

Activity Report

2020

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MESSAGE FROM THE BOARD







Jose Otavio Costa Auler Jr., PhD, Deputy Director General of FFM

On September 18, 1986, on the initiative of the Alumni Association (AAA), with the approval of the Congregation of the Faculty of Medicine of the University of São Paulo (FMUSP), the Fundação Faculdade de Medicina (FFM) was created. It is therefore 34 years of activities as a Support Foundation to FMUSP and its Hospital das Clínicas (HCFMUSP).

Over the years, the Board of FFM has faced all the hassles that the country has been going through with seriousness and competence, keeping FFM solid and stable. In recent years, in which the health sector has experienced so much difficulty, FFM's performance has been critical to assist the hospitals under its management.

The year 2020 was marked worldwide by the new acute respiratory syndrome, whose first reports came from China, in December 2019. The virus, named coronavirus, showed its high lethality, demanding treatment in intensive care units and assistance ventilation through orotracheal intubation for the most severe cases. Early on, it was noted that the world did not have enough ICU beds and respirators or specialized teams for this great demand for intensive care.

FFM has always been on the side of HCFMUSP in the various actions to combat the coronavirus pandemic. The transformation process of HCFMUSP started in January, when the Crisis Committee was activated. With the growing number of people infected by the disease in the State, HCFMUSP completely restructured its service policy, allocating the ICHC exclusively to fight the disease. As a consequence, all patients admitted to the ICHC for other types of care were distributed among the seven Institutes of the Complex and at the University Hospital.

FFM, in turn, provided for the immediate transfer of the facilities of its Supplementary Health and Billing and Control Departments, previously located on the HCFMUSP premises.

With 76 years of history, the HC has passed the pandemic test with top marks, as well as it continues to be a benchmark for the relief of other diseases and traumas. In the case of infected patients, 80% of them were intubated and about 30% required dialysis, which indicated the severity of the virus. There were 7 thousand professionals dedicated only to the Covid-19 treatment.

For the entire operation to be carried out successfully, the management of supplies and resources, which has the active participation of FFM, has been indispensable. In order to raise funds for the purchase of hospital supplies, the #VemPraGuerra campaign, which ended on April 17, was created. At the same time, the #HCCOMVIDA campaign was launched, aimed at raising funds for health promotion. All of these donations, which are audited by an independent auditor, are received and administered by FFM.

Even with the implementation of a home office rotation system, aiming at increasing the safety of its direct employees, HCFMUSP can always count on the active and tireless participation of FFM in all its needs. In addition to joint action with HCFMUSP on the front lines, through human resources, FFM participated in decision-making; in the legal support to the Agreements that were signed with public agencies and private institutions; enabling immediate hiring of the external workforce to provide the ICHC with healthcare professionals; in the acquisition of equipment and supplies to fight the pandemic; and other initiatives that were deemed necessary.

In the following pages, we will try to further detail the trajectory adopted by FFM in 2020, always focusing primarily on the maintenance and improvement of the care to SUS patients, the social health programs, the quality of life of the population and the thorough compliance with its statutory purposes.

PRESENTATION

FFM has always supported the HCFMUSP in the various actions to fight the coronavirus pandemic.

Get an overview of the social reach that FFM, in a joint initiative with HCFMUSP and FMUSP, obtained in 2020 by analyzing the chart **"FFM in Numbers"** (page 6).

A brief history of FFM (page 8), organizational structure (page 9), strategies adopted (page 12), main partners (page 14), main certifications (page 15), its consolidated results (page 17), the Financial Balance overview (page 20), are also presented in this Report.

In the FMUSP-HC System (page 22) we underscore, in 2020, the actions led by FMUSP and HCFMUSP on the front lines to face the Covid-19 pandemic.

In order to fulfill their statutory objectives, FFM develops, along with HCFMUSP and other partners, a series of **integral health care actions** (page 30), always prioritizing SUS patient care. Ensuring the performance of **special procedures** such as transplants, implants and other high specialty procedures (page 32), is another among its priorities.

The performance obtained in 2020 by the HCFMUSP Complex (page 35) and by other Health Units (page 44), despite being hampered by the pandemic, was assured by FFM, through the allocation of human and financial resources.

Due to its Social Organization status, it was possible for FFM to manage the ICESP Management Contract (page 47), which is specialized in highly complex care and equipped to provide comprehensive care to cancer patients in the public health network (SUS).

FFM also continued to manage the **IRLM** Management Contract (page 50), which grants SUS quality levels similar to the best care centers for the disabled in the world.

Recognized and certified as a philanthropic entity, FFM develops, in a joint action with HCFMUSP and other partners, several **social work projects** (page 53), both inside and out of FMUSP-HC installations, focused on the more unattended sector of the population, with no prejudice to SUS services.

The development of **Covid-19 Response** (page 57), and **Research Projects** (page 63), in conjunction with HCFMUSP and other partners, were FFM's high priority actions in 2020.

The realization of **Training** projects (page 81), in conjunction with HCFMUSP and other partners, is another of FFM's actions, aiming mainly at training professionals from the public sector.

The development of **Innovation** projects (page 85), together with HCFMUSP and other partners, aiming at the execution of creative ideas in order to to turn them into tools that allow reaching a goal in a more efficient or productive way, is also part of FFM scope.

The development of **Health Policy** projects (page 91), jointly with HCFMUSP and other partners, including the definition of processes and technologies, development of assessment instruments, analysis of results, among others, is also part of FFM's activities.

The development of **Institutional Projects** (page 95) jointly with HCFMUSP and other partners, with aim, especially, to the upgrade, expansion and maintenance of the physical and technological infrastructure of FM/HCFMUSP System installations, is also part of FFM's actions in 2020.

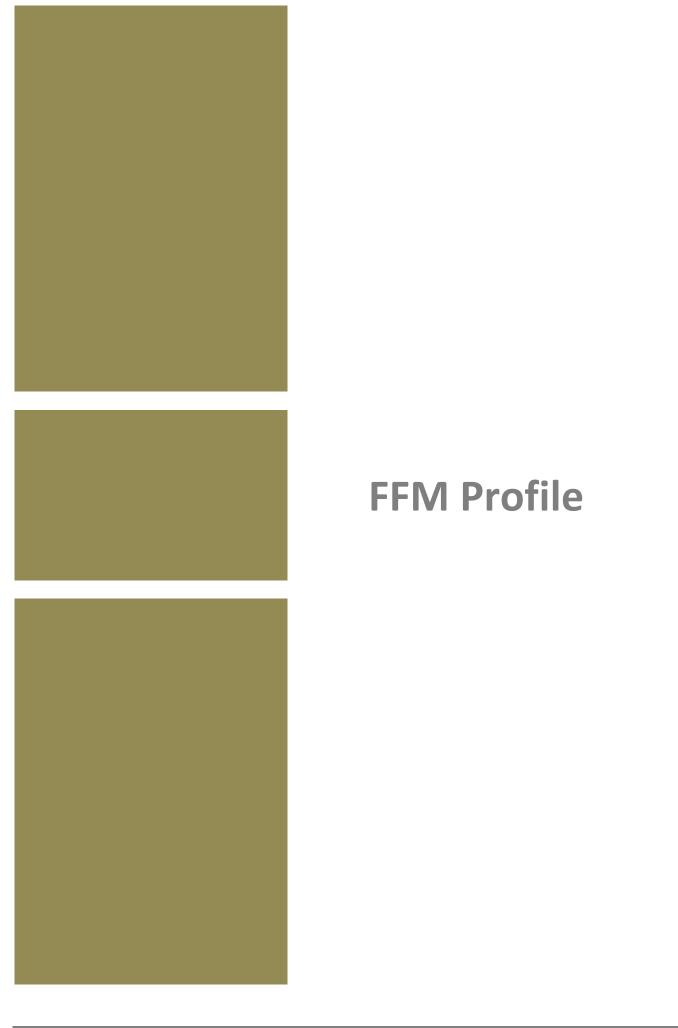
The **abbreviations** used (page 102) and the current membership of **FFM's Administration** (page 104) complete the FFM 2020 Report.

FFM IN NUMBERS

Procedures + Admissions with No Cost for SUS Patients - 2020	Quantity	Page.
Transplants and Implants (SES-SP Agreement)	(*) 619	32
Ambulatory Statement - Authorization for High Complexity Procedures – APAC (SES-SP Agreement)	(*) 122,951	33
Pharmaceutical Assistance - Quantity of Medications from CEAF (SES-SP Agreement)	(*) 44,207,132	34
ICHC + PAMB – Medical Specialties Care (SES-SP Agreement)	6,481,644	36
IPq – Psychiatric Care (SES-SP Agreement)	59,960	36
IOT – Orthopedics and Traumatology Care (SES-SP Agreement)	292,658	37
ICr - Children and Youth Health Care (SES-SP Agreement)	783,637	38
InRad – Radiology Care (SES-SP Agreement)	182,047	39
IMRea – Vila Mariana, Umarizal, Lapa and Clínicas Units (SES-SP Agreement)	164,695	40
HAS – Long-stay patient care – (Under construction) (SES-SP Agreement)	1,724	42
HAC – Intermediary care assistance – (Under construction) (SES-SP Agreement)	0	43
House of Aids (SES-SP Agreement)	33,068	44
ITACI - Children's Cancer Treatment (SES-SP Agreement)	31,882	45
C,S,E, Butantã (SES-SP Agreement)	2,543	45
NGA Várzea do Carmo (SES-SP Agreement)	13,400	45
HU-USP – Number of Surgeries and Ambulatory Care (SES-SP Agreement)	6,605	46
ICESP (Management Contract)	432,083	47
ICESP Osasco (Management Contract)	20,996	47
Lucy Montoro Rehabilitation Institute (Management Contract)	26,260	50
Suzano's Psychological Assistance Program (SES-SP Agreement)	(**) 19,135	54
CEMIM – IOT - Number of Surgeries and Ambulatory Care (SES-SP Agreement)	6,477	55
CEDMAC - Number of Assistances (SES-SP Agreement)	(***) 12,312	56
Assist. Speech + Surgery Patients with Labiopalatine Clefts (Other Agreements)	830	54
Student's Financial Support Program - AFINAL	99	55
TOTAL	8,572,055	

^(*) Information-only quantity not considered in the Total of Assistances carried out (**) From January to September/2020 (***) Approximate average quantity

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FFM PROFILE

Brief History

Since its creation, on September 18, 1986, FFM's activities have been backing the development and support for teaching, research and comprehensive health care.

The Faculdade de Medicina Foundation was created in 1986 by FMUSP alumni in order to contribute to the activities of the FM/HCFMUSP System. From the beginning, FFM's statutory objectives aim at supporting teaching, research and health care at FMUSP and Hospital das Clínicas (HCFMUSP), in addition to preserving the heritage of FMUSP's Academic Center Oswaldo Cruz (CAOC).



Façade of FFM headquarters at Av. Rebouças

The Foundation's activities are associated with the decisions of the FFM Board of Trustees and Advisory Board; the HCFMUSP Deliberative Board and Planning and Control Commission; and the FMUSP Congregation and Technical Administrative Board. In addition, FFM is subject to strict controls by the Curatorship of Foundations of the Public Ministry of São Paulo, the State and Municipal Court of Auditors and an independent external audit.

For the effective joint action of HCFMUSP and FFM in developing integral health care, a University Agreement was signed in 1988 between FFM, HCFMUSP and SES-SP, the Comprehensive Health Care Agreement for SUS Patients (former University Agreement), whose objective is to provide a comprehensive health care for SUS patients, in addition to other health actions in the Hospital Complex. This agreement was renewed for another five years at the end of 2018.

FFM develops, supports, manages and maintains hundreds of Comprehensive Health Care, Assistance, Institutional, Research, Clinical Studies and Health Policy Projects, through national and international agreements, by hiring researchers and

professionals allocated directly in research, in addition to the acquisition of materials and equipment.

Over the years, the FFM Board has faced, with seriousness and competence, all the difficulties that the country has been going through, keeping FFM solid and stable.

FMUSP's Renovation and Modernization Project, developed between the years 2000 and 2008, had the fundamental support of FFM, which shared with FMUSP the coordination of the Project and the raising of funds. The Project promoted not only a physical renovation, but a profound human and cultural change in the entire community of the FM/HCFMUSP System.

In 2008, FFM became a Social Organization and expanded its participation in the management of health care projects, such as the Western Region Project. As a result, control systems and processes were modernized, without the need for significant expansion of the direct management team.

In 2008 and 2010, FFM signed Management Contracts for the management of ICESP and IRLM health activities and services, respectively.

In 2006, 112 assistance programs and projects and 120 clinical studies were developed in the FM/HCFMUSP System. In December/2020, these numbers increased to 223 and 509, respectively.

In terms of team, in 2003 there were 10,203 employees managed by FFM's Human Resources Management, among those allocated in direct administration, at Hospital das Clínicas and in specific projects. Today, there are 12,095 (December/2020) employees in all.

In 2020, as soon as the first news of the advance of the Covid-19 pandemic was released, the HCFMUSP teams began to mobilize, always with the FFM support in the various response actions to ensure the functioning and care of patients already hospitalized and new patients, as well as the safety of its more than 350 direct employees and more than 11,700 professionals allocated to care and research projects.

Organizational Structure

In 2020, each Management implemented preventive measures to protect Employees from the pandemic, regardless of FFM activities

FFM has – as its maximum control body – the **Board of Trustees** (made up of ten members) and the **Advisory Board** (made up of 30 invited members from the FM/HCFMUSP System and civil society), both chaired by the Director of FMUSP.

The synergistic relationship with the Board of FMUSP and its Congregation and with the Deliberative Board, Planning and Control Commission, Clinical Board and Superintendence of HCFMUSP, enhances and leverages the joint actions they practice even more.

The 357 (December/2020) direct administration professionals of FFM are distributed and organized into teams of the nine Specialized Managements that compose it, in addition to their Board and Financial Superintendency. They are: 1) Legal Consulting; 2) Controllership; 3) Invoicing and Control; 4) Financial; 5) Information Technology; 6) Materials and Importation; 7) Projects and Research; 8) Human Resources; and 9) Complementary Health.

Each Management has a leadership with technical and managerial expertise, who coordinates their team with rationality, determination and responsibility. The overall coordination rests with the Executive Board, supported by the Financial Superintendence.

In 2020, the preventive measures established to protect the employees from the Covid-19 Pandemic were implemented, regardless of FFM activities, such as: adoption of a hybrid work model - On-site and Home Office, especially for employees with special needs., such as pregnancy, comorbidity and over 60 years of age; implementation of rotation/scale in face-to-face work; virtual meetings; use of VPN channel for remote access of employees in home office to computers at FFM; formation of working groups on WhatsApp; and installation of SIGA-ME on FFM telephones for employees in Home Office.

The assignments of each of the nine Managements are shown below.

1) The LEGAL ADVICE Department promotes the defense of FFM's interests in administrative, legal or out-of-court suits; it sponsors and administrates the litigation of suits in the tax, labor and civil areas, in the legal and administrative spheres; in addition to complying with all legal

obligations, the maintenance of the certificates and titles granted, the execution of the tax planning, etc.

In 2020, the funds received through donations, transfers, agreements or funding were the subject of contracts signed with public agencies and private institutions, and prepared by the Legal Consulting, which also offered support for emergency contracts to provide ICHC with health professionals. To reduce the paperwork and the need for face-to-face signatures, the area has implemented a recognized security digital signature system.

2) The **CONTROLLERSHIP** Department is responsible for the accounting, bookkeeping, accountability and property control of the Institution, among other functions.

In 2020, it also acted strongly in the various covenants, programs and projects designed to combat Covid-19. These demands required specific financial controls and records, preparation of accountability, answering questions, audits and inspections, among several other tasks.

3) The INVOICING AND CONTROL Department is responsible for invoicing the medical care services for patients of the SUS and Complementary systems, as well as for the operations of billing, control and distribution of the values related to the services provided in the several units of the FM/HCFMUSP System, via management actions implemented to seek improvement enhancement of the billing, registry, control and invoicing techniques. The Medical Auditing area of the Invoicing and Control Department of FFM is dedicated to analyzing medical records to assess if the procedure executed x invoiced from the patient's account finds itself invoiced in accordance with the SUS norms in effect. It also works as a authorizer and promotes the guidance process to the CGs, with aim to improve the invoicing quality.

In 2020, the Invoicing and Control Department was transferred to CCR. Due to the high volume of physical documents involving billing flows/activities, it was not possible to adopt the home office regime.

4) The FINANCIAL Department seeks to maintain the best results in the financial management of the Cash and the constant

improvement of the receipt and payment services required by the FM/HCFMUSP System and other partners, by means of the latest, safest and most agile tools for financial performance available on the market.

In 2020, it also received and managed the resources of campaigns to raise funds for the purchase of hospital supplies, including the #VemPraGuerra campaign, which ended on April 17, and the #HCCOMVIDA campaign, aimed at raising funds for the promotion of health. All of these donations are audited by an independent auditor.

The **INFORMATION TECHNOLOGY** 5) Department is responsible for identifying and developing specialized systems; integrating and monitoring third party systems, ensuring alignment of the requests with the institutional objectives; implementing and upgrading the technical infrastructure required to ensure information security and meet the demands for quality development in the administrative and operational processes, within the scope of FFM and interfaces with the partners HCFMUSP, FMUSP, ICESP and IRLM. They define the strategic Planning of Information Technology (IT) and monitor, via the Annual Work Plan and the Investment Plan, the projects that shall provide the corporate requirements of technological upgrade of information and communications. They keep a close relationship with the IT and communications areas of HCFMUSP with the purpose of sharing knowledge, maximizing results and reducing costs.

In 2020, its performance was critical in the process of adapting to the Covid-19 Pandemic, starting several work fronts aimed at identifying the IT tools incorporated and available for use.

Due to all the organizational difficulties in keeping the work in progress and still facing the greater demand imposed by the pandemic, the area called on service partners, purchased equipment and counted on the involvement of all its technical staff.

Whenever possible and feasible, remote connection tools were adopted with other collaborators – they allowed working remotely from anywhere with an Internet connection and computer/notebook, always valuing the security and quality of access.

Videoconferencing tools available on our collaboration platform and even from free third-party suppliers were also used to hold meetings.

6) The Department of MATERIALS (national and Importation markets) executes the acquisitions of materials, inputs, devices and equipment; service

contracting, works and renovations; payment of international services, complying with the proper taxes and legislation in regards to providing information to the controlling bodies; and everything else that may benefit the FM/HCFMUSP System and other Health Units.

In 2020, it combined work in national and foreign procurement of supplies for the operation of general care with the acquisition of inputs and equipment for the treatment of Covid-19 patients.

In national purchases, from the beginning of the pandemic until December 31, 2020, 435 orders were fulfilled, totaling more than BRL 125 million for the acquisition of PPE, equipment and supplies for the care of Covid-19 patients. Despite all the adversity, it was possible to save more than BRL 5.8 million in the selection of suppliers and quality control. A specific team totally dedicated to meet these demands was assigned.

As for imports, more than 4 million masks were imported from China, requiring attention and speed to finish the procedures for seven shipments through air transport. In order for everything to be realized in the urgency and efficiency that the situation demanded, the collaboration of the HCFMUSP Complex teams in meeting the technical and administrative demands was extremely important. A four-handed job, with everyone involved focused on the objective of maintaining excellent service to HCFMUSP patients and users.

7) The PROJECTS AND RESEARCH Department, responsible for the administrative management of all processes involving the receipt of external resources and the request for the purchase of inputs, equipment and other materials, carries out the viability studies, implementation and follow-up of the contracts/agreements signed with public and private, national and international bodies, related to the activities proposed by their partners, in particular the FMUSP-HC System.

FFM participates in relevant projects, mainly focused on the prevention and treatment of diseases that affect the health of the Brazilian population. In December 2020, **223 projects** were active in FFM, subsidized by public and private resources, both national and international, and **509 clinical studies**, sponsored by the pharmaceutical industry.

In 2020, the Communication area of the Project and Research Management kept the FFM **Intranet** constantly updated, which offers users ease and agility in the search for information and documents, access to integrated systems and several other resources. On the FFM **website**, the Transparency Portal has been updated. In 2020, due to the restrictions imposed by the Covid-19

pandemic, only the January/February and May/June editions of the **Jornal da FFM** were published. In view of these difficulties, it was decided to create a virtual journal in the future. Thus, from 2021, the **Jornal da FFM**, a bimonthly publication distributed to the entire HCFMUSP Complex, journalists, authorities, companies, public and private institutions, will be monthly and digital.

8) The **HUMAN RESOURCES** Department administrated, in 2020, 12,095 (December/2020) employees, among the personnel from the FFM direct administration, FFM personnel at the service of the FM/HCFMUSP System, part-time workers and personnel allocated in specific population care projects. Of that total, 357 (December/2020) collaborators are allocated in direct administration. focused on the support to hundreds of the entity's social programs, as well as health care activities, integral health care development and service to SUS patients, developed by the remaining professionals. The latter are hired in a part-time or full-time shift, hence seeking to stimulate the production of works in the didactic, health care and research areas, by means of material support and remuneration. The department also carried on Personnel Training and Training Program (2.365 hours/class), recruitment and selection activities for the entire FM/HCFMUSP System (2,685 vacancies), administration and payment of social benefits (BRL 49 million) and salaries, involving payroll expenses of approximately BRL 839 million, in addition to coordinating the hiring process, dismissals, licenses, vacations, positions and salaries, food stamps, meal vouchers, transportation vouchers, among others.

In 2020, the Human Resources Management continued to operate at the HCFMUSP facilities and led the operation to hire and manage the new

employees, who came to add to those at home, for the treatment of patients with Covid-19. 2,654 professionals were hired for the medical, nursing, physiotherapy and other support services for patients in wards and ICUs.

COMPLEMENTARY HEALTH The Department is committed to achieving business deals and strenghtening relationships with health contractors/operators, as well as the latent challenge of seeking alternatives to offer this model of healthcare provision together with the upper echelons of HCFMUSP and its Institutes. We highlight the improvement of management, control tools and the continuous action to increment the Complementary Health Segment, via the extension of the contracted services; market negotiations to improve payment values and conditions; and the management of Health Operator portfolios and other private sources.

In 2020, due to the Covid-19 Pandemic, the Supplementary Health Management was transferred to the Cláudia Building. Due to the high volume of physical documents that involve the billing flows/activities, it was not possible to adopt the home office regime.

The activities were hampered mainly by the lack of contact with the employees of the health plan operators, who took time to be relocated or transferred to the home office, which caused delays in the operations of sending billings and in the receipt of the amounts related to the services provided in the Complementary Health segment. The team, however, remained on standby to meet all deadlines and minimize financial losses, thus carrying out with quality and agility the distribution of the amounts received to the various Institutes of the HCFMUSP Complex.

Strategies

Work processes were reorganized to allow as many people as possible to work in home office

Since 1998 it sustains agreements with SES-SP, which include the joint execution of several activities, ranging from the invoicing of the medical-hospital care services and the human resources management of the FMUSP-HC System, to renovations and the acquisition of equipment and inputs, among others. It also supports the FM/HCFMUSP System, its extension courses, events, research projects, clinical studies, among other initiatives.

From their current staff of 12,095 employees (December/2020), only 357 are allocated in direct administration; the remaining professionals work directly in activities of assistance, integral health care development and services to SUS patients.

The structural and technological modernization of FMUSP and its Hospital das Clínicas is also among the main objectives, which has been maintained with constant investments. Improving management and services provided by its employees is also a priority, with a strong contribution allocated to training and courses.

A key point in its institutional strategy is transparency, given the extensive inspection to which it is submitted. FFM's activities are audited by the Curatorship of the Public Prosecutor's Office, by an independent external audit, and by the State Court of Auditors, in addition to accounting for their projects to bodies such as Ministries, State and Municipal Secretariats, and several public and private institutions, both national and foreign. In the relationship with partners, they operate according to regulations agreed upon case by case, always ensuring austerity in management.

FFM is also accountable for their works beyond the Board od Trustees (four meetings/year) and the Advisory Board (two meetings/year). In these cases, accountability takes place via its Status Report. FFM annually presents these two collegiates with their Work Plan for the coming year and the Activity Report of the year past. In the Deliberative Council and in the HCFMUSP Planning and Control Commission, FFM discloses on a monthly basis the Cash Flow book operational accounts. They also publish the bi-monthly edition of the FFM Journal, with varied and updated content associated to the FMUSP-HC System.

In order to adjust to the requirements of the State Court of Auditors, FFM adjusted its Purchase regulations and its personnel selection criteria for

FMUSP and the FM/HCFMUSP System, approaching them to federal law 8666/93 and has been, ever since, conducting tenders and contests, in particular for the selection of the health personnel. They aimed, with such, to ensure greater publicity, competitiveness and savings, with no loss of agility in conducting their processes.

FFM is also guided by values of transparency in relation to financial and administrative information, periodically publishing its reports on the website www.ffm.br.

The growth of the Faculdade de Medicina Foundation in the last ten years has been quite impressive. Its infrastructure was already quite similar in organizational terms, and the increase in the number of employees focused on the management and operational area grew at much smaller proportions than the projects and resources they developed.

Due to the credibility that FFM inspires with the subvention bodies, the volume of values handled by FFM has increased significantly, year after year. In face of the substantial progress of the **operational revenues**, projects, contracts and agreements, FFM has ascertained expressive amounts of revenues from financial applications, fully reinvested in favor of the operation itself and the projects executed by FFM.

The **financial guideline** has maintained the quest for positive working capital, basing their decisions on expenses or investments with the prior requirement that financial resources exist for such.

Let it be also noted that, over 2020, FFM received, via **Donations**, the amount of BRL 24.0 million, which have been invested in the execution of several projects in the assistance, education and research areas, with a highlight to the collection resulting from the campaigns carried out by HCFMUSP to combat the Covid-19 Pandemic, which reached approximately BRL 61 million.

Over its 34 years, they have constantly sought the **improvement** of their service standards while being concurrently dedicated to fulfilling its goals and meeting the needs of their partners.

The continuous **modernization** of its technical infrastructure, the adjustment to the current technological demands and the **training** and specialization of their team of professionals are among its other priorities.

The Board has a special focus on people and is concerned with their professional and personal growth. The Training and Qualification Program of their collaborators improves their technical skill set, rendering them more efficient and effective. Furthermore, the Board seeks to fulfill the legitimate needs of their professionals by means of reassessing positions, functions, classifications and promotions, always seeking to promote merit. This clears a path towards professional development, it generates adhesion, a team spirit and a feeling of belonging to the institution.

The management model also emphasizes a Positive Values Code, which permeate the institution as a whole, represented by integrity, transparency, reliability, good example, commitment, responsibility, flexibility, tolerance, listening skills and patience.

The Board stimulates the Improvement of Processes and Interpersonal Relationships. People have diverse backgrounds, different personalities and varied attitudes and behaviors. FFM understands that the technical competence of people, although absolutely necessary, is not sufficient to complete the profile they desire from collaborators. They thus invest and persist in the improvement of the interpersonal relationships in a way that one may recognize the other, with mutual tolerance, acceptance and bilateral respect. That reduces reactivity, improves the institutional environment and transforms opposition into cooperation.

The 357 (December/2020) professionals of FFM's direct administration are distributed and organized in the teams of nine Specialized Managements that compose it, in addition to their Executive Board and Financial Superintendence. They are: Legal Consulting, Controlling, Billing and Control, Financial, IT, Materials and Import, Projects and Research, Human Resources and Complementary Health.

FFM is also responsible for the management of Clinical Studies, under the supervision of in-house professors, to assess the efficacy, tolerability and safety of drugs and research in humans and animals.

In 2020, 223 assistance, teaching and research programs/projects were active in the institution, in addition to 509 clinical studies, developed in the FM/HCFMUSP System.

In 2008, FFM became recognized as a Social Organization, a private legal entity, non-profit, whose activities are directed to education, scientific research, technological development, protection and preservation of the environment, culture and health, receiving such title from the Public Administration and authorized to enter into Management Contracts with them to perform non-

exclusive services of the State. As a result, control systems and processes were modernized, without the need for significant expansion of the direct management team.

In 2008, FFM signed a Management Contract with SES-SP to handle the activities of ICESP, a tertiary hospital that is highly specialized in cancer treatment, which serves SUS patients for complex treatments, coming from the entire state. With the enactment of Complementary Law No. 1.160/2011, which transformed HCFMUSP into a special regime autarchy, FFM, a social organization selected in a public notice, initiated the Management Contracted directly with HCFMUSP as of 2017.

Since 2010 FFM has maintained the Management Contract with SES-SP to carry out the health activities and services at the IRLM. Inaugurated in September 2009, the Institute was designed to become a center of excellence in treatment, education and research in rehabilitation.

Due to the Covid-19 Pandemic, on 03/18/2020, after a meeting of the FFM Managements, eight preventive measures were defined to protect the Employees and not to harm FFM activities. Submitted to the FFM Directorate, they were enriched and approved, on March 19, and applied and monitored as of March 20: more flexible working hours, aiming to avoid peak hours in public transport; parking permit at Pacaembu Cluster; social distancing rules in the offices and common areas of FFM (with the installation of transparent partitions and the demarcation of the necessary distance, among other measures); immediate permission to work from home for employees with comorbidities, pregnant women and other risk groups.

With the help of the IT area (which made remote connections possible) and HR (with the flexibility of frequency records), work processes were quickly reorganized to allow the greatest possible number of people to work in home office, maintaining shifts in the office only for coordination and assistance that required face-to-face attention. Thus, the routine was maintained without delays in the Legal Consulting, Materials, Projects and Research, Controllership and Finance departments, which allowed everyone to safeguard their health without any prejudice to FFM activities.

Also, in 2020 it developed along with the FM/ HCFMUSP System several partnerships with institutions interested in developing medical sciences, such as:

Federal Public Bodies:

- Brazilian Health Regulatory Agency –ANVISA;
- National Economic and Social Development Bank–BNDES;

- Science and Technology Department / CNPq;
- Science and Technology Department / FINEP;
- Ministry of Health MS;
- Labor Prosecutor's Office MPT;
- Pan American Health Organization PAHO / World Health Organization (through the Ministry of Health);
- Petróleo Brasileiro S/A Petrobrás (mixed capital company).

State Public Bodies:

- Research Support Foundation of the State of São Paulo – FAPESP;
- Secretariat for Economic Development,
 Science, Technology and Innovation SDE;
- State Health Secretariat of São Paulo SES-SP.

National Private Institutions:

- Agência Brasileira de Desenvolvimento Industrial – ABDI:
- Aids Healthcare Foundation do Brasil;
- Associação Beneficente Alzira Denise Hertzog da Silva – ABADHS;
- Associação Brasileira da Infra Estrutura e Indústria de Base – ABDIB;
- Brainfarma Indústria Química e Farmacêutica S/A;
- BRF S/A;
- CISCO Comércio e Serviços de Hardware e Software do Brasil Ltda;
- Crefisa S/A Crédito, Financiamento e Investimentos;
- EMS S/A;
- Fundação Butantan;
- Fundação Itaú para a Educação e Cultura;
- Fundação Itaú Social;
- Fundação Maria Cecília Souto Vidigal;
- Fundação para o Desenvolvimento Científico e Tecnológico em Saúde - FIOTEC;
- GE Healthcare do Brasil;
- Grupo AMBEV;
- Grupo Itaú;
- Laboratórios Ferring Ltda.
- Ouro Fino Saúde Animal Ltda.;
- Sanofi Aventis Farmacêutica Ltda.;
- Siemens Healthcare Diagnósticos Ltda.;
- International Society of Nephrology;
- Vale S/A.

International Institutions:

- Alzheimer's Association;
- Baylor University;
- Inter-American Development Bank IDB;
- Bill and Melinda Gates Foundation;
- Blood Systems Research Institute;

- Case Western Reserve University;
- Climate and Land Use Alliance;
- Conquer Cancer Foundation of ASCO;
- Emory University;
- European Foundation for the Study of Diabetes;
- European Union (by European Commission);
- Family Health International;
- Fondation Mérieux;
- Foundation for Innovative New Diagnostics FIND;
- Global Genomic Medicine Collaborative;
- Grand Challenges Canada;
- Harvard Graduate School of Education;
- Harvard T. H. Chan School of Public Health;
- Hebrew Senior Life;
- Joan & Sanford I. Weill Medical College of Cornell University;
- Johns Hopkins International Injury Research Unit;
- Jonhs Hopkins University;
- Mérieux S.A.;
- NARSAD The Brain and Behavior Research Fund;
- National Institutes of Health NIH;
- Partners Healthcare (founded by Brigham and Women's Hospital and Massachusetts General Hospital);
- President and Fellows of Harvard College;
- United Nations Development Programme PNUD;
- Queen Mary University of London;
- Research Foundation for Mental Hygiene;
- Schizophrenia International Research Society;
- Swiss Tropical and Public Health Institute;
- The George Washington University;
- The Ohio State University;
- The Open Society Policy Center OSPC;
- The Smile Train;
- The Spaulding Rehabilitation Hospital;
- The University of Manchester;
- The University of North Caroline;
- The University of Sheffield;
- University College London;
- University of Birmingham;
- University of Bristol;
- University of California;
- University of Cambridge;
- University of Georgia;
- University of Wisconsin Madison;
- World Health Organization (OMS);
- ViiV Healthcare UK Ltd.;
- Yale University.

In its 34 years of existence, FFM obtained public acknowledgment for their work as a charitable entity of social welfare, by obtaining and maintaining several certifications, among which stand out:

- Declaration of State and Municipal Public Interest (the Declaration of Federal Public Interest was revoked for all institutions, by Law No. 13,204/2015);
- Attestation of Record and Certificate of a Social Welfare Charitable Entity (CEBAS), deferred by Decree SAS/MS No. 946, of 09/25/2014, published in the Official Press of the Union on 09/26/2014, valid from 06/12/2015 to 06/11/2018 (currently under process of renovation);
- Certificate No. 018/2008 of Qualification as a Social Organization of the Municipal Secretariat of the São Paulo Municipality Prefecture Management;
- Certification with CNPq No. 900.0011/1990, valid through 04/13/2021;
- Declaration of Recognition of Tax Immunity over the "Causa Mortis" Transmission and Donation of any Assets or Rights - ITCMD – Process No. 51220-135787/2017, valid through 2021;
- Certification of Enrollment No. 0308/SP/2000 of the State Social Assistance Council -CONSEA;
- Accreditation, as a foundation to support HCFMUSP, with the Secretariat for Economic Development, Science, Technology and Innovation, Resolution SDE 26, of 10/04/2019.

In 2020, FFM participated actively, either as a Member or Consultant, of the following Commissions, Committees, Work Groups and other initiatives:

- ✓ Collaboration to the São Paulo Foundations Association (AFP);
- ✓ Commission of the Alcohol and Drugs Agreement;
- Commission of the Permanent Education School;
- ✓ Commission of Financial Support to FMUSP Students:
- ✓ Commission of Clinical Studies of the HCFMUSP Clinical Board;

- ✓ Inova/HCFMUSP Executive Commission;
- ✓ Executive Committee for Agenda 2030;
- ✓ USP Foundations Committee (FUNASP);
- ✓ Commission for HC/FMUSP/FFM Integration;
- ✓ FMUSP Research Committee;
- ✓ HCFMUSP Deliberative Council Planning and Control Commission;
- ✓ HCFMUSP Strategic Planning Commission;
- ✓ Ciclotron Project Commission;
- ✓ Information Technology Committee;
- ✓ Angola Project Management Committee;
- ✓ FMUSP Congregation;
- ✓ Board of the Company School Integration Center (CIEE);
- ✓ Zerbini Foundation Advisory Board;
- ✓ HCFMUSP Deliberative Board;
- ✓ Board of the Football and Portuguese Language Museums;
- ✓ Complementary Health Contacts;
- ✓ Contracting Process for the SUS Agreement;
- ✓ Management of ICESP Cancer Institute of the State of São Paulo;
- ✓ Management of the Lucy Montoro Network (Morumbi Unit);
- ✓ Pacaembu Pole Real Estate Management;
- ✓ Work Group for the Analysis and Improvement of the Billing Process;
- HR Fixation Management Group;
- ✓ Interaction with TCE/MP/Comptroller;
- Member of the FMUSP Observatory/Library;
- ✓ People Management Nucleus;
- ✓ Partnership with the Electronic Purchase Exchange;
- ✓ Participation in the Health Coalition (PCOS);
- ✓ IT Master Plan.

FFM also supports its partners in carrying out their various events. In 2020, it participated in the following technical-scientific and institutional events: a) VI Psychiatric Clinic Congress 2020 - Research, Innovation and Humanization; b) CINDOR - USP Interdisciplinary Pain Congress c) XIV PHONOAUDIOLOGY DAY - FOFITO; d) 1st Update Course on Acute Renal Injury at USP Medical School.

In addition, it **financially supported** the FM/HCFMUSP System in the following technical-scientific and/or institutional initiatives, carried out before the outset of the Covid-19 pandemic, whose objectives were in line with its Bylaws:

APPROVAL	EVENT
02/18/20	Introductory Course of the Anxiety, Phobias and Panic League
02/18/20	Introductory Course of the Emergency League
02/18/20	Introductory Course of the Otorhinolaryngological Skills League
02/18/20	Academic Medical Extension - EMA
02/18/20	Surgical Expedition
02/18/20	16th Introductory Course to the League of Geriatrics and Gerontology at FMUSP
02/18/20	Introduction to the League to Combat Rheumatic Fever
02/18/20	Pro-Selection Physiotherapy Academic Extension (t-shirts/promotional material)
02/21/20	Introductory Course to the League of Cardiovascular Emergencies
02/21/20	Introductory Course to the Academic League of Physical Medicine and Rehabilitation
02/27/20	Introductory Course to the League to Combat Syphilis and other STDs
03/03/20	Introductory Course to the League of Meditation and Health
	XII Course on Infection in Transplants of the FMUSP's Department of Infectious and
03/03/20	Parasitic Diseases
	III Symposium on Clinical Neuromodulation and I Meeting of Specialists in
03/03/20	Neuromodulation
03/03/20	Kids Save Lives Brasil
03/03/20	Social Scope Project Awards – 2020 Generations Meeting
03/05/20	Introductory Symposium of the League to Combat Chemical Dependence
	17th Introductory Course to the League of Cardiology and Pediatric Cardiac
03/05/20	Transplantation
03/10/20	League of Physiotherapy for the Elderly Health
03/13/20	HCFMUSP Charitable and Cultural Association
11/13/20	COMU / 2020 - FMUSP University Medical Congress

FFM Consolidated Results

Initiatives towards health promotion, disease prevention, medical-hospital assistance and high complexity rehabilitation to the Public Health Service (SUS) users are the health care activities promoted, in joint action, by HCFMUSP and by FFM, through the Integral Health Care for SUS Patients Agreement, signed, since 1988, between FFM, HCFMUSP and SES-SP.

In ever more upgraded and technologically

equipped installations, following the latest international quality guidelines, the assistance also relies on a highly specialized and trained staff.

Partnerships with public and private, national and international institutions enable FFM to develop several programs, mainly in the areas of health and education, which benefit the population.

	FFM CONSOLIDATED RESULTS								
(In thousands of BRL)	2014*	2015	2016	2017	2018	2019	2020		
Revenues	1,222,869	1,183,383	1,159,527	1,187,917	1,256,771	1,286,982	1,541,492		
SUS medical care	291,880	276,587	277,231	287,472	290,957	316,839	322,981		
Private medical care	90,920	87,654	111,018	119,968	118,544	125,411	88,347		
Subventions and contributions	680,251	649,926	619,578	617,768	692,589	705,481	951,047		
Financial revenues (net)	51,335	56,076	60,510	48,542	32,628	31,299	17,357		
Technical services	52,299	49,834	44,815	42,077	47,690	44,189	39,807		
Other (courses, donations, etc.)	56,184	63,306	46,375	72,090	74,363	63,763	121,953		
Expenses	1,132,588	1,132,359	1,100,606	1,165,371	1,206,875	1,209,230	1,425,018		
Personnel	666,520	704,885	677,160	672,852	696,140	734,150	841,567		
Consumption materials	237,924	207,134	201,922	225,173	242,129	213,442	283,731		
Professional services	163,469	152,892	145,116	152,751	171,466	176,614	206,955		
Other (general, depreciations,	64,675	67,448	76,408	114,595	97,140	85,024	92,765		
etc.)									
Result	90,281	51,024	58,921	22,546	49,896	77,752	116,474		

^{*} With the conclusion of the ICESP Management Contract in 2014, ad hoc operations took place which, due to their nature, were not incorporated to the statements above, namely: return of the contingency fund to SES (BRL 43.8 million), return of residual balances to SES (BRL 12.7 million) and transfer of stock materials to the HC (BRL 25.8 million).

While comparing FFM's total revenues, a growth of 26% in 2019 in comparison to 2013 was achieved. The revenues deriving from medical assistances performed by SUS rose 11% in that period, obtained mainly by means of reassessment of fixed values established in the formal agreements that regulate the government funding.

The **investments in infrastructure and equipment** made by FFM in 2020 totaled approximately **BRL 58 million**. BRL 48.1 million were invested in the HCFMUSP, BRL 5.1 million in ICESP, BRL 780 thousand in FMUSP, BRL 723 thousand in IRLM and BRL 2.8 million in other agreements. In turn, FFM administration invested approximately BRL 492 thousand, with emphasis on equipment and IT systems.

FFM CONSOLIDATED RESULTS								
(In millions of BRL) 2014 2015 2016 2017 2018 2019 2020								
Total	54.9	42.5	26.9	26.2	38.1	26.2	58.0	
Equipment	16.9	26.4	13.2	11.1	12.5	14.8	37.8	
Buildings and Installations	25.8	7.8	7.3	8.1	16.6	1.9	1.7	
Information Technology	6.3	5.4	4.1	5.2	7.4	7.7	10.9	
Other (furniture, vehicles, etc.)	5.9	2.9	2.3	1.8	1.6	1.8	7.6	





OVERVIEW OF THE FINANCIAL BALANCE 2020

ORIGIN OF THE RESOURCES	2020	%	2019	%	2018	%
Total Revenues	1,541.5	100%	1,287.0	100%	1,256.8	100%
Government Resources	1,250.7	81.2%	1,004.2	78.0%	967.5	77.0%
Medical Care - SUS	323.0	21.0%	316.8	24.6%	291.0	23.2%
Subventions	927.7	60.2%	687.4	53.4%	676.5	53.8%
Medical Care - Insurance and Private	88.3	5.7%	125.4	9.7%	118.5	9.4%
Donations	80.0	5.2%	24.0	1.9%	26.6	2.1%
Private cooperation - national and						
international	23.4	1.5%	18.1	1.4%	16.1	1.3%
Provision of services and/or product						
sales	66.8	4.3%	65.6	5.1%	67.1	5.3%
Other revenues	32.3	2.1%	49.7	3.9%	61.0	4.9%

RESOURCE APPLICATION	2020	%	2019	%	2018	%
Total Expenses	1,483.0	100%	1,235.4	100%	1,245.0	100%
Personnel	841.6	56.7%	734.1	59.4%	696.1	55.9%
Operational expenses	583.4	39.4%	475.1	38.5%	510.8	41.0%
Asset acquisitions	58.0	3.9%	26.2	2.1%	38.1	3.1%



INTEGRAL HEALTH CARE ACTIONS

The FM/HCFMUSP System, composed of FMUSP, HCFMUSP and other health units, serves patients at the three levels of assistance and develops around 6% of all Brazilian research in the areas of health and biomedical sciences.

FM/HCFMUSP System

The FM/HCFMUSP System is an Academic Health System. It occupies a constructed area of 350 thousand m² and attends about 2.5 million patients in its three levels of care. It develops around 6% of Brazilian research in the health and biomedical sciences areas.

In addition to FMUSP, also integrating it are institutes specialized in high complexity care (tertiary/quaternary care - HCFMUSP), a hospital with medium complexity (secondary attention - HU-USP), auxiliary hospitals, units specialized in the integral care of patients that carry HIV/Aids, School Care Center and Basic Health Units (primary attention - CSE Butantã, DHAC, DHAS, House of Aids), as well as IMT and SVOC, both linked to FMUSP.

HCFMUSP unit for scientific research, the LIMs are intended to develop basic and applied research, in addition to diagnostic methods. The current 62 LIMs Laboratory Units are home to more than 200 research groups, which are academically and scientifically linked to FMUSP and administratively to HCFMUSP.

In the last 10 years, the FM/HCFMUSP System has been developing a network of multiuser equipment considered a national model. There are currently 42 centers, which make available equipment and services to System researchers and external ones, both national and international (www.premium.fm.usp.br). Among the equipment available is the 7 Tesla Resonance and the MicroPET-CT. Among the experimental models available are the zebra fish and the animal ICU.

The superior instances of the System are FMUSP Congregation and the HCFMUSP Deliberative Council, both presided by FMUSP's Director. FMUSP Congregation has a consultive and deliberative function and is advised by the Graduation, Post-Graduation, Research, Culture and Extension, Medical Residency and Foreign Relations Commissions. HCFMUSP's Deliberative Council defines the guidelines of tertiary medical-

hospital care and is composed by ten representatives of FMUSP full professors, elected by their peers.

The FM/HCFMUSP System is composed of the following institutions:

The Faculty of Medicine of the University of São Paulo (FMUSP) (page 24), recognized for its pioneering spirit and excellence in teaching and research, was founded in 1912 and implemented in 1913. In 1931, the current Faculty of Medicine building was inaugurated. In 1934, it joined USP.

It offers four undergraduate courses: Medicine, Physiotherapy, Speech Therapy and Occupational Therapy.

It has the largest hospital in Latin America - HCFMUSP and is one of the largest medical-scientific research centers in the country, with 230 research groups and an expressive intellectual production, with an average of 1,300 scientific articles published per year.

It boasts more than a century of excellence in teaching and international recognition. In 2015, Medical Winter Schools was implemented, which receives students from universities in different countries.

The Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo (HCFMUSP) (page 27), completed 76 years on April 19, 2020.

Officially inaugurated in 1944, the HCFMUSP is the largest hospital complex in Latin America, with approximately 2,400 beds distributed among its eight specialized institutes, two auxiliary hospitals, a rehabilitation division, an associated hospital, 62 medical research laboratories and a Convention Center.

As a benchmark of the Brazilian medicine in the assistance, research and teaching of technical and scientific disciplines, the complex has the collaboration of 22 thousand professionals.

Increasingly, the institution seeks to maintain its pioneering spirit by improving humanization, entrepreneurship and technological innovation, with the support of a management focused on scientific development.

Long recognized for its excellence in health assistance, teaching and research, HCFMUSP had its status as a Scientific and Technological Institution (ICT) formalized in 2016 and created its Center for Technological Innovation (NIT-HCFMUSP), inaugurated at the end of 2018.

Faced with the Covid-19 pandemic, HCFMUSP transformed its Central Institute into a unit dedicated exclusively to patients with Covid-19. There were a total of 900 beds, 200 of which were in the ICU.

Fundação Faculdade de Medicina (FFM), a non-profit organization, created in 1986 by AAAFMUSP, which actively takes part in teaching, research and assistance activities at FMUSP and Hospital das Clínicas.

FFM plays a key role in the development of integral health care in the FM/HCFMUSP System in its several Institutes and Units, for it ensures that the deprived population have continuity in medical-hospital care via the Public Health System (SUS), through the allocation of the System's human and financial resources on the Hospital itself, thus enabling the HCFMUSP to reach levels of SUS care (outpatient and hospitalization) in an average percentage of 95%.

In a shared action with HCFMUSP, FMUSP and other partners, FFM participates in relevant projects and research, carried out in all units of the FM/HCFMUSP System, mainly focused on the prevention and treatment of diseases that affect the health of the Brazilian population, generate hundreds of works published in indexed journals and is gaining global reach and visibility.

Zerbini Foundation (FZ), private-law foundation that has had an important role in promoting administrative agility and efficiency to InCor, as well as the additional fund raising.

The Cancer Institute of the State of São Paulo (ICESP) (page 47), which has consolidated itself as a benchmark in cancer care in the country, providing assistance to approximately 116,000 patients in a humanized manner, with high technical quality, developing research and teaching activities in all areas related to oncology.

Lucy Montoro Rehabilitation Institute (IRLM) (page 50), designed with the purpose of offering

(page 50), designed with the purpose of offering services of greater complexity to people with disabling physical disabilities through integral and integrated rehabilitation treatment, with a technological structure and qualified personnel in diagnostic and therapeutic procedures.

USP University Hospital (HU-USP) (page 46), community school-hospital, inaugurated, in 1981, in the University City, which works in partnership with FMUSP and aims to promote teaching, research and the extension of services to the community.

Samuel Barnsley Pessoa School Health Center (CSE Butantã) (page 45), FMUSP faculty-care unit, under the responsibility of the Departments of Preventive Medicine, Pediatric, Medical Clinic and Speech Therapy, Physiotherapy and Occupational Therapy (FOFITO), focused on teaching and research in the area of primary care, serving the neighborhood of Butantã, in the west region of the city of São Paulo.

The Institute for Tropical Medicine (IMT-FMUSP), reincorporated to FMUSP in 2019, which is dedicated to research, teaching and assistance in the area of tropical diseases, is the only one of its kind in the State of São Paulo. In 2020, the IMT took center stage in the pandemic, by presenting the sequencing of the new coronavirus in 48 hours, in addition to identifying new strains.



Research Group of Prof. Ester Sabino, Director of IMT-FMUSP, sequences SARS-CoV-2 in less than 48 hours

Death Verification Service of the Capital (SVOC), body binded to FMUSP dedicated to clarifying the *causa mortis* in deaths of poorly defined diseases or with no medical assistance, occurred in the city of São Paulo.

FMUSP CENTRAL LIBRARY COLLECTION

The Faculdade de Medicina da USP

FMUSP contributes to research, access, production management of the FM-HCFMUSP System and visibility of its importance, also on the international stage.



Articles, books and events related to students and professionals linked to the FM-HCFMUSP System are gathered at the OPI, a digital space that highlights the relevance of the research carried out at the Complex

The Faculdade de Medicina of the University of São Paulo is recognized for its pioneering spirit and excellence in teaching and research. It was founded in 1912 and implanted in 1913. In 1931, the current Faculty of Medicine building was inaugurated. In 1934, it joined the University of São Paulo.

FMUSP offers four undergraduate courses: Medicine, Physiotherapy, Speech Therapy and Occupational Therapy. The Medicine course is located on the Pinheiros campus, with a built area of 44,000 square meters and the Physiotherapy, Speech Therapy and Occupational Therapy courses are held in the University City in an area of 6,000 square meters.

FMUSP has 1,400 undergraduate students, more than 1,000 employees, of which 368 are professors; 1,800 graduate students and 1,600 residents. It has 27 graduate programs (master's and doctorate), 62 specialty medical residency programs and 14 multiprofessional and uniprofessional residency programs.

The average is 1,300 scientific articles published per year. It has the largest hospital in Latin America – Hospital das Clínicas –, with more

than one million outpatient consultations per year, over 232 thousand urgency and emergency visits per year and more than 50 thousand surgeries per year.

FMUSP is one of the largest medical-scientific research centers in the country, with 66 medical research laboratories, the LIMs, with 230 research groups and significant intellectual production.

The Faculty works in partnership with the University Hospital – HU and has the Health Center Escola Butantã as a teaching-assistance unit of FMUSP, specializing in primary health care.

It has more than a century of excellence in teaching and boasts international recognition. In 2015, the Medical Winter Schools was implemented, which allows to receive students from universities from different countries. The Faculty of Medicine of the University of São Paulo constantly seeks to develop and promote excellence in teaching and research.

Due to the multiplicity of links of researchers from the FM/HCFMUSP System, the institution has developed a system for capturing its scientific production, called the Observatory of Intellectual

Production (OPI). This system allows obtaining reports from the researcher's name, institutional link, liaison laboratory or research group. Since 2012, the data updated and certified periodically by the FMUSP Library and Documentation Service is available on the website http://observatorio.fm.usp.br.

In 2020, a new graphic was added to the OPI website, showing the international collaborations from teachers, students, doctors and other professionals who are linked to the system, a map of these collaborations and a chart with citations per year.

Another innovation at the OPI was the arrival of the Altimetric indicator, which brings data related to impacts on social networks, and a clear view of the powerful scientific production that the 17 departments of the faculty, with its 66 laboratories, and the eight Institutes of the HC carry out, thus contributing to research, access, production management of the FM-HCFMUSP System and the visibility of its importance, also on the international stage.

To encourage discussions about the great promises that the advancement of technology brings to the health area and to encourage innovative ideas to come true, FMUSP organized the Hackmed Conference & Health Hackathon, held from January 31 to February 2, 2020, at the CCR.

The event, inspired by MIT Hacking Medicine, brought together an audience of approximately 900 people and featured a full day of conferences on entrepreneurship, leadership and innovation, with the participation of renowned specialists in the medical, technology and business fields, in addition to a hackathon, a kind of competition of innovative business ideas for the health area, which lasted for three days.

In 2020, FMUSP was also at the forefront in tackling the pandemic. A crisis committee was set up, consisting of representatives from FMUSP and the Clinical Board, the Superintendence and the HCFMUSP Institutes, which defines the entire strategy and centralizes decisions.

HCFMUSP dedicated the 900 beds of its Central Institute for the care of coronavirus cases, which required an enormous logistical operation, with the transfer of patients and services. All professionals participated: students, residents, doctors and teachers from all areas are involved in responding to the epidemic, regardless of their specialty.

The Infection Control Commission coordinates the establishment of patient management protocols, hygiene and training to avoid contagion, involving protection of health professionals, and training for the correct use of PPE. The pulmonology discipline at FMUSP has been using its expertise to develop specific treatment protocols and to provide training to all intensivists in the state. Classes and protocols are available on the HCFMUSP website, in its EEP. A real-time case discussion service is also available, implemented with technology developed by InCor's innovation area. A pioneering technology was also developed, together with POLI researchers, the Electrical Impedance Tomography for pulmonary assessment in bed, fundamental equipment in the treatment of critically ill patients, which prevents their displacement for tomography exams, in addition to providing data in real time.

FMUSP is collaborating with POLI researchers in the development and testing of the low-cost open pulmonary ventilator.

Regarding the diagnosis and characterization of the virus, the IMT presented in 48 hours the sequencing of what was considered the first case in the country, the result of a technology developed by the University of Oxford, which employs a low-cost sequencer and was already being used for the ongoing dengue epidemic.

Serological tests (ELISA and IFI) are also being developed to diagnose Covid 19, since CRP tests, although very sensitive and specific, cannot be performed on the scale expected in an epidemic. Another study proposes the investigation of viral excretion in different biological materials. It is intended to investigate the presence of SARS-CoV-2 in saliva, urine, blood and feces, during the acute and convalescent phase of the infection.

The Infectious Diseases department created a research protocol to seek a less invasive technique for obtaining biological material, with greater security for the health professional.

The Pathology discipline is conducting a research with a minimally invasive autopsy of cases of death by coronavirus, where biopsies of different organs guided by ultrasound are made. With this research, the pathophysiology of Covid-19, its main morphological changes and the correlation of histological and molecular findings with postmortem imaging exams and clinical data of patients will be better understood. The first findings were already presented to doctors at a meeting promoted by the Regional Council of Medicine and which is available on CREMESP's youtube.

The Faculty of Medicine hosts a project called "Platform of Images in the Autopsy Room", PISA. They are high precision imaging equipment, including a 7 Tesla Magnetic Resonance, installed next to the autopsy room. This arrangement, unique in the world, allows research to be carried out during epidemics, as occurred recently in the case of Yellow Fever and Zika.

FMUSP professors are participating in a multicenter research protocol to assess the possible role of hydroxychloroquine in the treatment of Covid-19. Another study is the prevalence of Coronavirus in the blood donor population and the development of passive immunotherapy through plasma transfusion of convalescent individuals in patients with severe acute disease. This study involves two private hospitals in the capital and blood centers in the interior and other states.

The research pointed out that anticoagulant therapy improves the hypoxemia of patients with Covid-19 and suggested that the treatment could be introduced in the treatment protocols of the disease. The work was commented on by the journal Science.

A survey on depression in the elderly has been adapted to address the impact of Covid. The goal is to understand how the epidemic and social isolation impacted the mental and physical health of the elderly. A team coordinated by IPq seeks to monitor the mental health status of outpatients in the face of the crisis triggered by the Covid-19 pandemic, as well as isolation at home. The target population of this initiative is elderly patients with mental disorders, such as dementia, bipolar disorder and Geriatric Depression.

The Research Group on Applied Physiology & Nutrition works on the production of review articles on the potential impact of isolation caused by the pandemic on physical inactivity and its repercussions on the health of populations; and in the preparation of booklets, texts and videos on promoting a healthy lifestyle (food, physical activity, etc.), published on the Ciência inForma channel.

CEDEM is collecting the opinions of medical students about their role in the Covid-19 pandemic. The study will have both national and international coverage, with the application of a questionnaire in electronic version.

CEDEM has organized and made available the Covid-19 Course: Update and evidence for health professionals. It is intended for health professionals who work at different levels of care and specialties, and for students in the health field. It is a self-instructional, online, free course, which will feature a session of scientific articles and news validated by

the course authors and is available on the EEP website at https://coronavirus.eephcfmusp.org.br/.

In a joint effort with researchers from Fleury, Unifesp, and Ibope and sponsored by Instituto Semeia, FMUSP is researching the ratio of the population of the city of São Paulo that is already immune against the Covid-19 virus. The pilot project was carried out in three neighborhoods in the southern zone where there was a high initial incidence of the disease and three neighborhoods with the highest number of deaths. The initial results can be followed https://saude.estadao.com.br/noticias/geral,estud o-inedito-detecta-anticorpos-ao-coronavirus-em-5dos-moradores-da-cidade-de-sao 70003304706.

A survey carried out jointly with the Department of Pediatrics, a Neonatology discipline, will assess the possible maternal-fetal transmission of the virus. The Department of Speech Therapy, Physiotherapy and Occupational Therapy (FOFITO) will conduct research on the inefficiency of swallowing in patients admitted to the ICU dedicated to Covid-19 at the HCFMUSP.

The Department of Neurology is conducting five studies under the topic "Study of neurological manifestations in patients with infection by sarscov-2- covid-19", involving studies on the manifestation of encephalopathy and its possible cognitive effects, epileptic, neurovascular and neuromuscular manifestations.

In the field of prevention, the discipline of Clinical Immunology and Allergy is leading the search for a vaccine against Covid-19. The strategy is to develop a virus-like particle, called the Virus Like Particle (VLP). The antigens of the new coronavirus are being produced from the identification of regions of the virus structure that interact with cells and allow it to enter, called spike proteins. After the identification of these proteins, fragments of them are extracted and combined with the VLPs.

In 2020, FFM contributed effectively in expediting bureaucratic processes and, mainly, in the implementation of projects and programs that, in government administration, are more morose.

The FMUSP Hospital das Clínicas

The hospital is 76 years old and, for the first time in history, dedicated the 900 beds of its Central Institute exclusively for the care of Covid-19 cases.



To exclusively serve patients with the disease, the HCFMUSP Central Institute transferred patients under treatment and received investment in equipment and infrastructure

On April 19, the HCFMUSP completed 76 years of its foundation. Officially inaugurated in 1944, the HCFMUSP is the largest hospital complex in Latin America, with approximately 2,400 beds distributed among its eight specialized institutes, two Auxiliary Hospitals, a rehabilitation division, an Associated Hospital, 62 Medical Research Laboratories and a Convention Center.

As a benchmark for the Brazilian medicine in the assistance, research and teaching of technical and scientific disciplines, the institution increasingly seeks to maintain its pioneering spirit by improving humanization, entrepreneurship and technological innovation, with the support of a management focused on scientific development.

The figures give an idea of the giant size and relevance of the HCFMUSP. In this true medical city of more than 600 thousand square meters, occupied by about 20 thousand employees and third parties, in addition to hundreds of undergraduates, interns, master's students, doctoral students and residents in medical and paramedical areas, each month about 250 thousand patients pass through by the eight institutes and two auxiliary hospitals for free procedures, ranging from accidents to organ transplants and other

highly complex procedures. There are 2,500 beds, an apparently high number, but small in view of the representativeness of the HCFMUSP's activity. In the state, for example, it performs around 15% of transplants and accounts for 10.7% of highly complex hospitalizations.

By going through the social and political changes along seven decades, we sought to preserve the ideals and values of the founding founders: to train highly qualified human resources to face health problems in our environment, endowed with solid technical-scientific knowledge, ethical and social values and willingness to practice humanized health care, and to generate knowledge and innovation that can turn into effective actions in health promotion, prevention and management of diseases that afflict the community.

Improving patient care is an ongoing goal of HCFMUSP employees. Management projects are the result of great ideas put into practice in the name of quality service and can change the lives of thousands of people.

The opening of the Inova-HC District (an area of 900 m² on two floors of the HCFMUSP Employee Service Center) in 2019 confirms HCFMUSP's goal of becoming a benchmark for innovation in its sector.

JORNAL DA FFM

The space is intended for the development of new ideas and businesses for the health area through public-private partnerships.

Initiatives like this make the HCFMUSP the most innovative Brazilian institution in the health sector today, according to a study developed by the Standard Intelligence Center (CIP) for the second edition of the Whow! Award, created with the objective of identifying and recognizing companies and institutions that foster consistent innovation.

In 2020, the HCFMUSP was classified by the Global Health Intelligence team as one of the best equipped hospitals in Brazil and Latin America. In November, the Certificate of Recognition was delivered electronically via the USA. HC ranks 1st in the HospiRank 2020 index for the organization.

The School of Permanent Education (EEP) was created to centralize and organize the knowledge transfer from the HCFMUSP to the public, in an ethical and innovative way, and with a high quality level.

Founded in 2009, it offers the following learning models: **a)** Technical, in the professional categories and continuing initial training; and **b)** Higher education, in the areas of dissemination, updating, improvement, specialization and professional improvement.

EEP supports all HC institutes for the development of teaching activities. With 10 years of experience and accredited by the State Education Council, it has a portfolio with more than 300 courses in various modalities: *lato sensu* postgraduate courses, distance learning, updating and technical training for professionals in the various health areas. In addition to traditional methodologies, realistic simulation is present in the training offered for advanced trauma care (ATLS) and cardiovascular care (ACLS, PALS, BLS, etc.).

In 2020, HCFMUSP's EEP provided a free distance learning course (EAD) on the new coronavirus. The course "Covid-19 Update and Evidence for Health Professionals", which was made available to all health professionals and students in Brazil, aims to disseminate on a large scale the latest updates on the topic to support and qualify health professionals. health workers to work safely to face the pandemic.

The content is based on the best existing scientific evidence with updates on technical knowledge about the virus and the disease, as well as the best practices involved in the process of caring for the patient as well as the professionals. Those interested can choose to access the full content or take the modules of interest. The course will receive weekly updates for the duration of the pandemic.

The EEP also launched an e-book that serves as a guide on prevention and measures to deal with the pandemic. The material was produced from infographics that the school has developed in recent months based on information released by WHO, SES-SP, PAHO, Federal University of Santa Catarina (UFSC), Health Surveillance Coordination (Covisa) and National Council of Justice (CNJ). The e-book can be downloaded by students, employees and the general public on the EEP website, through a simple registration at www.eephcfmusp.org.br.

The hospital is 76 years old and, for the first time in history, in 2020, dedicated the 900 beds of its Central Institute exclusively to the care of coronavirus cases, which required a huge logistical operation, with the transfer of patients and services. Much of other activities, such as outpatient consultations and elective surgeries, are suspended.

The transformation process of the HCFMUSP started in January, when the Crisis Committee, composed of representatives from the Clinical Directorate, the Superintendence, the Faculty of Medicine and the Institutes, was set up. The teams responsible for the operations, planning, logistics and financial arms were organized, attentive to the evolution of the disease in China and Europe.

At the time, 500 patients were admitted to the ICHC, many of them of very high complexity. The organization of the removal of the sick was the most complex part, as it requires a complex logistics. In addition to transferring all patients in record time, it was necessary to organize medical teams for care in Institutes that do not have such expertise; in many cases, it was necessary to double the teams. 200 ICU-Covid beds were made available for critically ill patients.

Specializing in heart and lung, the InCor started to receive patients previously admitted to the ICHC in the areas of Neurosurgery, Neuroclinics, Trauma, Transplants, Vascular Surgery, Gastroclinics and Nephrology. Patients from the Neurosurgery ward went to IPq. The IOT started to serve the clinical wards (Rheumatology, Immunology, General Practice, Non-Covid Infectology, Neuroclinic).

The ICr admitted non-Covid infant patients, while in ICESP the specialties of Endocrinology, Gynecology, Head and Neck and Urology remained. The HU-USP, in turn, started to serve Ophthalmology, Otorhinolaryngology and Obstetrics. However, cases of pregnant women with suspected Covid-19 and newborns with the coronavirus are maintained in the ICHC.

These actions not only helped the attendance, but also guaranteed more safety to the other Institutes. In the case of infected patients, 80% of them were intubated and about 30% required

dialysis, which indicated the severity of the virus. Of the 180 daily requests for hospitalization, the hospital had managed to receive 40 to 60 new patients every 24 hours.

There were 7 thousand professionals destined only to the treatment of Covid-19, many of them isolated from their relatives and doubling their shifts. The final capacity for hospitalizations was 200 ICU beds and another 700 for infirmary, and up to May, the number of discharged patients exceeded one thousand.

For the entire operation to be carried out successfully, the management of supplies and resources was essential. In order to raise funds for the purchase of hospital supplies, FMUSP students and doctors created the #VemPraGuerra campaign, which ended on April 17. Simultaneously, citizens, doctors and researchers launched the #HCCOMVIDA campaign, an invitation to support HCFMUSP that has the Viralcure portal, focused on fundraising. Developed by the Sthorm agency, the platform brings together a series of missions aimed at promoting health.

Part of the financial resources from the #HCComVida action were used to subsidize 16 research projects related to the Corona, Sars, Cov, and covid-19 virus family, selected in the "Call for Proposal Submission no. 01/2020 – Research in the Covid-19 FMUSP-HC System".

In addition, with the funds raised, the intention is to purchase equipment, assemble and structure

new ICU beds; rent ambulances to transport patients who already have severe symptoms and cannot travel alone; expand the purchase of equipment for testing and diagnosing covid-19 in patients; increase the number of respirators for patients with respiratory problems in the ICU; and ensure the purchase of masks and other PPE for healthcare professionals.

In 2020, the HCFMUSP received, on loan, three telepresence robots from the startup Pluginbot, which have been screening patients since March at the Liver Transplant Ambulatory, at the PAMB. In April, the use of robots was also implemented in the ICUs and in the palliative care ward at Covid-19, at the ICHC.

When the patient arrives, the nurse is at a distance and, through the robot's screen, is able to receive the patients and perform the first screening, without any risk of contamination. In this way, nursing is able to identify patients with respiratory symptoms that are a priority in care, indicating the necessary isolation measures.

In 2020, as soon as the first news of the advance of the Covid-19 pandemic was released, the HCFMUSP teams began to mobilize, always with the FFM support in the various coping actions to ensure the functioning and care of patients already hospitalized and new patients, as well as the safety of its more than 350 direct employees and more than 11,700 professionals allocated to care and research projects.

Integral Health Care Agreement for SUS Patients

FFM currently employs 12,095 employees, of which more than 90% directly dedicated to the care/attendance of SUS patients.

Behind the USP School of Medicine (FMUSP) and its Hospital das Clínicas (HCFMUSP), with its Institutes, auxiliary hospitals and other health care services, in addition to teaching and research – which are the pillars of the University of São Paulo – operates the Fundação Faculdade de Medicina (FFM), founded by a group of professors over 30 years ago to support the activities of FMUSP and HCFMUSP.

Since 1988, FFM has been responsible for the University Agreement signed with the HCFMUSP and the São Paulo State Department of Health, aimed at the free care of SUS patients. The Agreement also guarantees the performance of special procedures, such as transplants of different organs, different implants and other highly complex procedures.

Access and assistance to SUS at all HCFMUSP facilities (except InCor) are ensured by FFM, through the allocation of the System's human and financial resources on the Hospital itself, thus enabling the HCFMUSP to reach SUS (outpatient) levels of care and hospitalizations) in an average percentage of 95%. On average, before the Covid-19 pandemic, approximately 3 million patients were treated every year at the HCFMUSP Complex every year, who underwent 10 million outpatient procedures.

The Agreements signed, within the scope of SUS, between SES, HCFMUSP and FFM, have their own characteristics, with a remarkable uniqueness I due to HCFMUSP's certification as a Teaching Hospital, where all production, actions and health services, within the scope of SUS, must constitute a field of practice for teaching, research and technological incorporation.

The rules and policies for the application of resources from that agreement are dynamically instituted by the several directive bodies of HCFMUSP (Deliberative Council, Board Councils, Executive Boards and Superintendency) and from FFM (Board of Trustees), which continuously monitor the results achieved, especially in regards to the funding of medical-hospital assistance.

HCFMUSP and FFM'S operation is shared, in the management and in services to SUS patients, and derives from the expressed authorization from the State Executive Authority, duly formalized in the proper legal instruments. In order to achieve their objectives, FFM currently employs 12,095 professionals (December/2020), of which more than 90% directly dedicated to the assistance/care of SUS patients.

The labor contracts signed by FFM are very distinct from the contracts of the public workers at the HCFMUSP, with no incompatibilities or subordination.

The professionals hiring process by FFM has the purpose of meeting the SUS patient demand of the HCFMUSP, and the difficulties inherent to the Government Authority in creating job posts. The financial resources used for salary payments derive, exclusively, from the consideration of their activities in the health sector.

In addition, on their behalf they acquire medication, inputs, consumption material, equipment, furniture, utensils and others, fully dedicated to the assistance and care of SUS patients. It is worth noting that FFM does not undertake to manage HFMUSP's budgetary resources nor do they receive any resource from that state autarchy.

CEBAS is granted by the Ministry of Health to private, non-profit legal entities recognized as a Social Assistance Charity Entity for the provision of services in the Health Area. Obtaining CEBAS guarantees the exemption from social contributions and the celebration of agreements with public authorities, among others.

FFM has had this title since 1989 and, thanks to it, has access to tax immunity from taxes and social contributions, providing the FM/HCFMUSP System with a tax saving of approximately BRL 204 million per year, resources that are totally destined to the FM/HCFMUSP System in the form of costing, hiring human resources, purchasing medical and hospital devices, modernizing the technological park, maintenance, renovations, extensions and other initiatives that, eventually, benefit the patient from the Unified Health System - SUS.

As a result, there are more resources for investment in cutting-edge equipment, training, scholarships, research financing, physical adaptation of spaces, purchase of medicines, hiring professionals allocated to research projects, among many other demands that are daily demanded by structure of the FM/HCFMUSP System, the largest teaching, research and health care center in Latin America, where 50 thousand people pass by daily.

The **number of assistances** performed, in the past two years, by the HCFMUSP and by FFM, in

joint action, is demonstrated in the two charts below:

2020(*)

ASSISTANCE INDICATORS OF THE HCFMUSP INSTITUTES AND AUXILIARY HOSPITALS (EXCEPT INCOR, IMREA AND ICESP)

Institute / Hospitals	Admissions	Surgeries	Urgent and emergency attention	Ambulatory Appointments	Imaging Exams	Lab Exams	Total per Institute / Hospitals
ICHC	18,110	10,685	47,248	397,873	58,675	5,949,053	6,481,644
ICr	5,138	1,832	7,988	49,023	32,668	686,988	783,637
IOT	3,260	3,365	12,051	30,768	51,738	191,476	292,658
IPq	1,744	797	-	47,128	10,291	-	59,960
InRad	-	-	-	2,718	179,329	-	182,047
DHAS	238	-	-	107	802	577	1,724
DHAC (under construction)	-	-	-	-	-	-	-
Total	28,490	16,679	67,287	527,617	333,503	6,828,094	7,801,670

^(*) Due to the restrictions imposed by the Covid-19 pandemic, in 2020, there was a reduction in the assistance indicators of the Institutes.

2019

ASSISTANCE INDICATORS OF THE HCFMUSP INSTITUTES AND AUXILIARY HOSPITALS (FXCFPT INCOR, IMREA AND ICESP)

(EXCELL HICCOR, HAND ICES!)							
Institute / Hospitals	Admissions	Surgeries	Urgent and emergency attention	Ambulatory Appointments	Imaging Exams	Lab Exams	Total per Institute / Hospitais
ICHC	31,852	25,722	44,082	696,625	100,216	7,379,905	8,278,402
ICr	7,222	2,159	17,078	74,747	43,361	764,581	909,148
IOT	5,047	5,599	18,097	68,548	89,388	211,860	398,539
IPq	2,646	1,252	-	81,728	13,980	-	99,606
InRad	-	-	-	4,827	285,359	-	290,186
HAS	108	-	-	19	392	75	594
HAC (under construction)	-	-	-	-	-	-	0
Total	46,875	34,732	79,257	926,494	532,696	8,356,421	9,976,475

Special Procedures

In addition to conventional care and admissions, FFM and HCFMUSP perform jointly transplants and implants, high complexity procedures and pharmaceutical assistance to SUS patients.

Transplants and Implants

Pursuant to the objectives of the Integral Health for SUS Patients Agreement (previously the University Agreement), signed between FFM and HCFMUSP and SES-SP, HCFMUSP and FFM jointly carry out transplant and implant procedures that are quite important for the population, and it is

considered strategic by the Ministry of Health for SUS services.

The quantity of transplant and implant procedures performed gratuitously in the past couple of years was the following:

STRATEGIC PROCEDURES - TRANSPLANTS AND IMPLANTS					
Description	q	uantity			
Description	2019	2020 (*)			
Cochlear implant	109	51			
Partial hepatectomy for transplant (live donor)	30	29			
Unilateral nephroureterectomy for transplant	42	18			
Allogeneic transplant of bone marrow hematopoietic stem cell - related	25	14			
Allogeneic transplant of bone marrow hematopoietic stem cell - not related	12	11			
Allogeneic transplant of umbilical cord blood hematopoietic stem cell - not related	-	3			
Allogeneic transplant of peripheral blood hematopoietic stem cells - related	24	11			
Allogeneic transplant of peripheral blood hematopoietic stem cells - not related	3	1			
Autogeneic transplant of bone marrow hematopoietic stem cells	6	13			
Autogeneic transplant of peripheral blood hematopoietic stem cells	111	56			
Cornea transplant	131	55			
Cornea transplant (in combined surgeries)	9	8			
Cornea transplant (in reoperations)	17	13			
Sclera transplant	-	-			
Liver transplant (deceased donor organ)	146	153			
Liver transplant (living donor organ)	35	28			
Pancreas transplant	2	-			
Kidney transplant (deceased donor organ)	177	119			
Kidney transplant (living donor organ)	61	28			
Simultaneous pancreas and kidney transplant	11	8			
Total	951	619			

^(*) Due to the restrictions imposed by the Covid-19 pandemic, in 2020, there was a reduction in the quantities of most transplants and implants.

Pursuant to the objectives of the Integral Health to SUS Patients Agreement (previous University Agreement), signed between FFM and HCFMUSP and SES-SP, HCFMUSP and FFM jointly carry out High Complexity Ambulatory Procedures, whose production, in the past two years, is demonstrated in the following chart:

AMBULATORY DEMONSTRATION AUTHORIZATION FOR HIGH COMPLEXITY PROCEDURES - APAC					
	Quan	tity			
Description	2019	2020 (*)			
Diagnosis in Clinical Laboratory	33,542	32,221			
Radiology Diagnosis	105	72			
Diagnosis by Tomography	960	1,461			
Ultrasonography	26	28			
Diagnostic Methods in Specialties	26,765	19,399			
Appointments / Assistances / Follow-ups	8,256	5,435			
Treatment in Oncology	18,599	6,053			
Treatment in Nephrology	22,095	20,851			
Dental Treatments	46	15			
Specialized Therapies	1,296	808			
Upper Respiratory Tracts, Head / Neck Surgery	0	0			
Vision System Surgery	4,667	2,670			
Genitourinary System Surgery	100	7			
Reparation Surgery	741	400			
Surgeries in Nephrology	89	74			
Small Surgery and Surgery of the Skin, Subcutaneous Tissue and Mucous Membrane	0	0			
Collection and Exams for Organ Donation Purposes	22,160	16,565			
Follow-up and Post-Transplant Complications	16,753	10,389			
OPMs Not Related to the Surgical Act	4,426	4,084			
OPMs Related to the Surgical Act	662	787			
Tissue Processing for Transplants	311	243			
Clinical Treatments (other specialties)	4,180	1,389			
Total	165,779	122,951			

^(*) Due to the restrictions imposed by the Covid-19 pandemic, in 2020, there was a reduction in the number of highly complex procedures.

Pursuant to the objectives of the Integral Health for SUS Patients Agreement (previous University Agreement), signed between FFM and HCFMUSP and SES-SP in the integral health care, the pharmaceutical assistance is determinant for the resolubility in the attention and health services.

The medication supply guarantee of the Specialized Component of Pharmaceutical Assistance (CEAF) is key for maintaining patient treatment, and a complement for the complex and high cost medical-hospital procedures, such as transplants, for example.

In 2020, **44,207,132 medication units** from CEAF were distributed, representing **BRL 12,275,802.49**. The control of CEAF medication distribution and the emission of APACs are carried out through the Hospital Information System - SIGH Prodesp.

In 2020, the HCFMUSP Pharmacy met 1,018,060 ambulatory prescriptions, an average of 4,500 thousand per day. There is also a medication home delivery service that, since 2013, became free of charge. Around 57% of the outpatients receive their medication at home, with no cost.

Located on the 8th floor of ICHC's PAMB, HCFMUSP has the largest hospital pharmacy in Brazil. Founded in the same year of the Hospital, 1944, today 395 collaborators work there, of which 70 are pharmacists.

Much more than a medication distribution center, a real factory functions there, where medications that do not exist in the market are produced, i.e., those that do not attract commercial interest. Different dilutions and dosages than those available in the market are also prepared, in accordance with the patient's requirements, or compositions that are different from traditional ones.

In 2020, medication production generated savings in the amount of BRL 9,052,455.68. Sixtyone types of standardized medication were produced, with a total of more than 10.3 million units, and 409 formulae were manipulated, in a personalized and individualized manner (476,184).

units), to fulfill the medical prescriptions and patient requirements. The pharmacy also distributed 36 special medications, produced for research protocols, in a total of 45,448 units. In addition to medication produced internally, 362 different medications were acquired and unitized, totaling 1.9 million units to fulfill admitted patients' prescriptions.

In 2020, the following upgrades ir pharmaceutical assistance took place:

- Implementation of the internal production of the drug ursodeoxycholic acid 300 mg compressed, promoting savings of BRL 2,175,046.50;
- Implementation of the Antimicrobial Stewardship Project centered on clinical pharmacy;
- Reformulation of Pharmaceutical Assistance processes to face the Covid Pandemic 19, such as:
 - a. Daily monitoring of the sedation medication for admitted patients;
 - Assembly of kits for quick sequence in the patient's intubation process and in the care of the clinical emergency room;
 - Reorganization of the medication return flow, with the implementation of a specific area dedicated to the hygiene of returned medications;
 - d. Schedule for prescriptions for sedatives, analgesics, neuromuscular blockers and vasoactive drugs;
 - e. Pharmaceutical evaluation of the prescriptions of 100% of the Intensive Care Units and Wards;
 - f. Revalidation of outpatient medical prescriptions through the HC em Casa program;
 - g. Opening of the Post-Covid Anticoagulation
 - h. Pharmaceutical consultations via WhatsApp and phone.

Institutes, Auxiliary Hospitals and Specialized Health Units of the FM/HCFMUSP System

Faced with the Covid-19 pandemic, the HCFMUSP transformed its Central Institute into a unit dedicated exclusively to patients with Covid-19. There were a total of 900 beds, 200 of which were in the ICU.



Façade of the HCFMUSP Central Institute, HCFMUSP unit exclusively dedicated to patients with Covid-19

75 years ago, on April 19, 1944, the Hospital das Clínicas of the USP Medical School was inaugurated. Considered one of the main hospital complexes in the world, since the first discussions regarding its creation, the HC was designed to house services from different medical specialties that were consolidated at that time. Precisely for this reason, it should have the highest technology available, knowledge and practices, intensifying the corporate transformations linked to the training of specialist doctors, giving clinical thought an increasingly broader position in the face of medical and public health issues.

While working in health care, HCFMUSP and FFM jointly develop actions towards health promotion, disease prevention, medical-hospital

care and high complexity rehabilitation for SUS

In the Institutes, Auxiliary Hospitals and Health Specialized Units, the care is provided in state-of-the-art hospital installations, with the support from highly specialized teams and a high grade technological park.

The HCFMUSP, through FFM, also attends some health plan operators, whose revenues, although inexpressive, are fully reinvested into the hospital's operations.

The performance, in 2020, as well as the actions to combat the Covid-19 pandemic, of the various Institutes (except for ICESP (page 47) and InCor), Auxiliary Hospitals of the HCFMUSP and specialized Units is presented in the following pages.

HCFMUSP WEBSITE

Institutional Data:

Foundation: 1944

Constructed Area: 178.5 thousand m²

Collaborators: 5,892

Accreditations: ONA II, CAP, PALC, ISO 9001, OHSAS 18001, ISO 14001, Friend of the Elderly Hospital Seal, SINASC Seal, Friend of the Environment, International Certification for Distinction in Assisted Infusion Therapy

Care Indicators:

Admissions: 18,110 Surgeries: 10,685

Urgent and emergency attention: 47,248 Outpatient appointments: 397,873

Imaging exams: 58,675 Lab exams: 5,949,053

The **Central Institute** (ICHC), the complex's first building, currently concentrates 36 medical and multi-professional specialties. In 1981, it started to have an interconnected building, the Outpatient Building (PAMB) and the Central Building - known for the large number of Inpatient and Intensive Care Units, in addition to the Referenced Emergency Unit for more serious cases.

The PAMB, opened in 1981, serves outpatients and clinical and surgical day hospital patients, in addition to diagnostic and therapeutic support areas. The building also houses the largest surgical center in the HCFMUSP Complex, the Pharmacotechnics Unit and the Central Laboratory Division.

Since the beginning of the Covid-19 pandemic, the HCFMUSP has dedicated the 900 beds of its Central Institute exclusively for the care of coronavirus cases, which required an enormous logistical operation, with the transfer of patients and services.

In view of the growing number of people infected by Covid-19 undergoing treatment at the

HCFMUSP Complex, the "Caring for All" program was designed, aimed at welcoming actions to patients, families and professionals involved in the pandemic. Created in mid-March 2020, the initiative has the support of employees, volunteers and students who work daily to assist everyone who has been, in one way or another, impacted by the coronavirus.



Volunteers of the Caring for All Program

As visits to Covid-19 patients are prohibited, the "Virtual Visit" project was created, in which patients and family members shorten the distance by means of video calls. Through donation, 40 tablets and 50 cell phones were obtained for the project, which has 14 medical students from FMUSP, 12 doctors, alumni and two volunteers.

There was also concern about patients hospitalized for other illnesses that needed to be transferred to other Institutes of the HCFMUSP Complex. All communication support was provided to patients and family members, between March 25th and 27th.

For those who, unfortunately, succumb to the virus, the family was welcomed at the time of death and the necessary psychological and emotional care was provided for this delicate moment, in a private environment. Simultaneously, the patient is monitored at the time of discharge.

In 2020, in a joint action with FFM, the ICHC carried out **6,481,644** assistance procedures.

IPq

Institutional Data:

Foundation: 1952

Constructed area: 22 thousand m²

Collaborators: 591
Accreditations: ONA II

Care Indicators:

Admissions: 1,744 Surgeries: 797 Outpatient appointments: 47,128

Imaging exams: 10,291

The **Institute of Psychiatry (IPq)** is one of the first institutions in the country to offer comprehensive and integrated care to various types of psychiatric disorders. It has the only unit in Brazil specialized in child therapy and is a benchmark for functional neurosurgery.

The Instituto de Psiquiatria maintains its level Full Accredited (Level 2), by ONA standards, conferring a prominent position in quality among the country's psychiatric hospitals.



In January 2020, IPq inaugurated the Therapeutic Kitchen of the Eating Behavior Infirmary (ECAL), an unprecedented initiative in Brazil that will house projects aimed at patients with eating disorders, such as anorexia, bulimia, binge eating, among others, being treated at the IPq.

In order to promote the mental health of health professionals who are at the forefront of combating the virus, in April 2020, the IPq joined the HCFMUSP Clinical Board and other departments to create the COMVC-19 Program, which works to promote the employee health, either through training videos, active listening to leaders, clinical research or interventions.

First, a Hotline was created to provide psychiatric and psychological assistance to professionals, with uninterrupted operation. A resident is responsible for subsequent screening and referral. The most reported symptoms were anxiety, depressed mood and sleep problems.

Based on a UN proposal, the team created the First Psychological Care (PCP) intervention, based on the training and qualification of leaders for the development of active listening and structure, in order to assist employees.

In partnership with the Humanization Cluster (NTH), the Welcoming Nursing program was created, consisting of conversations with up to six ICHC ICU employees and carried out by Psychiatric residents and members of the NTH.

In this regard, the team noted that residents also needed attention and created the Residents' Active Listening, in which testimonies from professionals were gathered and forwarded to the Crisis Committee and COREME.

In 2020, in a joint action with FFM, the IPq carried out **59,960** assistance procedures.

IOT

Institutional Data:

Foundation: 1953

Constructed area: 27.5 thousand m²

Collaborators: 1.009
Accreditations: ONA I

Care Indicators:

Admissions: 3,260 Surgeries: 3,365

Urgent and emergency attention: 12,051
Outpatient appointments: 30,768

Imaging exams: 51,738 Lab exams: 191,476

As one of the oldest institutes in the complex, the Institute of Orthopedics and Traumatology (IOT) was created in 1953 to assist victims of childhood paralysis. Today, it is a benchmark for healthcare of patients with respiratory and traumatological disorders, spinal cord injuries, limb reimplantation, reconstructions with endoprostheses or with a tissue bank in major tumor resections.



IOT façade

At the IOT, outpatient and inpatient assistance is provided, in addition to support for more severe cases with a help from the Referenced Emergency Unit.

Currently, the IOT occupies two buildings: the first with 10 floors and the second with four, totaling 25,000 m² of built area. Both are intended

IOT Collect

for the treatment of diseases of the locomotor system. The IOT also has seven specialty laboratories and a clinical staff of approximately 160 doctors, including: orthopedists, residents in the specialty and a group of anesthesiologists. Also part of this group are: pediatricians, geriatricians, physiatrists, chest and plastic surgeons, urologists and cardiologists, who provide medical support to patients undergoing orthopedic treatment.

The Welcome Project aims to guide and clarify patients and companions regarding their surgery and treatment, thus improving communication in search of greater safety and comfort.

In the field of research, the natural evolution of adolescent idiopathic scoliosis (AIS) has been extensively studied and several factors have already been identified that can determine the severity and progression of the disease in different populations. The IOT developed a simple scoring scale, based on evidence, which correlates with the quality of life of

patients and is capable of stratifying those with idiopathic scoliosis, prioritizing risk factors for progression and severity.

In addition, anatomical studies of microsurgical flaps, used in clinical practice, are performed to improve the surgical technique.

In March/2020, with the Covid-19 pandemic, the Central Institute began to prepare to empty the patient building and start serving only Covid-19. In a joint effort and quickly, the various specialties of the Central would be received by the institutes. The IOT was adapted and received in its wards, patients and collaborators from the Medical Clinic, Infectious Diseases, Rheumatology, Dermatology, Geriatrics, Neurology and Plastic Surgery. IOT care professionals readjusted and started a new journey, attending patients with diseases different from those they are used to.

In 2020, jointly with FFM, **292,658 assistance procedures** were carried out by the IOT.

ICr

Institutional Data:

Foundation: 1976

Constucted area: 23 thousand m²

Collaborators: 1,526
Accreditations: ONA II

Care Indicators:

Admissions: 5,138 Surgeries: 1,832

Urgent and emergency attention: 7,988 Outpatient appointments: 49,023

Imaging exams: 32,668 Lab exams: 686,988

The Institute for Children and Adolescents (ICr) is a reference in tertiary and multiprofessional care, from birth to adolescence, with high diagnostic and therapeutic technology, in addition to 20 medical modalities that treat chronic and complex diseases.



Instituto da Criança (ICr) created specialized call centers for Covid-19

Among the units are Emergency and Urgency, Intensive Care, Hospitalization, Outpatient, Day Hospital and Renal Replacement Therapy. In its own headquarters, the Institute for Childhood Cancer Treatment (ITACI) (page 45), linked to the ICr, stands out in the areas of Onco-Hematology, stem cells and hematopoietic stem cell transplants.

In 2020, in order to help tackle the new coronavirus, the ICr developed three lines of action that came into effect on March 23, focused on the areas of research, assistance and human resources, which include both employees and students.

In the line of research, the Scientific Group Covid-19 of the Pediatrics Department was created, with representatives from various sectors of the Institute. The group acts as a centralizer of all scientific activities in order to coordinate projects and prepare research, publications and articles.

The helpline operates on several fronts, ranging from phone calls to the reorganization of the entire ICr service flow. For example, Teleconsulta was created, a specific telephone consultation for questions about the new coronavirus, under spontaneous demand for all patients enrolled in the ICr. This procedure is performed at the Institute's Emergency Room, where a doctor is on call to answer questions about the coronavirus and flu-like syndromes. In addition, a primary physical examination is carried out with a checklist, in which the doctor guides the patient and maintains contact with him in cases of need or doubt.

The action was designed, mainly, to prevent children with complex pathologies from being exposed when looking for the basic health unit (UBS) closest to their homes, or to generate a doubt

da USP/José Luís da Conceição

that a professional who is not used to the specific pathology of that patient will be able to solve.

Outpatient Teleorientation, on the other hand, offers telephone guidance focused on the patient's underlying pathology. The attendance, with specific hours of the outpatient clinics, is done by a specialist doctor, who has been accompanying the child and family since the beginning of treatment.

Finally, a special telephone service for positive cases of Covid-19 was also created, which has doctors who clinically monitor all positive cases that are not hospitalized, as well as provide guidance on removal, care and the performance of consultations and tests.

In addition to telephone calls, a different flow was created for patients, from arrival to

consultation or examination. There is also a special space for suspicious cases in the ICr Emergency Room, which, if the test proves positive, sends the patient to the Instituto Central (ICHC) outpatient clinic, where there is also a space for children with positive tests for Covid-19.

The neonatal center at the ICHC was reorganized under the coordination of the ICr, which is also welcoming children in the postoperative period who were in other Institutes of the HCFMUSP Complex. In addition, the ICr sent pediatric teams to work with the Covid-19 patients at the neonatal center and the ICHC pediatric ward.

In 2020, in a joint action with FFM, the ICr carried out **783,637 assistance procedures.**

InRad

Institutional Data:

Foundation: 1994

Constructed area: 14.3 thousand m²

Collaborators: 565

Accreditations: ONA III, ONA/IBES Level 3 and Program of Quality in Mammographies (PNQM), QUANUN

Care Indicators:

Outpatient appointments: 2,718 Imaging exams: 179,329

for excellence both in Brazil and abroad.

Hailed for innovation, the **Radiology Institute** (InRad) has the most modern diagnostic and therapeutic imaging resources in the modalities of radiology, nuclear medicine, interventionist radiology and radiotherapy, becoming a benchmark



InRad is a pioneer in the development of radiopharmaceuticals

It consists of two buildings. The main one houses ambulatory resources of conventional and interventional radiology and radiotherapy. In the annex building is the Nuclear Medicine Center (CMN), a pioneer in the development of radiopharmaceuticals, produced by Cyclotron, for treatment and research in oncology and neurology. InRad also has the Center for Diagnostic Imaging of Breast Diseases (CEDIM) and the Technical-

Scientific Center for Diagnostic Imaging (NDI). The latter implemented the digital image storage and distribution system, which provides access to information for any hospital unit and dispensed with the printing of exam reports and images.

In 2020, the RadVid-19 project received the Abril & Dasa Medical Innovation Award (Special Edition Covid-19). The recognition is due to the initiative of creating a database of radiographs and tomographies from Covid-19, analyzed by the new artificial intelligence (AI) platform – an action between radiology and technology against the new coronavirus.

It is a platform to help doctors diagnose and treat Covid-19 - which has already analyzed more than 10,000 images of patients' lungs in its first four months of operation, identifying 70% as positive.

The RadVid-19 platform is powered by a large database of chest X-rays of patients and CT scans from 40 hospitals in Brazil. The quick and simple process identifies common patterns created by the disease in medical images, and will be used as a project to expand the AI core, developing platforms for other disease areas, such as cardiovascular. A big step in healthcare innovation!

In 2020, InRadiando was launched. It is a new knowledge portal for the InRad, which aims to provide continuing education at a distance so that the professional in the field of imaging diagnostics is constantly updated from anywhere.

Another innovative and creative initiative with which the InRad technicians have helped children and adolescents to face their disease is the use of personalized masks and accessories for the treatment with radiotherapy.

On September 25, 2020, the In.Lab was inaugurated at the InRad. This new Laboratory of

Artificial Intelligence in Medicine and Health brings together multidisciplinary teams, provides resources, space and energy to create products, processes and services that solve problems in the health area.

On December 15, 2020, the InRad received ONA/IBES Certification Level 3 (Accredited with

Excellence), ratifying the excellent practices that the institute has implemented, maintains and continuously refines.

In 2020, in a joint action with FFM, the InRad carried out **182,047** assistance procedures.

IMRea

Institutional Data:

Foundation: 1975

Constructed area: 33.2 thousand m²

Collaborators: 530

Accreditations: CARF and Accessibility Seal

Care Indicators:

Total quantity of Assistances (Vila Mariana, Umarizal, Lapa and Clínicas Units): 164,695

A pioneer in rehabilitational assistance, the Institute of Physical Medicine and Rehabilitation (IMREA) has multidisciplinary teams and state-of-the-art technology, with the largest and most complete technological park in Latin America, serving people with physical, transient or permanent disabilities, in an integral and integrated way, based on the development of their physical, psychological, social, educational and professional potentials.



Lokomat: gait assessment and training

The institution seeks to be a pioneer in rehabilitation assistance through clinical research and technological innovations, with the development of results assessment strategies for the patient and society.

The Rehabilitation Programs are organized with an emphasis on multiprofessional work, coordinated by a physiatrist and carefully developed by doctors, social workers, psychologists, physiotherapists, occupational

therapists, speech therapists, nurses, nutritionists, physical educators, pedagogues and art educators. These are highly specialized teams, responsible for the planning, execution and monitoring of specific treatments, perfected by the constant development and incorporation of new technologies.

In addition to regular rehabilitation treatments, the Re-AbilityLab Laboratory of Instrumental Skills and Practical Life, which is a set of interventions for the development and improvement of practical life skills, stands out.

The main deficiencies treated by the IMRea are due to brain injury, spinal cord injury, amputations, neurodegenerative diseases, post-Covid complications, in addition to congenital malformations of the upper and/or lower limbs, cerebral palsy and/or delayed neuropsychomotor development, hemophilia, Down and disabling benign pain.

In 2020, the IMRea also added teleservice (51,809, from March to December), a distance service modality, to patients in a Rehabilitation program. This is an extension of the care provided by the multiprofessional team already provided by the IMRea team to the patient and caregiver, with the aim of monitoring home therapeutic guidelines and promoting continuity of Rehabilitation care for patients with travel restrictions due to the pandemic. In addition, 48 videos were made available on YouTube and 2 Lives.

In 2020, the IMRea received the Abril & DASA Medical Innovation Award in the Treatment Innovation Category, with the project "Cicloergometer Vida Inteligente and the digital transformation of rehabilitation". It is the development of a prototype to exercise the patient, even though they are unconscious, aiming at improving respiratory and cardiac functions. This project is of paramount importance for patients with post-Covid-19 complications.

The IMRea currently comprises five Units, distributed throughout the Greater São Paulo: IMRea-Vila Mariana, IMRea-Umarizal, IMRea-Lapa, IMRea-Clínicas and IMRea Morumbi (IRLM - page 50).

IMRea's main office is located in Vila Mariana, south side of São Paulo, and assists, on average, 173 patients per day, offering specialized exams and treatments with high-end equipment, including Robotics Labs, Neuromodulation (inaugurated in 2013) and the Assistive Technology Lab. The admissions ward has adapted rooms to enable patients and their caretakers to a humanized and comfortable sheltering environment.

The assistance team consists of physiatrists, dental surgeons, social workers, psychologists, physiotherapists, occupational therapists, nurses, speech therapists, nutritionists, physical education professionals, rehabilitation technicians, rehabilitation engineers, among other professionals, in addition to specialists for the rear in the areas of cardiology, urology, neurology, infectology, radiology, psychiatry and general practice.

In the south side, in the district of Campo Limpo, is located the IMRea Umarizal, inaugurated in 2001. It assists approximately 64 patients every day within its several rehabilitation programs. It offers high-end technology, such as the Robotics and the Assistive Technology Labs, which aims to develop the patients' maximum potential. It provides specialized ambulatories, such as Neuromuscular Blockage, Acupuncture, Dentistry, and the labs specialized in Electroneuromyography and Isokinetic evaluation. After the conclusion of the rehabilitation program, it is possible to participate in physical conditioning activities to improve physical abilities, and introduction to adaptive sports.

In the west side of the city, **IMRea Lapa**, inaugurated in 2007, currently attends around **123 patients per day** within its several rehabilitation programs. It offers specialized outpatient facilities, such as hemophilia and Integral Care for Down Syndrome, which assists patients from zero to 18 years of age, with distinguished programs according to the age profile and different development phases.

Specifically in this Unit, in addition to the regular rehabilitation treatments, the Laboratory of

Instrumental Skills and Practical Life (Re-AbilityLab) stands out, which is a set of interventions for the development and improvement of practical life skills. In these laboratories, the activities are carried out by a multidisciplinary team and specialized technicians, who combine education techniques, art, sport and accessible leisure and culture concepts, enabling their active participation in society and full inclusion in the community in which they live. Activities and guidance are offered not only for people with disabilities, but also for their entire support network: their caregivers, family, friends, students in the community, health and education professionals, among others.

The treatment in this IMRea aims to strengthen the entire rehabilitation process. For each stage of life, the acquisition of new skills is required to face different challenges; therefore, the IMRea offers the possibility of living new experiences, returning to the labs whenever you feel the need to train new skills. In this Unit also take place the activities of the Wheelchair Technology Center and of the management and development associated to the provision of orthoses, prosthesis and auxiliary means of locomotion for patients in rehabilitation programs.

Inaugurated in 2008, **IMRea Clínicas** is located within the HCFMUSP block and assists, through its several rehabilitation programs, approximately **51 people a day**, which are referred by the community, Basic Health Units, Specialized Outpatient Ambulatories, and HCFMUSP as well.

It attends the higher complexity cases, such as brain lesions, cerebral paralysis and/or delayed neuropsychomotor development, neurodegenerative diseases and musculoskeletal pathologies, in addition to relying on the specialized ambulatory for Neuromuscular Blockade and the specialized Electroneuromyography lab.

Due to the Covid-19 Pandemic, in 2020, the quantity of outpatient assistances of **IMRea** (with exception to IRLM (page 50), including medical and dentist appointments, multiprofessional assistances and exams totaled **164,695**, according to the chart below:

PHYSICAL MEDICINE AND REHABILITATION INSTITUTE - ASSISTANCES IN 2020						
Unit	Multi-profissional Assistances	Medical / Dental / SSO Assistances	Exams	Total		
Vila Mariana	65,467	9,415	2,477	77,359		
Lapa	37,210	1,351	00	38,561		
Umarizal	24,967	3,497	30	28,494		
Clínicas	17,068	3,135	78	20,281		
Total	144,712	17,398	2,585	164,695		

Suzano Auxiliary Hospital

Institutional Data:

Foundation: 1960

Constructed area: 20.9 thousand m²

Collaborators: 450
Accreditations: ONA I

Care Indicators:

Admissions: 238

Outpatient appointments: 107

Imaging exams: 802 Lab exams: 577

The **Suzano Auxiliary Hospital (HAS)** focuses its assistance on long-term patients. This specialty makes the institution a fundamental arm of the Hospital das Clínicas in the Greater São Paulo area.



Façade of the Suzano Auxiliary Hospital

The multiprofessional teams that attend the unit receive adults and children at different stages of illness. The objective is to restore the patient's

functional capacity and reduce the impact of several sequelae.

Thanks to the reforms in the hospital, 2019 marks its expansion to increase the capacity of care and the amount of diagnostic and therapeutic resources available.

In addition, management and monitoring tools for the Health and Social Assistance Network were implemented, aimed at discharging patients on medical discharge with social restrictions, both for vulnerability and for judicial aspects.

Due to the quarantine imposed by Covid-19, some more aggravated mental health conditions and cases of domestic violence and illness of health professionals emerged. The mental health professionals (members of the Psychological Assistance Program for the population of Suzano (page 54), then, found new emergency demands: face-to-face service for psychological assistance for the employees impacted by the pressure of the Covid-19; psychological support by telephone for the population and for the workers impacted by Pandemic; maintenance of individual services and provision of individualized care for the most serious cases that were treated in a group; psychological scheduling for families bereaved by Covid-19; telephone monitoring of cases that were attended in person, and psychosocial support for welcoming people on the street in the context of Covid-19.

In 2020, in joint action with FFM, the HAS carried out **1,724** assistance procedures.

Cotoxó Auxiliary Hospital

The Cotoxó Auxiliary Hospital (HAC) was created in 1971, with the objective of supporting the HCFMUSP Institutes.

Located in the Pompeia neighborhood, in São Paulo, the hospital offers specialized medical-hospital assistance to patients in intermediate care, through an integrated multi-professional team.

Currently, the HAC is under construction to expand its installed capacity. The renovation, which shall be concluded in the coming years, will enable the introduction of modern resources in diagnostic and therapeutic procedures, in addition to new spaces dedicated to education and research in the health sector and the future Institute for Alcohol and Drugs.

LIMs

Created in 1975, in FMUSP, and incorporated to HCFMUSP in 1977, the **Medical Investigation Labs (LIMs)** are the branch for scientific research development. The LIMs standardize new technique and diagnostic methods, promote training in basic and applied research and have courses in the Medical and health fields. In addition, they work as

a field for education, development and training of health professionals and higher education level students.

The labs have 66 units and 230 research groups that work in the various fields of health sciences, developing basic and applied research, as well as diagnostic methods.

The LIMs do not have their own building and the Laboratory Units are distributed among the different buildings of the FM/HCFMUSP System, Oscar Freire Institute and IMT-FMUSP, remaining in a greater concentration (42 Units) allocated in the FMUSP Central Building.

Its scientific production is developed in the Institutes and represents 7.3% of Brazilian publications and 3.3% of Latin American publications in the health and biomedical sciences field, according to data from the Science and Technology Department.

With the growth of the scientific production of the FM/HCFMUSP system, in 2014 the Observatory of Intellectual Production (OPI) was launched to monitor and organize the scientific production of researchers linked to the institution, which developed its own database that gathers all scientific production from the FM/HCFMUSP system since 2011.

It is possible to consult the published works of the last eight years produced by researchers linked to the FM/HCFMUSP system through the FMUSP library website. Availability of the material in its entirety may vary. The OPI seeks to facilitate access to the full text, on the other hand, in keeping with copyright law and copyright, restricts or prohibits access to what is not allowed.

The FM-HCFMUSP System has a network of multi-user equipment considered a national model. There are currently 42 centers, which offer equipment and services to researchers from the System and external, national and international (premium.hc.fm.usp.br). More than USD 20 million has already been invested in the construction of this network. The financing for the acquisition of this equipment is made through development agencies and administration bodies, among others. Among the equipment available is the 7 Tesla Resonance Imaging Platform in the Autopsy Room, where the minimally invasive autopsies of Covid-19 cases are being performed. Among the experimental models available are the zebra fish and the Animal ICU.

Part of the financial resources from the #HCComVida action were used to subsidize 16 research projects related to the Corona, Sars, Cov, and covid-19 virus family, selected in the "Call for Proposal Submission no. 01/2020 - Research in the Covid-19 FMUSP-HC System", which counted on the active participation of LIM researchers. Its objective was to support research projects by researchers linked to the FM-HCFMUSP System that contributed to the knowledge about the SARS-CoV-2 virus, causative agente of Covid-19 and its effects and impacts on human health and society.

Other Health Units

FFM and HCFMUSP, in joint action, also develop actions focused on improving other Units and Health Centers, equally dedicated to the gratuitous assistance of SUS patients.

House of AIDS

Installed in the Pinheiros neighborhood, west zone of the capital of São Paulo, the Service of Extension to the Attendance of HIV/AIDS Patients – Casa da Aids (SEAP), of the Division of Infectious and Parasitic Diseases of the HCFMUSP is an outpatient and day hospital for teaching, research and interdisciplinary assistance to adult patients living with the human immunodeficiency virus.

Inaugurated in 1994, it develops teaching, research and assistance to patients with HIV/AIDS and has been working together with FFM since 2004.

Through agreements signed between FFM, SES-SP and HCFMUSP, approximately 3,300 adult patients are in care. In February 2019, an additional 520 patients on HIV pre-exposure prophylaxis (PrEP) were added. Comprehensive care is in charge of a multidisciplinary team that includes an infectious disease physician, gynecologist, psychiatrist, nurses, pharmacists, psychologists, social workers, nutritionist, physical educators, dentist and technical and administrative support.

SEAP is the first public health system in the State of São Paulo aimed at people with HIV and started to incorporate, in an innovative way, sports practice in the proposal of comprehensive care for HIV patients, to minimize the effects of diseases associated with HIV. Chronic AIDS and the use of antiretroviral drugs, with improved quality of life and adherence to treatment.

HIV prevention and diagnosis actions, testing for the virus and other infections, such as hepatitis and syphilis, which can be sexually transmitted, are also carried out.

In February 2020, **Sesc 24 de Maio** invited the Casa da AIDS to carry out a testing task force for the application of rapid HIV and syphilis tests and guidelines on the prevention and treatment of sexually transmitted infections. The rapid test consists of collecting secretion from the oral mucosa, with a cotton swab between the gum and lip, and the result is obtained in 30 minutes. In five

hours of activities, 190 HIV tests were performed and none of them were positive. Regarding the syphilis test, 9 reagent results were identified in 184 applied.



Casa da Aids team in action at Sesc 24 de Maio

Regarding medical consultations, elective psychology, nutrition and dentistry appointments, carried out during the Covid-19 pandemic, the guidelines contained in the protocol established by the HCFMUSP were followed, for assessing the clinical situation of the patient using the electronic medical record and telephone contact with patient made by the doctor for guidance on health status and definition of the next return. The mental health team, on the other hand, maintained the psychological duty to receive patients in acute crisis, as well as the dentist, for emergency dental care.

The provision of antiretroviral, antiviral and complementary drugs, in turn, went from 30 days to 90, in general, and 120 days, to patients with reduced mobility and the elderly. In order to continue these actions, in 2020, an Addendum to the Agreement was signed in 2016, between HCFMUSP, FFM and SES-SP.

In 2020, through FFM, 11,650 medical consultations and 21,418 visits by the multidisciplinary team were carried out, totaling **33,068 outpatient procedures**.

In 2020, 1,960 HIV tests, as well as 1,452 tests for syphilis and 904 for viral hepatitis, were applied.

Institute for Childhood Cancer Treatment – ITACI

The current Onco Hematology Service (**SOH**) of HCFMUSP's ICr, known as ITACI, serves children and adolescents, from 0 to 19 years old, with oncohematological diseases and started its activities on 12/17/2002.

FFM and HCFMUSP, through agreements made with SES-SP, jointly develop ICr's ITACI activities, a reference in assisting children with cancer. In order to continue these actions, in 2020, an Addendum to the Agreement was signed, signed in 2016, between HCFMUSP and FFM and SES-SP.

As a result of the Covid-19 pandemic, in 2020, it was necessary to suspend all cultural and social actions with external volunteering and supporters. Thus, the schedules were carried out individually with the patients, in order to respect the guidelines of the CCIH.

During the pandemic, the singer Samuel Rosa and Skank held two Lives on behalf of ITACI.

In December, ITACI participated in the "December Orange Campaign", carried out by the Melanoma Brasil Institute, when 1,500 sunscreens were distributed to patients, companions and employees.

Approximately 25,000 fabric masks were received and distributed to all employees of Instituto da Criança, patients and companions, in addition to hand sanitizer and moisturizing cream, distributed to employees.



Live Show – Samuel Rosa and Skank

In 2020, ITACI achieved the ONA 3 "Accredited with Excellence" certification.

In 2020 were performed: **13,708** medical appointments **13,303** multiprofissional appointments; **48** Hematopoietic Stem Cell Transplants, **15** Autologists, **14** Related Allogenic and **19** Non-Related Allogenic; and **4,823** ambulatory chemotherapy sessions, totaling **31,882 procedures.**

Butantã School Health Center

The Samuel Barnsley Pessoa School Health Center (CSEB) is a faculty-health care unit of FMUSP, under the responsibility of Departments of Preventive Medicine, Pediatrics, Medical Clinic, and Speech Therapy, Physiotherapy and Occupation Therapy. The center is dedicated to education and research in the area of primary attention for undergrad students in the field of health, medicine and multiprofessional residency, in addition to the

formation of technical level professionals and others already working in services.

It is responsible for the assistance in an area of 25 thousand residents in the Butantã region, encompassing two discontinuous nucleus, with socioeconomic, demographic, health conditions and susceptibility to disease heterogeneity. In 2020, via FFM, CSEB carried out **2,543 outpatient procedures.**

Várzea do Carmo NGA

By means of Agreements with SES-SP, FFM and HCFMUSP, via the Clinical Gastroenterology Service, they are responsible for the Várzea do Carmo Endoscopy and Hepatology Service of the Assistance Management Nucleus (NGA) Várzea do Carmo, a specialty outpatient facility of SES-SP that operates in central São Paulo.

The service was created to fulfill a gap in secondary patient care by SUS, solving the majority of cases and referring the most complex cases for specialized treatment in HCFMUSP.

Várzea do Carmo ambulatory is a reference for 39 municipalities of the Greater São Paulo. The cases are referred from primary attention services, such as AMAs, UBSs and emergency Hospitals.

Aiming for the continuity of these actions, initiated in 2010, an Agreement was signed between SES-SP, HCFMUSP and FFM in 2018.

In 2020, FFM and HCFMUSP, in joint action, carried out **13,400** assistances, 6,723 exams and 6,677 appointments.

Emílio Ribas Institute

The **Emílio Ribas Infectology Institute (IIER)** was one of the first Public Health institutions in São Paulo, inaugurated on January 8th, 1880.

IIER has a marked participation as a major health care, diagnostic, infectious disease treatment, and epidemics control center in the State of São Paulo and Brazil.

In parallel to health care activity, it is a reference center for education and research, contributing towards the training of health professionals.

In 2014, an agreement was signed between SES-SP, FFM and HCFMUSP, with aim to execute the IIER Management, Actions and Services Operationalization Project, which was terminated in that same year. In 2016 and 2017, new agreements were signed with SES-SP, aiming at the execution, of lab services by the ICHC Central Lab.

In 2020, a new agreement was signed, guaranteeing the continuity of these lab services.

USP University Hospital

The University Hospital (HU) has the purpose of promoting education, research and extension of services to the community. In order to achieve their objectives, HU undertakes to: stimulate and promote education and research, providing them with a field of activities and development; developing disease prevention and treatment assistance activities, as well as health protection and recovery; and collaborate with education institutions in the development of assistance, educational and operational technologies.

At the end of 2018, an agreement was signed between SES-SP, FFM and HCFMUSP for assistance improvements at the USP University Hospital. The main pillar of this agreement is the hiring of doctors via FFM, for the restructuring of teams in the main areas of the HU-USP. The Medical Assistance Management team of the Clinical Directorate is also

involved in the construction of new care flows and processes, taking to the University Hospital initiatives that have already been validated at the HCFMUSP. In this way, the path is traced to optimize the hospital's productivity and resume teaching excellence, which has always been a hallmark of the institution.

In March / 2020, with the use of the 900 beds of the ICHC exclusively for the care of coronavirus cases, the care of Ophthalmology, Otorhinolaryngology and Obstetrics patients from that Institute was transferred to the HU-USP. However, cases of pregnant women with suspected Covid-19 and newborns with the coronavírus remain at the ICHC.

In 2020, through FFM, 2,898 surgeries and 3,707 pediatric emergency services were performed, totaling **6,605** assistance procedures.

Management Contracts

Based on the qualification of FFM as a Social Health Organization (OSS), Management Contracts were signed, with the aim of managing ICESP and IRLM activities

The Cancer Institute of the State of São Paulo (ICESP) and the Lucy Montoro Rehabilitation Institute (IRLM) base their management on the Social Health Organization (OSS) model through FFM.

In 2008, the Fundação Faculdade de Medicina (FFM) came to be recognized as a Social Health Organization (OSS), a private non-profit legal entity, whose activities are directed to education, scientific research, technological development, environmental protection and preservation, culture and/or health, receiving this title from the Public Administration and authorized to sign with them management contracts to perform non-exclusive services of the State.

Thus, it became responsible for the management of the ICESP and the IRLM.

Annually, more than 211 thousand medical consultations are held at ICESP, more than 41 thousand chemotherapy sessions and 43 thousand radiotherapy sessions, in addition to more than 5 thousand surgeries. Each year, the ICESP receives evaluations from the population and is always among the best evaluated.

Aimed at the care of patients in rehabilitation, interdisciplinarity is a hallmark of the **IRLM**, whose team is formed by physiatrists, physiotherapists, occupational therapists, social workers, psychologists, nurses, nutritionists, speech therapists, music therapists and physical educators.

Management Contract of the Cancer Institute of the State of São Paulo - ICESP

The Cancer Institute of the State of São Paulo - Octavio Frias de Oliveira (ICESP) is one of the units of the Hospital das Clínicas of the Faculty of Medicine of the University of São Paulo (HCFMUSP), with exclusive care for patients of the SUS (Unified Health System).

Inaugurated in 2008, ICESP has consolidated itself as a reference in cancer care in the country, providing assistance to approximately 116 thousand patients in a humanized manner, with high technical quality, developing research and teaching activities in all areas related to oncology.

With the offer of 34 medical specialties and all multi-professional categories, the Institute offers unparalleled care in the public SUS network, with access to qualified care and individualized assistance, from outpatient consultations to the outcome of cancer treatment through surgery, chemotherapy, radiotherapy, diagnostic and

therapeutic support services, intensive care, rehabilitation and palliative care, with all the resources for comprehensive and specialized treatment.

In addition to the Headquarters Unit located at Avenida Doutor Arnaldo, in São Paulo, the Institute has an Outpatient Unit in the municipality of Osasco and a specialized outpatient pharmacy, located at Rua da Consolação, which enables comprehensive cancer care with the supply of all medications of high cost (oral chemotherapy and hormone therapy) and nutritional supplements.

In terms of representativeness in SUS oncology care, ICESP has 43 thousand active patients, has the highest output of hospital visits among specialized hospitals, in addition to performing 10% of the total chemotherapy and the highest number of medical consultations among specialized hospitals in the State of São Paulo.















For its commitment to Quality and Safety, ICESP is accredited by the National Accreditation Organization - ONA at level 1 (2010) and 2 (2011), by the Joint Commission International - JCI (2014 - 2017 - 2020) and boasts a Friend of the Elderly seal - adhesion and full level (2016). The Institute's rehabilitation service is also accredited by the

Commission on Accreditation of Rehabilitation Facilities – CARF (2015 - 2017 - 2020) and the laboratories by the Clinical Laboratory Accreditation Program – PALC.

The figures reflect an expressive and highly representative assistance production, as shown in the two tables below:

SUMMARY OF ICESP ASSISTANCE IN 2020 – DR. ARNALDO UNIT			
Procedures Performed	Qty.		
Medical appointments	202,004		
Chemotherapy sessions	37,633		
Radiotherapy sessions	42,707		
Surgeries	5,873		
Multiprofessional appointments and specialized therapies	105,390		
Hospital discharges	15,689		
Urgent assistance	22,787		
Total	432,083		

SUMMARY OF ICESP ASSISTANCE IN 2020 – OSASCO UNIT				
Procedures Performed	Qty.			
Medical appointments				
Multiprofessional appointments				
Chemotherapy sessions	4,070			
Radiotherapy sessions				
Total	20,996			

In 2020, HCFMUSP was mobilized to face the pandemic caused by the new coronavirus, Covid-19. The response occurred, among other actions, through the full allocation of one of its units, the Central Institute (ICHC), for the care of patients with Covid-19.

The patients and specialties originally treated at the ICHC were referred to the other Institutes of the HCFMUSP Complex, and as of March 2020, ICESP provided 52 nursing beds and the necessary structure for surgeries, intensive care and urgent care.

ICESP has promoted a series of actions and measures of protection and information to assist in to the response to the coronavirus pandemic. The training of the courses "Placement and Withdrawal of Vestments in Assistance to Suspected or Confirmed Patients from Covid-19" and "Intubation of Patients with Covid-19", which started on March 27, is coordinated by the Education and Training Center in Oncology (CETO) of the Institute. In three weeks, 85 health professionals, such as contracted doctors, medical residents and tutors, participated in the training.

The classes lasted approximately 1 hour and 30 minutes each and covered important topics such as placing and removing the garments in a safe and effective manner, as well as guidelines on how to intubate the patient without the employee being at risk of contamination.

Other measures taken to mitigate the impact of the pandemic on cancer treatments are highlighted:

- Adoption of non-face-to-face consultations for monitoring patients in follow-up (teleconsultation) – for patients undergoing active treatment (chemotherapy, radiotherapy or surgical programming), face-to-face visits were maintained;
- Expansion of services: "Alô Enfermeiro", "Alô Nutri" and "Alô Farmacêutico";
- Review of protocols for clinical cancer treatments (hypofractionation and use of oral chemotherapy drugs that prevent excessive visits to the service);
- Review of the surgical schedule, maintaining only procedures that required more brevity and that were considered essential for cancer treatment;
- Pre-surgical testing of patients on schedule for elective procedures;
- Definition of flows for patients with respiratory symptoms;
- Intense review of processes and flows at the Oncological Intercurrence Service Center;
- Formation of the Unusual Health Conditions Committee for strategic alignment of actions to ensure quality and safety in the care of patients and employees;

- Availability in the Virtual Learning Environment (VLE) of the course "Control Measures: suspected and confirmed cases of coronavirus (Covid-19)";
- Availability of the "Coronavirus Alert" icon, so that employees had access to information, protocols and guidelines on the virus, prevention measures, care protocols and details on the use of PPE in ICESP facilities;
- Implementation of virtual visits for family members of isolated patients (suspected or confirmed).

Despite all the adversities brought about by the pandemic, the Institute also carried out several actions and went through important moments:

- Satisfaction Survey: A new methodology, the NPS (Net Promoter Score), has been implemented, a survey through the application of a questionnaire by e-mail. Based on this new tool, which measures the recommendation level of patients and indicates that values above 75% are considered a level of excellence, the global average of ICESP's NPS in 2020 was 91.7%.
- The Outpatient Pharmacy completed 10 years in this year of 2020, with more than 1 million consultations performed, with 500 to 600 patients attended per day. There are 19 thousand prescriptions per month and 219 types of medicines are distributed.
- Electronic check of bedside medical prescription implemented in Intensive Care Units on the 9th and 10th floors, increasing safety and agility in nursing care and improving the record of patients' medical records.
- The Oncology Education and Training Center (CETO) held the II Educational Games Week, which aimed to remember the main protocols, institutional policies, assistance processes and guidelines of the institution through recreational activities.
- ICESP's Rehabilitation Service was reaccredited by the Commission on Acreditation of Rehabilitation Facilities (CARF), the most renowned international accreditation in rehabilitation, recognized worldwide for its high levels of quality requirements.
- In 2020, ICESP was granted, for the third time, the accreditation seal of the Joint Commission

International, an international hospital certification that attests to its excellence in the care and services offered to the population.



Electronic check of bedside medical prescription, implemented in Intensive Care Units

 Beginning of the renovation work on the façade of the Av. Doutor Arnaldo building to replace the tablets that currently cover the central tower with aluminum composite plates, in order to protect the support structures and seals against natural events (rain, pollution and temperature variations) and wear and tear due to daily use.

In 2020, ICESP promoted several humanization actions, among which the following stand out:

- Green July Campaign Digital awareness campaigns on head and neck cancer were carried out;
- Photographic Project In order to humanize patients during the pandemic, professionals working at the Oncological Intercurrence Care Center, Outpatient Clinic, ICU (9th floor) and Inpatient Unit (16th floor) were given new identification badges, who show their faces without the personal protective equipment used for assistance;
- Human Rights and Diversity Seal The REMAMA program received this seal from the Municipal Secretariat for Human Rights and Citizenship of São Paulo in the "Women" category. The Seal awards Institutions with the best practices for promoting human rights and valuing diversity.

Lucy Montoro Rehabilitation Institute Management Contract

The Lucy Montoro Rehabilitation Institute (IRLM), located in the neighborhood of Morumbi, was designed with the purpose of offering more complex care for people with disabilities through integral and integrated rehabilitation treatment, with technological structure and qualified personnel in diagnostic and therapeutic resources.

Health care promoted by IRLM has a multiprofessional and interdisciplinary character, specialized in the Medicine and Rehabilitation field. They seek to promote the treatment of the limitation caused by the disability, with the objective of reaching the highest level of physical and functional independence of the patient, with the aim of his full rehabilitation and social inclusion, considering the characteristics and degree of disability presented.

The rehabilitation programs carried out encompass the set of assistances offered to the patient since his/her admission to the hospital until their discharge, according to their disability, including all assistances and procedures required to obtain or complete the diagnosis and therapies required for the treatment.

Rehabilitation treatments are done in outpatient and admission programs, exclusively via SUS, which include: multiprofessional screening, medical ambulatory (evaluations and returns), rehabilitation program, orientation groups, staff meetings, educational activities for patients and technical caretakers, curative groups, ambulatory and neurochemical blockage ambulatory. It also includes home visits and engagement with community resources, when required. For such, it counts on a staff formed mainly by: physiatrists; consultant physicians in the specialties of medical clinic, cardiology, neurology and urology; social workers; psychologists; physiotherapists; occupational therapists; speech therapists; nursing professionals; nutritionists,

physical educators, in addition to technicians in orthoses and prosthesis and in therapeutic workshops.

The medical technologies for diagnostic and therapeutic support that help to sustain the Rehabilitation Programs offered at the IRLM are: virtual reality, urodynamics, robotics for upper and lower limbs, vesical biofeedback, balance system, cycloergometer with functional electrical stimulation, passive cycloergometer for upper limbs, ergometric bicycle, exoskeleton associated to virtual reality, game therapy, 3d digitizer, l.a.s.a.r posture (laser assisted static alignment reference), ultrasound, bone densitometry, equipment for equine therapy simulation, electrical bioimpedance and therapeutic pool.

For the rehabilitation programs in the admission, the IRLM is a benchamark in the State of São Paulo, sharing with the Institute of Physical Medicine and Rehabilitation of the Hospital das Clínicas of the Faculty of Medicine of the University of São Paulo the position of the only health equipment in the State to offer this Service Modeling. Patients with acquired brain lesions, bone marrow lesions and other paralysis were treated.

In the ambulatory, the rehabilitation programs are focused mainly on the Child macroprocess (up to 6 years and 11 months), including physical disabilities resulting from cerebral paralysis, myelomeningocele, obstetric paralysis and congenital malformations of the limbs. Upon specific demands related to the needs of patients that have been submitted to the rehabilitation program in an Admission regime and the processes of education and research, assistance for acquired brain injuries, spinal cord injuries, amputations and other paralysis was also offered.

IRLM's assistance production in 2020 was as follows:

IRLM'S ASSISTANCE PRODUCTION - 2020				
Description	Quantity			
Hospital Internment	446			
Ambulatory Activity – Medical Specialties	5,156			
Ambulatory Activity – Non-Medical Specialties	20,658			
Provision of Orthoses, Prosthetics and Means of Locomotion	(*) 3,173			
Total Geral	26,260			

(*) Only informative quantity and not considered in the Total Assistance Production

The IRLM also promotes ongoing training for health professionals in the area of rehabilitation and carries out activities to contribute to the support and development of teaching and research in the area of disabilities.

The IRLM supports the development of the RRLM. offering technical assistance administrative support, in addition to sharing structures and systems that will assist the organization and coordination of this Network. This support is based mainly on Communication Ombudsman, Information Advisory, Central Technology, Quality Management Humanization of Assistance, Orthopedic Workshop, Wheelchair Technology Center, Bioengineering Laboratory, Teaching, Research, Regulation and Professional Qualification Programs that include, among other actions, training, monitoring and development of specialized activities whenever necessary to ensure the modeling of services, work routines and technical improvements, ensuring sustainability to the RRLM Program.

Since March 13, 2020, when there was the first meeting of the HCFMUSP Crisis Committee on the new coronavirus, the IRLM started the first measures to deal with the disease.

All visits by the Institute are elective and, therefore, outpatients in the risk group for the new coronavirus were discharged. Patients under 14 or over 60 years of age were automatically removed from face-to-face activities as of March 16.

Patients between 15 and 59 years old underwent individual medical evaluations, considering comorbidities that could lead to complications or worsen the evolution of the condition, in case of contamination by Covid-19.

In order for patients to receive medical assistance, the Institute developed a system of call centers, called "Remote Monitoring". The multidisciplinary team was organized with the Directorates of Services and the Clinical Staff to assist all patients of the IRLM by telephone. The teams started to contact the patients undergoing treatment weekly to continue the follow-up.

Scheduled medical appointments have not been canceled. Collaborators contacted patients to find out if there was any urgency, offering the possibility of postponement. In cases where the patient needed some report or prescription, for example, they or the caregiver can withdraw it at the unit's reception. Every procedure is accompanied by guidelines for the care of locomotion in times of a pandemic and, if the person shows symptoms, they can send another person to fetch it. Inpatients who are part of the risk group were also discharged to perform isolation at home. In the case of patients who are not at risk,

the option was given to continue hospitalization or go home. Most preferred to self-isolate at home and are receiving care over the phone.

For outpatient and hospitalization actions, caregivers were also considered, as they received guidance on the new coronavirus and are monitored remotely by the consultations. In the case of the need for technical assistance with prostheses or motor assistance equipment, there is also a call center.

The Institute is not admitting new cases, except for the HCFMUSP transfer and reception program, which relocated all patients from the Central Institute (IC) who do not show Covid-19 symptoms to other Institutes of the Complex.

The IRLM admitted inpatients from the HCFMUSP with a profile consistent with the offer of rehabilitation of the unit to be discharged faster and more safely, in an attempt to reduce the patient's hospital time. These hospitalizations are short, lasting two to three weeks. Patients and their caregivers are trained to be more independent and functional at home, with the multidisciplinary team guiding them to avoid secondary damage.

Employees at all units are working in accordance with safety measures. Covid-19 suspected or confirmed employees, on the other hand, were removed and, after the quarantine period, those who had no serious conditions returned to work.



Image of videos produced by RRLM to guide patients who are self-isolating at home

The RRLM also made videos available on You-Tube for patients, both on the Institution's website and by e-mail. The videos contain exercises to be done at home, on physical and mental health. The channel aims to take some self-care guides to the patient, designed for the development of autonomy.

For people with physical disabilities who are not RRLM patients, contact was made available through the WhatsApp app to assist them in any doubts about their health status. The nursing team makes the first contact and, right after the screening, many questions are answered, and it is necessary to go through the medical team in call center approximately only one third of the cases.

On October 19, 2020, the IRLM participated, once again, in the CARF re-accreditation process, considered the most important of the international accreditations in rehab and recognized worldwide for its strict requirements. Due to the Coronavirus pandemic, the evaluation process took place in a

totally different way: online, with live transmission to all units. In November 2020, once again, the IRLM was accredited by the CARF for three years, confirming its commitment to excellence in personcentered care and management.



SOCIAL WORK ACTIONS

FFM develops, together with HCFMUSP, several social assistance projects, aimed at the poorest strata of the population. Due to the Covid-19 pandemic, some actions, such as the Scientific Flag Program [Programa Bandeira Científica], had to be postponed.

Psychological Assistance to the Suzano population

The tragedy that struck the State School Professor Raul Brasil, located in the municipality of Suzano, in Greater São Paulo, in March 2019, traumatized the local population. According to the SES, there was a significant increase in anxiety attacks, compulsive conditions resulting from anxiety disorders, in addition to the manifestation of psychosomatic symptoms among the population. A balance sheet by the Suzano Municipal Health Secretariat reported that more than 1,100 people were affected, in some way, by the tragedy and sought care at the Basic Health Units or Psychosocial Care Centers (CAPS) in the municipality.

With an estimated population of 294 thousand inhabitants, the municipality of the Alto Tietê region has seen the demand for health services grow exponentially.

To meet this demand, SES, in partnership with the HCFMUSP and FFM, created an emergency care plan with the hiring of 47 psychologists to work in UBSs, CAPs and state schools in the region. The project aimed to provide welcoming and qualified listening to the population, offering assistance in brief individual and group therapy and guidance to parents, caregivers and educators.

Due to the guarantine imposed by Covid-19, some more aggravated mental health conditions and cases of domestic violence and illness of health professionals emerged. The mental health professionals then found new emergency demands: on-call psychological assistance for the employees impacted by pressure from the Covid-19 service; oncall psychological support for the population and for the employees impacted by the Pandemic; maintenance of individual services and provision of individualized care for the most serious cases that were treated in a group; psychological scheduling for families bereaved by Covid-19; telephone monitoring of cases that were attended in person; and psychosocial support for welcoming homeless people in the context of Covid-19.

From January to September 2020, **19,135** assistances were made.

These activities were finished in 2020.

Protocol for the Treatment of Labiopalatine Cleft Patients

The Cranial-Facial Surgery Protocol for Treatment of Patients with Labiopalatine Clefts, developed by the HCFMUSP Discipline of Plastic Surgeries and Burns, was enabled via the Smile Train donations, through FFM, begun in 2008, benefiting labiopalatine cleft patients who need reconstruction of lips, nose, alveolus and palate defects, and their repercussions in speech and facial growth.

In 2020, due to the Covid-19 Pandemic, 37 patients were treated in **37 surgical procedures**,

distributed among primary cheiloplasties, primary palatoplasties and other secondary procedures.

In addition to the surgeries, **outpatient visits** (which remained suspended from 03/23 to 08/31/2020) were performed, around 25 patients per week, making a total of about **563 patients seen** per year.

In 2020, a total of **230 consultations** were carried out by **Speech Therapy**, totaling, therefore, **830 procedures** (surgical, outpatient and Speech Therapy).

Students Financial Support Program - AFINAL

Since 2007, the Students Financial Support Program (AFINAL) financially aids undergrad FMUSP students, in order to contribute to a better performance in their studies.

A commission formed by FMUSP, HCFMUSP and FFM representatives gathers on a monthly basis, or extraordinarily if so required, to make all decisions and discuss new ways to raise funds and other subjects.

Family income and the necessity profile of freshman and seniors are assessed, in parallel

to USP's inclusion program, focused mainly on students from public schools and who live at far from the campus.

The counterparts required are that the student be involved in some academic project and have not failed any classes.

In 2020, with the financial support from FFM, FMUSP, AAAFMUSP, HCFMUSP Superintendency, Zerbini Foundation, and a donation from the private sector, **99 scholarships** were granted.

Assistance in the Emergency Care Center for Reconstructive Microsurgery and Hand Surgery of HCFMUSP's IOT (CEMIM)

The creation of HCFMUSP's IOT CENIM is owed to the high growth in the number of patients bearing high complexity traumas. The phenomena of motorcycle accidents, urban violence, chaotic traffic and speeding have contributed to this situation.

Since the 1980s, multiple publications have shown scientific evidences of the importance of treatment in the trauma's acute phase. The proper primary treatment promotes better results, reduces the rate of complications, the incidence of infection,

the hospitalization period and the health-related costs, in addition to reducing mortality and the amputation rates associated to the trauma.

With aim to continue these actions, which started in 2014, in 2020, an Addendum to the Agreement was signed between HCFMUSP, FFM and SES-SP, in effect from 2017 to 2019.

In 2020 a total of **651** surgeries, in addition to **5,826** outpatient assistances, totaling **6,477** procedures.

Air transport for the organ capturing team for liver and pancreas transplants

With aim to benefit HCFMUSP patients in a waiting list for digestive system organ transplants, private airway transport services are used for the HCFMUSP Transplant Division teams for Liver, Pancreas and Digestive System Organs, upon the removal of organs for transplants outside the São Paulo capital city.

The targets of this initiative, developed in joint action by FFM and HCFMUSP, are the growth in the number of transplant collections and the reduction

of the average organ wait list period, ensuring quality in the conditions of cold ischemia recommended for transport.

Aiming for the continuity of these actions, initiated in 2014, an Agreement was signed between SES-SP, HCFMUSP and FFM in 2018, whose actions continued in 2020, when six air transports were carried out, to perform capturing outside the São Paulo capital area.

These activities were finished in 2020.

ICESP Rehabilitation Center

IMRea, beneficiary of a donation from the public civil suit authored by the Labor Prosecutor's Office against a private company, carried out in replacement of a collective moral damage reparation, enabled in 2008 the installations of the ICESP Rehabilitation Center, inaugurated on 09/22/2008.

ICESP's Rehabilitation Service is focused in attending disabled persons, whether transient or definitive, with aim to optimize their functional

potential, within the physical, psychological and social participation scopes.

Rehabilitation is focused in stimulating functional and independence potential, but it also seeks to aid patients while adapting to their limitations, in order to live in the fullest and most independent manner possible. For such, it relies on physiatrists, physiotherapist, speech therapist, neuropsychologists, occupational therapists, physicians, rehabilitation nurses and physical educators.

The Rehab Center became a pioneer in the field of oncology in Latin America to attain the Commission on Accreditation of Rehabilitation Facilities (CARF) accreditation, an entity recognized globally for establishing strict standards to accredit such ambulatory service.

In 2010, it was acknowledged by the National Accreditation Organization (ONA), in the following year, ONA level II and, in 2014, by the Joint Commission International (JCI), methodologies which establish specific requirements and certify the quality and safety of the health services.

In 2020, it was re-accredited by the Commission on Accreditation of Rehabilitation Facilities (CARF), the most renowned international accreditation in rehabilitation institution, recognized worldwide for its demanding quality requirements, whose accreditation occurred in 2015 and 2017.

Permanent, continuous and participatory assessment processes that contribute to quality and safety are also part of ICESP's humanization policy, aimed at welcoming patients and their companions.

These activities continued in 2020.

Implementation of the State Network of High Cost Medication Provision Centers - CEDMAC

The State Network of High Cost Medication Provision Centers - CEDMAC is a partnership with SES-SP to provide immunobiological medication in Rheumatology.

CDMAC and HCFMUSP activities encompass two main lines: 1) assisting the patient with a rheumatologic disease that requires special medication; and 2) CEDMAC Network coordination. The first includes evaluation and orientation to the patient, medical infusion, pharmacovigilance actions, in addition to the assistance and evaluation of the patients from SES-SP administrative processes.

In 2018, HCFMUSP's CEDMAC received the final assessment and reached the highest scoring level, becoming rated in the Diamond category.

CEDMAC was the first public service in Brazil to obtain International Accreditation in that category, enabling access to international excellence and innovation standards.

In order to continue these actions, which began in 2009, in 2020, an Addendum to the Agreement was signed between HCFMUSP and FFM and SES-SP, effective from 2017 to 2019.

In 2020, FFM and HCFMUSP performed jointly, via the Rheumatology Division, an average of 963 monthly routine assistances (11,556/year); 3 monthly visits to administrative processes (36/year); and 60 monthly applications of zoledronic acid, (720/year), totaling an annual average of 12,312 assistances for 11,558 patients.





Covid-19 Response Projects



COVID-19 RESPONSE PROJECTS

As soon as the first news of the advance of the Covid-19 pandemic was released, the HCFMUSP teams began to mobilize, always with FFM support, developing actions of assistance, diagnosis, research, treatment and prevention of the disease.

Research projects related to the Corona, Sars, Cov, and covid-19 virus family, selected in the "Call for Proposal Submission no. 01/2020 - Research in the Covid-19 FMUSP-HC System"

In order to raise funds to support the HCFMUSP, citizens, doctors and researchers launched, in 2020, the #HCCOMVIDA campaign, which had the Viralcure portal, focused on fundraising.

Through FFM, part of these financial resources were used to subsidize 16 research projects related to the family of viruses Corona, Sars, Cov, and covid-19, selected in the "Call for Proposal Submission no. 01/2020 - Research in the Covid-19 FMUSP-HC System", whose objective was to support research projects by researchers linked to the FM-HCFMUSP System that contributed to the knowledge of the Covid-19 SARS-CoV-2 virus and its effects and impacts on human health and society.

The 16 projects selected were as follows:

- Investigation on neutralizing antibodies in SARS-CoV-2 infection;
- Adipose tissue contribution to the cytokine storm of COVID-19 patients;
- Characterization of the inflammatory response in patients with severe acute respiratory syndrome by Covid-19;
- COVID-19 pathogenesis: an autopsy-based approach;
- Genetic susceptibility to complications associated with SARS-CoV-2 infection in the Brazilian population;
- Exploratory study on COVID-19 during pregnancy (umbrella project), sub-project Post-COVID-19 fatigue syndrome: evaluation of pregnant women and postpartum women;

- Viral and myocardial inflammatory profile in SARS-CoV2 infection (VIPHeart-SARSCoV2);
- COVID-19 and the study of the action of antihypertensive drugs and hydroxychloroquine on the reninangiotensin system in lung tissue: an experimental study;
- Randomized and paired clinical trial comparing modalities of regional anticoagulation in continuous venous venous hemodialysis in patients with COVID-19;
- Minimally Invasive Autopsy in COVID-19 cases: Agreement between Post-mortem Computed Tomography and Histopathological Analysis of the Lungs;
- Zebrafish in the development of a rapid test for COVID-19;
- ACE2 receptor expression and circulating ACE2 levels in pediatric patients with comorbidities and COVID-19;
- Impact of the prone position maneuver in patients with COVID-19 and severe acute respiratory distress syndrome: a multicenter cohort study;
- COVID-19 fatal magnetic resonance brain evaluation in minimally invasive autopsy;
- CO-FRAIL Study: Association between frailty and adverse outcomes in middleaged and elderly adults hospitalized for COVID-19;
- Prognostic plasma severity markers for COVID-19.

Treatment of patients with COVID-19 with convalescent plasma transfusion: Multicenter, open, randomized and controlled study

This study, developed by the Department of Infectious and Parasitic Diseases of the HCFMUSP, was made possible through an Agreement signed, in mid-2020, between FINEP, HCFMUSP and FFM.

Through it, it will be possible to evaluate the efficacy and safety of convalescent plasma transfusion in hospitalized patients with severe and potentially severe pulmonary COVID-19.

Study of biomarkers that assess disease severity and co-infection in hospitalized patients with Covid-19

This research, developed by the IMT-FMUSP, was made possible through a Work Order signed between FFM and the Foundation for Innovative New Diagnostics, at the end of 2020.

Through it, it will be possible to assess the prognostic status of severity and co-infection of patients with Covid-19 hospitalized in the ICUs and ICHC wards, with the help of biomarkers.

Phase 3, randomized, double-blind, placebo-controlled study to assess the efficacy and safety of Ad26.COV2.S for prevention of SARS-CoV-2-mediated Covid-19 in adults 18 years of age or older

This study, developed by the Departments of Infectious and Parasitic Diseases and Preventive Medicine at FMUSP, was made possible through Agreements signed, in mid-2020, between FFM and Family Health International, with NIH subsidy.

Through it, it will be possible to evaluate the efficacy of Ad26.COV2.S in preventing moderate to severe Covid-19 confirmed by molecular testing, compared to placebo, in SARS-CoV-2 seronegative adults

HPTN Personal Protective Equipment / CoPVN Vaccine Site Preparation / HIV Prevention Trials

By means of six Grants signed, in mid-2020, between FFM and Family Health International, additional financial support was granted to the Departments of Infectious and Parasitic Diseases and Preventive Medicine at FMUSP, aiming at: a) acquisition of PPE; b) strengthening the capacity of

these centers to participate in large Phase III efficacy trials of ongoing HIV Prevention Trials Network (HPTN) and Covid-19 Prevention Network (CoVPN); and c) adequacy of research centers for HPTN studies in progress in Covid's current environment.

Phase III Double-Blind, Randomized, Placebo-Controlled Clinical Trial for Evaluation of Efficacy and Safety of the Covid-19 (Inactivated) Adsorbed Vaccine Produced by Sinovac in Health Professionals

This study, developed by the Infectious and Parasitic Diseases Division of HCFMUSP, was made possible through a Technical-Scientific Cooperation Agreement signed, in mid-2020, between the Butantan Foundation, HCFMUSP and FFM.

Through it, it will be possible to evaluate the general efficacy of two doses of a adsorbed vaccine COVID-19 (inactivated) produced by Sinovac, in symptomatic individuals with virological confirmation of COVID-19, who work as health professionals in units specialized in the treatment of COVID-19.

The new methodology for colorimetric diagnosis based on the detection of RT-LAMP nucleic acids (reverse transcription loop-mediated isothermal amplification) and its applicability in the diagnostic screening using saliva samples from contacts of individuals positive for Covid-19 among athletes, students and teachers of the public sector of the municipality of São Caetano do Sul

This project, developed by the Discipline of Infectious and Parasitic Diseases of FMUSP, was made possible by means of a Partnership Agreement signed, at the end of 2020, between the Itaú Foundation for Education and Culture, FMUSP and FFM.

The purpose of using this technique is to make a practical and accessible form of diagnosis available to SUS that allows the detection and screening of Covid-19 in the population, thus enabling the control measures related to the pandemic.

Use of the blood of Coronavirus immunized patients (plasma) for the treatment of new, at-risk, infected ones through antibodies created by immunized patients and other research on the topic of the use of anticoagulants, such as heparin, and the discovery of new drugs

This project, developed by the ICHC's Hematology, Hemotherapy and Cell Therapy Service, was made possible through a Donation Contract signed, in mid-2020, between BRF S/A and FFM

Its main objective is to evaluate the feasibility on the use of blood from immunized patients (plasma) for the treatment of newly infected patients, in addition to the development of research on the use of anticoagulants.

Study of the prevalence of Coronavirus COVID-19 in the blood donor population of the Fundação Pró-Sangue Hemocentro de São Paulo and development of passive immunotherapy, through plasma transfusion of convalescent individuals in patients with severe acute disease

This project, developed by the Discipline of Infectious and Parasitic Diseases of FMUSP, was made possible through a Partnership Term signed, in mid-2020, between the Itaú Foundation for Education and Culture, FMUSP and FFM.

Through this study, it will be possible to evaluate the feasibility of producing hyperimmune serum, with individuals who have had their infection confirmed by PCR and from seropositive donors and develop a test that allows the expansion of epidemiological studies.

Conectar Saúde – Development of technological solutions related to the use of Communication, Collaboration, Cybersecurity and IoT technologies for applications to minimize human exposure to contamination in hospital operations and in remote assistance for patients being treated at home

This project, to be developed by NIT-HCFMUSP, was made possible through a Term of Technical Scientific Cooperation signed, in mid-2020, between CISCO Comércio e Serviços de Hardware e Software do Brasil Ltda., HCFMUSP and FFM.

Its main objective is the implementation of a pilot project of the Platform Connect Health, formed by three fronts that apply the Revolution 4.0 technologies in the fight against Covid-19. These fronts offer support for operations in the ICU, Infirmary and remote assistance for patients who are being treated at home.

RADVID-19 – Development and implementation of an intelligent platform with algorithms capable of identifying coronavirus markers in x-ray and computed tomography images

This project, developed by the NIT-HCFMUSP, was made possible by means of a Partnership Agreement signed, in mid-2020, between the Itaú Foundation for Education and Culture, HCFMUSP and FFM.

The same project also had the support of Petrobrás - Petróleo Brasileiro S/A, by means of a Donation Term.

Its main objective is to combat the pandemic caused by the new coronavirus (SARS-CoV-2) with

the use of Artificial Intelligence in the analysis of radiological exams, making this diagnosis more accurate, and the formation of a base of positive cases to support studies and research related to Covid-19.

In 2020, the RadVid-19 project was granted the Abril & Dasa Medical Innovation Award (Covid-19 Special Edition).

Open innovation for the health sector in the fight against COVID-19

This project, to be developed by the NIT-HCFMUSP, was made possible through an Agreement signed, at the end of 2020, between the IDB, HCFMUSP and FFM.

Its main objective is the prospecting and testing of innovative solutions and Research, Development and Innovation (R&DI) projects to combat and mitigate the consequences of the crisis caused by Covid-19.

Perceived mental and physical workload using separate personal protective equipment (N95 respirator with face shield) and integrated respirator (powered air purifying respirator) as respiratory and eye protection

This research, carried out by the Infectious and Parasitic Diseases Division of the HCFMUSP, was made possible through an Agreement signed, at the end of 2020, between the World Health Organization (WHO) and FFM.

The main objective of the study is to evaluate the human factors involved in using the N95 respirator plus face shield compared to traditional PAPR (powered air purifying respirator) and light PAPR integrated respirators.

Mental health impact of the pandemic of the new coronavirus (Covid-19) on the participants of the Longitudinal Health Study of Adults (ELSA-Brazil) of the State of São Paulo

This research, developed by the HU-USP, was made possible through an Agreement signed between FFM and Global Genomic Medicine Collaborative, at the end of 2020.

Through it, it will be possible to identify the impact of the Covid-19 pandemic on the mental health on participants of ELSA-Brasil in São Paulo,

composed of USP employees, and to evaluate the effectiveness of psychological interventions offered in a virtual way in participants who have a previous history of psychiatric disorders, high severity of mental symptoms or who wish to carry out such interventions.

Reassessment of Deaths from Natural Causes in the Municipality of São Paulo during the Covid-19 Pandemic

This project, developed by the Discipline of Clinical Medicine at FMUSP, was made possible by means of a Partnership Agreement signed, in mid-2020, between the Itaú Foundation for Education and Culture, FMUSP and FFM.

Information on deaths is essential for understanding the pandemic and its demographic and social impacts; for this reason, it is mandatory

to review the deaths that occurred in this period, using classic methods of demography and epidemiology, in order to reveal the exact profile of the impact of the coronavirus.

Through this study, it will be possible to show the deaths of residents of the city of São Paulo, who died by or with Covid-19 from March 1 and October 31, 2020.





RESEARCH PROJECTS

FFM takes part in relevant projects and research, mainly focused on the prevention and treatment of diseases that affect the Brazilian population's health.

Clinical and biological indicators of premature aging and dementia in adults and the elderly with Down syndrome: characterization of clinical demands and intervention perspectives

This study, forwarded by the IPq, through FFM, to the Ministry of Health for the presentation and approval of projects, within the **PRONAS** scope, was approved at the end of 2020.

Through it, it will be possible to establish the clinical-functional indicators and investigate the

biological markers of premature aging and dementia in people with Down Syndrome and to characterize the care demands and intervention perspectives, to promote mental health and prevent cognitive and functional decline in this population.

Development of a comprehensive instrument to identify individuals at high risk for hereditary cancer

This study, forwarded by the ICESP, through FFM, to the Ministry of Health, for presentation and approval of projects, within the **PRONON** scope, was approved at the end of 2020.

Through it, it will be possible to develop a simplified and comprehensive scoring system for the identification of individuals at high risk for hereditary cancer and who may benefit from measures to mitigate such risk.

Research activities focusing on infectious diseases that affect public health and vulnerable populations mainly in the Amazon region, including arboviruses

This project, to be developed by the IMT-FMUSP, was made possible through an Agreement signed between FFM and Fondation Mérieux, at the end of 2020.

The objective is to develop research programs and activities focusing on infectious diseases that affect public health and vulnerable populations, especially in the Amazon region.

Validation of the Global Development Scale (GSED) for the Brazilian Context - Phases 1 and 2

This project, developed by the HU-USP in two phases, was made possible through Agreements signed in 2020 between the World Health Organization (WHO) and FFM.

The main objective of the project is to validate – for the Brazilian context – a robust, universal and psychometrically sound scale to measure the development of children from zero to three years old using two measuring instruments.

Treatment of negative symptoms of schizophrenia with transcranial direct current stimulation (tDCS): clinical, randomized, sham-controlled, double-blind trial

This study, developed by the IPq, was made possible through an Agreement signed, at the end of 2020, between the Schizophrenia International Research Society and FFM.

Through it, it will be possible to evaluate the effectiveness of a specific neuromodulation

technique (cerebral photostimulation) in the treatment of negative symptoms in patients with schizophrenia, evaluating magnetic resonance with spectroscopy.

LatAm FINGERS - Latin American Lifestyle Intervention Initiative to Prevent Cognitive Decline

This study, developed by the Neurological Clinic of HCFMUSP, was made possible through an Application signed, at the end of 2020, between the Alzheimer's Association and FFM.

Through it, it will be possible to evaluate a flexible lifestyle intervention, in comparison with

another active and more systematic intervention, in 1,400 cognitively asymptomatic elderly people at risk of cognitive impairment, aiming at the prevention of cognitive impairment and dementia.

PREVINE-TB - Implementation of New Strategies for TB Prevention among people living with HIV in Brazil

This research, developed by the Department of Preventive Medicine at FMUSP, was made possible through a Statement signed, in mid-2020, between FFM and the Johns Hopkins University, with a grant from NIH.

Through it, it will be possible to operationalize the diagnosis of latent tuberculosis infection, through the interferon gamma release assay.

Association of Systemic Atherosclerosis with Neurodegenerative and Cerebrovascular Disease: A Clinicopathological Study

This study, to be developed by the Discipline of Geriatrics at FMUSP, was made possible through an Application signed between FFM and the Alzheimer's Association, at the end of 2020.

Through this research, it will be possible to investigate the association between atherosclerosis in coronary, carotid and brain arteries with neurodegenerative diseases and vascular dementia, defined by clinical and neuropathological criteria.

Bloomberg Initiatives for Global Road Safety in São Paulo: 2020-2021

This research, developed by the LIM 40, was made possible through a Subagreement signed, in mid-2020, between FFM and the Johns Hopkins University.

This is the continuation of the project called "Bloomberg Initiatives for Global Road Safety: Observational studies on speed, helmet use, seat belt, child restraint and driving under the influence

of alcohol, in the city of São Paulo" (p. 75), where it is expected to continue to provide data on the major risk factors for traffic accidents, including the use of alcohol by drivers, the absence of seat belts, lack of child restraint equipment, inappropriate use of helmet by motorcyclists, and speeding, with the expansion of this methodology to other cities in the interior of São Paulo.

Genome of landscapes in latitudinal gradients and ecology of Anopheles darlingi

This study, developed by the Epidemiology Department of the USP School of Public Health, through a contract signed between FFM and Health Research Incorporated, with the NIH grant, started in 2020.

This is the continuation of the project called "Landscape genomics in latitudinal gradients and

ecology of *Anopheles darlingi*" (page 76), where it is expected to identify and quantify the main factors (ecological, entomological, socioeconomic) that drive maintenance and proliferation of vector species in malaria hotspots in Brazil and Venezuela, as well as the genomic signatures of adaptation of the primary vector An. darlingi, in broader scales.

BASE - games for socioemotional learning: an early intervention program in early childhood education

This study, to be developed by the Discipline of Pediatrics at FMUSP, was made possible through a Contract signed, in 2020, between the Harvard Graduate School of Education and FFM.

Through it, it will be possible to assess whether BASE, a kit of 13 games for use in the early childhood environment, is effective for increasing socio-emotional skills in children, aged three to five, who attend early childhood education units.

Treatment of depression in the elderly with repetitive transcranial magnetic stimulation using the THETA-BURST method: randomized, double-blind clinical trial

This study, developed by the IPq, was made possible through a contract signed in 2020 between NARSAD - The Brain and Behavior Research Fund and FFM.

Through it, it will be possible to check if the Theta Burst Stimulation method is a therapeutically

effective alternative and with few side effects, in the treatment of depression in elderly patients who do not tolerate the use of antidepressants, or have shown themselves refractory to this type of medication.

Brazilian Autopsy and Image Study

This study, developed by the Department of Pathology at FMUSP, was made possible through a contract signed in 2020 between the Bill and Melinda Gates Foundation and FFM.

Through it, it will be possible to investigate the viability and effectiveness of virtual autopsies,

applied according to different criteria and organic systems, comparing the performance of two autopsy methods: a) virtual (by imaging methods - Computed Tomography and Magnetic Resonance); and b) conventional.

Qualiaids-BR Cohort: Effects of the organization of the treatment service on reaching and maintaining viral suppression of HIV and on curing coinfection with tuberculosis in the cohort of SUS patients who started antiretroviral treatment from 2015 to 2018: Part 1 - Building the base and descriptive analysis of cohort data

This research, carried out by the FMUSP Department of Preventive Medicine, was made possible through a Letter of Agreement signed at the end of 2020 between PAHO and FFM.

Through this study, it will be possible to analyze the effects of the organization of the

treatment service in reaching and maintaining viral suppression, and in curing tuberculosis in cases of HIV / TB coinfection, in the cohort of people who started HIV antiretroviral treatment between June of 2015 and June 2022.

Partnership for Prevention of HPV-Associated Cancers in People Living with HIV: Brazil, Mexico and Puerto Rico

This study, developed by the Immunology Department of HCFMUSP, was made possible through a Contract signed, at the end of 2019, between Joan & Sanford I. Weill Medical College of Cornell University and FFM, with NIH subsidy, and was continued in 2020.

Through it, it will be possible to research the best strategies for the prevention of tumors caused by HPV (human papillomavirus) in HIV positive women and men, in Latin America and the Caribbean.

Evaluation of the effectiveness of Nivolumab in prostate adenocarcinoma with and without abnormalities in DNA repair pathways

This project, developed by ICESP, made possible through a Contract signed between the Conquer Cancer Foundation of ASCO and FFM, was started in 2019 and continued in 2020.

The research aims to determine the antitumor effect of Nivolumab in patients with metastatic prostate cancer resistant to castration after progression to taxane-based treatment in positive and negative DRD tumors.

Diagnosis and monitoring of Alzheimer's disease using volumetry of the locus ceruleus

This project, developed by InRad, made possible through a Collaboration Letter issued by the Grinberg Laboratory - University of California San Francisco, started in 2019 and continued in 2020. The objective of the study is to develop an

algorithm based on magnetic resonance imaging, histologically validated to evaluate volumetric changes of the locus ceruleus, which capture the neuropathological progression associated with Alzheimer's Disease for clinical use.

Optimizing rehabilitation for phantom limb pain using mirror therapy and transcranial direct current stimulation

This project, developed by IMRea, made possible through a contract signed between FFM and The Spaulding Rehabilitation Hospital, started in 2019 and was finished in 2020.

The aim of the study was to evaluate the effectiveness of transcranial direct current stimulation and mirror therapy, as rehabilitation tools for the treatment of patients with chronic phantom limb pain.

Diagnosis of the main barriers to the treatment of atrial fibrillation in primary care and in a community hospital

This project, developed by the HU-USP, made possible through a contract signed between FFM and the University of Birmingham, started in 2019 and continued in 2020.

The objective of the study is to investigate patients with atrial fibrillation and, together with

health professionals who attend to these patients, get to know the existing barriers to the implementation of appropriate treatment using vitamin K antagonist anticoagulants in primary care.

Trends in greenhouse gas emissions from Brazilian food using GGDOT (Greenhouse Gas and Dietary choices Open source Toolkit)

This research, developed by the FMUSP Department of Preventive Medicine, made possible through a contract signed between FFM, FMUSP, the University of Manchester and the University of Sheffield, started in 2019 and continued in 2020.

The study aims to assess the trend of greenhouse gas emissions from food in Brazil and verify its relationship with changes in the population's dietary patterns, considering the degree of food processing.

Intervention to improve clinical monitoring in outpatient care services for people with HIV

This research, carried out by the FMUSP Department of Preventive Medicine, made possible through a contract signed between FFM and ViiV Healthcare UK Ltd., began in 2019 and continued in 2020.

The study aims to promote the effective implementation of the use of the Clinical Monitoring System, in outpatient services for the treatment of HIV infection in four regions of the State of São Paulo.

Community Violence and Adolescent Mental Health in the Municipality of São Paulo

This research, developed by the FMUSP Department of Preventive Medicine, made possible through a Collaboration Agreement signed between the University College London and FFM, FMUSP, the Federal University of Pelotas, the Federal University of Bahia, the Brazilian Association of Public Health

and the Foundation for Support to Research and Extension, started in 2019 and was finished in 2020.

The general objective of the study was to investigate the association between the exposure to community violence and mental health problems, especially the Post-Traumatic Stress Disorder.

Uncovering causal factors related to neurotoxicity of the tau protein in Alzheimer's disease ,00

This research, developed by the FMUSP's Geriatrics Discipline, made possible through a Collaboration Letter issued by the University of California's Grinberg Laboratory, started in 2019 and continued in 2020.

The objective of this study is to elucidate which are the specific cellular factors that contribute to

the accumulation of tau in neurons, in order to advance the understanding of the neurodegeneration cellular mechanisms and to identify therapeutic targets for the Alzheimer's disease.

Effect of the intestinal microbiota profile on the occurrence of delirium in acutely ill elderly hospitalized

This project, developed by the LIM 66, made possible through a contract signed between FFM and Hebrew Senior Life, with NIH subsidy, started in 2019 and was finished in 2020.

This study was a protocol aimed at the occurrence of delirium in seniors and changes in the intestinal microbiota, which aimed to investigate possible dysbiosis in this population.

Evaluating the trend of prevalence of serological markers for infectious diseases subject to blood transfusion among blood donors in three national blood centers: Fundação Pró-Sangue / Hemocentro de São Paulo (FPS / HSP), Hemocentro de Minas Gerais (HEMOMINAS) and Hemocentro de Pernambuco (HEMOPE)

This research, developed by the FMUSP Department of Infectious and Parasitic Diseases, made possible through a contract signed between the Vitalant Research Institute, FFM and FMUSP, began in 2019 and continued in 2020.

With this study, it will be possible to monitor patients the cohort of patients with sickle cell

anemia and the database of blood donors in participating blood centers (Hemorio, Hemope, Hemominas and Fundação Pró-Sangue), as well how to continue surveillance of epidemics related to arboviruses and new infectious agents.

Uncovering causal factors related to neurotoxicity of the tau protein in Alzheimer's disease

This project, developed by the FMUSP Geriatrics Discipline, made possible through a Collaboration Letter issued by the University of California's Grinberg Laboratory, started in 2019 and continued in 2020.

This proposal is based on the premise that the degree of selective neuronal vulnerability to injuries with accumulation of tau protein depends on protective or sensitizing factors, expressed differently in different neurons.

Dengue, Zika and Chikungunya - Neurological Manifestations during a Multiple Epidemic of Emerging Arboviruses in Fortaleza / CE

This research, developed by the IMT-FMUSP, through a Grant Letter signed between FFM and The Encephalitis Society, started in 2019 and was finished in 2020.

This pilot study aimed to investigate clinical and laboratory aspects of 18 patients, who developed encephalitis during a triple epidemic of Dengue, Zika and Chikungunya in northeastern Brazil, from June 2015 to December 2017.

The use of sexual pre-exposure prophylaxis (PrEP) by people with high exposure and vulnerability to HIV in the context of Brazilian health services: effectiveness of use on demand and the predominantly remote clinical follow-up protocol - (Projeto Combina - phase 3)

This research, carried out by the FMUSP Department of Preventive Medicine, through a Letter of Agreement signed between the OPAS and FFM, began in 2019 and continued in 2020.

With this study, it will be possible to analyze the effectiveness of different clinical schemes and

protocols for the use of sexual pre-exposure prophylaxis (PrEP) in a cohort of individuals at increased risk for HIV infection, followed in public health services for a period of four years.

Improving the Detection and Treatment of Acute Kidney Injury (ARI) in Low and Middle Income Countries: An Implementation Project

This research was initiated, in 2019, by the LIM 12, through a contract signed between FFM and the International Society of Nephrology and was finished in 2020.

Considering that Acute Renal Injury (ARI) is a frequent, preventable and treatable syndrome, this

implementation project was designed to include sustainable improvements in the clinical care of the disease and to improve the approach to patients with diseases that can progress to ARI. Phase IV, double-blind, randomized, non-inferiority clinical trial to assess the safety and immunogenicity of the Butantan Institute's seasonal trivalent influenza vaccine compared to the Sanofi-Pasteur seasonal trivalent influenza vaccine

This study, developed by the HCFMUSP Infectious and Parasitic Diseases Division and the ICr, was made possible through two Scientific Technical Cooperation Agreements signed in 2019, between the Butantan Foundation, HCFMUSP and FFM, and was finished in 2020.

The study sought to determine whether the immunogenicity caused by the single dose of the Butantan Institute's trivalent seasonal flu vaccine was not inferior to that elicited by a single dose of Sanofi's trivalent seasonal influenza vaccine in adult and elderly populations.

Consulting to develop curriculum and collect data to evaluate a parental group intervention in Boa Vista

This study, developed by the FMUSP Pediatrics Discipline, was made possible through a Contract signed between FFM and the International Development Bank (IDB) in 2019, continued in 2020.

The goal is to raise families' awareness for the importance of stimulating their babies from birth, by talking, playing and interacting with them in various ways, without the need for expensive and sophisticated toys.

The pilot project involved around 800 children aged 9 to 12 months, born to vulnerable families in the west zone of São Paulo.

The second stage will be developed in the city of Boa Vista (RR), which accounts more than 300 thousand inhabitants. The objective is to impact all vulnerable children up to 2 years of age.

Clinical and epidemiological and histological study of neoplasms in the population living with HIV / AIDS and in individuals without HIV infection who died at ICESP

This project, developed by the HCFMUSP Infectious and Parasitic Diseases Division, made possible through a Purchase Order issued, on behalf of FFM, by *The George Washington University*, with NIH subsidy, started in 2018. In 2019, a contract was signed Agreement between FFM and *The George*

Washington University, with a NIH grant, to continue the research.

Its purpose is to comparatively analyze neoplasms in HIV-infected and non-infected individuals, monitored by ICESP, which eventually led to death.

Strengthening care for violence against women in sexual and reproductive health actions in primary care in São Paulo

This is a multicultural study funded by the NIHR-UK, through the Bristol University (UoB) and the LSHTM. The study, started in 2018, continued in 2020 and is developed by the FMUSP Preventive Medicine Department.

The initiative seeks to implement an intervention regarding the violence against women

in eight UBSs and evaluate: changes in the identification, reception and referral of cases of violence against women; and changes in sexual and reproductive health in the experiences of violence of the women identified in the services.

Study of Functional Treatment of Disabling Pain Due to Knee Ostearthrosis in the Unified Health System Program

This project, to be developed by the IMRea, was approved at the end of 2018 by the Ministry of Health (MS), within the PRONAS scope, which provides for the raising of funds from individuals and companies with deduction of income tax. The beginning of its activities, however, depends on the solution of bureaucratic issues with the Ministry of Health.

The aim of this study is to rank the current

rehabilitation treatment of knee osteoarthritis in the SUS, in patients with severe pain and severe osteoarthritis, associating it with the conventional treatment described by Skou et al., 2015, cognitive orientation, segmental desensitization with paraspinal block (Imamura et al., 2016) or with radial and focal shock waves and treatment with intra-articular injection of hyaluronic acid.

Treatment of cervical metastases of thyroid carcinoma by percutaneous thermal ablation guided by ultrasound

This project, to be developed by the ICESP, was approved at the end of 2018 by the Ministry of Health (MS), within the PRONON scope. Its activities began in mid-2020.

Through this study it will be possible to bring new information about the diagnosis and treatment of thyroid cancer, especially in those patients who have metastatic cervical lesions subject to percutaneous treatment by thermal ablation.

Parent-child interactions and children's language development in low-income families in Brazil

This study is developed by the IPq, through a contract signed between FFM and the President and Fellows of Harvard College, started in late 2018 and was finished in 2020.

Its main objective was to identify the breadth of variation in the quantity and quality of language

input that mothers, in a poor urban area in Brazil, use during a play interaction with their children at 12 months of age, determine their variations and understand the similarities and differences in the language input of parents in Brazil compared to those in the USA.

Using the Cohort of 100 million Brazilians to establish critical air pollution limits for Child Health in Brazil

This study, developed by the FMUSP Pediatrics Department, through a contract signed between FFM and the Bill and Melinda Gates Foundation, started in late 2018 and was finished in 2020.

The objective was to use the Cohort of 100 million Brazilians, along with spatial data on air

pollution in high quality and resolution, to analyze the associations between air pollution and health problems at birth, in addition to defining critical limits for air pollution in Brazil.

Evaluation of the impact of the Family Health Program on child development - ROC cohort

This study is developed by the FMUSP Pediatrics Department, through a contract signed between FFM and the Swiss Tropical and Public Health Institute, started in mid-2018 and continued in 2020.

Through this study it will be possible to investigate the impact of adversity, in early life, on children and adults and to identify the most critical interventions to improve the population's health in low and middle income countries.

Phase I randomized double blind placebo-controlled clinical trial to assess safety and immunogenicity and dose determination of influenza H7N9 antigen adjuvanted with two different adjuvant formulations in healthy adult volunteers in Brazil

This study, which is being carried out by the HCFMUSP Immunology Department and the HCFMUSP Children and Adolescents Institute, was made possible through Technical Scientific Cooperation Agreements signed in 2018 between

the Butantan Foundation, the HCFMUSP and FFM, and was finished in 2020.

The study sought to assess the safety, immunogenicity and dose-saving effect of candidate vaccines against H7N9 influenza formulated with two different adjuvants.

Randomized trial on the enteral use of glutamine to minimize thermal lesions - RE-ENERGIZE

This study, developed by HCFMUSP's Anesthesiology Department, was enabled by means of a contract signed in 2018 between the Kingston General Health Research Institute, HCFMUSP and FFM, continued in 2020.

Its general objective is obtaining information about the use of glutamine as a nutritional supplement in severely burnt patients, which are under greater risk of developing infections.

"Potential lost pregnancy days" (DPGP): an innovative measurement of the pregnancy age to assess interventions and results of maternal-child outcomes

This study is developed by the Public Health School, by means of a contract signed between FFM and the Bill and Melinda Gates Foundation, and began at the end of 2018 and was finished in 2020.

The idea was to develop and explore an innovative measurement of pregnancy age, called

"potential lost pregnancy days" (DGGP), to produce evidence of its association with maternal and child death, morbidity and mortality at short, medium, and long terms.

The effect of the program Visitation for Young Pregnant Women over Child Development: A Pilot Study

This research was initiated at the end of 2018 by FMUSP's Psychiatry Department, via a contract signed between FFM and the Lemann Institute, continued in 2020.

This study consists in the encoding and secondary analysis of data collected as part of a research project in São Paulo, Brazil ("Father-son interactions and child language development in low-income families in Brazil" - page 64 of this report).

Its main goal is to identify the amplitude of the variation of the quantity and quality of the language inputs that mothers in a poor urban area in Brazil use during their playful interactions with their children, at 12 months of age, determe its variations and understand the similarities and differences in the language of parents in Brazil versus those of the US.

Randomized clinical essay controlled by clusters to reduce the blood pressure among the elderly with hypertension and depression attended by the Family Health Strategy in São Paulo, Brazil

This study, developed by LIM 23, via an Agreement signed between FFM and the Harvard T. H. Chan School of Public Health, was approved in mid-2018 and continued in 2020.

This study will compare the effectiveness, and the cost-effectiveness and the improvement ratio in the control of blood pressure (secondary outcomes) between the control group (routine care) and the group that will receive psychosocial intervention.

Characterization of astrogliopathy by Tau in aging and in neurodegenerative diseases

This study, developed by the CHFMUSP Neurology Department, by means of an Application signed between FFM and Alzheimer's Association, was approved in mid-2018 and was finished in 2020.

This study allowed to identify possible risk factors for early development of the Alzheimer's

type pathology; analyze the presence of the Alzheimer's type pathology in brains of individuals with less than 65 years of age; and identify sociodemographic, clinical and genetic risk factors associated to the early development of the pathology and the development of symptoms.

Classificadores para diagnóstico precoce do Transtorno do Espectro Autista usando o rastreamento do olhar

This project, to be developed by the IPq, was approved at the end of 2017 by the Ministry of Health, within the **PRONAS** scope and got started in 2020.

The main objective is to develop computer methods that contribute with earlier and more

objective diagnosis of the Autistic Spectrum Disorder (TEA) based on sight tracking signs, as well as developing classifiers and analysis of clusters to define TEA subtypes.

Mammary Portraits

This project, to be developed by the ICESP, was approved in the end 2016 by the Ministry of Health, within the PRONON scope. The commencement of the activities took place in 2019 and continued in 2020. Through this study it will be possible to: a) analyze the molecular alterations of breast cancer

by the sequencing of the full exoma; correlate the molecular findings with other data and develop a computer system that integrates the different databases of patients with breast cancer for integrated analyses.

Randomized study to prevent vascular events in HIV - REPRIEVE (A5332)

This research, developed by the FMUSP Disciplines of Immunology and Preventive Medicine, through agreements signed between FFM and Partners Healthcare (founded by Brigham and Women's Hospital and Massachusetts General

Hospital), with NIH subvention, started in 2017 and continued in 2020.

Its objective is to evaluate the effects of pythavastatine in preventing major adverse cardiovascular events in patients undergoing HIV infection treatment.

From basic science to clinical practice: infusion of modified lymphocytes to promote viral eradication - Study BELIEVE

The project developed by LIM 60, through a contract signed between FFM and The George Washington University, with NIH subvention, started in 2017 and was concluded in 2018. In the same year of its termination, a new contract was signed with Joan & Sanford I. Weill Medical College of Cornell University, with NIH subvention, thus enabling the continuity of the Study in 2020.

With this study, it will be possible to understand ways to improve the ability of cytotoxic T lymphocytes to eliminate HIV; amplify the function of NK cells; and harness T and NK cells and antibody-mediated responses in the context of HIV infection in adults and children.

Binding and retaining people with HIV in public health services: a demonstrative project in the city of São Paulo, Brazil

This research, developed by the FMUSP Preventive Medicine Department, via an agreement made between FFM and the Aids Healthcare Foundation Brazil, commenced in 2017 and continued in 2020.

Its objective is studying the frequency, the barriers of access and the profiles of binding

vulnerability and different retention standards for people infected with HIV in public health services in the city of São Paulo; as well as analyzing the effects of health care techniques with aim to reduce such events within the Brazilian context.

TOC Project - Research of Brain Markers associated to Obsessive-Compulsive Disorder

This research developed by IPq, through a contract signed between FFM and the Research Foundation for Mental Hygiene (The New York Psychiatric Institute) with NIH subvention, began in 2017 and continued in 2020.

The objective of this research is identifying reproducible cerebral markers that match specific

measurable behaviors pertaining to OCD symptom dimensions. These cerebral markers may eventually be used to reveal OCD manifestations that also manifest in other mental disorders.

Arbobios: A Translation study for the identification, characterization and validation of severity biomarkers in arbovirus infections

This study, developed by USP's IMT, via an agreement between FFM, USP, FAPESP and BioMérieux S/A signed in 2017, continued in 2020.

Its overall goal is to identify and validate prognostic biomarkers for disease by Dengue,

Chikungunya and Zika, which allow early stratifications of the risk of developing evolutionary forms that represent greater morbidity and mortality.

Clinical outcomes of Zika virus infection in patients with Sickle Cell Disease

This research was initiated in 2017 by FMUSP's Infectious and Parasitic Diseases Department, via contracts signed between FMUSP, FFM and the

Blood Systems Research Institute, and was finished in 2020.

The study intended to broadly characterize the clinical impact of the Zika virus in sickle cell disease and identify the main routes involved in the Zika

virus physiopathology. In turn, this data shall provide strategies to screen, monitor and treat the Zika virus in a potentially vulnerable population.

Clinical Trial phase III for the evaluation of the effectiveness and safety of Dengue 1, 2, 3, 4 (attenuated) vaccines of the Butantan Institute

This research was initiated in 2017 by the FMUSP LIM 60, via contracts signed between FFM and the Case Western Reserve University, with NIH subvention. In 2020, the study sponsorship was transferred to Emory University.

The vaccine is produced with weakened viruses, which have no potential to cause the disease, and must protect against the four dengue serotypes in single dose.

Clinical Trial phase III for the evaluation of the effectiveness and safety of Dengue 1, 2, 3, 4 (attenuated) vaccines of the Butantan Institute

This study, developed by the Immunology Department of the HCFMUSP, was made possible through a Technical Scientific Cooperation Agreement signed in 2016 between the Butantan Foundation, the HCFMUSP and FFM and continued in 2020.

So far, there is no licensed vaccine for dengue prevention with protection against the four dengue serotypes. Thus, its objective is to evaluate the efficacy and safety of the Dengue Vaccine 1,2,3,4 (attenuated) produced by the Butantan Institute.

Study of the Incidence of influenza among children and youth in Araraquara, Brazil, 2016-2017

This study, developed by the IMT-SP, through a contract signed between the HCFMUSP, FFM and Sanofi Aventis Farmacêutica Ltda., commenced at the end of 2016 and continued in 2020.

It is an amendment to the project called "Study of the Incidence of dengue in Brazil, in municipalities of high and medium endemicity

Goiânia – GO and Araraquara- SP" (page 76 of this report).

The main goal of this study is to determine the incidence of symptomatic infections by the influenza virus and other respiratory viruses in the cohort studied, which could subsidize the evaluation of future vaccination strategies against dengue.

A 2b/3 phase double-blind study, on the safety and effectiveness of injectable cabotegravir in comparison to tenofovir desoproxil / emtricitabine fumarate (TDF / FTC) daily and orally, for a pre-exposure prophylaxis in cisgen males and transgender women not infected by HIV and who have sex with men

This research, developed by the FMUSP Disciplines of Immunology and Preventive Medicine, through agreements signed between FFM and Family Health International, with NIH subvention, started in 2016 and continued in 2020.

Through this study it will be possible to compare the incidence of HIV among the participants; make assessments of factors related to HIV infection, hepatitis, or sexually transmitted infections; and analyze possible drug interactions between sex hormone therapies for transsexuals.

Use of Laser fluorescence with SPY ELITE, PINPOINT and the FIREFLY Robotics Platform systems in Surgical treatment of Cancer

This project, initiated by ICESP in mid-2016, and which was continued in 2020, was approved by the Ministry of Health, within the PRONON scope.

Through this study it will be possible to: 1) determine the incidence of complications related to postoperative tissue ischemia in short and medium terms; analyze and compare the influence of circulatory mapping; evaluate the effectiveness of

the method for the identification of lymphonodal structures of interest in the state and treatment of patients with digestive, urological and gynocological tumors; and evaluate the impact of the general and systemic complications over hospital costs in surgical cancer treatment and the influence of the use of fluorescence in surgical cancer treatment.

Protection against AIDS mediated by GBV-C

This subproject initiated in 2016 by HCFMUSP's LIM 60, via a contract signed between FFM and the University of Wisconsin – Madison, with NIH subvention, was finished in 2020.

GBV-C virus causes asymptomatic infection, which is persistent and has a high viral load in humans; but after years of research, little is known about the in vivo biology of that virus,

due to the lack of functional in vitro model in animals.

This study has the goal of determining one of the most important aspects of the virus' biology: tissue tropism of the virus in humans, in order to determine which cells, permissible to viral replication, are responsible for the high viral load found *in vivo*.

Factors of risk and protection for violent behavior among adolescents in the Municipality of São Paulo - São Paulo Project for the social development of children and youth

This study, developed by FMUSP's Preventive Medicine Department, by means of a contract signed between FFM and The Chancellor, Masters and Scholars of the University of Cambridge, began at the end of 2016, and was finished in 2020.

The objectives of this cross-sectional study with about 3,300 adolescents were: to estimate the

prevalence of violent behavior and victimization; investigate the association between individual, situational-relational and contextual characteristics; and to analyze the prevalence and factors associated with violent behavior and victimization in São Paulo, Montevideo and Zurich.

VIA T HELPER 17 in Autoimmune Type 1 Diabetes Mellitus

This study, developed by the LIM 18, via a contract signed between FFM and the European Foundation for the Study of Diabetes, began in 2016 and was finished in 2020.

Its objective was to evaluate genes polymorphisms involved in the Th 17 pathway in healthy control individuals and patients with autoimmune type 1 diabetes mellitus.

Programs and policies for obesity prevention in countries with low and average income and in transition - studies in foment to evidence and evaluation of programs

This project, developed by NUPENS of USP's Public Health School, through an agreement signed between FFM and The University of North Carolina at Chapel Hill, began in 2016 and continued in 2020.

This research shall enable the production of: studies on food consumption patterns and temporal trends in household purchase of foods in Brazil;

studies on the prevalence of obesity, hypertension, diabetes and other transmittable chronic diseases related to nutrition in Brazil; studies about the elasticity of prices for non-essential beverages and foods; and database with the nutritional composition of industrialized beverages and foods marketed in Brazil.

Participation of astrocytes located on the ventrolateral surface of the bulb in ventilatory responses to hypercapnia and hypoxia

This study, developed by the ICB-USP, via an agreement signed between FFM and *The Ohio State University* in 2016, continued in 2020.

The incomplete maturation of neural cells, involved in respiratory control, causes a significant change in homeostasis and these changes can be

crucial for life. A basic understanding that neural networks are necessary and how they are impaired in pathological conditions is essential for devising possible pharmacological interventions for certain pathologies that affect the respiratory system and improve population survival.

Multiplex Test for the evaluation of Chagas disease cure

This study, developed by the LIM 46, by means of a contract signed between FFM and the University of Georgia, with NIH subvention, was approved at the end of 2016 and continued in 2020.

Its objective is developing a cure test that may identify individuals previously exposed to infection by the *Trypanosoma cruzi* protozoan and who have evolved to cure, with or without therapeutic treatment.

Cohort study with pregnant women to assess the risk of congenital malformations and other adverse consequences for pregnancy after infection by Zika Virus - ZIKAlliance Consortium

This research was initiated at the end of 2016 by the FMUSP Infectious and Parasitic Disease Department, via a contract signed between FFM and the European Union (represented by the European Commission), and continued in 2020.

Its objective is evaluating the causal relationship between the infection by the Zika virus during pregnancy and the congenital malformations.

Bloomberg Initiative for Global Roadway Safety: Observational studies of speed, use with helmet, seat belt, retention equipment for children and driving under the influence of alcohol, in the city of São Paulo

This research is being developed by the LIM 40, via a contract signed in 2015 between FFM and the Johns Hopkins University, was finished in 2020, but continued through a new study called "Bloomberg Initiatives for Global Road Safety in São Paulo: 2020-2021 (page 65).

It is an observational study of the crosssectional type, where shall be collected, in a manner that is not interactive with the research subjects, data from five risk factors for traffic accidents: use of helmets by motorcyclists, seat belt use, use of equipment for the retention of children in vehicles, driving with excess speed, safety and use of alcohol.

Production of recombinant proteins from different systems of expression

This study, developed by the LIM 25, via a contract signed between Ouro Fino Saúde Animal Ltda., FMUSP and FFM, began in 2015 and continued in 2020.

The general objective of this research project is to enable the unprecedented recombinant production of therapeutic proteins of interest in animal health, in a way to preserve the in vivo biological activity of these proteins both in lab animals and in target species.

Vaccine against S. pyogenes for the prevention of Rheumatic Fever and Rheumatic Heart Disease: clinical study phase I / IIa

This study, developed by InCor, via a Contract signed between the HCFMUSP, the Butantã Institute, BNDES and FFM, started in 2015 and continued in 2020.

Its main objective was to carry out phase I/IIa clinical trials of a vaccine produced entirely in Brazil against *Streptococcus pyogenes* to prevent new cases of rheumatic fever and rheumatic heart disease.

Development of an Anatomical Atlas with Computed Tomography for Application in Tomography Equipment by Electric Impedance

This project, developed by the HCFMUSP LIM 09, was initiated in 2014, via an agreement signed between FINEP, FFM, HCFMUSP and Timpel S/A, and was finished in 2020.

Its objective was developing an Anatomical Atlas, i.e., a unified database with anthropometric information, tomographic images and data on the pulmonary function of approximately 600 patients, from a Computed Tomography (CT) database. This new technology will have applications in Tomographers by Electric Impedance, reaching a precision and spacial resolution much better than that available in current tomographers.

Combination of Brain Stimulation and Peripheral Nerve Stimulation to Increase the Beneficial Effects of Functional Electric Stimulation on the Parethic Hand After a Stroke

This research, developed by the Neurology Department of HCFMUSP, through a contract signed between FFM and NIH, started in 2012 and was finished in 2020.

Neuromodulation techniques, such as transcranial direct current stimulation (tDCS) and somatosensory stimulation in the form of peripheral sensory stimulation (ESP), are emerging techniques with great potential to improve motor

performance or increase the effects of motor training in CVA patients.

This study tested the hypothesis that tDCS and ESP shall increase the effects of functional electric stimulation (FES) and the task-specific training over motor function.

In February 2019, this initiative received the Paul Dudley Award during the International Stroke Conference promoted by the American Heart Association, in Honolulu, Hawaii.

Genome of landscapes in latitudinal gradients and ecology of Anopheles darlingi

This project, developed by the Epidemiology Department of USP's Public Health School, through a contract signed between FFM and Health Research Incorporated, with NIH subvention, began in 2014 and was finished in 2020.

Its objective was to examine the three biological aspects of *Anopheles darlingi*, which have been underestimated, with the aim to identify the major mechanisms responsible for the malaria transmission vector's success: broad plasticity or genetic specialization.

Study of the Incidence of dengue in Brazil, in municipalities with high and medium endemicity Goiânia-GO and Araraquara-SP

This study, developed by the IMT-USP, via a contract signed between Sanofi Aventis Farmacêutica Ltda., FMUSP and FFM, began in 2014 and continued in 2020.

Its main objective is to outline and implement epidemiological studies that subsidize the evaluation of future vaccination strategies against dengue.

Latin America Treatment & Innovation Network in Mental Health

This study, initiated in 2014 and supported by the NIH, through a contracted signed with FFM and developed by the FMUSP Preventive Medicine Department, was finished in 2020.

Its objectives are to evaluate the effectiveness of an intervention, by automatic mobile phone

messages attended by nursing assistants, in the treatment of depression in individuals with chronic physical diseases (diabetes and/or hypertension) who were attended in Family Health Strategy units in the city of São Paulo, Brazil.

Perspectives of eliminating residual malaria in the rural Brazilian Amazon: strategy for the investigation of Plasmodium vivax reservoirs

This study, developed by the ICB-USP via an agreement made between FFM and the Ministry of Health at the end of 2013, continued in 2020.

Its objective is implementing and evaluating a strategy to detect symptomatic and asymptomatic

carriers of the parasite in areas of residual malaria transmission, focused on monitoring the potential transmission hotbeds in the surroundings of clinical episodes (index cases) diagnosed by BA or BP of fever cases.

Research Center for Biomarkers in Neglected Tropical Diseases of São Paulo-Minas Gerais

This research was initiated in 2012 by the HCFMUSP LIM 46, via a contract signed between FFM and NIH. A new contract, signed with NIH in 2017, enabled the project to continue until 2022.

The long-term objective is to establish a Center of Excellence for research in Biomarkers of

Neglected Infectious Diseases in Brazil. The initial focus will be Chagas disease, with the aim of finding biomarkers that may be used to infer the risk of disease progression.

Receiver epidemiology and donor evaluation - REDS III Study - International Post

This proposal, initiated at the end of 2011 by the FMUSP Infectious and Parasitic Diseases Department, through a contracted signed between FMUSP, the Blood Systems Research Institute and FFM, relies on the partnership of four major blood centers in Brazil: Fundação Pró-Sangue (SP), Hemominas (MG), Hemope (PE) and Hemorio (RJ), was finished in 2020.

The study aimed to establish the basis for a National research Program on blood safety in Brazil;

maintenance of the donors and donations database; the reevaluation of the patients who participated in the cohort study of Chagas disease and the continuation of the analysis of viral characteristics and risk factors in blood donors infected with HIV.

Peruvian/Brazilian Amazon Center of Excellence in Malaria

This study initiated in 2010 by the ICB-USP, via a contract signed between FFM and the University of California with NIH subvention, was finished in 2018. In 2019, a contract was signed between FFM and the Yale University, with a grant from NIH, in order to continue the study.

The entomological component of this proposal, centered in the major malaria vectors

found in the area of study, aims to determine the vector diversity in that region, by means of molecular tools for vector identification and genotyping; and to evaluate the impact of the different economic activities in the vectors' population structure.

These activities continued in 2020.

Study of specific immune response and genetic aspects in HIV-1 infected patients who are not long-term progressors or slow progressors for AIDS

This study, enabled via an agreement between FFM and the Ministry of Health at the end of 2010, is developed by LIM 56 and was initiated at the end of 2011, due to a delay in the release of funds by the Ministry of Health, continuing in 2020.

The Long Term Non Progressors (LTNP), or also called Slow Progressors (SP), remain free from the progression to Aids for many years and amount to 1-3% of the total of individuals infected by HIV.

These individuals remain asymptomatic and with a stable number of T CD4+ lymphocytes, and above 500 cells/mm3 of blood, without any use of antiretroviral (ARTs) treatment for more than 8-10 years. This study intends to analyze HIV- 1+ PL individuals by comparing with typical and rapid Aids progressors, matched by time and evolution and matched by gender and age.

Prospective evaluation of the use of isoniazid in the prevention prophylaxis of pulmonary tuberculosis (PT) in HIV-infected patients

This research, developed by LIM 56, enabled via an Agreement between FFM and the Ministry of Health at the end of 2010, was initiated at the end of 2013, due to a delay in the release of funds by the Ministry of Health, and continued in 2020.

Despite several studies indicating isoniazid (INH) as a prophylactic to reduce the incidence of

Tuberculosis (TB) in the HIV-infected population, such measure is not broadly assisted in all Brazilian services.

This study aims to evaluate TB incidence in individuals, adherence to the prophylaxis, as well as its effectiveness compared to a historical series of service.

Clinical Studies

Clinical Research, also known as clinical trial or clinical study, is considered the main instrument to validate innovation in the health sector







Ipq's CPC Collection Center / Offices and Monitoring Room

One of the areas with the highest growth among FFM's duties was the management of clinical studies, developed under the supervision of FMUSP professors and with the support of the CPCs of the HCFMUSP Institutes.

Clinical Research, clinical trial or clinical study are the terms used to name a scientific investigation involving humans. These are all investigations in human beings whose objective is discovering or verifying the pharmacodynamic, pharmacological, clinical and/or other effects of products and/or identifying adverse reactions to the products under investigation, with the aim to verify their safety and/or effectiveness.

It enables to evaluate new drugs, new treatments, new vaccines, in addition to a broader understanding of diseases and population behavior, which reflects into benefits to patients and society.

Thus, it is considered the main instrument to validate innovation in the health sector.

Clinical Studies also aim to ensure that research is carried out according to technical-scientific, ethical, legal parameters, and within the framework of current legislation, in addition to ensuring fairness in terms of research funding, source of resources, ROI, adaptation to the guidelines of the Institutional Policy, integration with other sectorial actions, and the best interest and convenience for the Public Service.

It is also Worth highlighting the important role of Clinical Research in the training of human resources, in addition to the generation of financial resources, which enable investments in the area.

In 2020, FFM managed **509 clinical studies** (number on 12/31/2020), approved by the Ethics Commissions and coordinated by researchers of the FM/HCFMUSP System.



TRAINING PROJECTS

The training projects aim at the knowledge transfer in an ethical and innovative way with a high quality level

Main Training Projects

Training course for health professionals in the Primary Care Network: care and follow-up with people with disabilities in Primary Care

This project, forwarded by the IRLM, through FFM, to the Ministry of Health, for the presentation and approval of projects within the **PRONAS** scope, was approved at the end of 2020.

Through it, it will be possible to offer a specific qualification and continuing education course to

health professionals in the Primary Care network of the city of São Paulo, with a view to improving care for people with disabilities, prioritizing the exchange of clinical experiences based on evidence and the latest research on the topic.

Training for Physicians in Allogeneic Skin Transplantation

This study, carried out by HCFMUSP's EEP, was made possible through a Letter of Agreement signed between the PAHO and FFM and started at the end of 2020.

Its objective is to update the knowledge of health professionals in burn centers and units for the diagnosis, indication and carrying out of skin transplantation in Brazil.

Training in basic and advanced laparoscopy in a program associated with the Faculty of Medicine of PUC-Chile, Santiago

This study, developed by the Department of Digestive System Surgery and Coloproctology at the HCFMUSP, was made possible through a Private Educational Fund Instrument signed between Johnson & Johnson and FFM and started in late 2020.

Its objective is to provide training in basic and advanced laparoscopy for the Trainers of the (Virtual) Training Center in a program associated with the Faculty of Medicine of PUC-Chile, developing basic skills of video surgery through simulated models.

Professional training program in the area of research and innovation in pharmaceutical products

The objective of this project, developed by the Discipline of Gastroenterology at FMUSP, through an agreement signed, in mid-2020, between Brainfarma Indústria Química e Farmacêutica S/A, USP, FMUSP and FFM, is to expand the training of

health professionals who will work in multicentric research, in a Uniprofessional Residency in Pharmaceutical Assistance, being partly made in the HCFMUSP Residence practice field, and part within Brainfarma's Research and Development Center.

Workshop to train participants on molecular and serological diagnostics of arbovirus

This workshop, with the participation of professionals from the HCFMUSP Infectious and Parasitic Diseases Division, was made possible through a contract signed between the Fondation Mérieux and FFM, in early 2020.

Its objective is the practical and theoretical training of these professionals in molecular and serological issues related to the diagnosis of arboviruses.

Specialization Course in Health Education at the University of São Paulo for Teachers at the Higher School of Health Sciences at the State University of Amazonas

This project, prepared by the FMUSP Clinical Medicine Discipline, was initiated in late 2019, through a contract signed between FFM and the State University of Amazonas (UEA), and continued in 2020.

Its objective is to develop a Specialization Course in Health Education at FMUSP for teachers at the School of Health Sciences (ESA / UEA), whose

proposal for the formation of health professions in the 21st century is to transform education centered on the **transmission** of content into an education based on content **integration**. Such a paradigm shift fundamentally depends on the transformation of the educator, so changing education begins with the teacher development.

Upgrade Course on the Production and Maintenance of Lower Limb Prosthesis, Fixed and Articulated Suropodal Orthoses, and Maintenance in Means of Locomotion

This project, submitted by the IOT, through FFM, to the Ministry of Health, for the presentation and approval of projects within the **PRONAS** scope, was approved at the end of 2018, and got started in late 2020.

This course is focused on the upgrade of ortheses and prostheses workshop employees, with aim to improve competences and technical skills in the process of manufacturing and producing ortheses, prostheses and adjustments of wheel chairs.

Training in Critical Oncology Patient Care and Imaging Diagnosis in Oncology

This project was approved at the end of 2016 by the Ministry of Health, within the PRONON scope. It started at the end of 2018 and continued in 2020.

Its objective is to train, through ICESP, professionals who work in the SUS network in the

care of critical cancer patients to perform MRI exams, Computed Tomography, Bone Densitometry, Contrast Tests, Mammography, Radiological Protection and Digital Radiology.

Tutoring Activity for the State of Tocantins

The objective of this project, developed by the HCFMUSP's Liver Transplant Service, by means of an agreement signed between the Ministry of Health and FFM, at the end of 2013, is to aid the implementation of the organ donation and transplant service in the State of **Tocantins** promoting the improvement of the already

authorized services and qualifying the local health professionals, thus enabling the development of the **multiple organ capturing** services and the performance of **cornea and kidney transplants**.

These activities continued in 2020.

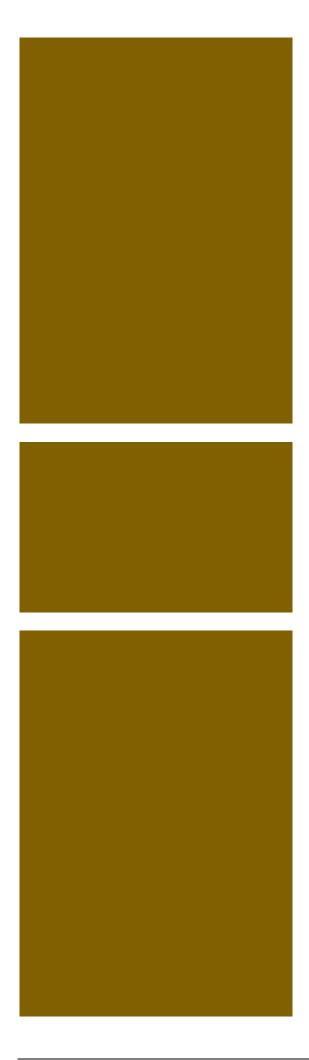
Tutoring Activity for the State of Roraima

The objective of this project, developed by the HCFMUSP's Liver Transplant Service, by means of an agreement signed between the Ministry of Health and FFM, at the end of 2013, is to aid the implementation of the organ donation and transplant services in the State of **Roraima**,

promoting the improvement of the already authorized services and qualifying the local health professionals, thus enabling the development of the **multiple organ capturing** services and the performance of **kidney transplants**.

These activities continued in 2020.





Innovation Projects

INNOVATION PROJECTS

Innovation projects aim at executing creative ideas and turn them into products, services, processes or tools that allow achieving the same objective in a more efficient or productive way

InterRad Platform - Request for integrated imaging exams and scheduling

This project, to be developed by the NIT-HCFMUSP, was made possible through an Agreement signed, at the end of 2020, between ABDI, HCFMUSP and FFM.

Through it, it will be possible to develop an Examination Request System that supports doctors

to order the best exam for their patient, as well as an Scheduling System that automates the process for scheduling image exams with the use of artificial intelligence.

Industry 4.0 technologies applied to the patient monitoring process

This project, to be developed by the NIT-HCFMUSP, was made possible through an Agreement signed, at the end of 2020, between ABDI, HCFMUSP and FFM.

Through it, it will be possible to carry out, through a pilot project, a study of technologies of

industry 4.0 applied to the process of monitoring patients throughout their relationship with the hospital/doctor, including pre-hospitalization, hospitalization and after-hospitalization.

Application of industry 4.0 technologies in intelligent rehabilitation equipment linked to the LucyIO Platform

This project, to be developed by the IMRea, was made possible through an Agreement signed, at the end of 2020, between ABDI, HCFMUSP and FFM.

Through it, it will be possible to carry out a study on the application of the technologies of

industry 4.0 in medical equipment, using the production process of an intelligent rehabilitation equipment (cycloergometer) connected to a digital rehabilitation platform - LucyIO Platform.

Structuring an innovation program aimed at generating new business and accelerating the development of startups in the Health area

This project, developed by the NIT-HCFMUSP, was made possible through an Agreement signed, in early 2020, between SDE, HCFMUSP and FFM.

With this initiative, the aim is to create the conditions to turn HCFMUSP's scientific and

technological knowledge into new services and products, through the transfer of technologies, generation of business ideas and speeding up the development of health startups.

Implementation of a R&D Lab for projects related to Artificial Intelligence with precision medicine applications and diagnosis in general

This project, to be developed by the NIT-HCFMUSP, was made possible through a Term of Technical Scientific Cooperation signed, in mid-2020, between Siemens Healthcare Diagnósticos Ltda., HCFMUSP and FFM.

The proposal foresees the implementation of a R&D Lab, focused on the development of projects related to Artificial Intelligence with precision medicine applications and diagnosis in general.

Use of artificial intelligence and mobile app to estimate vaccination protection coverage

This project, to be developed by the USP Innovation Center, was made possible through an Agreement signed between FFM and the Ministry of Health, and continued in 2020.

The project contemplates the development of an application that will use artificial intelligence to

digitize the vaccination cards of the population; inform the health worker which vaccines a person still needs to receive; and send the collected information to the Government's database, SI-PNI.

Establishment of a reference genome for the Brazilian population - Brazilian Reference Genome Project

This project, to be developed by the USP Biosciences Institute, was made possible through an Agreement signed between FFM and the Ministry of Health and continued in 2020.

Our population is very heterogeneous in relation to its genetics, which is little investigated. The study proposes genomic sequencing and the

creation of a clinical and genomic database of the Brazilian population, using cohort studies funded by the Ministry of Health. This will allow better diagnosis/prevention of diseases with genetic components in Brazilians, and design of public health policies based on our genetics.

Development of technical support to support decision making at ANVISA, especially those related to technology assessment processes, preparation of the Agency's regulatory framework and production of regulatory impact studies

The present project, started in 2019 and continued in 2020, made possible through an agreement signed between ANVISA, HCFMUSP and FFM.

Its objective is to develop scientific

technical support services to support decisionmaking at Anvisa, especially those related to technology assessment processes, preparation of the Agency's regulatory framework and production of regulatory impact studies.

Effect of inhaled terlipressin on coagulation, tissue perfusion, hemodynamics, on airway mucosa and early mortality in the rescue of controlled hemorrhagic shock in swine

This research, which began in 2018 and continued in 2020, is developed by the FMUSP Digestive Surgery Discipline at the Department of Gastroenterology and was made possible through a Partnership Agreement signed between the Ferring Laboratory, USP and FFM, whose project was approved in the company's innovation notice.

The hypothesis is that terlipressin accentuates the "protective" effect of organ damage, since it can have a direct action on the changes observed in the microcirculation. In addition, it can have a beneficial hemodynamic effect, preserving systemic pressure and portal and renal flow.

Project of Research, Development and Innovation, for the Department of Assistance Pharmaceutics and Strategic Inputs of the Ministry of Health

The objective of this project, to be developed by HCFMUSP's Technological Innovation Nucleus, via an agreement signed between the Ministry of Health and FFM, at the end of 2017, is supporting the Ministry of Health (MS), in the implementation of a laboratory to promote and develop projects in the area of automation and innovation, and their respective applications.

These activities started in late 2018 and were finished in 2020.

One Health Brazilian Resistance - Integrated Genomic Base for Surveillance, Diagnosis, Management and Treatment of Antimicrobial Resistance at the Human-Animal-Environmental Interface

This research was initiated, in 2019, by ICB-USP, through a Cooperation Term signed between FFM and FIOTEC and was finished in 2020.

The project proposes the creation of OneBR (One Health Brazilian Resistance), the first genomic

database, cured and integrated with algorithms based on artificial intelligence, to be used by different Brazilian professionals, which will allow to trace the origin of bacteria and know their resistance profile.

Control Center for the Logistics of Thermolabile Drugs

This project, to be developed by HCFMUSP's Technological Innovation Nucleus, via an agreement signed between the Ministry of Health and FFM, at the end of 2017, is justified by the Ministry of Health's need to define processes and technologies capable of structuring a logistics control center for

thermolabile medication that may be operationalized and integrated by any supplier of the Ministry, whether presently or in the future.

These activities got started in 2019 and continued in 2020.

National Drug Control System Project - SNCM - PHASE II

This project, developed by the NIT-HCFMUSP, was made possible through a Letter of Agreement signed, in mid-2020, between UNDP, ANVISA, HCFMUSP and FFM.

Together with the project called "Structuring the Surveillance and Monitoring System for Health Products" below, the objective is the continuous support to ANVISA, during the beginning of the implementation period of the National Drug Control System, by supporting activities of the regulated sector, validation of developments made for the final solution and evolution of standards, prototypes, tests and innovations.

Developing and testing the Motherly application: an automated intervention to promotemental health of young mothers

This research was initiated in 2018 by FMUSP's Psychiatry Department, via contracts signed between FFM, FMCSV and between FFM and the GCC. In 2019, a Grant was signed with The Open Society Policy Center, aiming at continuing the study.

The objective of this research is developing an application (app) that will monitor pregnant women, in order to ensure the mental health of young mothers. The app will be installed in the

patients' smartphones, so they may report their daily life and receive support messages that help ensure their well-being.

The project seeks to obtain data that will either prove or disprove the improvement in the mental health of the patients and will monitor mothers as of the second quarter of the pregnancy up to the child's first months, also measuring the baby's development in this beginning of life.

These activities continued in 2020.

Systematization of the Xenotransplant Method in Brazil

This project, started in 2018 and developed by the HCFMUSP Immunology Department, was enabled through a Technical-Scientific Cooperation Term signed between EMS S/A and FFM.

Due to the progressive increase of candidates on the organ waiting list, xenotransplantation (transplantation carried out between different species) offers the best perspective to meet this need

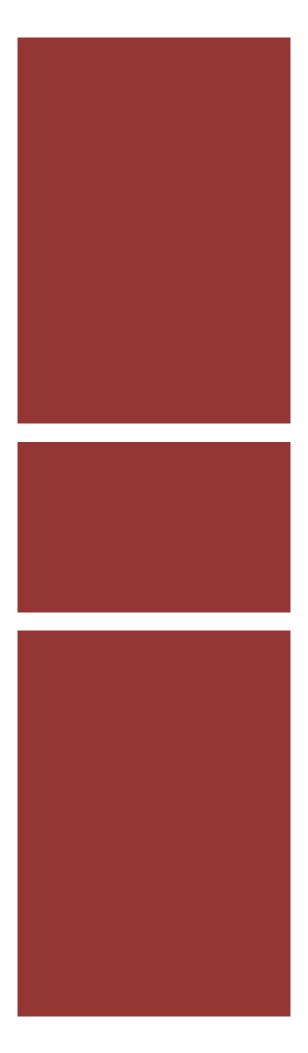
Due to the need for additional organs in Brazil and the new perspectives of clinical application of swine xenotransplant, this project aims to systematize such new methodology in Brazil.

These activities continued in 2020.

Structuring of the Health Products Surveillance and Monitoring System

This project got started in 2017, by the NIT-HCFMUSP, through an Agreement Letter signed between UNDP, ANVISA, HCFMUSP and FFM, and was finished in 2020. Phase II started in 2020, through the project called "National Drug Control System Project – SNCM – PHASE II".

Through this initiative, it was possible to develop standards, prototypes, simulations, tests, innovations, in addition to proposing norms to support the implementation, acquisition and interoperability processes of the National Drug Control System.



Health Policy Projects

HEALTH POLICY PROJECTS

Health Policy projects aim at defining processes and technologies, developing assessment tools, analyzing results, among others.

PROVMED 2030 Study - Development and application of dynamic models for analysis of supply and needs of doctors and specialists in Brazil

This study, developed by the Department of Preventive Medicine at FMUSP, was made possible through a Letter of Agreement signed between the PAHO and FFM and started in 2020.

Its main objective is to develop Indicators of demand and supply of medical workforce adjusted to the Brazilian reality.

Medical Workforce Survey in São Paulo and Maranhão

This study, developed by the Department of Preventive Medicine at FMUSP and supported by the Queen Mary University of London, through FFM, started in 2020.

Through this research, it will be possible to understand the different ways in which the Brazilian economic crisis affects the health system and its workforce, especially doctors.

Research program on the environmental impact of the Brazilian diet

This project, to be developed by NUPENS of the School of Public Health at USP, through a Grant signed between FFM and Climate and Land Use Alliance, started in 2019 and continued in 2020.

Through this research, it will be possible to assess the Brazilians' diet, while considering their nutritional quality and their environmental impacts, and to identify viable ways to optimize it in relation to these two dimensions.

The Judicialization of the Incorporation of Technologies in the Unified Health System (SUS) and in Complementary Health

This project, to be developed by the FMUSP Preventive Medicine Department, was made possible through an Agreement signed between FFM and the Ministry of Health, at the end of 2019 and continued in 2020.

The research aims to understand why patients go to court in search of health technologies; what

are the technologies, medicines and treatments claimed in the lawsuits filed against SUS and health plans in the State of São Paulo; as well as the understanding of the Judiciary and any regulatory gaps regarding these claims.

Research Project for Implementation of Intestine and Multivisceral Transplantation Program in the Unified Health System - SUS

This project, to be developed by the HCFMUSP Surgery of the Digestive System Department, was made possible through an Agreement signed between FFM and the Ministry of Health, at the end of 2019 and continued in 2020.

The study will make it possible to build a complete and consistent history for the procedure, generating opportunities for surveying costs and

developing work processes and clinical protocols to support the future creation of an Intestine Transplant Program within the SUS, in addition to opening precedents for new therapeutic perspectives in the treatment of chronic intestinal failure in the country, offering quality of life and social benefit for affected patients and their families.

Health Insurance and Plans in Brazil: judicialization, regulation and interfaces between the Public and Private spheres

This research will be developed by the FMUSP Preventive Medicine Department, through an agreement made between the Ministry of Health and FFM in 2018.

Through this study it will be possible to map and systematize data and point out the tendencies

regarding prices of medical-hospital activities, private expenses and use of health services.

These activities started in late 2019 and continued in 2020.

Intestinal and Multivisceral Transplant Program

This program, to be developed by the FMUSP Liver Transplant and Surgery Discipline and funded by the Ministry of Health, via an agreement signed with FFM in 2011, is the result of the Ministry of Health (MS)'s National Transplant System (SNT) in

having reference institutions available for the implementation of this care modality in Brazil.

These activities started in mid-2016, given they were waiting for the approval of a request to reorganize items of the project budget, and were continued in 2020.

ARENA Project (Organ and Tissue Donation for Transplants)

The Arena Project, developed by OPO - Organ Seeking Organization of HCFMUSP, via an agreement made between the Ministry of Health and FFM at the end of 2013, continued in 2020.

The iniciative aims only at raising awareness among the population as to the importance of organ donation, providing information that conveys them a feeling of safety to decide about the act of donating and, eventually, reduces the high rates of family denial observed to date.

The project includes ten capturing and transplant centers under construction in the following states: Acre, Amazonas, Goiás, Maranhão, Mato Grosso do Sul, Pará, Paraíba, Piauí, Rio Grande do Norte and Rio de Janeiro.

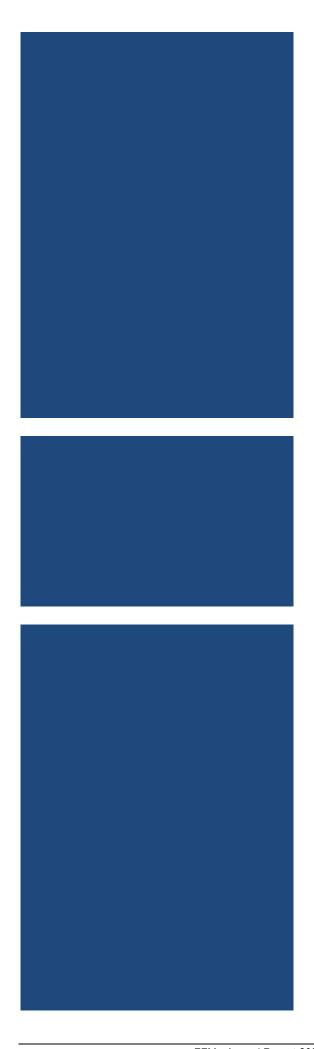
Proposal of the Strategic Committee for the Development of New Transplant Centers

This proposal, developed by the Liver Transplantation and Surgery Discipline of FMUSP, financed by the Ministry of Health, through an agreement signed with FFM, which started in 2012 and ended in 2020, was based on the evaluation of

a qualification method and the qualification of the clusters in capturing multiple organ transplants.

This project included the States of AM, MS, PA, PB, RN, AC, AL, GO, MA, MT, PI and SE.





Institutional Projects

INSTITUTIONAL PROJECTS

The improvement, expansion and maintenance of the physical and technological infrastructure of the FM/HCFMUSP System's facilities are also achieved through institutional projects.

Revitalization Project of the Inpatient Unit for Digestive Surgery

Through a Partnership Agreement signed between ABDIB, FFM and HCFMUSP, at the end of 2020, ABDIB undertook to disclose to its associates the information about this project, in order to encourage donations for its implementation.

The renovation of the hospital beds will ensure greater privacy for patients, readjusting the number of beds per room (from 4 to 2), providing greater efficiency in the control of nosocomial infection and greater patient safety.

Renovation of the ICHC Microbiology Lab

This project, coordinated by the ICHC Microbiology Lab, was made possible through a Transfer Agreement signed, at the end of 2020, between FFM, CEF and the Ministry of Health.

With the execution of the renovation and adaptation, which have not yet started, it will be possible to install automated equipment, in a lending model, which cannot be purchased due to the lack of space and the current infrastructure.

Renovation of the ICHC Gastrosurgery Ambulatory

This project, coordinated by the ICHC's Division of Surgery of the Digestive System and Coloproctology, was made possible through a Transfer Agreement signed, at the end of 2020, between FFM, CEF and the Ministry of Health.

Its objective is the renovation and adaptation of this unit, which have not yet started, which provides comprehensive and quality care to overweight and obese patients, highlighting the specialized pre- and post-surgical outpatient care.

Renovation of the ICHC Gynecology Units

This project, coordinated by the ICHC's Gynecology Division, was made possible through a Transfer Agreement signed at the end of 2020, between FFM, CEF and the Ministry of Health.

Its objective is the renovation and adaptation of the ICHC Gynecology Sector, which have not yet started, which has not received investments in infrastructure for more than 20 years.

Renovation of the ICHC Trauma Center

This project, to be coordinated by the ICHC General Surgery and Trauma Department, was made possible through a Transfer Agreement signed between FFM, Caixa Econômica Federal and the Ministry of Health, at the end of 2019.

With the execution of the reform, the diagnosis and treatment of critical patients will be carried out in the same physical location, with the following phases: resuscitation, endovascular interventions and invasive surgical procedures.

Renovation of the ICHC Surgical Center

This project, developed jointly by FFM and HCFMUSP via an Agreement made in 2014 with SES-SP, aimed to carry out improvement works in 23 rooms of the ICHC Surgical Center, currently formed by 33 surgical rooms, divided into four blocks.

The full renovation totals 1,326 m2, enabling an improvement in patient safety and in the work conditions of the technical staff. These activities were finished in 2020.

Replacement of equipment of the ICHC's Obstetrics Division due to obsolescence

This project was made possible through an agreement signed, at the end of 2020, between FFM and the Ministry of Health.

Its objective is to replace equipment with outdated technologies installed in the ICHC's Obstetrics Division.

Acquisition of computers for HCFMUSP's Informatiza Project

Since 2013, the "Informatiza Project" was created for the implantation of the Electronic Health Record in all institutes of the HCFMUSP Complex, seeking to offer greater agility and efficiency in the performance of outpatient consultations, urgent and emergency care,

surgeries, hospitalizations, lab tests and distribution of medicines.

Through parliamentary amendments, the present project, made possible through agreements signed, at the end of 2020, between FFM and the Ministry of Health, aims to acquire 94 computers, to be installed in the HCFMUSP's various institutes.

Acquisition of Electroencephalographs for InCor

This project was made possible by means of an agreement signed, at the end of 2020, between FFM and the Ministry of Health and aims to acquire an Electroencephalograph equipped with the

technological innovation necessary to meet the demand for postoperative cognitive dysfunction and performing non-invasive treatment at InCor.

Acquisition and replacement of equipment of the ICHC's Surgical Center due to obsolescence

This project was made possible through an agreement signed, at the end of 2020, between FFM and the Ministry of Health.

Its objective is the acquisition and replacement, due to obsolescence, of various

equipment and materials used by the ICHC Surgical Center, which will allow better room turnover, greater productivity and an increase in the supply of highly complex surgeries for SUS.

Replacement of the LIM 26 video endoscopy system due to obsolescence

This project was made possible through an agreement signed, at the end of 2020, between FFM and the Ministry of Health.

The replacement of video endoscopy systems is intended for teaching simple and advanced endoscopic procedures, within the scope of surgical endoscopy.

Replacement of IPq's Neuroendoscope due to obsolescence

This project was made possible through an agreement signed, at the end of 2020, between FFM and the Ministry of Health.

The Neuroendoscope is an essential instrument for performing endonasal surgeries in

the pituitary region. Currently, the equipment installed at the IPq is obsolete and needs to be replaced.

Modernization of the IOT Orthopedic Workshop

This project was made possible through an agreement signed, at the end of 2020, between FFM and the Ministry of Health.

Its objective is the modernization of the IOT Orthopedic Workshop, which will improve the quality and shorten the time for making and delivering orthoses and prostheses.

Acquisition of equipment for the ICr Neonatal Hearing Screening

This project was made possible through an agreement signed, at the end of 2020, between FFM and the Ministry of Health.

Its objective is to acquire equipment for ICr Neonatal Hearing Screening, which are currently borrowed from other areas.

Acquisition of Equipment and Permanent Materials for the IMRea

Through two agreements signed, at the end of 2017 and 2019, between FFM and the Ministry of Health, purchases of permanent equipment and

materials aimed at the outpatient and inpatient areas of IMRea were made possible.

These activities continued in 2020.

Replacement of ICr's equipment due to obsolence

This project was made possible by means of an agreement signed, at the end of 2019, between FFM and the Ministry of Health and aims to replace equipment used by the ICr to perform digestive

endoscopies, bronchoscopies, colonoscopies and endoscopic retrograde cholangiopancreatography.

These activities started in late 2020.

Acquisition of Equipment for the HCFMUSP LIM 04

This project was made possible, at the end of 2019, through an agreement signed between FFM and the Ministry of Health and aims to acquire equipment for the LIM 4, which will enable research

on therapeutic strategies for the treatment of encapsulation of the breast implant after radiotherapy.

These activities continued in 2020.

Replacement of ICESP computers due to obsolescence

This project was made possible by means of an agreement signed, at the end of 2020, between FFM

and the Ministry of Health and aims to replace 40 ICESP computers due to obsolescence.

Technological update of ICESP equipment

Through three agreements signed at the end of 2017 between FFM and the Ministry of Health, the following were made possible: a) technological upgrading of Monitors, Video Laparoscopy System, Rigid Endoscopes of the Surgical Center and replacement of Servers due to obsolescence at the ICESP; b) technological upgrading of outpatient equipment, Surgical Centers, Material and

Sterilization Center, Assistance, Physiotherapy, Day Hospital, Hospitalization, Radiology Rehabilitation, ICU and other areas; and c) acquisition of radiological diagnosis monitors and flexible endoscopes, used in diagnostic imaging.

These acquisitions started in 2019 and continued in 2020.

Replacement of ICESP equipment due to obsolescence

This project, approved at the end of 2016, was enabled through an agreement made between FFM and the Ministry of Health and has the objective of updating the ICESP's echocardiograph, oximeters,

computers and server, in addition to acquiring an otoscope and TV sets.

These activities were finished in 2020, due to the non-approval, by the Ministry of Health, of a request to extend the term of the agreement.

Acquisition of equipment and technological upgrading for the ICESP

Through three agreements signed in 2017, 2016 and 2015, between FFM and the Ministry of Health, the ICESP made possible, respectively: a) the replacement of equipment in the Imaging Area; b) the replacement of flexible endoscopes and shower chairs and the purchase of air-conditioning splits for installation in the logistics area for the supply of

medical and hospital supplies; and c) the acquisition of a monitoring center and bedside multiparametric monitors for the ICU, outpatient, post-anesthetic recovery areas, and transport monitors for the surgical center, replacing the equipment that were rented.

These acquisitions were finished in 2020.

Project of Acquisition of Videolaparoscopy and Fibroendoscopy System for ICESP

The objective of this project, started in the end 2015, developed via an agreement signed between FFM and the Ministry of Health, is the acquisition of

Video Laparoscopy / Rigid Endoscopy System and Flexible Endoscope for oncological treatment.

These acquisitions continued in 2020.

Structuring of the laboratories network as centers for continuous professional training and technical support for the attention to patients with hereditary coagulopathies and plaque diseases

This project, approved at the end of 2016 via an Agreement signed between the Ministry of Health and FFM, to be developed by HCFMUSP's Hematology Service, has the objectives of: a) Improving the structures, in regard to the

equipment, labs qualified in laboratory diagnosis hemorrhagic hereditary diseases; **b)** Creating professional training centers; and **c)** Acquire equipment that may function as technical support.

These activities were finished in 2020.

Multiuser Equipment Network Program (PREMiUM)

In order to stimulate the research and innovation activities of the FM/HCFMUSP System, the FMUSP Board and the LIMs Executive Board created the Multi-User Equipment Network Program (PREMIUM). This Program aims to create conditions so that all researchers in the FM/HCFMUSP System, and outside, have access to the latest technologies of contemporary biomedical research and, at the same time, optimize the application of financial and specialized human resources.

The implantation of this Network, therefore, aims to avoid duplication and underutilization of equipment, allowing researchers to have access to the most advanced technology installed in the Institution and necessary for the different types of Experimental and Clinical Research.

Organized as services, the laboratories involved in this Program are coordinated by researchers with recognized experience in their respective areas of expertise.

The cutting-edge equipment in the PREMiUM Network is operated by highly trained technicians to offer the best possible result.

The services provided by the multi-user centers are available on its own website with forms,

guidelines and rules of procedures available on the page itself. (www.premium.fm.usp.br).

The Program is structured in such a way that each set of equipment with the same purpose constitutes a multiuser nucleus. The Network today has 42 active nuclei. The equipment and services currently offered are distributed in the following groups:

Equipment:

- 1. Cytometry;
- 2. Experimental Models;
- 3. BioBank;
- 4. Structural and Functional Genetics;
- 5. Special Analyses;
- 6. Imaging; and
- 7. Microscopy and Microscopic Technique;

Services:

- 8. Scientific Documentation;
- 9. Publishing;
- 10. Cell Line Authentication; and
- 11. Biological Sample Storage Center.

The PREMIUM Network model has been presented at national and international research management events and has received a positive evaluation both in Brazil and abroad.

Maintenance of the Research and Innovation Infrastructure of the FMUSP and HCFMUSP System

This project, to be coordinated by the LIMs Executive Board, was made possible through an Agreement signed between FFM, HCFMUSP and Finep, in 2019, and continued in 2020.

The objective is to guarantee, through preventive maintenance services and parts acquisition, the maintenance of two important

research infrastructures, which are the Multiuser Equipment Network Program (PREMIUM Network) and the FMUSP Central Vivarium, which serve the entire community of researchers from the FM/HCFMUSP System, Brazilian and foreign researchers from other institutions, from public and private services.

Infrastructure for Multidisciplinary Research in Medicine, Engineering and Physiotherapy - INFRALIMS 2018

In 2019, an agreement was signed between FINEP, HCFMUSP and FFM for the development of the following subprojects, which have a highly multidisciplinary character, intense interaction with Engineering, exploit the expertise of researchers

and the existing infrastructure, and will allow the introduction of new lines of research and the training of professionals prepared for innovation projects.

These activities continued in 2020.

Infra-LIMs 2015 - Expansion of the equipment park of the HCFMUSP PREMIUM Multiuser Network

The HCFMUSP Academic System and FMUSP boast the PREMiUM Network - Multi-User Equipment Network Program of the HCFMUSP and FMUSP System.

At the end of 2017, an agreement was signed between FINEP, HCFMUSP and FFM to to expand and update that Network with the introduction of essential technologies to develop new lines of research in technological levels that at the frontier

of knowledge: 1) Creation of a Nucleus for 3D printing of nano, micro and macrostructures for application in regenerative 2) Creation of the Multiuser Nucleus for Cardiac Optical Coherence Tomography and the expansion of the Imaging Platform in the Autopsy Room; 3) Expansion of the Multiuser Nucleus for Bioinformatics and the Information Technology Nucleus.

These activities continued in 2020.

Maintenance, Operation and Consolidation of PREMiUM - the FMUSP-HC System Network Multiuser Equipment Network Program

With aim to consolidate PREMiUM - Multiuser Equipment Network Program of the HCFMUSP and FMUSP System (page 93), an agreement was signed between Finep, HCFMUSP and FFM in 2017 and continued in 2020.

The general purpose is to enable preventive and corrective maintenance of the high cost and advanced technology equipment installed in the Network; and the purchase of equipment to complement the existing nuclei and hire highly specialized labor.

ABBREVIATIONS USED IN THIS REPORT

AAAFMUSP Alumni Association of the Faculdade de Medicina da USP

ABDI Brazilian Industrial Development Agency

ABDIB Brazilian Association of Infrastructure and Basic Industries

ANVISA National Sanitary Vigilance Agency

AMA Medical Ambulatory Assistance of the Municipal Health Secretariat of São Paulo

APAC Authorization of Ambulatory Procedures

CARF Commission on Accreditation of Rehabilitation Facilities

CCIH Hospital Infection Control Commission

CCR Rebouças Convention Center

CEAF Specialized Component of Pharmaceutical Assistance

CEBAS Charitable Social Work Entity Certificate

CEDEM Center for the Development of Medical Education "Prof. Eduardo Marcondes" of FMUSP

CEF Caixa Econômica Federal CG Management Center

CNES National Registry of Health Establishments

CNPq National Scientific and Technological Development Council

CPC Clinical Research Center

CREMESP Regional Medical Council of the State of São Paulo

DST Sexually Transmitted Diseases
EEP Continuing Education School
EPI Personal Protective Equipment

FAPESP Research Support Foundation of the State of São Paulo

FFM Medical School Foundation

FMCSV Maria Cecília Souto Vidigal Foundation

FMUSP Medical School of the Universidade de São Paulo

HAC HCFMUSP's Cotoxó Auxiliary Hospital HAS HCFMUSP's Suzano Auxiliary Hospital

HCFMUSP The Clinics Hospital of the Universidade de São Paulo Medical School Hemominas Foundation of the Hematology and Hemotherapy Center of Minas Gerais

Hemope Hemope Foundation (Pernambuco)

Hemorio State Hematology Institute Arthur de Siqueira Cavalcanti (Rio de Janeiro)

ICB-USP Biomedical Sciences Institute of the Universidade de São Paulo ICESP Cancer Institute "Octavio Frias de Oliveira" of the State of São Paulo

ICHC Central Institute of HCFMUSP

ICr HCFMUSP Children and Youth Institute

IMRea HCFMUSP Physical Medicine and Rehabilitation Institute

IMT Tropical Medicine Institute of São Paulo, Universidade de São Paulo

InCor HCFMUSP Heart Institute

IOT HCFMUSP Orthopedics and Traumatology Institute

IPq HCFMUSP Psychiatry Institute
IRLM Lucy Montoro Rehabilitation Institute

ITACI Children's Cancer treatment Institute of the HCFMUSP Children's Institute

LIM HCFMUSP Medical Investigation Lab
LIM 04 Microsurgery Lab – Plastic Surgery

LIM 09 Pneumology Lab

LIM 18 Carbohydrate and Radioimmunoassay Lab
LIM 23 Psychopathology and Psychiatric Therapy Lab
LIM 25 Cellular and Molecular Endocrinology Lab

LIM 40 Immuno-Hematology and Forensic Hematology Lab

LIM 46 Medical Parasitology Lab

LIM 56 Dermatology and Immunodeficiencies Investigation Lab

LIM 60 Clinical Immunology and Allergy Lab

LSHTM London School of Hygiene & Tropical Medicine

MS Ministry of Health

NIHR-UK National Institute for Health Research-UK

NIH National Institutes of Health

NUPENS/USP Nucleus of Epidemiological Research in Nutrition and Health of the Universidade de São

Paulo

OMS World Health Organization

ONA National Accreditation Organization
OPAS Pan American Health Organization

OPM Orthoses, Prostheses and Means of locomotion

PAMB HCFMUSP Ambulatory Building

PNUD United Nations Development Programme

POLI Polytechnic School of the University of São Paulo

PRONAS/PCD National Program of Health Care Support for the Disabled PRONON National Program of Support to Oncologic Attention

RRLM Lucy Montoro Rehabilitation Network SES-SP São Paulo State Health Secretariat

SI-PNI Information System - National Immunization Program

SSO Occupational Health Service

SUS Public Health Service

SVOC São Paulo Death Verification Service

UBS Basic Health Units of the São Paulo Municipal Health Secretariat

USP University of São Paulo

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FFM Archive Internet FFM Journal

Activity Report FMUSP Hospital das Clínicas 2019

FMUSP Hospital das Clínicas Collection Faculdade de Medicina da USP Collection

https://www.facebook.com/INRAD.INSTITUTODERADIOLOGIAHCFMUSP/

https://www.fm.usp.br/cpesq/covid-19/covid-19

The information in this report has been provided by all areas of FFM and the FM/HCFUSP System and by the Coordinators of the Projects herein described.

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