



International Review
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Introduction

Dear Reader,

We are pleased to present topics from our newsletter in English in this issue of USP International Review. In accordance with USP's internationalization policy, we aim to increase the visibility of the main Brazilian university to all national and international academic partners and to foster international academic cooperation.

This issue features articles on USP's International Office, its prominence and cooperation, on international cooperation within the Pasteur Network, the WCRP Programme, the Global Challenge Lab 2021, the Hemispheric University Consortium (HUC) and the WC2 Network.

In addition, you will find articles about the special anniversaries of our School of Agriculture and the USP's Engineering School double degree program, as well as contents related to animal welfare, a highlighted interview of Nita Freire about Paulo Freire's life: a 100-year struggle for equality and literacy and, finally, a feature about our new USP International Intercultural Center.

Check it out and enjoy your reading!

USP's International Office: prominence and cooperation



The University of São Paulo was founded in 1934. Since then, the institution has expanded itself nationally and internationally, becoming one of the most prestigious universities in Brazil, Latin America and the entire world. To manage its international impact, USP's International Cooperation Office, also known as Aucani, was established with a mission to develop and implement policies that promote the university's internationalization. Read more about USP and Aucani in our article.

The University of São Paulo (USP) was founded in 1934, when five established faculties merged into what would become one of the most prestigious universities in Brazil and Latin America. USP has been considered by many university rankings one of the world's best universities, having an outstanding reputation among the academic community worldwide.

Located in the state of São Paulo, the university has campuses that spread from the capital city of São Paulo to seven other cities from the state's countryside: Bauru, Lorena, Piracicaba, Pirassununga, Ribeirão Preto, Santos and São Carlos. USP is active in research and teaching across the full range of the sciences and humanities. Accordingly, the university offers a great variety of undergraduate and graduate programs, as well as many extra-curricular activities. As a public state institution, USP does not charge tuition fees for its undergraduate, Masters and Doctorate degrees.

Among its major objectives, USP has a mission to internationalize; it seeks to raise its international profile and develop international cooperation. To coordinate and manage this objective, USP's International Cooperation Office, also known as Aucani, develops and implements policies that foster international academic cooperation.

Aucani aims to enhance USP's ever growing global presence. Therefore, it creates the conditions for USP to disseminate its prolific research to an international audience and ensures that its academic body is familiar with and benefits from the most innovative discoveries from around the world. One of its most impactful methods of international cooperation is supporting exchange agreements with other reputable institutions around the world.

With over 87% of full-time faculty members, USP relies on a team of professionals from faculty to staff members that are committed to ensure the university is a center of excellence in human resources and production of knowledge. The institution's research output is strongly evident in its many articles published in national and international journals, reports, chapters and books. In Brazil alone, the research output of USP represents around 22% of the country's scholarly production.

USP also fosters the transfer and application of knowledge for the benefit of society. The university's community members usually maintain a connection with industries, companies, health centers, movements and initiatives that are actively developing projects or products and applying new techniques, technologies and expertise.

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The University of São Paulo has a considerable structure : it consists of 48 schools and specialized institutes, 4 physical museums, 4 major hospitals and 48 physical libraries. Moreover, it also provides digital libraries, orchestras, choirs, cultural and scientific communication centers, a theater and a movie theater, a publisher, radio stations, a newspaper, a sports center, technological parks and astronomical observatories.

As a consequence of the university's engagement towards internationalization, each school has its own local International Office that receives support from Aucani in their efforts towards greater internationalization.

Through enabling the mobility of students, researchers, faculty and staff members, establishing cooperation strategies between USP and its international partners, providing information about research and mobility opportunities for the wider USP community or selecting, organizing and disseminating information about programs and initiatives related to academic cooperation, Aucani is a fundamental piece of the university's international influence.

And it shows results: USP has consistently

rankings. In the 2021 QS World University Rankings, which evaluates world class institutions in terms of teaching, research, knowledge transfer and international outlook, it ranks well within the top 120. Other rankings, such as the 2021 Webometrics Ranking of World Universities, which presents University of São Paulo as the 32 university in the world with respect to presence, impact, openness and excellence, and the 2021 Times Higher Education Latin America, in which USP appears as the second best university in Latin America, also prove how influential the University of São Paulo is worldwide.

USP has more than 1900 international agreements signed with several institutions all over the world. The university welcomes people from all continents and stimulates this process via network and consortia. Aucani makes sure not only to handle these international academic agreements that the university participates, but also to assist its international students, faculty members and researchers before and during their stay at USP so that, at the university, students and faculty members are able to enjoy a multicultural easygoing environment with people from different cultural backgrounds.

USP elects new President and Vice-President



Carlos Gilberto Carlotti Junior and Maria Arminda do Nascimento Arruda, President and Vice-President respectively, will take office on January 25th 2022, and will serve a 4 years term.

The professors Carlos Gilberto Carlotti Junior and Maria Arminda do Nascimento Arruda are the newly elected President and Vice-President of the University of São Paulo (USP). USP's new

President is a doctor by the Ribeirão Preto Medical School (FMRP), with an award of distinction in the clinical course. The professor is a neurosurgeon, graduated from the FMRP Clinics Hospital (HCRP),

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and is considered a specialist by the Brazilian Society of Neurology. Carlotti has a masters degree and a PhD by FMRP and is a professor at the Department of Surgery and Anatomy of the School. The professor has also been HCRP's clinic director, FMRP's Dean and president of the Ribeirão Preto Medical Researches Foundation. At the moment, Carlotti is the Provost at the Post-Graduation Pro-Rectory at USP, a position he has occupied since 2016.

Maria Arminda do Nascimento Arruda, the new vice-President, graduated and has a masters degree and a PhD in Social Sciences, all achieved through USP. She is also a faculty member of USP, being a professor of sociology at the Faculty of Philosophy, Languages and Human Sciences (FFLCH), department she served as Dean from 2016 to 2020. Furthermore, she was a senior researcher at the Instituto de Estudos Sociais e Políticos de São Paulo, which can be translated as São Paulo's Institute of Political and Social Studies, at the Pro-Rectory of Culture and Extension of USP from 2010 to 2015, as well as a representative of sociological

studies at the Coordination of Superior Level Staff Improvement (CAPES) and a representative of Human Sciences at the CAPES' technical-scientific council. As of now, Arruda is USP Women Office coordinator.

The new President and Vice-President of USP shall take office on January 25th 2022 and serve a mandate of four years. Carlotti and Arruda's administration will be the university's 28th administration since its foundation in 1934. They will succeed the serving President of USP, the Poli former professor Vahan Agopyan, and Vice-President, the São Carlos Institute of Physics (IFSC) professor Antonio Carlos Hernandez.

[This article was written in Portuguese by Adriana Cruz, Jornal Da USP's journalist](#), and translated by Filipe Albessu Narciso, journalism intern at the USP International Cooperation Office.

The Institut Pasteur International Network is evolving and becoming the PASTEUR NETWORK



Through a One Health approach based on international solidarity.

A new system of governance is being introduced for the Institut Pasteur International Network and its 33 members, which since 2011 have been part of the Pasteur International Network association, which was chaired by the Institut Pasteur President Stewart Cole.

Ten years on, the Network is adopting a more participatory, balanced mode of governance and a more structured business model. The articles of association of the Association representing the Institut Pasteur International Network have been amended, and the Association will now be known as the Pasteur Network.

A Sheltered Foundation is also being established, based at the Institut Pasteur, to serve as a financial body for the Network in addition to the Association. The organizational structure and new identity of the Pasteur Network reflect a continued commitment to tackling diseases, especially infectious and emerging diseases, through a One Health approach based on international solidarity and the development of a single voice.

For further information, access <https://www.pasteur.fr/fr/institut-pasteur/institut-pasteur-monde/actualites-international/reseau-international-instituts-pasteur-evolue-devient-pasteur-network>

WCRP Programme – Survey for climate educators

Now, more than ever, the world needs climate scientists. A key part of building the climate research workforce needed to address the challenges of this century is broadening access to climate science training. [The WCRP Academy](#) is one of the new lighthouse activities of the World Climate Research Programme, designed to make positive steps towards giving more scientists access to the training they need to meet the challenges of tomorrow.

“To meet the challenges and explore the opportunities of our changing climate, our scientists will need a strong understanding of climate from an Earth systems perspective, will need a more interdisciplinary understanding of the problems faced, will need to understand better how their science can be used in decision making, and will need to know how to communicate it to a broad audience. This will require training – not only of our early career scientists, who will lead the way, but of all climate scientists.”

Detlef Stammer and Helen Cleugh, Chair and Vice-Chair of the WCRP Joint Scientific Committee

A key pillar of the WCRP Academy is an annual, global stock-take of training needs. This message is to invite you to participate [in the first survey](#).

Any questions, please do contact us on wcrp-academy@wcrp-climate.org or visit our [WCRP Academy website](#).

USP and Harvard propose a new treatment to induce faster remission of breast cancer



Tests with mice have shown that the new strategy is six times more efficient at treating the disease's most aggressive variant in comparison to conventional therapy

University of São Paulo's (USP) Institute of Chemistry of São Carlos (IQSC) and Harvard Medical School have collaborated in the search for more efficient treatments against the most aggressive type of breast cancer, the triple-negative. The researchers have proposed a new strategy that could result in the remission of tumors in less time and reduce the collateral damage that patients are exposed to in chemotherapy. Their work was [published](#) recently in *Science Signaling*, an international scientific journal specialized in cell signaling, issued by the American Association for the Advancement of Science (AAAS).

Unlike conventional treatment, in which chemotherapy is applied as the initial method and is one of the only possible resources, the approach developed by the scientists revolves around a previous step, which weakens the tumor cells before they are submitted to chemotherapy. The objective is that they show less resistance and die faster. To obtain that result, the IQSC post-doctoral student and one of the authors of the research, Vinícius Guimarães Ferreira, tested and evaluated 192 chemical products that could be able to weaken the cancer cells selectively, without damaging the healthy ones.

To find the "ideal molecule," Ferreira tested all the substances against the diseased cells with the help of a chemical compound printer capable of analyzed and interpreted the results until he found

the compound that showed the best results at weakening the cells. This was measured, briefly, by the amount of proteins (Cytochrome C) that these cells lost after the action of the compounds, indicating how vulnerable the cells were.

After this stage, the selected molecule was used to treat mice with breast cancer for 21 days interspersed with chemotherapy sessions. The results were encouraging: "The method using only chemotherapy to treat the animals showed that the tumor had a 10% reduction in size. With the combined treatment the tumor shrank 60% in the same period of time, which means that the therapy was six times more efficient or 500% more efficient," revealed Ferreira, whose research was financed by the Brazilian National Council for Scientific and Technological Development (CNPq) and who went on an exchange program at Harvard Medical School for a year during the period when he was studying for his doctorate at IQSC. At Harvard, he was supervised by professor Anthony Letai, a specialist in the evaluation of mechanisms that lead tumor cells to death.

By providing a more efficient result against cancer cells, generating more adverse reactions to patients, who would need to go through more sessions of the treatment. However, with our proposal, from the moment we have previously sensitized tumor cells, the chemotherapy effectiveness increases and its toxicity to healthy

cells decreases”, explains IQSC professor and Dean Emanuel Carrilho, who advised Ferreira during the research and also signed the published article.

Challenging treatment - According to the American Cancer Society, triple-negative breast cancer (TNBC) is responsible for around 10% to 15% of all breast cancers and it is more common in women under the age of 40. This type of cancer differs from others in that it grows and spreads at a quicker pace, has limited treatment options, and not-so-satisfactory outcomes.

A study [published](#) in 2019 shows that TNBC doubles its size after 124 days, while other types of breast cancer double in volume every 185 days. The term “triple-negative” is used because the cancer cells lack hormonal receptors for estrogen and progesterone. Besides, they either don’t produce or produce in low amounts the protein HER2, which is fundamental for breast cell growth. In short: the test for cancer cells is “negative” on all three occasions. According to estimates [released](#) by the Brazilian National Cancer Institute (INCA), Brazil should register in each year of the triennium 2020-2022 about 66 thousand new cases of breast cancer, considering all its variants. The disease represents 29,7% of cancer cases in women, making it the leading cause of cancer occurrences in the female public.

Now, scientists from IQSC and Harvard are

open to partnerships with the pharmaceutical industry in order to license the treatment. It would also enable Farber Cancer Institute and at the both located in Boston.

Photo 1: Tests carried out with mice show that the new strategy is six times more efficient at treating the most aggressive type of the disease in comparison to conventional therapy. Picture: Canva

Photo 2: 192 chemical compounds were evaluated at their capacity of weakening cancer cells. Picture: Vinicius Ferreira

Photo 3: Chemical printer tests molecules against tumor cells. Picture: Vinicius Ferreira

Photo 4: Device evaluates how weakened the cells are after the compounds action. Picture: HMS/Reproduction

Photo 5: The study was conducted in partnership with scientists from Harvard Medical School. Picture: HMS/Reproduction

Photo 6: Ferreira had a one-year exchange program in the USA. Picture: Vinicius Ferreira

This article was written in Portuguese by Henrique Fontes, communication advisor at IQSC/ USP and translated by Filipe Albessu Narciso, journalism intern at Aucani.

Towards a sustainable future: the University of São Paulo's relevance in the Global Challenge Lab 2021



With a student in the winning team and two students in second place, USP's participation in the Global Challenge Lab 2021 was expressive. A 10-day program of entrepreneurship and international cooperation, the first edition of the Global Challenge Lab counted with the participation of ten international universities and the designing of more than 50 projects related to health and well-being. USP was represented by four mentors and 29 students. You can learn more about USP's participation and impact in the Global Challenge Lab [here](#).

This year, Imperial College London, in a partnership with Tsinghua University's X-lab in Beijing, promoted an entirely new event: the Global Challenge Lab. Described as a "virtual entrepreneurship program", the Global Challenge Lab had more than 900 undergraduate and graduate students around the globe participating in a 10-day entrepreneurship program. The University of São Paulo (USP), one of the ten universities attending the event, was represented by four mentors and 29 students. The event was also sponsored by multinational companies Huawei, Nestlé and BMS.

An event of ambitious objectives, its main idea was to split students in different teams to develop projects related to the third goal of the [United Nations' 2030 Agenda for Sustainable Development](#), which stands for good health and well being. The event had four main tracks to which the 58 formed groups could design their projects: Mental Health & Non-Communicable Diseases, Women & Children's Health, Communicable Diseases and Access to Healthcare. There were also regulations defining that students couldn't have a fully formed idea before the event and that the groups should have no more than two members from the same university.

USP's participation in the event was considerably fruitful. Three USP students were on the podium. Student Giselle Akemi Tsukahara Jensen was part of the event's champion Team Scarlet, while Isabela Carvalho Velloso de Oliveira and Luiz Gustavo dos Santos Lima were part of Team Milky, which won second place. Both teams were also winners of their own tracks (Women & Children's Health and Communicable Diseases, respectively).

According to Renata Ferretti-Rebustini, one of USP mentors who participated in the Global Challenge Lab, the responsibility and commitment of students to their projects was admirable. Every mentor was responsible for orienting an obligatory group, however Professor Ferretti-Rebustini also took part in extra

mentoring sessions for other groups that had interdisciplinary components to their ideas. She mentions that it was an enriching experience to accompany the process of the ideas taking shape and emphasizes the fact that the mentors wouldn't give the groups any type of orders. Instead, they suggested ways for the group to improve their ideas, as they had the freedom to follow these recommendations or not. Interviewed in Portuguese, Professor Ferretti-Rebustini stressed her point of view that "events such as these are catalysts for scientific progress".

Giselle Jensen, the USP student member of the winning team, argues that participating in the Global Challenge Lab was an eye-opening experience. She points out that, when it comes to public health and "hack" type of challenges, it's relevant to consider a sparse and diverse range of elements to the discussion, such as the impact of entrepreneurship and private entities.

Jensen's group developed a platform to connect mothers and midwives in sub-Saharan Africa. The idea, called Oba-Pa, uses cellular networks on analogue phones to promote women's health and lower maternal related deaths. Jensen mentions that it was challenging at first to figure out a solution to a problem of a different world region, as the cultural and structural differences between Brazil and sub-Saharan Africa were made more and more evident as she worked with her team. "At first, I was thinking only of solutions to problems in Brazil and the USA," admits Jensen in an interview in Portuguese. "As our project unfolded, I had to detach myself from my own background. For example, our idea involved mobile money, a concept that I had never heard of before in Brazil".

Isabela de Oliveira was also a part of the challenge podium. "We would meet up online and work hard all day on our project," she mentions. Her team won second place and, out of four members, two were USP students (Isabela de Oliveira and Luiz Gustavo Lima). In order to tackle the transmissibility of vector-borne diseases, their group was responsible for an idea of a pheromone trap for mosquitoes called the Pherotrap.

Interviewed in Portuguese, Isabela de Oliveira says that her group tried to think outside the box while searching for a major problem in public health that they desired to fix. She points out that, because she and Luiz Gustavo Lima were both Brazilians, they knew how much of an issue mosquito transmitted diseases are to the country and the rest of the world. "We haven't talked enough about these diseases [mosquito-borne diseases]. With the coronavirus pandemic, they were put aside for a while, but their impact is still there". [Data from the non-profit initiative World Mosquito Program](#) show that 700 million people contract mosquito-borne illness each year.

Nowadays, De Oliveira mentions that her group still maintains contact and considers taking the project to a new level. "Up to the competition, I had never even thought of working on a startup," she declares.

Both Jensen and De Oliveira mentioned that working with people from different time zones had many organizational difficulties, one of the major challenges that the event offered. However, they also agreed that international cooperation, both in a professional and social point of view, was fundamental for their experience.

Professor Ferretti-Rebustini has a similar perspective on the matter, exposing the idea that different backgrounds and areas of expertise made the event an incredible opportunity of growth to everyone, even the mentors. "When you work with sustainability and sustainable development, you can't ignore the beneficial impact that transdisciplinary and transcultural aspects bring to the discussion," argues the Professor.

Hemispheric University Consortium celebrates achievements in its third year

Collaborative online international learning training and implementation programs, an innovation observatory, research internships, a library Network, a social entrepreneurship creative center, and collective reflections on the impact of Covid 19 on the SDGs are only some of the initiatives implemented by the Hemispheric University Consortium in the last two years. The leaders of the 14 universities met to review and reflect on the results achieved in these challenging times.

The HUC was founded in 2018, as a unique cooperative mechanism to promote solution-oriented collaborations in research and education to act upon the United Nations Sustainable Development Goals ("SDGs") to address the unique societal needs of the Hemisphere, mobilize to face the challenges posed by public health, climate change, crime, corruption, entrepreneurship and technology.

Three years after its creation, numerous initiatives addressing those needs have bolstered collaboration among the 14 universities from Latin America, the Caribbean, Canada and the United States that are members of this alliance.

The HUC Social Entrepreneurship Collaborative Center created a multilateral program on social innovation in the hemisphere- "Pathways to Prosperity"; a conference series on the impact of Covid -19 on the SDGs- "Conversaciones para el Futuro", and a competition for young entrepreneurs – "Social Ideas Challenge". Just in the conference series, more than 70 experts gathered in 17 seminars to reflect on the impact of Covid- 19 on the SDGs, sharing their knowledge with an audience totaling 20,000 people. The HUC Innovation Observatory created the HUC website to foster research collaborations among its members; matchmaking



events for research projects and for research internships.

The HUC Collaborative Online International Learning initiative has had more than 1500 people in conferences to share experiences and best practices among the HUC institutions, with more than 3300 students benefiting from the online collaborations.

The Library Network announced the launching of its new website, an online platform that provides Information on each of the libraries of the universities, facilitating access to valuable resources in a collaborative manner: (<https://www.thehuc.org/libraries/>).

The results showed that this cooperative mechanism multiplied the potential to contribute to sustainable development through the joined forces and vision of each institution, with the result of delivering a greater good for all members of our societies. In words of President Frenk, they committed to "continue with the energy" that was shown so far.

WC2 network: developing a better urban future



The World Cities World Class University (WC2) network has recently announced the WC2 Challenge 2020 winners and held its well-known WC2 Symposium. This year's theme was Undergraduate Challenge: Imagining Urban Futures in a Post-COVID World. Two of the winning projects were developed in collaboration with USP researchers and one of those was mentored by a USP professor. Yearly, the WC2 network promotes events to discuss solutions to problems affecting the world's urban area. You can learn more about the WC2 network [here](#).

Established in September 2010 by City University London, the World Cities World Class University (WC2) network promoted its WC2 Challenge 2020, hosted by the RMIT University. This event's yearly edition addressed the same problem as last year's: Undergraduate Challenge: Imagining Urban Futures in a Post-COVID World.

Starting on November 2nd 2020 and finishing on March 16th 2021, the WC2 Challenge 2020 participants had about six months to develop their projects. Competitors were invited to provide solutions to the needs and challenges of urban actors. WC2 is committed to helping ensure that the experience gained at the Universities brings benefit to urban areas around the world.

The University of São Paulo (USP) was involved in two winning projects in the WC2 Challenge 2020. USP researchers Edvaldo Pereira Santos, Livia Kaneko and Gabriela Rodrigues, mentored by Professor Adriana Marotti de Mello, were part of the winning group for the Business Theme, while researcher Guilherme Fernandes Alves represented the university among the champions of the Transport Theme.

These results are an important part of the network's main activity: the annual symposium, which functions as a platform for sharing and developing ideas, as well as establishing new partnerships. This year, the WC2 symposium happened on the week of August 9th. The event hosted WC2 2020 Challenge winning project presentations, as well as guest lecturers, such as a transport planning project led by USP researchers André Devay, Carolina Almeida Novais, Felipe Giacomini Gripa and Márcio Antonio Lino Júnior.

Network History

WC2 is an international higher education network consisting of nine universities spread across major cities around the globe. The member universities are: RMIT University (Australia), Tongji University (China), University of São Paulo, Universidad Autonoma Metropolitana (Mexico), Technische Universität Berlin (Germany), Ryerson University (Canada), Peter the Great St. Petersburg Polytechnic University (Russia), City University of New York (USA) and City University London (UK). The network's main goal is to address cultural, environmental and political issues of common interest to world cities and their universities, while recognizing and promoting the essential role of the latter in overcoming them.

Among the values shared by the member institutions of the WC2 network are the commitment to international activities, cosmopolitan perspectives and strategic direction, a willingness to meet the development of new areas of knowledge and technology, and involvement in the public and private sectors of the community at large. As such, in over ten years of activities, WC2 has supported several inter-institutional arrangements related to student exchange, staff mobility and research collaboration. Its events are decisive in promoting cultural exchanges in order to plan for the future.

The network has defined some areas of common interest related to healthy urban area development: Business; Eco-Campus; Knowledge, Culture and Urban Affairs; Global Health; Transport; and Cybersecurity. Each of its member institutions brings unique expertise to these universal themes that are also used as categories for the yearly WC2 Undergraduate Challenge. Especially in the last two editions, the WC2 has taken up the challenge of coming up with solutions for a post-pandemic world.

Currently, the network is managed by a Strategy Group headed by the former Dean of the School of Technology and Design of the City University of New York (CUNY), and includes a representative from each member institution. The Strategy Group also has two Vice Chairs, who serve a two-year term and are elected by the members. Member institutions also pay an annual fee for participating in the network in order to fund a secretariat that deals with the network's operational and communication issues and other Strategy Group related activities.

ESALQ celebrates 120 years of history

On a June 3rd virtual ceremony, the Luiz de Queiroz College of Agriculture (ESALQ) celebrated 120 years of history. One of Brazil's oldest higher education institutes, as well as one of USP's founding institutions, it plays a fundamental role as Brazil's international reference in agricultural sciences. You can learn more about ESALQ here.

On June 3, the Escola Superior de Agricultura Luiz de Queiroz (ESALQ), also known as the Luiz de Queiroz College of Agriculture, celebrated 120 years of history. One of University of São Paulo (USP) oldest campuses, it held a virtual 120th anniversary celebration attended by USP's former President Vahan Agopyan and USP's former Vice-President Antonio Carlos Hernandez. The program of the event included tributes, inaugurations, homages and the publication of two books related to research on campus. The celebration can be found in Portuguese at [ESALQ YouTube account](#) or through this [link](#).

Located in Piracicaba, a city in the countryside of São Paulo State 150 km (around 100 miles) northwest of the city of São Paulo, ESALQ was founded in 1901. Back then, a farmer and businessman named Luiz Vicente de Souza Queiroz donated his farm to the São Paulo State Government, hoping to create a school of agriculture. The land, called Fazenda São João da Montanha, became the well-known Escola Agrícola Prática de Piracicaba, later named ESALQ.

The school was integrated into the University of São Paulo in 1934 as one of its founding institutions. The Piracicaba Campus covers 9,200 acres of land, which is equivalent to about 48% of all USP campuses. Its structure includes facilities such as a restaurant, a computer lab, medical and dental services, libraries, and a sports center. The Center for Nuclear Energy in Agriculture (CENA) is also a part of the Piracicaba Campus, as are four experimental stations scattered around São Paulo state.

Ever since its foundation, ESALQ has been at the forefront of agricultural sciences and academic production in Brazil. In 1964, it became the first USP Institute to offer graduate courses, which have welcomed more than nine thousand students. Nowadays, ESALQ offers fifteen graduate programs, one of which is international.

Today, the campus also offers seven undergraduate courses and has awarded degrees to over fifteen thousand students. Equipped with 130 laboratories and 12 departments, ESALQ hosts



studies ranging from agricultural productivity to environmental, biological and societal impacts of agricultural production.

ESALQ's participation in the international scene can be recognized through its agreements with foreign institutions, student and faculty exchange programs, and the double degree programs in Agriculture and Food Science with French institutions.

The campus also impresses for its beauty, so much so that in December 2006 part of it was classified as public heritage of the State of São Paulo by the State council for historical, archeological, artistic and touristic preservation (Condephaat).

The architecture of the main campus building is especially remarkable. Designed in 1895 by José Van Humbeeck, a São Paulo State civil servant, the building has undergone many adaptations throughout its history, only recently becoming a preservation site under the care of São Paulo State.

ESALQ also has an extensive and impressive green area and its park is based upon an English model of landscaping. It was idealised by Belgian architect and ESALQ professor Arsène Puttmans at the start of the 20th century. It induces the observer to believe in the illusion that the park is a dense woodland, an aspect maintained for more than a hundred years.

You can learn more about ESALQ in the institutional video [here](#).

USP's Engineering School celebrates the 20-year anniversary of its double degree program



University of São Paulo's Escola Politécnica (Engineering School), also known as Poli, established its first partnership with an international institution for a double degree program in December 2000. On July 1st, a prestigious virtual event celebrated the 20th anniversary of the program, which has grown to encompass seven different countries. You can learn more about Poli [here](#).

Poli's Dean, Liedi Legi Bariani Bernucci, inaugurated the event stating "It's a great honor to celebrate the 20 years of double degree internationalization for Poli's students. Unfortunately, due to the Covid-19 pandemic, this ceremony had to be held virtually. We hope that soon it will be possible to be together with our academic partners and that students can once again travel abroad, study in other countries, experience and learn other cultures".

USP's former President Vahan Agopyan's speech emphasized the importance of double degree programs for Poli's Brazilian students, not only for those that took part in the program, but for the entire school. "Having classmates that already had the experience of living in other countries shows just how much engineering is a globalized activity. If we want to prepare our students for international endeavors, they must have this kind of opportunity", declared Agopyan, who was also Poli's vice dean back when the program's first agreement was signed.

A student selected by the program may attend a partner university for terms ranging between 18 months and 3 years. Once the program is completed, the student returns to USP to finish his original undergraduate course and receives a degree from both institutions. The one conferred by the partner university makes it possible to work in the corresponding country in which the program took place, without requiring further validation.

"Internationalization is a fundamental factor in developing any higher education institution. It is a tool to improve the quality of education, research, cultural and community services. And mobility goes beyond scientific and academic experience, as it allows students to experience new cultures, expand personal horizons, learn how to deal with diversity, be more tolerant and respect differences; in summary, to become a better citizen", reflected USP former Provost for International Cooperation, Prof. Valmor Tricoli.

About USP

Currently, the partnership includes institutions located in Belgium, France, Germany, Italy, Peru, Portugal and Spain.

The event had the participation of Deans from both USP and other international institutions, representatives from companies and engineers that have participated in the initiative.

This text was originally written by Erika Yamamoto and published in Portuguese at the [Jornal da USP](#) news agency. It was translated to English by Aucani's journalism intern Filipe Narciso.

You can check the commemoration event in English for the 20 year anniversary of Poli's double degree internationalization below

[20 anos de Duplo Diploma na Poli-USP / 20 years of Double Degree at Poli-USP – YouTube](#)

Poli has also created a commemorative website for its internationalization 20 year anniversary with testimonials and a soundtrack made by Poli's Acappella group, Acappolli, which you can access through the link: [20 ANOS DUPLO DIPLOMA POLI USP – 2000 | 2020 – ESCOLA POLITÉCNICA](#)

Poli's communication team also provided a coverage of the event in Portuguese, including the schedule of the panel's participants and mediators, which can be accessed through the link: [Alunos, professores, equipe e parceiros da Poli-USP celebram conquistas de 20 anos de internacionalização – ESCOLA POLITÉCNICA](#)

Animal Welfare – a personal account of its evolution in Brazil

Brazil is on its way to becoming a world leader in the welfare of farm animals.

Brazil is on its way to becoming a world leader in the welfare of farm animals. It is making swift advances in the understanding of pet-related issues and it is making inroads into wildlife protection. It is a cause dear to Brazil and to the Brazilian people. Indeed, Brazil may well be the only country that enshrines the prohibition of cruelty to animals in its constitution. Recent research shows that Brazilian consumers favour systems that value animal welfare and sustainability.

In my professional career, I have had the opportunity to witness the advancement of animal welfare in several countries and universities, and I am really proud to be participating in the evolution of Brazilian livestock farming towards a One Welfare approach.

It was during my doctorate at Cambridge University, and under the guidance of Professor Donald Broom, that I presented, at the World Congress of Veterinary Medicine in Rio de Janeiro in 1991, the results (unpublished at the time) of research on changes in endogenous opioids in the brain of sows housed in crates, showing that such changes are associated with repetitive behaviour; that system would be banned in the UK in 1999 and in Europe in 2013. That event opened to me the doors of the Veterinary School of Munich, at Ludwig Maximilians Universität, from which I organised the first Latin American event on animal

welfare, in 1994, in Porto Alegre, Brazil. On that occasion, we addressed issues such as animal transport and slaughter.

In 1996, I joined Michigan State University, where I spent ten years. There I created a programme on animal welfare that would come to be regarded as one of the most influential in the world. Then, in 2006, as I joined the Norwegian School of Veterinary Science, now Norwegian University of Life Science, I was contacted by the Brazilian Ministry of Agriculture, Livestock and Supply (MAPA), who asked me to develop theoretical and practical training on the humane slaughter of animals for their official veterinarians working in the inspection of products of animal origin. The training, in collaboration with the Universidade de Passo Fundo, Brazil, was attended by Temple Grandin. An American scientist renowned for her work in animal welfare, Grandin left Brazil with a positive impression of the poultry slaughterhouses that she visited in our country. That training programme would become a milestone in MAPA's actions in that field. From Norway, I was able to continue helping in the development of animal welfare in Brazil, by receiving students and researchers, and in close contact with Brazilian institutions.

As a full professor and chair in animal health and welfare at Scotland's Rural College in

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Edinburgh, I coordinated the second largest ever project on animal welfare in the world. Funded by the European Union to the order of six million euros, the AWIN project included some events in Brazil. The first one was in Belo Horizonte, where we proposed to undertake the creation of a global school for animal welfare, which became the Animal Welfare Science Hub, a global portal for communication in the area of animal welfare.

Every new visit to Brazil gave me the certainty that the compass of animal welfare and sustainability in food production was pointing to our country. The challenges and exceptional opportunities to transform Brazilian livestock farming into a model of animal welfare attracted me to the University of São Paulo (USP). There, starting in 2013, after twenty-six years abroad, I set off to create a unique centre of excellence in animal welfare in Brazil, with a focus on the development of animal welfare indicators, the production of robust and resilient phenotypes, quality of life for producers and consumers, and sustainability as well. Animal welfare became a mandatory subject in our programme at the School of Veterinary Medicine and Animal Science of USP, and we were awarded the World Veterinary Association's prize in the field of animal welfare, in 2018.

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We quickly entered into partnerships with other public institutions and established an animal welfare monitoring programme that would become an international reference point, namely the Platform Unified to Respond to Accidents Involving Animals (PURAA). This programme was recognised with two awards by the São Paulo Military Police, an institution that helped to create the initiative, for its innovation in solving recurring problems related to road accidents involving live cargo and collisions with animals.

This innovative way of using the motorways to better understand issues of animal welfare, animal health, food safety, and even tax evasion, paved the way for the establishment in São Paulo of a network that became a template for Brazil. The interaction between the different inspection agencies went on to allow the transportation of live cargo in São Paulo to be routinely inspected for animal welfare on the motorways. The Military Police, the Military Road Police, the Secretary of Agriculture of the State of São Paulo and the Ministry of Agriculture are partners in the PURAA activities.

Currently, Brazil is stepping up its legal framework for the protection of animal welfare. MAPA's recent Normative Instruction 113/2020 establishes good practices in management and animal welfare in commercial pig farms and puts Brazilian pork production at the forefront in the world, with specific guidelines on training and measures to ensure animal welfare. This Normative Instruction was devised with contributions from the Brazilian Association of Pork Producers, who worked closely with MAPA and brought the different stakeholders and interested parties to the debates when the rules were being drawn up. The livestock industry was always attentive to these issues and found continuous support in MAPA.

Cattle farming has also benefited from initiatives led by the Brazilian Agricultural Research Corporation (Embrapa) in gauging the advantages of the forest-pasture system. The data unequivocally show that cattle farming can coexist in perfect harmony with Brazil's rich biodiversity. The Integrated Crop-Livestock-Forest (ILPF) systems, besides giving greater thermal comfort to animals, have been proven to neutralise greenhouse gas emissions, which enabled the launch of Embrapa's Carbon Neutral Brazilian Beef official seal.

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Biodiversity issues are part of Brazil's everyday life and the country is seeking strategies to project them internationally. For example, they are contemplated in the Mercosur-European Union Agreement and in global initiatives of climate change mitigation. As far as animal welfare is concerned, the Mercosur-European Union Agreement establishes a dialogue and an exchange of information between the parties. At the 88th General Assembly of the World Organization for Animal Health (OIE), as a reflection of its progress, Brazil obtained an increase in the number of states recognised as areas free from foot-and-mouth disease without vaccination. The OIE was very clear on their agenda towards animal welfare and Brazil is attentive to its responsibility in this area.

The fact is that Brazil today, possibly like no other country, is perfectly qualified, in its livestock production, to comply with the five freedoms of the global framework of animal welfare protection.

The first freedom ensures that animals are not hungry or thirsty, and have access to water and sufficient food to keep them healthy and strong. Only extreme weather conditions can jeopardise this freedom in Brazil, where pastures are abundant.

Regarding the second freedom, which ensures that an animal is free from distress and enjoys conditions that are suitable to its species, including in terms of shelter and comfort, it is the case that some challenges still remain. But these are challenges that we can certainly overcome, for example, by providing cattle with access to shade in forest-pasture systems. As for egg-laying poultry and pigs, changes in the housing systems would be required, like virtually everywhere else in the world.

The third freedom ensures that an animal lives a life free from pain and injury, and this includes speedy diagnosis and interventions to relieve pain. In Brazil, although the use of swine immunocastration is high, surgical procedures that still cause pain and discomfort mobilise professionals and producers in the search for solutions. When it comes to disease diagnosis, Brazil has competent veterinarians who have the support of both official and private bodies of recognised excellence to meet the demands for rapid interventions.

Few countries have access to environments such as those available in Brazil for animals to be able to enjoy the fourth freedom, which ensures that a species' natural behaviours are not disturbed. Forest-pasture systems for the rearing of ruminants are being developed very rapidly, as are Voisin Rational Grazing systems. A large proportion of cattle production in Brazil is under the system of free-range pasture. The aforementioned MAPA Normative Instruction 113/2020 provides for the elimination of gestation crates for sows. In this regard, egg-laying poultry is the main concern in Brazil and measures are being explored for possible transitions to systems that will ensure that birds have access to nests, material suitable for pecking at, and other important requirements for the species. As a result of demands from Brazilian civil society, a number of companies have already announced deadlines for their transition in egg production systems.

"Just as importantly, livestock production is fundamental to food security and food safety, with a strong social component in Brazil."

Regarding the fifth freedom, which ensures the absence of fear and stress, livestock farming in Brazil also stands out for their growing interest in training and other outreach activities led by universities and other institutions. Family farmers, breeders of poultry and pigs, are in most cases directly integrated into the chain of production through the meat industry, which constantly promotes training in the fields of animal welfare and health. The chains of beef and dairy cattle have

been making swift progress in their pursuit of low-stress management, in a somewhat less organised fashion than the pig and poultry industries. Animal transportation has specific rules and the country is improving its inspections. Animal slaughter, under federal, state, and municipal inspection, follows specific legislation, and the respect for animals during pre-slaughter handling and stunning is guaranteed by law. MAPA runs training courses throughout Brazil to provide the meat industry with access to the most modern techniques of animal protection in the transportation, pre-slaughter handling, and during slaughter.

Just as importantly, livestock production is fundamental to food security and food safety, with a strong social component in Brazil. The 2016-2017 Agricultural & Farming Census shows that 31% of cattle, 45.5% of poultry, 51.4% of pigs, and 70.2% of goats are produced in family farms, which are also responsible for 64.2% of milk production. These data underscore the social dimension of animal production for sustainable development.

To conclude, a final remark about Brazil's relationship with the international community as a whole. This is a decisive factor in ensuring proper recognition for those stakeholders responsible for good practices in the field of animal welfare, sustainability and quality of life for producers. More diversified and deeper partnerships with other countries, in favour of sustainable animal welfare practices, are also very welcome, insofar as they offer opportunities for positive experiences to be duly recognised and, consequently, publicised. Ever in the spirit of international cooperation, we would all benefit from the establishment of a centre that gathered researchers from all over the world dedicated to animal welfare. The Fernando Costa Campus at USP, in Pirassununga, might be one of the most suitable locations for the creation of a unique centre of excellence in health, sustainability and welfare.

Based on my personal experience, I firmly believe that, because of its rich history regarding these issues and given its openness to the world, Brazil stands out increasingly among the leading players in the promotion of animal welfare and sustainable development under the umbrella of ONE WELFARE, ONE PLANET.

Paulo Freire through the eyes of Nita Freire: a 100-year struggle for equality and literacy

To commemorate the centenary of Paulo Freire's birth, one of the paramount philosophers and educators of the 20th Century, we talked with Freire's widow, Ana Maria Freire, about his life, values and immense impact on the world today. Ranging from the passion he had for his work and the adversities he faced during his lifetime to the legacy he established in contemporary education, Ana Maria Freire, commonly addressed by her nickname Nita, revealed a personality filled with an innate drive to promote equality and to fight for every person's right to a voice of their own. Read more about Freire and our interview here.

Born in the Northeast Region of Brazil, in a city called Recife, on September 19th 1921, Paulo Freire was one of Brazil's most remarkable educators and philosophers. Dedicated to a life of pursuing methods of inclusive and democratically driven education and literacy, Freire is reputed to be a highly influential name in the history of social sciences and is extremely relevant to the critical pedagogy movement. In Brazil, he is recognized as education's patron saint.

In 2021, the world celebrates a hundred years of Freire's history. He passed away in 1997, at 75, leaving behind a life work that is as relevant today as ever. His most famous book, *Pedagogy of the Oppressed*, was released in 1968 and translated into English for the first time in 1970. Since then, it has sold more than 750,000 copies worldwide and is the third most cited book in social sciences.

His second wife and legal successor Nita Freire has also dedicated her life to education: she has a PhD and a master's degree on the subject — and Freire himself was her mentor on the latter. In an interview in Portuguese, Nita expresses her tenderness and admiration for the educator in each and every answer.

A look into Freire's history against social inequality

Paulo Freire's vast intellectual production is deeply rooted in his observations as a member of the Brazilian lower middle class. From a very young age, everywhere Freire witnessed the harassment and marginalization of illiterate people and questioned what could be done to change those circumstances.

He enrolled in the Law School of Recife in 1944, this being his only course option for pursuing a career in the humanities at the time. "Paulo asked himself why the Northeast Region had so many illiterate people" — explains Nita Freire, gently



addressing him by his first name during the entire interview — "he decided to dedicate himself to education because people were marginalized from society if they didn't know how to write or read".

Nita Freire was an important figure from early on in Freire's life: Nita's father was a principal who offered Freire a high school scholarship, consequently providing him with a chance to devote himself to his education. Back then, Freire's family was going through the hardship of a declining social status and the recent passing of his father. Freire then noticed how hunger disrupted a person's ability to learn as he witnessed the inequalities that affected his nation: in the 30's and 40's, about half of the Brazilian population were illiterate and consequently disenfranchised.

After working as a teacher for a couple of years and getting married to his first wife, Elza Maia Costa de Oliveira, with whom he would have five children, Freire was appointed director of his homestate Pernambuco's Department of Education and Culture in 1946. In 1961, Freire was then appointed director of the Department of Cultural Extension at Recife University, which a year later led him to implement

a project that helped 300 sugarcane harvesters learn how to read and write in just 45 days. The program was a success and demonstrated Freire's abilities to guide Brazil into a more lettered and inclusive future.

However, two years later, a military coup would overthrow Brazilian president João Goulart and interrupt the educator's plan, sending him to exile for several years. Nita reinforces that, in those trying times, Freire depended on receiving a safe-conduct from countries that would welcome him, because he wasn't even able to obtain a passport. "He [Freire] had a mass literacy plan for Brazil back when Goulart was president. Then, the military and foreign businessmen decided it was a bad idea for Brazilians to be able to read and write" reveals Nita Freire, "but, when a person has a desire, political will, intellectual capability, and they love their people, they don't give up only because they've been told to do so."

During his exile, travelling back and forth to countries in America, Africa and Europe, Freire wrote *Pedagogy of the Oppressed* and experienced far greater international influence of his work. "He kept resisting and resisting, even out there Paulo didn't give up on his purpose", emphasizes Nita Freire, "he spent more than 15 years travelling from one place to another without being able to return to his homeland"

In 1979, Freire was finally allowed to visit Brazil, and moved back in the subsequent year. He then joined the Workers' Party (PT) and became the supervisor of their adult literacy project from 1980 to 1986. In 1988, Freire and Nita got married and, in the same year, when the candidate for the Workers' Party in the São Paulo mayoral election, Luiza Erundina, was elected, he was appointed as the city's Secretary of Education.

Nine years later, Paulo Freire would pass away as a result of a heart failure. Today, the world celebrates the educator's posthumous hundredth birthday. Nita, who is now 88 years old, has published many works of the pedagogue, including a biography. "It has been 24 years since Paulo died and the things he said and wrote are still being debated, used, and transformed into acts of grandness for our people", she points out.

Paulo Freire: a guiding light towards an inclusive future

This year, for the first time since the foundation of the University of São Paulo (USP) in 1934, the amount of public school students enrolling at USP has surpassed the number of students that come from private institutions. This change is due to a

series of inclusive policies adopted by the university, especially the social quotas implemented for its qualification process.

When given this information, Nita reinforced the institution's responsibility to promote democratic principles and recalled how the word "university" already points out that it should be universal: a place for everyone where everything is studied. "It is essential to promote a better understanding of what a public university really is"

Despite improvements in recent years, Brazil still has a long way to go when it comes to quality education. According to data gathered by the Organisation for Economic Co-operation and Development (OECD), Brazil comes in the lowest positions at most criteria related to education. Specifically regarding higher education, around 21% of the country's young adults have a degree, while the average rate of OECD members is 44%.

Nita points out that education plays a major role in enabling individuals to have autonomy and, consequently, promote a democratic, inclusive society. "Paulo's greatest desire was that people were inserted into society, leaving this 'voiceless state'. As he used to say, 'illiterate people are silenced, they cannot speak'". Today, the percentage of illiterate people in Brazil is around 5% of the population. Freire's work emphasized the importance of quality basic education for everyone, basing itself upon the concept of social justice. "What social justice asks, and let's say even imposes, is that we all become acting subjects of history", clarifies Nita Freire.

The educator's widow admits being impressed by the substantial recognition that Freire receives up to this day. "Have you seen someone turn a hundred years old and receive so many celebrations and tributes? I haven't". However, Freire still isn't liberated from conservative and reactionary groups who attempt to minimize his impact. "There are, let's say, ulterior motives, depriving Paulo of his stature. Not only his stature, but the things that he was able to do and he is still able to do while deceased". She then pointed out a recent setback on the country's social progress, exemplifying with the attacks against native people and the wildfires in the Amazon Rainforest and other Brazilian biomes.

Yet, Nita Freire still keeps an optimistic attitude when it comes to education: "I believe that the tendency is that, within a few years, education and its policies — in cities, neighborhoods, states and the nation as a whole — will be aligned with freirean principles, because we need social justice, we need a society where everyone is able to learn what they want to learn"

Get to know the USP International Intercultural Center



USP announces the inauguration of the academic reception office for foreign and domestic institutions and a public space for intercultural exchange: the USP International Intercultural Center. It will be open to undergraduate and graduate students, researchers and professors participating in courses, lectures, and in a variety of international academic activities. The purpose of the designated location is to enhance communication among exchange students, to give greater visibility to the results of various internationalization programs and to enable new actions regarding academic exchange and teaching and research methodologies. Learn more about USP's International Intercultural Center [here](#).

The University of São Paulo (USP) is opening a new facility for exchange: the USP International Intercultural Center (CII-USP). The new area provides opportunities for intercultural exchange and an academic reception office for foreign and national institutions and peers. Located at the Centro de Difusão Internacional, translated as the International Diffusion Center, the new center can be found on the university main campus, the University City Campus Armando de Salles Oliveira.

Opening in November 2021, the center will promote productive interchange between the university community and its international partners through a series of mutually planned activities. The CII-USP is conceived as a hub of attraction for educational and academic affinities, whether national or international.

The site will be open to undergraduate and graduate students, researchers, and professors, regardless of nationality. These members of the USP community will participate in courses, lectures and a variety of international academic events.

The center aims to be an interactive intercultural locus open to dynamics related to international ventures and education technologies. It is devised to be a location for reading, cultural activities, and disclosure of opportunities offered by partner universities, consulates and university-companies relations. The facility's design was inspired by the Visitor Centers at the Harvard, Stanford and Davis Universities.

The intercultural exchange center comprises a large room intended for a series of events, such as meetings of the [USP iFriends](#) program and workshops directed to exchange students. It is also planned



to host exhibitions, interactive cultural events, and informational workshops about exchange programs with USP's many partner institutions in Brazil and abroad. Additionally, the International Intercultural Center is open for casual interactions, such as spontaneous encounters for sharing experiences acquired at USP or foreign universities and independent creative workshops supervised by Aucani and proposed by exchange students. These workshops are thought to help participants develop oral communication skills in foreign languages and Brazilian Portuguese.

The International Intercultural Center houses an office for welcoming foreign students and delegations that visit USP annually. The office also offers information about exchange programs procedures and support in obtaining the necessary documents from the Brazilian Federal Police. It is conceived to ease the path of visitors by providing them with room where they are able engage in academic and social activities, such as delivering presentations about their universities, besides offering them support with formalities at their arrival and during their stay.

USP's new International Intercultural Center aims at boosting new forms of action through gathering students and professors with a shared interest in academic exchange and methodologies of education and research. It is envisaged as a resource to raise the potential of extended communication between exchange students, either "incoming" or "outgoing", for having a shared space for encounters, and also give more visibility to the results of numerous internationalization programs.

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