Visiting Professor in Brazil (1 month)	3	69.465,87
2020	Young Talents A (12 months)	1	116.110,58
2019	Training in short-term courses (3 months)	3	76.399,20
2019	Young Talents A (12 months)	1	116.110,58
2019	Post-Doctorate (12 months)	1	69.310,58
2019	Ph.D Sandwich (12 months)	3	228.830,40
2020	Ph.D Sandwich (12 months)	3	228.830,40
2021	Post-Doctorate (12 months)	1	69.310,58
2020	Senior Visiting Professor (6 months)	1	65.678,40

2019	Visiting Professor in Brazil (1 month)	3	69.465,87
2019	Senior Visiting Professor (6 months)	1	65.678,40
2020	Junior Visiting Professor (6 months)	1	60.638,40
2021	Junior Visiting Professor (6 months)	1	60.638,40
2021	Young Talents A (12 months)	1	116.110,58
2022	Visiting Professor in Brazil (1 month)	1	23.155,29
2021	Ph.D Sandwich (12 months)	3	228.830,40
2021	Visiting Professor in Brazil (1 month)	3	69.465,87
2019	Junior Visiting Professor (6 months)	1	60.638,40
2021	Training in short-term courses (3 months)	3	76.399,20

Name of the project	Start date	End date
Biomarkers and Antitumor Therapy	01/01/2019	30/06/2022

**Description**

Biological markers are molecules present in the tumor or biological fluids whose appearance and / or changes in concentration are related to the genesis and growth of tumor cells. In some cases, the biomarker may be produced by healthy individuals, but high levels indicate deregulation and thus the presence of a tumor. There is a huge variety of biomarkers, which can be enzymes, cell membrane receptors or antibodies, nucleic acids, small peptides, among others. These markers can assist the physician in the diagnosis, staging, and evaluation of therapeutic response, relapse and prognosis. They also contribute to the development of new modalities of treatment and/or evaluation of drug pharmacokinetics. One of the major challenges is the development of target-specific drugs that do not damage normal cells, or can be used in combination with conventional therapies. Treatments that target the tumor microenvironment and tissue resistance factors also need to be better explored. The identification of biomarkers is now favored by the use of techniques, such as large-scale sequencing, gene expression profiles and mass spectroscopy. The large amount of data generated using these techniques means that special attention should be paid to the design of the study and data analysis in order to minimize associations that are subsequently determined to be false-positive. UNIFESP has multi user devices for "omics" technologies and laboratories from different areas of knowledge have been developing techniques of molecular and cellular biology, biochemistry and in vivo studies in the search for new targets. We are in the era of translational research development, where clinical studies are coupled with the search for predictive markers of response; development of personalized treatment directed against specific molecular targets; identification of mutations in genes and other changes predisposing to cancer, which can be markers for prevention and early detection of the disease. Collaboration with international researchers to exchange knowledge and improve them will be extremely important for the advancement of our scientific research and the training of highly qualified human resources.

**Work missions related to the cooperation project**

Year	Quantity	Amount
2019	8	121.600,00
2020	8	121.600,00
2021	8	121.600,00
2022	1	15.200,00

**Resources to maintenance of the projects**

Year	Amount
2019	10.000,00
2020	10.000,00
2021	10.000,00
2022	5.000,00

**Scholarships related to the cooperation project**

Year	Modality	Quantity	Amount
2019	Ph.D Sandwich (12 months)	3	228.830,40
2021	Post-Doctorate (12 months)	1	69.310,58
2020	Post-Doctorate (12 months)	1	69.310,58
2019	Training in short-term courses (3 months)	3	76.399,20
2019	Post-Doctorate (12 months)	1	69.310,58
2021	Young Talents A (12 months)	1	116.110,58
2021	Visiting Professor in Brazil (1 month)	3	69.465,87
2020	Visiting Professor in Brazil (1 month)	3	69.465,87
2020	Ph.D Sandwich (12 months)	3	228.830,40
2020	Training in short-term courses (3 months)	2	50.932,80
2022	Visiting Professor in Brazil (1 month)	1	23.155,29
2019	Young Talents A (12 months)	1	116.110,58
2021	Ph.D Sandwich (12 months)	3	228.830,40
2019	Visiting Professor in Brazil (1 month)	2	46.310,58
2021	Training in short-term courses (3 months)	3	76.399,20
2019	Junior Visiting Professor (6 months)	1	60.638,40
2021	Junior Visiting Professor (6 months)	1	60.638,40
2020	Senior Visiting Professor (6 months)	1	65.678,40
2021	Senior Visiting Professor (6 months)	1	65.678,40

Name of the project	Start date	End date
Assistance to cancer patients and their families: actions to improve quality of life and safety	01/01/2019	30/06/2022

#### Description

Cancer is a worldwide public health problem. In Brazil, mortality represents 16.2%. Treatment approaches involve a variety of care settings and aggregate numerous professionals to provide the necessary conditions for their prevention, diagnosis and treatment, routinely dealing with technological and therapeutic advances. Understanding the role of each individual in these settings is essential for quality care for cancer patients and their families. In Brazil, oncological care policies have favored the therapeutic arsenal and stimulated the multiplication of service centers with high resolution. The State of São Paulo concentrates a complex network of services for oncological patients, users of the Unified Health System (SUS), but despite the increase in diagnostic and therapeutic offerings, there is still mixed statistics on mortality, since in most cases the patient is at advanced stages of the disease. In this way, cancer generates social, economic, ethnic and educational fragilities and vulnerabilities in individuals, both for their prevention and aggression of the pathology as for the treatment, palliative care and care at the end of life. Adverse events in cancer patients are a source of concern in all areas of care, including nursing. In addition to providing care, the oncologist nurse has the educational role, guiding patient and their family members during treatment. It is paramount to develop competencies, both in teaching and in professional practice, to make effective oncology care effective and effective. According to the recent National Patient Safety Program, they are needed to improve care processes, which are systematically addressed by the World Health Organization. International cooperation will provide: - broadening discussions on risk management and adverse events; costs of non-quality; quality strategy associated with clinical practice; Quality management; development of indicators; participation of the patient in their own safety; social and economic impacts of quality management; training of human resources: leadership; Communication; teamwork; advocate in favor of the patient; risk management; emotional intelligence; decision-making, and security-focused planning and management.

#### Work missions related to the cooperation project

Year	Quantity	Amount
2021	4	60.800,00
2022	1	15.200,00
2020	4	60.800,00
2019	4	60.800,00

#### Resources to maintenance of the projects

Year	Amount
2019	10.000,00
2020	10.000,00
2021	10.000,00
2022	5.000,00

#### Scholarships related to the cooperation project

Year	Modality	Quantity	Amount
2019	Visiting Professor in Brazil (1 month)	1	23.155,29
2022	Visiting Professor in Brazil (1 month)	1	23.155,29
2021	Training in short-term courses (3 months)	2	50.932,80
2020	Visiting Professor in Brazil (1 month)	2	46.310,58
2019	Training in short-term courses (3 months)	2	50.932,80
2020	Post-Doctorate (12 months)	1	69.310,58
2021	Ph.D Sandwich (12 months)	2	152.553,60
2019	Ph.D Sandwich (12 months)	2	152.553,60
2020	Ph.D Sandwich (12 months)	2	152.553,60
2020	Training in short-term courses (3 months)	3	76.399,20
2020	Young Talents A (12 months)	1	116.110,58
2021	Visiting Professor in Brazil (1 month)	2	46.310,58
2020	Junior Visiting Professor (6 months)	1	60.638,40
2019	Senior Visiting Professor (6 months)	1	65.678,40
2021	Senior Visiting Professor (6 months)	1	65.678,40

**WORK MISSIONS**

Year of work missions	Quantity of work missions per year	Amount of work missions
2021	1	18.160,00
2019	1	18.160,00
2022	1	18.160,00
2020	1	18.160,00

**SCHOLARSHIPS**

Year	Modality	Quantity	Amount
2020	Young Talents A (12 months)	1	116.110,58
2019	Ph.D Sandwich (12 months)	1	76.276,80
2021	Ph.D Sandwich (12 months)	2	152.553,60
2020	Senior Visiting Professor (6 months)	1	65.678,40
2021	Young Talents A (12 months)	1	116.110,58
2021	Post-Doctorate (12 months)	1	69.310,58
2020	Junior Visiting Professor (6 months)	1	60.638,40
2022	Visiting Professor in Brazil (1 month)	1	23.155,29
2020	Visiting Professor in Brazil (1 month)	1	23.155,29
2021	Visiting Professor in Brazil (1 month)	1	23.155,29
2020	Ph.D Sandwich (12 months)	2	152.553,60
2022	Ph.D Sandwich (12 months)	2	152.553,60
2020	Training in short-term courses (3 months)	1	25.466,40
2020	Post-Doctorate (12 months)	1	69.310,58
2022	Junior Visiting Professor (6 months)	1	60.638,40
2021	Training in short-term courses (3 months)	1	25.466,40
2022	Senior Visiting Professor (6 months)	1	65.678,40

**OTHER PROGRAM ACTIONS**

Year	Actions	Description	Amount
2019	Creating necessary conditions for the implementation of the projects.	1.Services: daily and service rendering directly linked to the results intended in the research. 2. Legal Third Party Services: installation and repairs of equipment linked to the project, consumables of equipment linked to the project, printed and graphic services, rents for scientific events, software, and congress registration.	200,000.00
2020	Creating necessary conditions for the implementation of the projects.	1.Services: daily and service rendering directly linked to the results intended in the research. 2. Legal Third Party Services: installation and repairs of equipment linked to the project, consumables of equipment linked to the project, printed and graphic services, rents for scientific events, software, and congress registration.	200,000.00
2021	Creating necessary conditions for the implementation of the projects.	1.Services: daily and service rendering directly linked to the results intended in the research. 2. Legal Third Party Services: installation and repairs of equipment linked to the project, consumables of equipment linked to the project, printed and graphic services, rents for scientific	200,000.00

2022	Creating necessary conditions for the implementation of the projects.	events, software, and congress registration. 1.Services: daily and service rendering directly linked to the results intended in the research. 2. Legal Third Party Services: installation and repairs of equipment linked to the project, consumables of equipment linked to the project, printed and graphic services, rents for scientific events, software, and congress registration.	100,000.00
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**THEME**

NEUROSCIENCE, COGNITION AND EDUCATION

**INTERNATIONAL COOPERATION PROJECTS**

Name of the project	Start date	End date
Evaluation of tools for the detection of neurodevelopmental, language and social cognition disorders in children and young people, and investigation of the effectiveness of educational therapeutic interventions.	01/01/2019	30/06/2022

**Description**

Genetic susceptibility and exposure to adverse life events during periods of neurodevelopment, such as low cognitive stimulation and chronic stress are risk factors for vulnerable individuals leading to a lifelong impact. We will emphasize developmental disorders, both language and social cognition related. The protocols aim to evaluate the effectiveness of preschool early intervention programs to promote oral and written language skills through Randomized Clinical Trials that will consider adverse socioeconomic conditions associated with inadequate cognitive stimulation and stress. These are multidisciplinary studies that include 1) speech-language assessment of reading disorders obtained by eye tracking and analyzed through artificial neural networks to identify visual patterns of performance that may add to differential diagnosis of dyslexia; and 2) evaluation of the effectiveness of a teacher training program to promote the language development of children at risk for speech and language disorders. Another related study focuses on the translation and adaptation of an assessment tool for communicative competence in children and adolescents with Autism Spectrum Disorder (ASD). Still in children with ASD we will investigate the mental processes underlying the understanding and response to the intentions, emotions and thoughts of the other person (social cognition). Social cognition skills influence the capacity for socialization and formal learning. We will evaluate tests associated with physiological measures such as skin conductance, pupillometry, and eye-tracking. Finally, the linguistic- gestural description of the productions of children with ASD in interaction will be evaluated, offering intelligibility to the way these interactions take place. Inappropriate responses will be reexamined from a linguistic perspective by offering theoretical and practical support to family members and health professionals who interact with such children. These associated projects involve 7 of the 9 participating PGPs. Complementary clinical trials will evaluate the effects of executive function training and language skills on school readiness in preschool children, with the aim of adapting and comparing intervention programs. In addition, we will investigate the efficacy of combined transcranial stimulation combined with integrative therapy on cognition in children with attention deficit hyperactivity disorder, ASD, Dyslexia and others. In the basic research, we emphasize studies based on the neonatal stress paradigm. Perinatal stress can result in inadequate hormonal responses to stress and depression. Our studies aim to investigate the neurobiology underlying the behavioral changes induced by neurochemical, pharmacological and molecular approaches. The results may support therapeutic approaches for affective disorders mainly in the youth population.

**Work missions related to the cooperation project**

Year	Quantity	Amount
2019	2	31.000,00
2022	3	46.500,00
2021	4	62.000,00
2020	3	46.500,00

**Resources to maintenance of the projects**

Year	Amount
2019	10.000,00
2020	10.000,00
2021	10.000,00
2022	5.000,00

**Scholarships related to the cooperation project**

<b>Year</b>	<b>Modality</b>	<b>Quantity</b>	<b>Amount</b>
2019	Young Talents A (12 months)	1	116.110,58
2019	Junior Visiting Professor (3 months)	1	36.986,40
2019	Training in short-term courses (3 months)	2	50.932,80
2020	Training in short-term courses (3 months)	1	25.466,40
2021	Visiting Professor in Brazil (1 month)	2	46.310,58
2019	Ph.D Sandwich (12 months)	1	76.276,80
2019	Post-Doctorate (24 months)	1	123.310,58
2020	Ph.D Sandwich (12 months)	1	76.276,80
2020	Young Talents A (12 months)	1	116.110,58
2021	Junior Visiting Professor (3 months)	1	36.986,40
2022	Visiting Professor in Brazil (1 month)	1	23.155,29
2022	Young Talents A (12 months)	1	116.110,58
2021	Young Talents A (12 months)	1	116.110,58
2020	Senior Visiting Professor (3 months)	1	39.866,40
2020	Junior Visiting Professor (3 months)	1	36.986,40
2021	Training in short-term courses (3 months)	1	25.466,40
2020	Post-Doctorate (24 months)	1	123.310,58
2021	Ph.D Sandwich (12 months)	1	76.276,80
2022	Junior Visiting Professor (3 months)	1	36.986,40
2021	Senior Visiting Professor (3 months)	1	39.866,40
2020	Visiting Professor in Brazil (1 month)	2	46.310,58
2019	Senior Visiting Professor (3 months)	1	39.866,40
2019	Visiting Professor in Brazil (1 month)	2	46.310,58

Name of the project	Start date	End date
Well-being, Cognition and health status assessment in college students and general population of Sao Paulo, according to chronotype and presence of sleep disorders.	01/01/2019	30/06/2022

**Description**

Wake / Sleep Cycle and Sleep Disorders are common among young people and can greatly affect overall performance. Sleep and wakefulness play an important role in students' performance. The maintenance of the biological rhythmicity is preponderant for the proper functioning of the organism, and changes in its synchronization and / or timing have been related to the development of metabolic disorders, mood disorders, increase in the incidence of tumors, among other changes in the physiology of the human organism. Respect for individual biological rhythmicity (expressed by chronotype) has also proved important for more effective initiatives in the field of education and cognition, such as changes in the school period showing that the later onset in the morning has is a more adequate alternative for adolescents, in particular (with potential to be applied for all age groups), with a significant improvement in learning scores and school social interaction. In this sense, the evaluation and implementation of strategies that propose better adaptation of students according to their chronotype are welcome in the current context. The recent Nobel Prize in Medicine, 2017 was awarded to scientists who revealed the molecular mechanisms controlling biological rhythmicity, recognizing the importance that the preservation of rhythms and their synchronization to the environment plays a critical role in the overall functioning and performance of the organism. Given that our University has professors and researchers with experience in this area of knowledge, and that the applicability of discoveries and studies of circadian rhythms have important implications on health, well-being, cognition and learning, we also propose to evaluate the patterns of wakefulness and sleep disturbances in students and in the general population of São Paulo. However, other sleep disorders unrelated to the wake / sleep rhythm are prevalent and significantly affect the acquisition and learning process in a complex way. Several studies are proposed and others are already being carried out aiming to evaluate physiological, diagnostic and therapeutic aspects of sleep and its disorders in special populations and in the general population. These protocols will be conducted jointly by 3 of the participating PGPs.

**Work missions related to the cooperation project**

Year	Quantity	Amount
2021	3	46.500,00
2019	2	31.000,00
2022	3	46.500,00
2020	3	46.500,00

**Resources to maintenance of the projects**

Year	Amount
2019	10.000,00
2020	10.000,00
2021	10.000,00
2022	5.000,00

**Scholarships related to the cooperation project**

Year	Modality	Quantity	Amount
2021	Junior Visiting Professor (3 months)	1	36.986,40
2021	Visiting Professor in Brazil (1 month)	2	46.310,58
2021	Young Talents A (12 months)	1	116.110,58
2020	Junior Visiting Professor (3 months)	1	36.986,40
2022	Visiting Professor in Brazil (1 month)	1	23.155,29
2020	Senior Visiting Professor (3 months)	1	39.866,40
2020	Young Talents A (12 months)	1	116.110,58
2019	Visiting Professor in Brazil (1 month)	2	46.310,58
2019	Post-Doctorate (24 months)	1	123.310,58
2020	Ph.D Sandwich (12 months)	1	76.276,80
2021	Ph.D Sandwich (12 months)	1	76.276,80
2021	Training in short-term courses (3 months)	1	25.466,40
2019	Ph.D Sandwich (12 months)	1	76.276,80
2019	Senior Visiting Professor (3 months)	1	39.866,40
2019	Young Talents A (12 months)	1	116.110,58
2021	Senior Visiting Professor (3 months)	1	39.866,40
2022	Young Talents A (12 months)	1	116.110,58
2019	Junior Visiting Professor (3 months)	1	36.986,40
2020	Training in short-term courses (3 months)	1	25.466,40



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2019	Training in short-term courses (3 months)	1	25.466,40
2020	Post-Doctorate (24 months)	2	46.310,58
2020	Junior Visiting Professor (3 months)	1	123.310,58

Name of the project	Start date	End date
Application and Development of Neurotechnologies in the diagnostic and therapeutic management of neurological disorders	01/01/2019	30/06/2022

**Description**

In general, we will cover the applicability, development and improvement of techniques in neurological disorders including multimodal techniques, "data mining"; "machine learning" and neuromodulation. Environmental stimuli induce a dynamic neuronal arrangement and also a cognitive representation generating a sense of unity, also known as a body schema. Understanding how the perception of limbs is arranged in the central and peripheral nervous systems is fundamental, since the lower limbs are the main effectors of spatial displacement of the individual, requiring a recruitment of neural pathways of planning and decision making for long distances. An Integrated Biofeedback System will improve therapeutic strategies and efficiency of rehabilitation processes. The objectives of this project are: to develop new platforms of assistive, integrated and interactive technologies for the rehabilitation of people with dysfunctions; Implementation of clinical rehabilitation procedures for people with neurocognitive or sensory-motor dysfunction; develop an experimental, real-time and interactive protocol that allows the investigation of neurocognitive and behavioral aspects involved in the learning process and body representation. This project will include international partnership. Regarding the improved efficacy of indications for invasive procedures, our project draws attention to epilepsy, which affects around 70 million people worldwide. Mesial temporal lobe epilepsy and hippocampal sclerosis are frequent and sometimes progressive, with worsening of cognitive function and psychiatric disorders and even death. In this scenario, resective surgery has been recognized as an effective treatment in drug-resistant epilepsy. However, highly reliable criteria for a robust prediction of postoperative outcomes are still, to date, non-existent. Our proposal has the potential to enable health systems to use a large amount of information about their patients and, based on systematic analysis, be able to identify problems, improve treatments and diagnoses, reduce treatment inefficiencies, modify informational exams and improve practices in patient care the methods used in "Data Mining" and "Machine Learning". Evidence-based clinical practices have great repercussions in the adoption of public policies in several countries. Finally, the use of transcranial direct current stimulation combined with integrative speech therapy in a blind and randomized study will evaluate the effects of stimulation on cognition, executive functions, communication and language in patients with Attention disorder, Dyslexia and other developmental disorders. This trial will be carried out in conjunction with international centers.

**Work missions related to the cooperation project**

Year	Quantity	Amount
2019	2	31.000,00
2020	4	62.500,00
2022	3	46.500,00
2021	5	77.500,00

**Resources to maintenance of the projects**

Year	Amount
2019	10.000,00
2020	10.000,00
2021	10.000,00
2022	5.000,00

**Scholarships related to the cooperation project**

Year	Modality	Quantity	Amount
2021	Senior Visiting Professor (3 months)	1	39.866,40
2021	Training in short-term courses (3 months)	1	25.466,40
2019	Training in short-term courses (3 months)	2	50.932,80
2020	Junior Visiting Professor (3 months)	1	36.986,40
2020	Training in short-term courses (3 months)	1	25.466,40
2021	Young Talents A (12 months)	1	116.110,58
2022	Young Talents A (12 months)	1	116.110,58
2019	Young Talents A (12 months)	1	116.110,58
2019	Junior Visiting Professor (3 months)	1	36.986,40
2019	Senior Visiting Professor (3 months)	1	39.866,40
2020	Senior Visiting Professor (3 months)	1	39.866,40
2021	Junior Visiting Professor (3 months)	1	36.986,40
2022	Senior Visiting Professor (3 months)	1	39.866,40
2022	Junior Visiting Professor (3 months)	1	36.986,40
2020	Young Talents A (12 months)	1	116.110,58
2022	Visiting Professor in Brazil (1 month)	1	23.155,29
2021	Ph.D Sandwich (12 months)	1	76.276,80
2020	Visiting Professor in Brazil (1 month)	2	46.310,58

2021	Visiting Professor in Brazil (1 month)	2	46.310,58
2020	Post-Doctorate (24 months)	2	246.621,16
2020	Ph.D Sandwich (12 months)	2	152.553,60
2019	Post-Doctorate (24 months)	2	246.621,16
2019	Ph.D Sandwich (12 months)	2	152.553,60
2021	Post-Doctorate (24 months)	1	123.310,58
2019	Visiting Professor in Brazil (1 month)	2	46.310,58

**WORK MISSIONS**

Year of work missions	Quantity of work missions per year	Amount of work missions
2021	1	18.160,00
2019	1	18.160,00
2022	1	18.160,00
2020	1	18.160,00

**SCHOLARSHIPS**

Year	Modality	Quantity	Amount
2020	Young Talents - A (12 months)	1	116.110,58
2020	Post-Doctorate (12 months)	1	69.310,58
2020	Senior Visiting Professor (6 months)	1	65.678,40
2022	Junior Visiting Professor (6 months)	1	60.638,40
2021	Senior Visiting Professor (6 months)	1	65.678,40
2019	Visiting Professor in Brazil (1 month)	1	23.155,29
2020	Visiting Professor in Brazil (1 month)	1	23.155,29
2021	Visiting Professor in Brazil (1 month)	1	23.155,29
2020	Senior Visiting Professor (6 months)	1	65.678,40
2020	Training in short-term courses (3 months)	1	25.466,40
2021	Ph.D Sandwich (12 months)	2	152.553,60
2021	Post-Doctorate (12 months)	1	69.310,58
2022	Visiting Professor in Brazil (1 month)	1	23.155,29
2021	Young Talents - A (12 months)	1	116.110,58
2019	Ph.D Sandwich (12 months)	1	76.276,80
2020	Ph.D Sandwich (12 months)	2	152.553,60
2022	Ph.D Sandwich (12 months)	1	76.276,80
2022	Training in short-term courses (3 months)	1	25.466,40

**OTHER PROGRAM ACTIONS**

Year	Actions	Description	Amount
2019	Support for the implementation of projects	Payment of services and materials to support visitors and local researchers.	100.000,00
2020	Support for the implementation of projects	Payment of services and materials to support visitors and local researchers.	100.000,00
2021	Support for the implementation of projects	Payment of services and materials to support visitors and local researchers.	100.000,00
2022	Support for the implementation of projects	Payment of services and materials to support visitors and local researchers.	50.000,00

**THEME**

LONGEVITY

**INTERNATIONAL COOPERATION PROJECTS**

Name of the project	Start date	End date
The role of the immune system in the aging process and alternatives to healthy longevity.	01/01/2019	30/06/2022

**Description**

There are several changes that occur in organs and tissues during the process of human aging. Changes that occur in the Immune System are indicated as cause and / or consequence of various diseases related to aging. The two arms of the immune response (innate and adaptive) undergo changes and as a result less effectiveness in responding to infections, immunization after vaccination and tumors, and increased autoimmune responses are observed. It is also reported a discrete process of chronic peripheral inflammation that has been related to diabetes, cardiovascular complications, Alzheimer's, sarcopenia, among other diseases. Our group has evaluated peripheral blood cells of healthy individuals over 60 years old with the objective of evaluating the possible changes of the Immune System. Preliminary results show changes in proliferation rate, cytokine production, and T cell phenotype in individuals aged 60- 65 years, as well as in individuals aged 80 to 100 compared to individuals aged 20-30 years. In individuals between 60 and 65 years of age, the changes are more evident in men, while in the elderly over 80 years this difference disappears, but the changes are more vigorous. The next step is to assess the impact of strategies such as physical activity, supplements, and vaccine adjuvants on the immune response. Our project can be inserted in several other lines of research seeking the understanding of how changes in the Immune System can compromise other organs and tissues, and how strategies that maintain the integrity of the Immune System can contribute to healthy longevity.

**Work missions related to the cooperation project**

Year	Quantity	Amount
2020	1	15.500,00
2021	1	15.500,00
2019	1	15.500,00
2022	1	15.500,00

**Resources to maintenance of the projects**

Year	Amount
2019	10.000,00
2020	10.000,00
2021	10.000,00
2022	5.000,00

**Scholarships related to the cooperation project**

Year	Modality	Quantity	Amount
2019	Young Talents - A (12 months)	1	116.110,58
2020	Senior Visiting Professor (8 months)	1	88.660,80
2021	Ph.D Sandwich (12 months)	1	76.276,80
2022	Visiting Professor in Brazil (6 months)	1	95.155,29
2019	Ph.D Sandwich (6 months)	1	40.478,40
2020	Young Talents - A (24 months)	1	216.910,58
2022	Young Talents - A (12 months)	1	116.110,58
2020	Visiting Professor in Brazil (6 months)	1	95.155,29
2021	Visiting Professor in Brazil (6 months)	1	95.155,29
2021	Young Talents - A (24 months)	1	216.910,58
2020	Ph.D Sandwich (12 months)	1	76.276,80
2021	Senior Visiting Professor (10 months)	1	105.868,80
2022	Ph.D Sandwich (12 months)	1	76.276,80
2022	Junior Visiting Professor (6 months)	1	60.638,40
2019	Junior Visiting Professor (6 months)	1	60.638,40
2022	Senior Visiting Professor (10 months)	1	105.868,80

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2019	Visiting Professor in Brazil (6 months)	1	95.155,29
2019	Senior Visiting Professor (8 months)	1	88.660,80
2020	Junior Visiting Professor (6 months)	1	60.638,40
2021	Junior Visiting Professor (6 months)	1	60.638,40

Name of the project	Start date	End date
Health promotion and prevention of functional losses inherent to aging	01/01/2019	30/06/2022

**Description**

Our group has been conducting a longitudinal epidemiological study with elderly residents in the community since 1991, using a multidimensional methodology to evaluate the health and functionality of these elderly individuals, identifying the risk factors for mortality. Results from this cohort showed that functional and cognitive functional losses are the main risk factors for mortality and that there is a constant functional loss associated with aging. Preliminary intervention studies in this cohort showed that actions promoting physical activity and cognitive stimulation are able to significantly increase physical activity in leisure time and improve neuropsychological indicators of memory and cognition. The objective of the present project is to evaluate the effectiveness of these health promotion actions - physical activity and cognitive stimulation - in maintaining the functional capacity of the elderly reducing functional losses inherent to aging. Both have a potential positive impact on the quality of life, independence and autonomy of the aging population, but have not yet been duly evaluated together. In order to evaluate the independent effect of these actions on functional capacity, we must have an interdisciplinary approach evaluating economic and housing conditions, social and health integration that may influence functional losses. The project has a consortium within UNIFESP integrating professionals from the actuarial area, humanities and health sciences, the latter focusing on disciplines vital for understanding the biological functionality of the elderly, namely: immunity, sleep, neurocognition, renal function, hearing and vision. There are numerous theses, dissertations and papers published in the area based on a cohort of elderly people maintained for 27 years.

**Work missions related to the cooperation project**

Year	Quantity	Amount
2019	1	15.500,00
2020	1	15.500,00
2021	1	15.500,00
2022	1	15.500,00

**Resources to maintenance of the projects**

Year	Amount
2019	10.000,00
2020	10.000,00
2021	10.000,00
2022	5.000,00

**Scholarships related to the cooperation project**

Year	Modality	Quantity	Amount
2022	Visiting Professor in Brazil (6 months)	1	95.155,29
2021	Ph.D Sandwich (12 months)	1	76.276,80
2021	Visiting Professor in Brazil (6 months)	1	95.155,29
2020	Ph.D Sandwich (12 months)	1	76.276,80
2019	Ph.D Sandwich (6 months)	1	40.478,40
2019	Senior Visiting Professor (8 months)	1	88.660,80
2021	Training in short-term courses (3 months)	1	25.466,40
2022	Senior Visiting Professor (10 months)	1	105.868,80
2019	Post-Doctorate (24 months)	1	123.310,58
2020	Training in short-term courses (3 months)	1	25.466,40
2022	Ph.D Sandwich (12 months)	1	76.276,80
2021	Senior Visiting Professor (10 months)	1	105.868,80
2022	Training in short-term courses (3 months)	1	25.466,40
2020	Visiting Professor in Brazil (6 months)	1	95.155,29
2019	Visiting Professor in Brazil (6 months)	1	95.155,29
2019	Training in short-term courses (3 months)	1	25.466,40
2020	Senior Visiting Professor (8 months)	1	88.660,80
2020	Post-Doctorate (24 months)	1	123.310,58
2021	Post-Doctorate (36 months)	1	177.310,58
2022	Post-Doctorate (24 months)	1	123.310,58

**WORK MISSIONS**

Year of work missions	Quantity of work missions per year	Amount of work missions
2021	1	18.160,00
2019	1	18.160,00

**SCHOLARSHIPS**

Year	Modality	Quantity	Amount
2021	Ph.D Sandwich (12 months)	1	76.276,80
2020	Visiting Professor in Brazil (1 month)	1	23.155,29
2020	Ph.D Sandwich (12 months)	1	76.276,80
2020	Training in short-term courses (3 months)	1	25.466,40
2022	Visiting Professor in Brazil (1 month)	1	23.155,29
2021	Post-Doctorate (12 months)	1	69.310,58
2021	Senior Visiting Professor (6 months)	1	65.678,40

**OTHER PROGRAM ACTIONS**

Year	Actions	Description	Amount
2019	Support for the implementation of methodologies for health research for the elderly	Metabolic dosages in biological material of the elderly to be performed at the Central Laboratory UNIFESP	50.000,00
2020	Support for the implementation of methodologies for health research for the elderly	Acquisition of laboratory reagents to investigate the immune response in the elderly.	100.000,00
2021	Support for the implementation of methodologies for health research for the elderly	Acquisition of cognitive and anthropometric evaluation materials for the elderly.	100.000,00
2022	Support for the implementation of methodologies for health research for the elderly	Acquisition of visual and auditory acuity assessment materials for the elderly.	100.000,00

## COUNTERPART

### **Internationalization of the curriculum - Incorporation of international themes in postgraduate classes.**

Although Unifesp's undergraduate and postgraduate curriculum often themes in all areas of knowledge, including foreign language, the institution has not yet established a systematic policy for internationalization of the curricula of their courses. However, it was recently approved a normative resolution to offer courses in a foreign language and one of the goals of Institutional Internationalization Policy is to promote initiatives that contribute to the curriculum that values cultural, linguistic and global criticism. Within the scope of this goal, the institution intends to promote discussions participatory planning activities of the Institutional Pedagogical Project (PPI) that will be the document that will give the curricular guidelines for the institution. Another goal is to create initiatives to promote distance education programs and in the COIL format (Collaborative Online International Learning) that can strengthen internationalization in home. For the Capes - PrInt purpose, PROPGPq intends to organize a seminar of postgraduate students to evaluate the functioning of curricular practices in progress in the institutions that promote internationalization and promote its expansion in all institution.

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

One of the goals of the Internationalization Institutional Policy is to improve the promotion Unifesp visibility, in view of its strategic collaboration on the world stage. Currently, Unifesp has an International Portal ([www.unifesp.br/world](http://www.unifesp.br/world)) and publicity material printed in English, but it considers important to supplement the information on this portal and to elaborate and provide International Portals in Spanish and French. Another aspect that the institution considers it important to publicize the Institutional Repository of access to Unifesp production intellectual property and the academic and scientific journals of the institution to impact of the knowledge produced by its researchers. Unifesp also considers that it is fundamentally to develop scientific dissemination material, institutional videos, research and other materials that may contribute to the dissemination of the university. Over the next few years, PROPGPq and SRI will work intensively towards the implementation of these proposals and will organize a timetable for all PPGs involved in Capes - PrInt, but also the other PPGs of the institution translate their graduate pages for the English language.

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

The International Relations Office technical staff is already highly qualified, including post-graduate employees or post-graduate in the area of management and international relations, however, foreign language training is still lacking. The university has few resources to finance the training of these professionals, but in the part of the Capes-PrInt development, the idea is to negotiate with the institutions that Unifesp has long-standing relationships such as the University of Groningen and Coimbra, scholarships studies in distance learning courses and in person for employees in the area, providing an international experience. Unifesp also intends to negotiate with partner institutions, immersion courses to raise the level of proficiency, in English, of the internationalization team.

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

In addition to the possibility of negotiating the courses for the internationalization employees mentioned above, there is a set of counterparts to be negotiated with the foreign institutions that enter into partnership in the framework of the Capes - PrInt research collaboration. In order of priority, the institutions will be asked to: the exemption of any fees at the institution for use of its infrastructure (libraries, laboratories and computer rooms); access to individual or collective spaces of work; access to university restaurants and the accommodation of researchers in mobility. Institutions should also be committed - depending on the research activities



development and the possible signing of cooperation - to provide vacancies for undergraduate student mobility, as well as in discuss the possibilities of building dual diploma programs and doctoral.

### **Other counterparts, when applicable.**

An important institutional counterpart that Unifesp will assume over the next few years in relation to the financing granted by Capes - PrInt is the Institute of Converged Studies (IEC) implementation, which will be the institutional space for university research and will contribute to the nucleation of thematic research networks formed within the scope of the Institutional Internationalization Policy. Project coordination of the center implementation is in charge of Professor Renato Janine Ribeiro, full professor of philosophy from USP and recently hired as visiting professor by Unifesp. The IEC was within the scope of the Institutional Development Plan (PDI 2016-2020), as a institutional place to consolidate academic integration and the university international insertion, being mainly a space committed to the debate of questions relevant aspects of contemporary science and culture, focused on the formulation and of concrete problems of Brazilian society, pointing to the necessary convergence between university knowledge and society.

**DOCUMENTS**

<b>Description Date</b>	<b>Type</b>	
UNIFESP English Form.pdf	Institutional Internationalization Project in English	21/05/2018 10:46:50
Proof of registration	Proof of registration	10/05/2018 14:49:25
Official Letter issued by the Rector	Official Letter of Presentation issued by the highest authority ( 8.2.4 Call of proposal)	10/05/2018 14:29:21
Lattes of the instituional Management Committee UNIFESP pdf	Curriculum Lattes Brazilian Members	10/05/2018 12:37:44
Charles Newton.pdf	Curriculum Vitae - foreign members	09/05/2018 18:44:47
EXECUTIVE SUMMARY EN.pdf	Executive Summary, in English, of the Institutional Plan aligned with the Project presented for CAPES-Print	09/05/2018 18:35:59
EXECUTIVE SUMMARY PT.pdf	Executive Summary, in Portuguese, of the Institutional Plan aligned with the Project presented for CAPES-Print	09/05/2018 18:35:48
Marina Bentivoglio cv .pdf	Curriculum Vitae - foreign members	09/05/2018 10:26:50
UNIFESP Internationalization Policy Acta CPGPq 29032018.pdf	Institutional Internationalization Plan of the HEI or similar document	09/05/2018 10:05:50
CV Han_Moshage.pdf	Curriculum Vitae - foreign members	09/05/2018 10:03:39