

# Activity Report 2022

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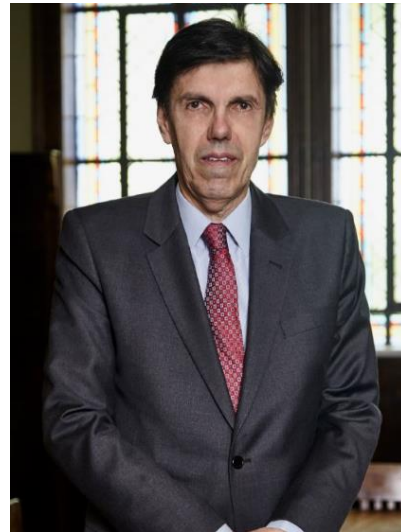


# Message from the Board



**Arnaldo Hossepian Junior, PhD**

*FFM Director General*



**Tarcisio Eloy Pessoa de Barros Filho, PhD**

*FFM Deputy Director General*

**W**e have reached the end of the first year since the inauguration of this new FFM board, and with that also comes the time for accountability of the activities carried out, thus reinforcing our stance of publicizing and guaranteeing transparency for the measures and actions taken and the advances and achievements achieved.

Inspired by the idea of shared management, in which the Institution's directions are discussed among all directorates (Corporate, Legal and Financial Management), we updated the Internal Regulation, which was approved by the FFM Board of Trustees, as well as by the Public Ministry's Foundation Trusteeship, body to which we are submitted. The Fiscal Council was also installed, with three members, the integrity office (Compliance) and the Anti-Bribery and Anti-Corruption Policy was approved and published, which represented a significant advance in the good treatment of the public resources that we manage, by virtue of agreements signed with the State government.

In this context, the highlights are: the creation of the Corporate Management Board, which relates to all areas, making them work in a more integrated and interactive way, which should become even more pronounced in 2023; the restructuring of the Legal Department, which turned into a Board, began to adopt a preventive stance in all signed contracts, in light of the current legislation, aiming to minimize questions by the control bodies and which led to the reformulation of the

staff of Law professionals; and the structuring of the SIA - Service for Information and Assistance to the internal and external public, as well as the reporting channels and the direct hotline with the Director General.

On the operational front, we sought to streamline internal processes. In the Purchasing area, we approved the new regulations and accelerated processes. We were also able to bring more agility to the personnel hiring model, detecting the demands of each area so that all institutes benefit, according to their needs. Expanding its activities, FFM participated and won in the dispute for the administration of the Perdizes Institute, part of the HCFMUSP Complex, former Cotoxó Hospital, intended for the treatment of diseases related to the use of alcohol and drugs.

We seek to get even closer to the operational management, in meetings throughout the year, to face the difficulties jointly and, for the first time, we promoted a meeting with all managers to discuss the Strategic Planning, in December. All of this reflects our quest for participatory and organic management, encouraging the exercise of coexistence.

Together with the State Court of Auditors (TCE), we sought to demonstrate, in a transparent manner, the practices adopted in FFM's administration and our full respect and adherence to protocols and regulations. We carried out a survey of all accounts that were under the scrutiny of that body and approved three of the seven accounts awaiting approval. We fully adhered to the

# Message from the Board

Transparency Portal and carried out a work to raise awareness of the Federal Court of Auditors (TCU), in partnership with the Clinics Hospital and the Zerbini Foundation, to promote a better understanding of the activities of the hospital and foundations.

Finally, aiming at greater interlocution with other institutions and Powers, FFM promoted an event in which the foundational model in force was discussed with the Superior Court of Justice. We also seek to strengthen contact with the regulatory agencies, ANS and ANVISA, we have entered into a partnership with the State Public Prosecutor's Office and received Justices from Superior Courts, always seeking to highlight the service of public interest, and of excellence, provided here. The idea is always to strengthen the relationship and make these bodies aware of FFM functioning, showing its importance and relevance to society, and our purpose of seeking solutions and resources beyond the

public authorities, always under the pillar of transparency.

We are aware that administering FFM requires a lot of dedication, willingness and commitment to the dictates established in article 37 of the Federal Constitution of the Republic. Inspired by these values, we are grateful to be able to contribute to the enhancement of this work of many, especially the employees and the medical staff, the Clinics Hospital Complex and the University of São Paulo Medical School. The mission is challenging and we have a lot to do, but together we will make FFM even better and more effective!

## **Arnaldo Hossepian Junior**

Retired MPSP Public Prosecutor and Director General at FFM





# Presentation

Get an overview of the social reach that FFM, in joint action with HCFMUSP and FMUSP, achieved in 2022 by analyzing the chart “**FFM in Numbers**” (page 8).

A brief **history** of FFM (page 11), its **organizational structure** (page 12), the **strategies** adopted (page 18), main **partners** (page 20), main **certifications** (page 22), its **consolidated results** (page 23), and the **summary of the 2022 Financial Statement** (page 25) are also presented in this Report.

The chapter dedicated to the FMUSP/HC System (page 28) highlights the summary of the main activities carried out, in 2022, by FMUSP (page 30) and by HCFMUSP (page 34).

In order to fulfill its statutory objectives, FFM develops, together with HCFMUSP and other partners, a series of **comprehensive health care actions** (page 37), always prioritizing care for SUS patients. Ensuring the performance of special procedures such as transplants, implants and other highly **specialized procedures** (page 40) is another of its priorities. The performance obtained, in 2022, by the HCFMUSP Complex (page 41) and by other Health Units (page 52), was ensured by FFM, through the allocation of human and financial resources.

From the qualification as a Social Organization, it was possible for FFM to manage the **Icesp Management Contract** (page 57), specialized in high complexity care and equipped to provide comprehensive care to cancer patients in the public health system (SUS).

FFM also continued the management of the **IRLM Management Contract** (page 61), which grants SUS quality levels relative to the best care centers for people with disabilities in the world.

In 2022, FFM was the social organization selected to manage the activities of **Perdizes Institute** (IPer), through a Management Contract (page 63). Inaugurated on November 8, 2022, IPer, built in the space formerly occupied by the rear Cotoxó Auxiliary Hospital, was created with the mission of becoming one of the world's leading benchmark centers in the treatment of alcohol and drugs.

The development of **Other Assistance Initiatives** (page 66), **Covid-19 Confrontation Projects** (page 70), and **Research Projects** (page 84), together with HCFMUSP and other partners, were priority actions of FFM, in 2022.

The technological innovation projects developed by InovaHC and other initiatives focused on digital health and Artificial Intelligence leave a potential legacy in the **innovation** hub (page 77) of the FMUSP/HC System.

Carrying out, together with HCFMUSP and other partners, **Training** projects (page 102) aimed at transmitting knowledge, in an ethical and innovative way, with a high level of quality, and **Health Policy** projects (page 106), including the definition of processes and technologies aimed at improving the diagnosis and treatment of diseases, among others, is also part of FFM's activities. The development of **Institutional Projects** (page 112), together with HCFMUSP and other partners, which aim mainly at improving, expanding and maintaining the physical and technological infrastructure of the FMUSP/HC System facilities, was also part of the FFM actions in 2022.

The **abbreviations** used (page 119) and the current composition of the **FFM Administration** (page 121) complete the FFM Activity Report 2022.



# FFM in numbers



2022		
Assistance Procedures + Admissions with No Cost for SUS Patients	Quantity	Page
Transplants and Implants (SES-SP Agreement)	(*) 748	39
Ambulatory Statement - Authorization for High Complexity Procedures - APAC (SES-SP Agreement)	(*) 137,171	40
Pharmaceutical Assistance - Quantity of CEAF Medications (SES-SP Agreement)	(*) 36,643,895	41
ICHC + PAMB – Medical Specialties Care (SES-SP Agreement)	6,928,356	44
IPq – Psychiatry Care (SES-SP Agreement)	68,815	45
IOT – Orthopedics and Traumatology Care (SES-SP Agreement)	259,222	46
IMRea - Vila Mariana, Umarizal, Lapa and Clínicas Units (SES-SP Agreement)	227,828	48
ICr - Children and Youth Health Care (SES-SP Agreement)	908,494	49
InRad – Radiology Care (SES-SP Agreement)	204,190	50
HAS – Long-stay patient care – (SES-SP Agreement)	1,487	51
House of Aids (SES-SP Agreement)	41,760	53
ITACI - Children's Cancer Treatment (SES-SP Agreement)	19,748	54
C.S.E. Butantã (SES-SP Agreement)	5,487	54
ICESP (Management Contract)	453,176	56
ICESP Osasco (Management Contract)	23,133	56
Lucy Montoro Rehabilitation Institute (Management Contract)	29,217	60
Perdizes Institute - IPer (newly opened) - (Management Contract)	0	61
Adult and Pediatric Kidney Transplantation Project (SES-SP Agreement)	716	64
Speech Therapy + Surgery + Ambulatory Care in Patients with Lip and Palate Clefts (Other Agreements)	1,110	64
CEMIM – IOT - Quantity of Surgeries and Ambulatory Care (SES-SP Agreement)	3,190	65
NGA Várzea do Carmo (SES-SP Agreement)	15,346	65
Emílio Ribas Infectology Institute - Quantity of Exams (SES-SP Agreement)	325,541	65
CEDMAC - Quantity of Assistances (SES-SP Agreement)	(**) 13,140	66
<b>TOTAL</b>	<b>9,530,116</b>	

(\*) Quantity merely informative and not considered in the Assistance Total

(\*\*) Approximate average quantity



# FFM Profile

## Brief History

*Currently, the foundational model is of great importance in supporting public management and maintaining institutional excellence.*

Created in 1986, Fundação Faculdade de Medicina (FFM) is a private, non-profit entity that promotes teaching, research and health care by supporting the activities of the University of São Paulo Medical School (FMUSP) and the Clinics Hospital (HCFMUSP). Recognized for its relevant philanthropic legacy, FFM contributes to the improvement of the administrative and financial management of these units, providing greater agility, effectiveness and assertiveness to academic and assistance initiatives in the health areas.



*Facade of the FFM main office, on Rebouças Ave.*

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

For the effective joint action of HCFMUSP and FFM in the development of comprehensive health care, FFM, HCFMUSP and SES-SP have been celebrating, since 1988, the **Comprehensive Health Care Agreement for SUS Patients**, whose objective is to 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, Research, Innovation, Clinical Studies, Institutional and Health Policy Projects, through agreements signed with

public and private, both national and international institutions, with the hiring of researchers and professionals allocated directly to the research, in addition to the acquisition of materials and equipment.

The FMUSP Restoration and Modernization Project, developed between 2000 and 2008, had the fundamental support of FFM, which shared with FMUSP the coordination of the Project and fundraising.

In 2008, FFM became a Social Organization and expanded its participation in the management of health care projects, such as the West Region Project, which ended in 2016. 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 activities and health services at Icesp and IRLM, respectively, which are still in force. In 2022, FFM was the social organization selected in the HCFMUSP Public Call to manage the activities of the Perdizes Institute, through a Management Contract.

In 2022, the new Board of Directors implemented a digital transformation process in its operation, aiming to optimize processes, expand integration between different areas and promote and encourage transparency during work. In addition, the Fiscal Council, with three members, and the Compliance Office were installed.

In recent years, the Foundation has consolidated itself due to its participative and open management towards its interlocutors. It does not work as an isolated body, but as an integral part of a broader administrative process, which assists in the main needs of research, assistance and teaching in healthcare. The foundational model is, today, of great importance in supporting public management and maintaining institutional excellence.

## Organizational Structure

*As of March 2022, the retired Public Prosecutor Dr. Arnaldo Hossepian Junior started directing FFM*

After more than four terms (from 2003 to March 6, 2022) of Flavio Fava de Moraes, PhD, being active as Director General at FFM, as of March 7, 2022, the retired Public Prosecutor Dr. Arnaldo Hossepian Junior started to head FFM.

Graduated in Law from the Faculty of Law of the University of São Paulo and with a master's degree from the Pontifical Catholic University of São Paulo, he retired after 35 years dedicated to the Public Ministry. Recently, he held the position of Deputy Public Prosecutor for Institutional Relations at the Public Ministry of São Paulo.

With the amendment of its Bylaws, in 2022 the Senior Management of FFM started to be made up of the following bodies:

- **BOARD OF TRUSTEES:** It is the FFM's highest body, which, due to its qualification as a Social Organization, is also called the Board of Directors.

- **ADVISORY BOARD:** Its role is to assist the Board of Trustees, as well as the Executive Board, to implement the statutory purposes of FFM.

Both chaired by the Director of FMUSP, who also chairs the Deliberative Council of HCFMUSP, the synergic relationship with the Board of FMUSP and its Congregation and with the Deliberative Council, Planning and Control Commission, Clinical Board and Superintendence of HCFMUSP, boosts and leverages, even more, the joint actions they are involved.

- **FISCAL COUNCIL:** Created in 2022, it aims to exercise, independently, the financial and accounting supervision of the management acts of the administrators and the activities of FFM, with the purpose of maintaining the good functioning of the Institution.

- **EXECUTIVE BOARD:** Comprised of the Director General and Deputy Director General, who conduct strategic activities within the scope of FFM's management.

In addition, it now has a Compliance Officer, responsible for internal integrity, audit and prevention mechanisms and procedures.

The execution of corporate activities is directly linked to its four Boards:

- **CORPORATE MANAGEMENT BOARD,** responsible for the Departments of Business and Market Relations; Communication; and Projects, Research and Innovation;

- **ADMINISTRATIVE BOARD (currently associated with the CORPORATE MANAGEMENT BOARD),** responsible for the Departments of Procurement and Operations; Information Technology; and People Management;

- **FINANCIAL BOARD,** responsible for the Departments of Finance; Controllershship; and Billing Departments and

- **LEGAL BOARD,** responsible for the areas of Judicial and Administrative Litigation; Contracts; and Advisory.

Each Department has a leader with technical and managerial expertise, who coordinates his team with lucidity, determination and responsibility.

Established to organize the Institution's responsibilities and competences, the attributions of the 345 (Dec/2022) FFM direct administration professionals that make up each Board and respective Departments are as follows:

**CORPORATE MANAGEMENT BOARD:** Its objectives are to conduct the Institutional Strategic Planning, execute the corporate strategy, as well as the general guidelines approved by the Boards and the Executive Board, in addition to establishing management policies and managing programs, projects and strategic goals.

The following Departments are linked to the Corporate Management Board:

**Business and Market Relations:** In 2022, it is premised on establishing business and relations with healthcare contractors/operators, as well as the impending challenge of, together with the Senior Management of

HCFMUSP and its Institutes, seeking alternatives to offer this model of providing assistance services.

We highlight the improvement of controls and management tools, continuous action for the growth of supplementary health through the expansion of contracted services, bargain to yield results and changes in remuneration models, management of portfolios of Health Operators and other private sources .

In 2022, the department actively participated in several fronts: transition from the Multimed platform (Phillips) to MV; adherence to the improvement project related to the General Data Protection Law with the company Every; and a project to map strategic administrative processes with the consulting firm.

Billing from contracts with operators and other services had a positive impact on turnover, with an increase of BRL 13 MM compared to 2021, with readjustment negotiations corresponding to 15% of the total billed and added to exceptionality contracts, which contributed with more than BRL 12 MM in consolidated turnover. In this context, 4,680 registrations of orthoses, prostheses and special materials (OPME) were carried out and 2,393 demands were met by the Institutes that make up the Supplementary Health system in the HCFMUSP Complex.

**Communication:** The Communication area seeks to ensure FFM's institutional image, in addition to planning and executing the integrated communication plan, always focusing on the values of transparency, integrity and austerity in governance, and with the purpose of strengthening the image of modernity and effectiveness of the Institution.

It is responsible for institutional, internal and external communication, visual identity management, communication materials in general, internal and external vehicles (Intranet, FFM Journal, website, social networks), communication campaigns, organization of events, press relations, development of spokespersons, definition and implementation of the communication policy, support to other areas and the board in activities related to communication.

Since 2022, the area has the following attributions: managing the channels, instruments and content for institutional dissemination in its various purposes; ensuring brand positioning; working to strengthen the Institution's image on the market; planning, coordinating and implementing ad campaigns; acting in line with the FMUSP/HC Academic Health System;

providing access to quality information in a reliable, up-to-date and transparent manner; disseminating relevant institutional information to their respective target audiences; providing press consultancy and crisis management, when applicable; and providing support to the various areas of the organization and acting in a joint and integrated manner.

**Projects, Research and Innovation:** It is responsible for the administrative-financial analysis of all processes involving contracts/agreements signed with national and international public and private bodies, with the exception of CGs intended for the billing of medical care services for SUS patients and Supplementary Health.

FFM participates in relevant projects, mainly focused on the prevention and treatment of diseases that affect the health of the Brazilian population. In December 2022, 237 projects were active at FFM, subsidized with national and international public and private resources, and 622 clinical studies, sponsored by the pharma industry.

In addition to ensuring correct compliance with legislation and legal instruments linked to projects, the Department of Projects, Research and Innovation (PPI) is also responsible for the financial analysis of other activities carried out by members of the FMUSP/HC System, such as: IRLM management, EEP and ServCEX courses, donations, sponsorships, provision of various services, leases, etc., which represented, in 2022, more than 900 CGs, totaling more than 1,700 active CGs, including projects, clinical studies and miscellaneous activities.

The PPI acts as a "gateway" for projects at the institution, carrying out a prior analysis of the processes, forwarding them to the respective areas, providing guidance on the rules of each subsidy body and specific legislation, and warning about changes in terms of validity and deadlines for making expenses.

It is also responsible for the elaboration of the FFM Work Plan and the Annual Activities Report.

**FINANCIAL BOARD:** Its objectives are to conduct FFM's financial planning and develop the institutional investment plan, as well as to develop projects and new business models to achieve the objectives of cost reduction, revenue increase and sustainable growth, in addition to carrying out effective financial risk management and ensuring adequate cash flow for institutional operations.

The following Departments are linked to the Financial Board:

**Financial:** It seeks to maintain the best results in financial management and the constant improvement of the receiving and payment services demanded by the FMUSP/HC System and other partners, through the most modern, agile and secure financial performance tools available on the market.

**Controllership:** Responsible for accounting, bookkeeping, asset control, rendering of accounts and managerial cash flows by the Management Center (CG).

**Billing:** Responsible for billing medical care services for SUS and Supplementary Health patients, as well as for billing operations, control and distribution of amounts related to services provided in the various units of the HCFMUSP Complex, through actions implemented in the search for enhancement and improvement of said activities.

In the SUS segment, it also operates in the qualification/accreditation processes with the MS and various registrations, as required by DRS-1/SES and MS. Monitors/supports external audits related to SUS processes at the administrative level.

The Medical Audit area of FFM's Billing Department is dedicated to analyzing medical records to assess whether the procedure performed x billed to the patient's account is billed in accordance with current SUS rules. It also acts as an authorizer and promotes the orientation process for the Management Centers of the HCFMUSP Complex, with a view to improving the quality of billing.

**ADMINISTRATIVE BOARD (currently associated with the CORPORATE MANAGEMENT BOARD):** Its objectives are to implement and supervise the standardization of processes, performance indicators and administrative measures in the various organizational sectors, in addition to developing and disseminating good practices, as well as the set of Institutional policies, guidelines, beliefs and values. Currently, the Corporate Management Director also holds the function of Administrative Director.

The following Departments are linked to the Administrative Board:

**Supplies and Operations (domestic market and imports):** It is responsible for the acquisition of materials, inputs, devices and equipment; contracting services, architecture projects, works and renovations; payment of international services, complying with due taxation and legislation regarding the provision of information to controlling bodies; and everything else that can benefit the FMUSP/HC System and other associated Health Units.

On the domestic market, during 2022, 3,416 processes were carried out, totaling more than BRL 464 MM, with savings of BRL 19 MM (4.0%) in negotiations with suppliers.

In Imports, 194 processes were carried out, totaling US\$ 5.3 MM, with savings of 0.6%.

**Information Technology:** Responsible for identifying and developing specialized systems; integrate and monitor third-party systems, ensuring the alignment of requests with institutional objectives; deploying and modernizing the necessary infrastructure ensuring information security, in order to meet the demands for the advancement of quality, administrative and operational processes within the scope of FFM and with interaction with the partners HCFMUSP, FMUSP, Icesp and IRLM. In 2022, it defined the strategic planning of Information Technology (IT), together with the Annual Work Plan and the Investment Plan, the projects that will provide the corporate requirements for technological updating of information and communication, in addition to maintaining a close relationship with the areas of IT and communication at HCFMUSP with the purpose of sharing knowledge, maximizing results and reducing costs.

In 2022, the **Personnel Management** Department managed 11,382 employees, including FFM direct administration personnel, FFM personnel at the service of the FMUSP/HC System, outsourced and personnel allocated to specific projects to assist the population. Of this total, 345 employees are assigned to its direct administration, focused on supporting hundreds of the entity's social programs, as well as on assistance activities, development of comprehensive health care and care for SUS patients, developed by the remaining professionals. The latter are hired on a complementary or full-time basis, thus seeking to encourage the production of work in the didactic, assistance and research areas, through material support and adequate remuneration.

It continued the Personnel Qualification and Training Program, carried out recruitment and selection activities for the entire FMUSP/HC System (more than 24 thousand candidates recruited and more than 8 thousand candidates evaluated), administration and payment of social benefits (BRL 84 MM) and salaries, involving payroll expenses of approximately BRL 889 MM, in addition to coordinating the process of hiring, dismissals, leaves, vacations, positions and salaries, food staples, meal vouchers, transportation vouchers, among others.

**LEGAL BOARD:** It aims to guide the practice of acts based on legality, acting preventively to the control bodies, through the adoption of existing instruments, which will reflect on the efficiency of the execution of contracts and, consequently, will give greater security to the activities of FFM and those developed in support of FMUSP and HCFMUSP, as well as conducting the preparation and implementation of legal plans and goals for the Institution, in addition to analyzing changes in legislation and their impacts.

The following areas are linked to the Legal Department:

**Judicial and Administrative Litigation:** It promotes the defense of FFM's interests in administrative, judicial or extrajudicial proceedings; sponsors and administers litigation in the tax, labor and civil areas. It analyzes judgments relating to filed demands and proposes changes to postures and regulations, with the aim of reducing future risks. It monitors and petitions existing processes before the Court of Auditors.

**Contracts:** It prepares preliminary drafts for publication of notices for purchases, projects and services; writes up the necessary instruments for the agreement and proposes the direction to be given to the processes that involve the formation or modification of contracts, covenants, agreements and other legal instruments.

**Advisory:** It acts in the prevention of conflicts and the judicialization of processes; seeks out-of-court solutions to claims; issues legal opinions based on legislation, jurisprudence, doctrine and other applicable rules; anticipates the adoption of necessary measures to comply with all legal obligations, the maintenance of certificates and titles granted; provides support to studies prepared for tax planning.

In 2022, the defense of FFM interests in relevant actions of the Court of Auditors in the judgment of the Annual Balance Sheet of FFM stands out, as well as the achievement of success in the following processes: a) Action brought by the MPT due to alleged non-compliance with an agreement entered into in a Public Civil Action on excessive working hours of employees, beyond the legal limit; b) Extinction of two of the three Public Civil Actions promoted by the Professional Union of the Preponderant Category, which sought the full hazard pay to all professionals of the institution; c) Action taken against the Professional Union of the Preponderant Category, suspending the illegal collection of union dues from the institution's employees.

**COMPLIANCE:** The Compliance Office was created in April 2022 with the aim of developing and monitoring institutional activities and with responsibility for FFM's internal integrity, audit and prevention mechanisms and procedures. The implementation of the Compliance and Data Integrity Program began in the second half of 2022, with the approval of the Foundation's Board of Trustees and its governing body.

Among its attributions, emphasis was given to the review and update of FFM's proposals for the Policy of Respect for Human and Labor Rights; FFM's Conflict of Financial Interests Policy; and FFM's Anti-Bribery and Anti-Corruption Policy, regarding the legal and regulatory standards that the Foundation must comply with, offering support for the awareness of its collaborators.

The Rules for Per diems and Tickets and the Rules for Training and Participation in Corporate Education Actions are in the process of being approved, guiding those responsible on how to decide on requests for travel and scholarships to be carried out for the benefit of FFM.

A dedicated channel was created in the FFM ombudsman system, in order to meet the Compliance culture and give voice to employees or any other individual who identifies any non-compliance and is able to report it, through the [compliance@ffm.br](mailto:compliance@ffm.br) channel, in addition to offer opinions to solve any doubts about matters that cover the Compliance area (e.g. possibility or not of hiring a former member of the Advisory Board; possibility or not of nominal disclosure of the salary of FFM employees).

The Compliance Office assiduously monitored the implementation of the Data Integrity Program, contracted by Every consultancy, with the aim of leaving

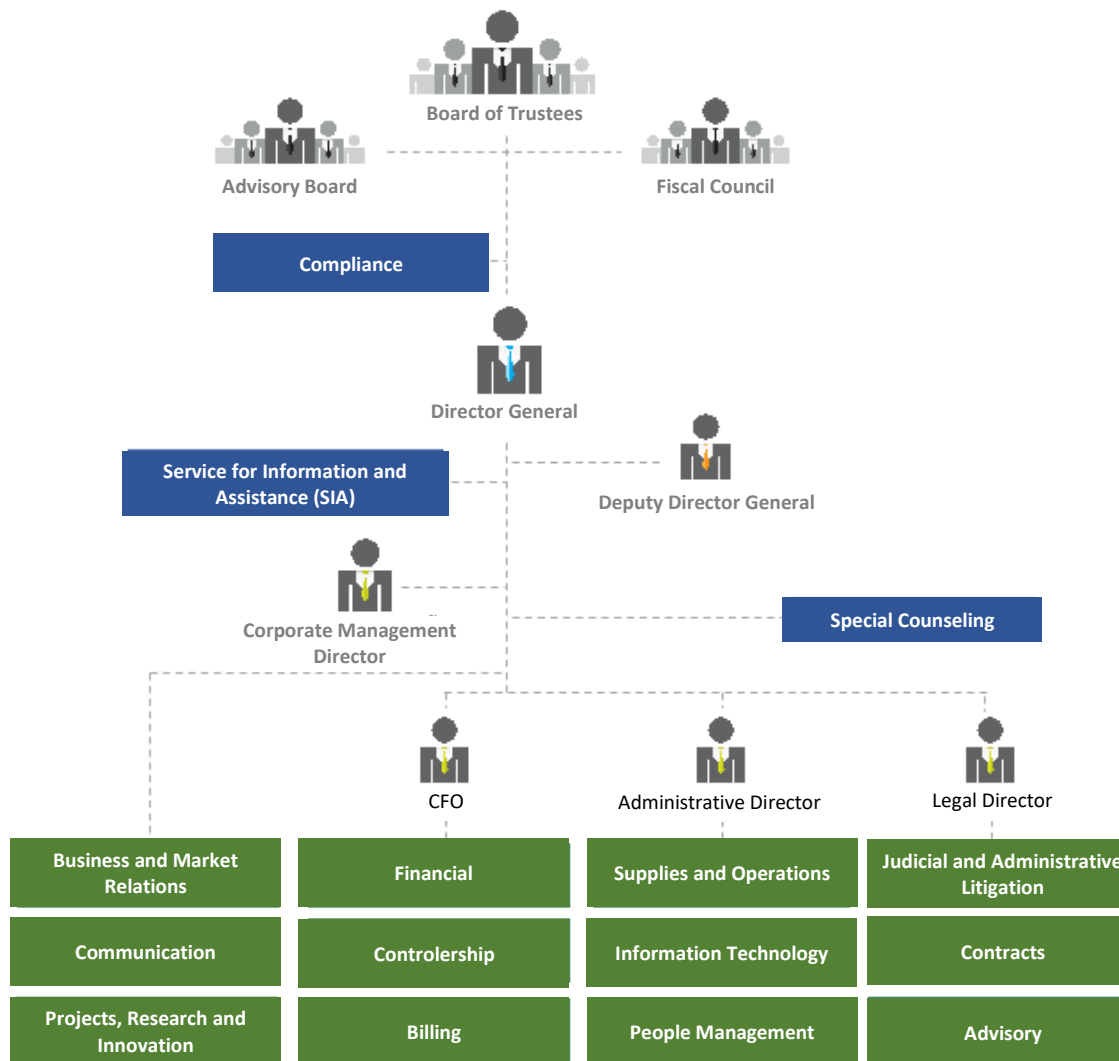
FFM in compliance with the guidelines set forth by the General Data Protection Law and advancing in terms of information security.

The FFM Governance Diagnosis was idealized, seeking the evolution of governance and management

practices, assessing FFM's maturity and digital performance, identifying gaps in the development of governance practices, giving approval for an action plan for evolution of the maturity of such actions.



## Organograma da Fundação Faculdade de Medicina a partir de 2022 <sup>2</sup>



## Strategies

*In 2022, regarding operational matters, the FFM's organizational structure was reformulated, seeking to give more agility to the internal processes*

Since March 2022, a new Board of Directors has been in charge of FFM, which now has a Director General, a Deputy Director General and four Boards: Corporate, Administrative, Legal and Financial, according to the new statute.

A new Internal Regulation was drawn up and the Fiscal Council, with three members, and the Compliance Office were installed.

In terms of operations, FFM's organizational structure was reformulated, seeking to streamline internal processes.

A new visual identity was established on the website, as well as on all FFM communication media, integrating it to the FMUSP standard and its Clinics Hospital.

In order to meet the requirements of the State Court of Accounts, FFM adapted its Purchasing Regulation and the personnel selection criteria for the FMUSP/HC System, bringing them closer to those of federal law 8666/1993. With this, it aimed to guarantee greater publicity, competitiveness and parsimony, without loss of agility, in the conduction of its processes. In 2022, the Department of Supplies and Operations underwent structural changes, with new protocols and a new regulation, created to streamline the sector's operations.

FFM presented a proposal to reduce costs in the management of resources allocated to the HCFMUSP Complex, thus enabling an increase in investments in the core activity. The Legal Board adopted a consultative/preventive stance in all signed contracts.

FFM sponsored an event in which the foundational model in force was discussed with the Superior Court of Justice. It also sought dialogue with the regulatory agencies: ANS and ANVISA. A partnership was signed with the State Public Prosecutor's Office and the process of building a more comprehensive endowment fund began.

The digital transformation was initiated, with the mission of optimizing processes, expanding integration between different areas and promoting and fostering transparency in the conduct of work.

FFM has specific computerized systems that support administrative operations, whether in the scope of internal, legal, regulatory demands, as well as for the HCFMUSP complex – solutions that are implemented through its Department of Information Technology (DTI).

As FFM grew in number of projects and processes, a new perspective was given to DTI for the updating of its systems and operations. However, due to the current technological scenario and the growing demand for services for FFM, a new phase of systems restructuring is emerging to ensure continuous growth and speed in processes.

As a strategic goal, the implementation of an ERP System (Enterprise Resource Planning) stands out. This establishes a great differential in the integrated management of all sectors and the management of the activities carried out by FFM, with the possibility of issuing decision support reports.

The ERP System also ensures the speed of processes, brings more transparency and autonomy to applicants, demonstrates the status of their requirements and accurately estimates the completion of their respective processes.

The implementation of the ERP will optimize processes, reduce costs associated with the use of paper, storage and document custody, and also guarantee online mobility for accessing documents, as well as offering a global vision, through analysis and planning, thus enabling rapid action in critical areas or moments.

This initiative takes into account the different stakeholders, profiles and activities supported by FFM, based on the premise of participatory and integrated construction, whose product is user-friendly and provides excellent usability to all users, generating benefits of scale.

Another key aspect is data security, as the entire process will be conducted in compliance with the General Data Protection Law and other legislation in force, with periodic backups and respective redundancies, in accordance with the best practices in IT.

Sponsored by FFM, the first edition of Fonajus was held on November 17 and 18, 2022, which brought

together authorities from the areas of Justice and Health to discuss ways to provide the Judiciary with specialized information on Health so that decisions involving drugs and treatments not covered by SUS, and sometimes not even requested to ANVISA, improperly mobilize resources from the Judiciary and MS.

On December 15th and 16th, FFM promoted the “2023 Strategic Planning Meeting”, aiming to discuss and define the actions and priorities to be developed in the next year. The event also had the participation of representatives from FMUSP and HCFMUSP, in addition to lectures by the greatest Brazilian navigator, Amyr Klink, with valuable examples of strategy and determination, and by the economist, professor at Fundação Getúlio Vargas and member of the FFM Advisory Board, Paulo Gala, who addressed the prospects and economic scenario for the health sector.

FFM has maintained, since 1988, cooperation agreements with SES-SP, which provide for the joint performance of a series of activities, ranging from the billing of medical and hospital care services and the management of human resources of the FMUSP/HC System, to renovations and purchases of equipment and inputs, among others. It also supports FMUSP/HC System programs, its extension courses, events, research projects, clinical studies, among other initiatives.

Of its current staff of 11,382 employees (Dec/2022), only 345 are assigned to its direct management; the remaining professionals work directly in care activities, development of comprehensive health care and care for SUS patients.

The structural and technological modernization of FMUSP and its Clinics Hospital is also among the central objectives, which has been maintained with constant investments.

A fundamental point of its institutional strategy is transparency, given the extensive oversight to which it is submitted. FFM has its activities audited by the Public Prosecutor's Office of Foundations, by an independent external audit and by the State Court of Auditors, in addition to rendering accounts of its projects to bodies such as Ministries, State Secretariats and various national and international public and private institutions. In the relationship with partners, it operates according to regulations agreed on a case-by-case basis, always guaranteeing transparency and austerity in management.

FFM also renders accounts of its performance to its Board of Trustees (four meetings/year) and Advisory

Board (two meetings/year). In these cases, the rendering of accounts takes place through its Situational Report. Annually, FFM presents its Work Plan for the following year and the Activity Report of the previous year for analysis by these two collegiates.

In addition, in 2022, the Fiscal Council, with three members, and the Compliance Office were installed.

In the Deliberative Council and in the Planning and Control Commission of HCFMUSP, FFM discloses the Cash Flow “book” for operational accounts monthly. It also publishes the monthly edition of FFM Journal, with diverse and updated content related to the FMUSP/HC System.

FFM is guided by values of transparency in relation to financial and administrative information, available on the Transparency Portal on the website [www.ffm.br](http://www.ffm.br).

FFM growth 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 areas grew in much smaller proportions than the projects and resources they developed.

Due to the credibility that FFM inspires to the subsidizing bodies, the volume of values managed by FFM has increased significantly, year after year.

**Operating revenue** and those arising from projects, contracts and agreements and others, with substantial growth over the years, were fully reversed in favor of the operation itself and the projects executed by FFM.

The **financial guideline** maintained the search for positive working capital, basing its expenditure or investment decisions on the prior requirement of the existence of financial resources for such.

With regard to financial investments, the policies for allocating investments in safe banking products, with liquidity and very low risk, were maintained. Nevertheless, the financial returns in 2022 were significant, mainly in view of the boost from the high Selic rates, when compared to previous years.

Over its 36 years, it has sought to constantly **improve** its services standards and has dedicated itself, simultaneously, to fulfilling its objectives and meeting the needs of its partners.

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

The 345 (Dec/2022) FFM direct administration professionals are distributed and organized in the

Corporate, Administrative, Legal and Financial Management Boards and in the teams of the specialized Departments, which are: Communication; Controllership; Invoicing; Financial; People management; Legal; Business and Market Relations; Projects, Research and Innovation; Supplies and Operations (domestic market and import); and Information Technology.

FFM is also responsible for managing 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 2022, 237 assistance, teaching and research programs/projects were active in the institution, in addition to 622 clinical studies, developed in the FMUSP/HC System.

In 2008, FFM started to be recognized as a Social Organization – a private, non-profit legal entity, whose activities are aimed at teaching, scientific research, technological development, protection and preservation of the environment, culture and health, receiving this title from the very Public Administration and authorized to enter into Management Contracts with it to perform services not exclusive to the State. As a result, control systems and processes were modernized, without the need for a significant expansion of the direct administration team.

In the same year, FFM signed a Management Contract with SES-SP to manage the activities of Icesp, a tertiary hospital highly specialized in cancer treatment, which serves SUS patients for complex treatments, coming from all over the 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, began to sign the Management Contract directly with HCFMUSP, as of 2017.

Since 2010, FFM maintains a Management contract signed with SES-SP to carry out health activities and services at IRLM. Inaugurated in September 2009, the Institute was designed to be a center of excellence in treatment, teaching and research in Rehabilitation.

The HCFMUSP Cotoxó Auxiliary Hospital Division was deactivated in 2013, in order to be fully rebuilt, with a rear guard hospitalization unit and an Alcohol and Drugs Center. In 2022, the building was completed and equipped and was renamed Perdizes Institute. FFM was the social organization selected to manage its activities, through a Management Contract.

In 2022, FFM developed, together with the FMUSP/HC System, **partnerships** with several institutions interested in the development of medical sciences, such as:

#### **Federal Public Bodies:**

- National Health Surveillance Agency – ANVISA;
- Federal Justice of Santa Catarina;
- Ministry of Science and Technology / CNPq;
- Ministry of Science and Technology / Finep;
- Ministry of Health – MS;
- Labor Public Prosecutor's Office / Labor Prosecutor's Office of the Municipality of Patos de Minas
- Pan American Health Organization – PAHO / World Health Organization (through the Ministry of Health);
- Petróleo Brasileiro S/A – Petrobrás (mixed capital company);
- Attorney General of the National Treasury;
- Regional Superintendence of Administration of the Ministry of Economy in São Paulo.

#### **State Public Bodies:**

- Regional Council of Physiotherapy and Occupational Therapy of the 3rd Region - CREFITO;
- Research Support Foundation of the State of São Paulo – FAPESP;
- Emílio Ribas Infectology Institute;
- State Secretariat for Economic Development of São Paulo – SDE;
- São Paulo State Department of Health – SES-SP.

#### **National Private Institutions:**

- Brazilian Agency for Industrial Development – ABDI;
- Aids Healthcare Foundation of Brazil;
- Associação Beneficente Alzira Denise Hertzog da Silva – ABADHS;
- Syrian Beneficent Association – Hospital do Coração;
- Latin American Association for Oral Health Promotion and Dental Research;
- UMANE Association;
- Association Volunteers for International Service Brazil – AVSI;
- Banco Industrial do Brasil S/A;
- Braincare Desenvolvimento e Inovação Tecnológica S.A.;
- Brainfarma Indústria Química e Farmacêutica S/A;
- Butantan Foundation;

- Institutional Support Foundation for Scientific and Technological Development of the Federal University of São Carlos;
- Itaú Foundation for Education and Culture;
- Maria Cecília Souto Vidigal Foundation;
- Foundation for Scientific and Technological Development in Health - FIOTEC;
- GE Healthcare do Brasil;
- Itaú Group;
- Huawei do Brasil Telecomunicações Ltda.;
- Mahle Institute;
- Instituto Todos Pela Saúde;
- Laboratórios Ferring Ltda.;
- Magazine Luiza S.A.;
- Samsung Eletrônica da Amazônia Ltda.;
- Sanofi Aventis Farmacêutica Ltda.;
- Siemens Healthcare Diagnostics Ltd.;
- Vale S/A.

#### International Institutions:

- Abbott Laboratories;
- AIGORA GMBH;
- *Alzheimer's Association*;
- *Americas Hepato – Pancreato - Biliary Association Foundation - AHPBA Foundation*;
- *Baylor College of Medicine*;
- *Baylor University*;
- Banco Interamericano de Desenvolvimento – BID;
- *Bill and Melinda Gates Foundation*;
- bioMérieux S.A.;
- *Climate and Land Use Alliance*;
- *Conquer Cancer Foundation of ASCO*;
- *Diomics Corporation*;
- *European Union by European Commission*;
- *Family Health International*;
- *Fellows of Harvard College*;
- *Fondation Mérieux*;
- *Foundation for Innovative New Diagnostics – FIND*;
- *Fundación Infant, de Buenos Aires*;
- *Grand Challenges Canada*;
- *Harvard Graduate School of Education*;
- *Harvard T. H. Chan School of Public Health*;
- *Icahn School of Medicine at Mount Sinai*;
- *Imperial College of Science, Technology and Medicine*;
- *J. David Gladstone Institutes*;
- *Jhpiego Corporation*;

- *Joan & Sanford I. Weill Medical College of Cornell University*;
- *Johns Hopkins International Injury Research Unit*;
- *Lego Foundation*;
- *London School of Hygiene & Tropical Medicine*;
- *Milken Institute*;
- *Ministério do Ensino Superior, Ciência, Tecnologia e Inovação da República de Angola*;
- *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)*;
- *Queen Mary University of London*;
- *Regeneron Pharmaceuticals, Inc.*;
- *Research Foundation for Mental Hygiene*;
- *Schizophrenia International Research Society*;
- *Swiss Tropical and Public Health Institute*;
- *The Chancellor Masters and Scholars of the University of Oxford*;
- *The George Washington University*;
- *The Ohio State University*;
- *The Open Society Policy Center – OSPC*;
- *The Regents of the University of California – Berkeley*;
- *The Smile Train*;
- *The University of North Caroline at Chapel Hill*;
- *The University of Warwick*;
- *UNAIDS – Joint United Nations Programme on HIV/AIDS*;
- *United Nations Children's Fund – UNICEF*;
- *University College London Consultants Limited*;
- *University of Birmingham*;
- *University of Bristol*;
- *University of Georgia*;
- *University Health Network*;
- *Vanderbilt University Medical Center*;
- *ViiV Healthcare UK Ltd.*;
- *Vital Strategies, Inc.*;
- *World Health Organization*;
- *Yale University*.

In its 36 years of existence, FFM has obtained public recognition for its work as a charity for social assistance, through obtaining and maintaining various **certifications**, of which the following stand out:

- State and Municipal Public Utility Declaration (the Federal Public Utility Declaration was revoked, for all institutions, by Law no. 13.204/2015);
- Certificate of Registration and Certificate of Charitable Social Assistance Entity (CEBAS), granted by Ordinance SAS/MS No. 1205, of 12/13/21, published in the DOU on 12/15/21, valid from 12/15/2021 to 12/15/2024;
- Certificate of Qualification as a Social Health Organization from the State Department of Health of the Government of the State of S. Paulo - Process SS 001/0001/002.913/2008;
- Certificate No. 018/2008 of Qualification as a Social Organization from the Municipal Secretariat for Management of the Municipality of São Paulo;
- Accreditation, as a support foundation for HCFMUSP, with the Secretariat for Economic Development, Science, Technology and Innovation, Resolution SDE 26, of 10/04/2019;
- Accreditations with PRONON (Ordinance 669/2013 and 668/2016) and PRONAS (Ordinance 782/2013 and 550/2016);
- Accreditation with CNPq no. 900.0011/1990, revalidated until 03/29/2026;
- Declaration of Recognition of Immunity from Tax on Transfer "Causa Mortis" and Donation of Any Assets or

Rights – ITCMD – Process No. IM01310342, valid until 04/12/2025;

- Registration Certificate No. 0308/SP/2000 from the State Social Assistance Council – CONSEAS.

FFM also supports its members in carrying out their various events. In 2022, it participated in the following technical-scientific and institutional events: a) 1st Congress of the National Forum of the Judiciary for Health – Fonajus; b) XIV Summer Course in Bioinformatics; c) VII Psychiatric Clinical Congress 2022; d) Hospital Fair - 2022; e) Update Course in General Surgery, Emergency and Trauma - Surgeon Year 12; f) II Acute Kidney Injury Update Course - IRAUSP; g) XXXI Brazilian Congress of Nephrology, XIII Luso-Brazilian Congress of Nephrology and XIX Brazilian Congress of Nephrology Nursing; h) Annual Course of the Discipline of Nephrology - NEFROUSP; i) course "Training in Minimally Invasive Surgery – LAPP; j) IX ENEO International Meeting on Oncological Endoscopy; k) Specialization Course in Voiding Dysfunctions; l) V USP Rheumatology Update Day; m) Workshop "*Translation of Radiopharmaceuticals: important aspects*"; n) Workshop on Vaginal Pessaries of the Urogynecology Day; o) Applied Cytogenomics Course; and p) "Physician Symposium" at the XXVIII Brazilian Congress of Physical Medicine and Rehabilitation 2022.

## FFM Consolidated Results

Health promotion actions, disease prevention, medical-hospital care and highly complex rehabilitation for users of the Unified Health System (SUS) are the assistance activities promoted, in joint action, by HCFMUSP and FFM, through the Agreement of Comprehensive Health Care for SUS Patients, celebrated since 1988 between FFM and HCFMUSP and SES-SP.

In facilities that are increasingly modern and technologically equipped according to the latest international quality guidelines, assistance also relies on highly specialized and trained teams.

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

FFM CONSOLIDATED RESULTS			
(In thousands of BRL)	2020	2021	2022
<b>Revenue</b>	<b>1,541,492</b>	<b>1,471,647</b>	<b>1,583,129</b>
SUS medical care	322,981	309,463	372,277
Private medical care	88,347	101,904	117,564
Subventions and contributions	951,047	890,143	854,337
Financial revenue (net)	17,357	33,055	100,013
Technical services	39,807	42,721	59,415
Other (courses, donations, etc.)	121,953	94,361	79,523
<b>Expenses</b>	<b>1,425,018</b>	<b>1,396,568</b>	<b>1,490,343</b>
Personnel	841,567	839,206	886,635
Consumption materials	283,731	247,257	251,925
Professional services	206,955	209,920	252,042
Other (general, depreciations, etc.)	92,765	100,185	99,741
<b>Result</b>	<b>116,474</b>	<b>75,079</b>	<b>92,786</b>

When comparing the total revenue of FFM, an **increase of 3%** is observed in 2022 compared to 2020. The revenue arising from medical care provided by SUS **increased by 15%** in that period, obtained mainly through of reassessments of fixed values established in the formal agreements that regulate transfers.

**Investments in infrastructure and equipment** made by FFM, in 2022, totaled approximately **BRL 74.8**

**million.** BRL 54.5 million were invested in HCFMUSP, BRL 15.6 million in Icesp, BRL 3.5 million in FMUSP, BRL 370 thousand in IRLM and BRL 103 thousand in other agreements. The FFM Administration, in turn, made investments of approximately BRL 764 thousand, with emphasis on equipment and computer systems.

FFM CONSOLIDATED RESULTS			
(In million of BRL)	2020	2021	2022
<b>Total</b>	<b>58.0</b>	<b>35.5</b>	<b>74.8</b>
Equipment	37.8	19.6	35.0
Buildings and Facilities	1.7	7.5	25.9
IT	10.9	6.4	9.3
Other (furniture, vehicles, etc.)	7.6	2.0	4.6





# Financial Balance Overview 2022

# Financial Balance Overview 2022

ORIGIN OF THE RESOURCES	2022	%	2021	%	2020	%
<b>Total Revenue</b>	<b>1,583.1</b>	<b>100%</b>	<b>1,471.6</b>	<b>100%</b>	<b>1,541.5</b>	<b>100%</b>
<b>Government Resources</b>	<b>1,178.5</b>	<b>74.4%</b>	<b>1,166.8</b>	<b>79.3%</b>	<b>1,250.7</b>	<b>81.2%</b>
Medical Care - SUS	372.3	23.5%	309.5	21.0%	323.0	21.0%
Subventions	806.2	50.9%	857.3	58.3%	927.7	60.2%
<b>Medical Assistance - Agreements and Private</b>	<b>117.6</b>	<b>7.4%</b>	<b>101.9</b>	<b>6.9%</b>	<b>88.3</b>	<b>5.7%</b>
<b>Donations</b>	<b>27.3</b>	<b>1.7%</b>	<b>45.4</b>	<b>3.1%</b>	<b>80.0</b>	<b>5.2%</b>
<b>Private cooperation - national and international</b>	<b>48.1</b>	<b>3.0%</b>	<b>32.8</b>	<b>2.2%</b>	<b>23.4</b>	<b>1.5%</b>
<b>Provision of service and/or sale of products</b>	<b>95.4</b>	<b>6.0%</b>	<b>77.0</b>	<b>5.2%</b>	<b>66.8</b>	<b>4.3%</b>
<b>Other revenue</b>	<b>116.2</b>	<b>7.3%</b>	<b>47.7</b>	<b>3.3%</b>	<b>32.3</b>	<b>2.1%</b>

RESOURCE APPLICATION	2022	%	2021	%	2020	%
<b>Total Expenses</b>	<b>1,565.1</b>	<b>100%</b>	<b>1,432.1</b>	<b>100%</b>	<b>1,483.0</b>	<b>100%</b>
Personnel	886.6	56.6%	839.2	58.6%	841.6	56.7%
Operational expenses	603.7	38.6%	557.4	38.9%	583.4	39.4%
Asset acquisitions	74.8	4.8%	35.5	2.5%	58.0	3.9%



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# Integral Health Care Actions

## FMUSP/HC System

*Since 2011, the FMUSP/HC System aligns its actions in research and innovation to a strategic plan that is continuously elaborated and updated.*

The Academic Health System of the University of São Paulo Medical School (FMUSP) and the Clinics Hospital (HCFMUSP) provides complete assistance at all levels of health care, being the oldest Brazilian university health system and the largest in Latin America. Its main objective is to offer teaching, research, assistance, innovation and cultural and extension activities, with an emphasis on multidisciplinary and multi-institutionality.

At the Medical School, theoretical classes and the entire academic activity take place, while the Clinics Hospital specializes in high-complexity care (tertiary/quaternary care), a benchmark in assistance in severe cases. The System is also complemented by: the medium-complexity University Hospital of USP (secondary care); the specialized units: the Extension Service for the Care of HIV/AIDS Patients, the Butantã School Health Center and Basic Health Units (primary care); the Institute of Tropical Medicine at USP; and the supporting institutions Fundação Faculdade de Medicina and Zerbini Foundation.

Since 2011, the FMUSP/HC System has aligned its actions in research and innovation with a strategic plan that has been drawn up and continuously updated. This plan integrates the FMUSP and LIMs research groups to the different HCFMUSP institutes.

The scientific production of the FMUSP/HC System between 2018 and June 2022 was impressive, with 13,653 articles published in journals indexed in the Web of Science database. The number of articles indexed in the ISI base in collaboration with international authors increased from 1,055 (36.6%) in 2018 to 1,499 (41.7%) in 2021. Among the more than 33,000 scientific papers already cataloged at the Observatory for Intellectual Production (OPI) since 2011, 13,688 (39%) are open access.. It is noteworthy that USP members were part of the world ranking of top scientists, according to a study published in the scientific journal *Public Library of Science (PLOS) Biology* released in 2020. Of this group, 25 are from the FMUSP/HC System. In 2021, the same magazine published a list of the 100,000 most influential

researchers in the world. It included 30 professors from FMUSP.

As a result of its constant investment in infrastructure and qualification of researchers, the FMUSP/HC System was able to respond quickly and with quality to the challenges of the pandemic generated by the SARS-CoV-2 virus.

The FMUSP/HC System produced research of great impact, such as the first sequencing of the coronavirus in Brazil, the findings of autopsies, which pointed out the nature of the thrombotic disease of Covid-19, in addition to data on the manifestation of the virus in children. On the OPI website, 982 publications on Covid-19 with authors from the FMUSP/HC System were identified. In 2020 there was an increase of more than 10% in total publications per year compared to 2018 and 2019, with a substantially large number of articles on Covid-19 (340). In 2021, 504 articles on the disease were published by FMUSP/HC System researchers, accounting for an even greater proportion of annual scientific productivity. Approximately 75% of the total production of articles related to Covid-19 include original data, which were published in international journals of greater impact. The general citation ability of institutional scientific production on Covid-19 can be attested by an H index equal to 35, until October 2021.

Humanization is a transversal field of knowledge in the health area that concentrates efforts on the ethical and empathetic quality of interpersonal relationships in care, management and teaching practices.

The higher bodies of the FMUSP/HC Academic Health System are the Congregation of the Medical School and the Clinics Hospital Deliberative Council, both presided over by the Director of FMUSP. The FMUSP Congregation has a consultative and deliberative function and is assisted by the Undergraduate, Graduate, Research, Culture and Extension, Medical Residency and International Relations Commissions. The HCFMUSP Deliberative Council defines the guidelines for tertiary-level medical-hospital care and is composed of ten representatives of FMUSP professors elected by their peers.

The FMUSP/HC System is composed of the following institutions:

The **University of São Paulo Medical School (FMUSP)** (page 30), with more than a century of excellence in teaching, research and international recognition, was founded in 1912 and established in 1913. In 1931, the current building of the Medical School was inaugurated. In 1934, it joined USP.

It offers five undergraduate courses: Medicine, Physiotherapy, Speech Therapy, Occupational Therapy and Medical Physics. It has the largest hospital in Latin America - HCFMUSP - and is one of the largest medical-scientific research centers in the country.

The **Clinics Hospital of the University of São Paulo Medical School (HCFMUSP)** (page 34), which on April 19, 2022 completed 78 years of its foundation.

Considered the largest Hospital Complex in Latin America, HCFMUSP comprises 10 hospitals (ICHC, IPq, IOT, IMRea, ICr, InCor, InRad, HAS, Icesp and IPer) and outpatient facilities with 2,500 beds in addition to LIMs, LEPIC, InovaHC, EEP and a Convention Center (CCR).

The Fundação Faculdade de Medicina (FFM), created in 1986 in order to contribute to the teaching, research and health care activities of the FMUSP/HC System. It collaborates to improve the institutional management of FMUSP and HCFMUSP, with the aim of providing greater integration, agility, effectiveness and credibility to academic and assistance initiatives. To this end, it develops, supports, manages and maintains hundreds of comprehensive health care, innovation, research, clinical, institutional and health policy studies projects, through national and international public and private partnerships, with the hiring of researchers and professionals allocated directly to research, in addition to the acquisition of materials and equipment. In 2022, FFM completed 36 years of existence, fulfilling its social mission with seriousness and transparency.

Health promotion, disease prevention, medical and hospital care and highly complex rehabilitation actions for SUS users are carried out by HCFMUSP and FFM, through the Agreement on Comprehensive Health Care for SUS Patients, celebrated since 1988, with SES-SP.

The **Zerbini Foundation (FZ)** is a non-profit organization that has been involved in the technical, administrative, operational and financial aspects of InCor for 44 years.

The **Lucy Montoro Rehabilitation Institute (IRLM)** (page 61), designed to provide more complex care for people with disabling physical disabilities, through comprehensive and integrated rehabilitation treatment, with technological structure and qualified personnel in diagnostics and therapeutics resources.

The **University Hospital of USP (HU-USP)** is a community teaching hospital that offers health care to USP professors, employees and students. It is responsible for medium-complexity care at the FMUSP-HC Academic Health System (secondary care), works to promote teaching and research, and offers assistance to SUS patients in the Butantã neighborhood. In addition, the Hospital is part of the Urgency and Emergency Network of the city of São Paulo.

The **Samuel Barnsley Pessoa School Health Center (CSE Butantã)** (p. 56), FMUSP's teaching-assistance unit that offers health care in the Butantã region, an area with 25,000 inhabitants. Focused on teaching and research in primary care, it plays an important role in the training of undergraduates, medical and multidisciplinary residents, health technicians, among others.

The **Institute of Tropical Medicine (IMT)**, reintegrated into the FMUSP framework in 2019, divided into different laboratories dedicated to research and teaching in areas related to the most diverse tropical diseases, develops studies on parasites, bacteria, viruses, fungi, genetics microorganisms, immunology and public health. The Institute has its own Biosafety Commission, Biobank and Library.

The **Capital Death Verification Service (SVOC)**, an agency linked to the FMUSP Department of Pathology aimed at clarifying the cause of death in cases of death due to an ill-defined disease or without medical assistance, occurred in the city of São Paulo.

## The USP Medical School

*FMUSP completed, in 2022, 110 years of existence, developing teaching, research and university extension with pioneering spirit and excellence*



*The new FMUSP logo*

The University of São Paulo Medical School (FMUSP) is recognized for its pioneering spirit and excellence in the areas of teaching, research and university extension. The Institution invests in modernization, technological innovation and educational platform, in addition to establishing partnerships with the private sector and expanding the internationalization process to become a reference educational center in the world.

Inaugurated in 1931, the campus currently has around 44,000 m<sup>2</sup> of floor area and houses facilities such as the Oscar Freire Institute (IOF), the Technical Division of Support to Teaching, Research and Innovation (DTAPEPI), Institute of Tropical Medicine (IMT), Medical Research Laboratories (LIMs), Library and Administration Building. Added to this space is an area of 6,000 m<sup>2</sup> located in Cidade Universitária, where part of the courses are taught.

FMUSP completed 110 years of existence this year, developing teaching, research and university extension with pioneering spirit and excellence. To publicize this date, officially celebrated on December 19, the Institution launched a new exclusive anniversary brand, applied to all its visual communication materials throughout the year.

The new symbol of FMUSP carries a bit of its history and shows its original architecture, still striking even after the renovations and modernizations it went through. The front view of the Pinheiros campus, with its three main buildings, the Central Building or “Casa de Arnaldo”,

Faculty Library and Theater, appears at the top of the brand.

Excellence in teaching is one of the pillars of FMUSP. Through innovative pedagogical projects and a curriculum that envisages future challenges, students are provided with solid training in the field of health sciences. Today, FMUSP has five undergraduate courses: Medicine, Physiotherapy, Speech Therapy, Occupational Therapy and Medical Physics.

FMUSP offers Stricto Sensu Graduate Programs (Masters/Doctorates) in several areas of knowledge for candidates graduated in higher education in courses recognized by the Ministry of Education. With the incorporation of four new programs, the Institution now has 29 Doctoral, Academic Master's or Professional Master's programs, with a total of 816 accredited advisors. Three Professional Master's programs started their activities in June 2019, and an Academic Master's and Doctoral program was incorporated by the transfer of IMT activities in February 2020.

Medical Residency is a modality of postgraduate teaching in the form of a specialization course and characterized by in-service training. FMUSP has 53 training programs in medical areas and 937 vacancies accredited by the National Medical Residency Commission. Currently, the Institution offers competition for 748 vacancies. In 2022, the Institution had approximately 1,689 residents.

With the aim of making FMUSP a reference educational center in the world, the International Relations Commission (CRInt), through its International Office, established strategic partnerships and strengthened the existing ties with the most diverse foreign entities in recent years. Among its objectives are the global visibility of the Institution, closer scientific cooperation, professional training, cultural development and the promotion of diversity among researchers, professors and students.

FMUSP is in the select group of 25 leading institutions in the health area and is part of the think tank that annually organizes the World Health Summit. The M8 Alliance brings together academic health institutions and teaching hospitals from 18 countries and promotes the transformation of current medical approaches to the treatment of the sick through preventive actions. By stimulating research in priority areas, the M8 Alliance seeks effective solutions that have a positive impact on the population's living conditions. To do so, it considers the greatest global health challenges: the impacts of demographic changes, growing urbanization and climate change.

FMUSP was elected, by EduRank 2022, the best college in Latin America in terms of performance in research on Medicine. This result was obtained from an analysis of 7.77 million citations received by 435,000 academic works from 334 higher education institutions throughout Latin America.

EduRank is based on research performance that covers metrics from 14,131 universities in 183 countries, and uses its own database, with an index of about 45 million scientific publications that received more than 1 billion citations for ranking in 246 topics, without distinction between undergraduate and graduate programs. In addition to the addition of indicators of non-academic prominence and alumni popularity. In this category, the University of São Paulo (USP) is pre-eminent in Brazil and Latin America.

In 2022, the FMUSP Library and Documentation Division created, within the FMUSP/HC System Intellectual Production Observatory (OPI), the ODS Thematic Community, which identifies works with authorship related to the FMUSP/HC System and that fall within one of the 17 United Nations (UN) Sustainable Development Goals (SDGs).

The OPI is an institutional repository and an observatory of the metrics of this production. Its objectives are to gather, collect, organize, analyze,

preserve and make available the scientific production from FMUSP, HCFMUSP and other associated institutions, in order to contribute to the management of knowledge related to scientific research in the area of Life Sciences and Health.

In January 2022, FMUSP maintained 47 agreements in force with institutions present in different continents. Of these agreements, 60% are with European institutions, 21% with teaching units in North America and 11% with universities in South America.

On January 14, the inauguration ceremony was held for the modernization and readjustment of the physical space of the FMUSP Central Animal Facility, which incorporated, over the years, new attributions and a diversity of activities, which led to its renaming to Technical Division Support for Teaching, Research and Innovation (DTAPEPI).

Currently, DTAPEPI is responsible for the production of animals under controlled conditions, free of pathogenic microorganisms, for the genetic and sanitary control of experimental animals, as well as the cryopreservation of embryos of research animals. It also houses part of the services and multi-user equipment of the Multi-user Equipment Network Program (PREMIUM) of FMUSP and HCFMUSP.

The Ministry of Health's Obstetric Tele ICU project in co-participation with FMUSP was announced on March 9, in a ceremony held in the Faculty's Congregation Room. The essence of the Obstetric Tele ICU is teleconsulting, which will allow health professionals to have a second opinion with specialists from different areas, clinical case discussions and classes; in addition to offering face-to-face training on skills and competences to improve obstetric and hospital care in the follow-up of high-risk pregnancies. The initiative is nationwide and will initially be offered in 27 hospitals, one in each Brazilian state and Federal District.

On April 13th, the official inauguration of the Historic Room took place, a space that was revitalized with the removal of all old computers and the installation of 50 modern notebooks for use during classes and other academic activities by the FMUSP community. Two other rooms had their renovations completed and more than 50 computers were made available in each one.

The first public notice of the Medicine Fund - FMUSP Endowment, launched on April 25, received entries for the competition for subsidies for innovative academic projects that contribute to the development of Teaching, Research, Extension and Innovation at FMUSP.

The main theme discussed was “Dissemination of Scientific Medical Knowledge”.

The Endowment is a philanthropic, innovative, non-partisan and non-profit tool, coordinated by volunteers (academics, professors, alumni and financial market professionals) whose purpose is to enable, with an endowment composed of donations from individuals or companies, excellence training. The donors' contribution is perpetual, since the resources are invested in investments and only the earnings from them are used.

On the 4th of May, Ester Cerdeira Sabino, PhD, associate professor at the Department of Infectious and Parasitic Diseases at FMUSP and researcher at IMT, took office as a full member of the Brazilian Academy of Sciences (ABC), in an event held at the Museum of Tomorrow, in the city of Rio de Janeiro. Her appointment took place in the Health Sciences category. ABC disseminates and encourages scientific production in Brazil since 1916. Its full members are Brazilian scientists who have lived in Brazil for over ten years, with outstanding scientific activity. Ester Cerdeira Sabino, PhD, was one of the researchers to lead the sequencing of the genome of the new coronavirus in Brazil.

On June 9, researchers from the Joint Brazil-UK Center for Arbovirus Discovery, Diagnosis, Genomics and Epidemiology (CADDE) released the complete genome sequencing of the monkeypox virus (MPXV), isolated from the first patient with diagnosis of monkeypox confirmed in Brazil. The work, coordinated by Ester Cerdeira Sabino, PhD, was completed in just 18 hours, thanks to the adaptation of a rapid metagenomics technique to the MPXV.

The inaugural ceremony of the sixth edition of the FMUSP Winter Schools 2022, a FMUSP event that brings together students from different countries and institutions in a two-week program, providing them with multiple academic activities on topics related to Medicine, took place on July 18, in the FMUSP Congregation Room.

Promoting an opportunity for people from all over the world to share interests and knowledge in the most diverse medical areas, in addition to integrating FMUSP's knowledge with that of other renowned international institutions, the event lasted until July 29th. In all, the exchange brought together 40 students from 14 countries and 21 institutions of higher education.

The construction of a new environment to meet the most recent computing and network needs of the entire FMUSP was completed in July 2022. This is a project for

the physical and logical readaptation of the data center, which began in 2019, driven by the evolution of information technology, which assessed the power supply, temperature stability, preventive monitoring on equipment and connection availability to allow data traffic.

The data center concentrates a high number of storage servers, data, routers and services that serve the different areas of Teaching, Research and FMUSP administration, but, with the growth over the last few years, it needed to undergo updates and revisions.

In August, the FMUSP Medical Education Development Center (CEDEM) received certification from the Aspire program (*International Recognition of Excellence in Medical Education*) from the Association for Medical Education in Europe (AMEE) in the Teaching Development category.

CEDEM, which recently became an Integrated Center for Academic Activities (CIAA) of FMUSP, is the first Institution in its area in Latin America to receive certification, which recognizes the excellence of an educational institution in different areas and provides validation tools for best practices and innovations that can be replicated.

The department is made up of a team of specialists in health education, which contributes to the improvement of FMUSP courses. It monitors and organizes the educational program, teaching development, psycho-pedagogical support and professional development of students in the Mentoring Program. In addition, it offers services such as training in the use of digital platforms and tools, support for the transmission of classes, organization of the virtual learning environment, online assessments, educational planning and teaching development workshops.

In March 2021, the FMUSP Vegetable Garden was officially recognized as one of the Urban Vegetable Gardens in the municipality of São Paulo. As of September 2021, with space provided by FFM at Polo Pacaembu, more than 40 species of spices and herbs were planted, harvested and used in the daily production of 400 meals, more than 50 kg of food. The action, developed by the ICHC Nutrition and Dietetics Division, promotes food without pesticides, improves the flavor of recipes and hospital diets with little-known seasonings and encourages learning in environmental management. In 2022, the collection exceeded 150 kg of different products. In 2022, the *Nutrição na Horta*



# Integral Health Care Actions

Educational Program was created, aimed at Nutrition employees, with a guided tour in the vegetable garden.

In 2022, the FFM continued to effectively contribute to the streamlining of bureaucratic processes and,

mainly, to the implementation of FMUSP projects and programs that, in the state administration, are more time-consuming

## The FMUSP Clinics Hospital

*HCFMUSP and the ICHC Central Lab are highlights among institutions with the best experience and quality of services in their categories in 2022*



*Aerial view of the HCFMUSP Complex*

In April, the Clinics Hospital of the University of São Paulo Medical School (HCFMUSP) celebrated 78 years of foundation, during which it consolidated its excellence and international recognition in teaching, research, care and innovation.

Inaugurated on April 19, 1944, HCFMUSP became an institution that stands out for its ethics, humanism, social responsibility, pluralism, pioneering spirit and commitment to health.

In 600 thousand square meters of floor area, more than 20,000 employees work under the motto: "Together We Are + HC, Together We Are Better". And on this 78th anniversary, the Clinics Hospital incorporates digital health and transforms the area of innovation into reality.

Over the past two years, HCFMUSP has faced yet another major challenge in its history, contributing to saving thousands of lives during the Covid-19 pandemic – the biggest health crisis in the modern world.

The annual *World's Best Hospitals* ranking, organized and released by the North American magazine *Newsweek* in April, places six medical specialty services of HCFMUSP among the 200 best in the world. The

ranking is based on services from leading hospitals in over 20 countries.

The 2022 ranking includes the 200 best global hospitals in nine categories (up to 2021 there were six), and the evaluations were carried out between August 2020 and June 2021. HCFMUSP was ranked among the top 50 and the best in Latin America in the neurology specialties, with the 22nd place; cardiology, in 24th; and cardiac surgery, in 38th. The hospital also appears among the top 200 in the world for orthopedics (52nd), neurosurgery (73rd) and oncology (99th).

The *World's Best Hospitals* ranking methodology is based on three main data for the evaluation: hospital recommendations from more than 40,000 health professionals (physicians, hospital managers and others); patient experience (patient satisfaction); and so-called medical KPIs (patient safety indicators, hygiene measures and quality of care).

HCFMUSP and the ICHC Central Lab stand out among institutions with the best experience and quality of services in their categories – reveals the 7th. edition of

the Estadão Best Services 2022 ranking released by the newspaper O Estado de S. Paulo.

Research indicates that consistent public relations work is the most awarded by consumers. To arrive at the results, 10,832 interviews were carried out, which resulted in 92,478 evaluations – an average of 8.5 evaluations per interviewee.

In the Hospitals category, the FMUSP Clinics Hospital came in second. And in the Lab category, the Laboratory of the Central Institute of HCFMUSP stood out in third place.

In 2022, HCFMUSP started implementing the Project for the Elaboration and Implementation of the Adaptation Program to the LGPD - General Law for the Protection of Personal Data (13,709/2018). To this end, it prepared a Privacy Awareness Booklet to help disseminate the institution's privacy culture.

The LGPD entered into force on September 18, 2020 and provides for the processing of data, including in digital media, by natural or legal persons of public or private law, with the aim of protecting the fundamental rights of freedom and privacy and the free development of the personality of the natural person.

Its main reference is the General Data Protection Regulation (GDPR), a set of European law regulations in the field of privacy and data protection.

In March, the Laboratory of Teaching, Research and Innovation in Surgery at HCFMUSP (LEPIC) began its activities. The space aims to develop teaching, research and innovation programs in the surgical areas of the Clinics Hospital in the fields of laparoscopy, videosurgery, videoendoscopy and robotic surgery. Courses certified by EEP will be promoted.

In April, the opening meeting of the RH@Digital Project took place, with the presentation of the modules acquired for the implementation of the Human Resources system at the Clinics Hospital.

According to the implementation schedule, the delivery of the functional information processes is scheduled for next year; vacation; frequency and work schedules; functional movement; team organizational chart; surveys (climate, experience, disconnection, etc.); performance evaluations; and training and development, with exclusive access through the Employee and Manager Portal within the System.

This acquisition is an important milestone for the project, which began with the implementation of SP Sem Papel in HR. Among all the benefits acquired with the computerization of processes, the system will allow

access and transparency for all employees about their professional information at HCFMUSP. Managers will have an overview of their entire team and the ease of managing it with autonomy and effectiveness.

From May 17 to 20, the 2022 Hospital Fair was held in São Paulo, one of the main national events dedicated to the health area. HCFMUSP was one of the program's highlights.

The Clinical Director of the Hospital and current Director of FMUSP, Eloisa Silva Dutra de Oliveira Bonfá, PhD, was awarded the Personality of the Year Award in the Health Area, in recognition of the institution's work in dealing with the Covid-19 pandemic.

HCFMUSP also received the public in a booth, where it presented the HCTalks, lectures on important projects of the Institution and successful cases in hospital management, with leaders and managers presenting a diversified content of quality, knowledge and professional updating. Among them, learning and impacts of the pandemic, technology, innovation, digital health, diversity and inclusion, integrated management system, intra-hospital logistics, among others.

On June 23, the state governor signed the release of funds for the expansion of HCFMUSP, which will now have two new buildings. One of them will be the new institute of the HCFMUSP Complex, which will honor Dr. Ovidio Pires de Campos, second director of FMUSP. The other building will house the Clinical Research Center.

The Institute Dr. Ovídio Pires de Campos will increase the capacity to care for patients in the specialties of ophthalmology, otorhinolaryngology, oral and maxillofacial surgery, head and neck and craniofacial plastic surgery. The building was planned to house 14 operating rooms, 17 surgical recovery beds and another 10 Intensive Care Units. The monthly capacity for performing outpatient surgeries in the area will increase by 178%, while large surgeries, which require hospitalization, will be increased by 75%. Outpatient consultations will increase by 47%.

The new Clinical Research Center will be a structure dedicated to the recruitment and follow-up of volunteer patients for clinical studies to be carried out at HCFMUSP.

As of October, with the aim of facilitating the movement of people with reduced mobility, the HCFMUSP Corporate Asset Security area began to provide a circular cart for the transport of wheelchair users, people who use crutches or a cane, the visually impaired and elderly people with limited mobility.

The service, available from 7:00 a.m. to 5:00 p.m., is supported by the Operation Control Center and serves all Institutes in the Complex. Users are transported free of charge to the Clínicas subway, to the Avenida Rebouças footbridge and to the Rua Arthur de Azevedo access.

On November 17th and 18th, with the support of the FFM, the first edition of Fonajus was held, which brought together authorities from the areas of Justice and Health to discuss ways of providing the Judiciary with specialized information on Health, so that decisions involving medicines and treatments not covered by the SUS, and sometimes not even requested from ANVISA, unduly mobilize resources from the Judiciary and MS.

Organized by the National Council of Justice and HCFMUSP, the event addressed topics such as the NatJus platform, which concentrates judicial requests and provides advice to magistrates, technical procedures in use that help the decision-making process by the Justice and issues related to Supplementary Health, medical ethics, regulation and guarantee of rights.

The 2022 Health Excellence Award, organized by Grupo Mídia, was held on December 12 at InRad, and honored the hospital institutions that stood out the most in the last year.

In all, 39 hospitals were awarded, in the following categories: Architecture and Engineering; Ethics and Compliance; Nursing; Teaching and Research; Philanthropy; People and Management; Corporate Governance; Innovation; Hospital Hospitality; Investment; Quality and Safety; Social and Environmental Responsibility and Technology. The winners were chosen based on a market survey by the Editorial Board of Grupo Mídia and analysis of registered cases.

On the occasion, HCFMUSP was honored for its important role in teaching, research and healthcare. The hospital was also awarded in the Technology category, as a result of the important investments made by the institution in the last year.

Research by CVA Medicina Diagnóstica, which interviewed 3,195 patients across the country, elected HCFMUSP as the best public hospital in 2022. HCFMUSP also ranked 4th in the Perceived Value and Brand Strength categories, considering public and private hospitals. In the capital of São Paulo, the Institute is well evaluated by more than 86% of hospital users and in different income brackets.

In the study, more than 200 public and private hospitals were cited by patients. The average Net Promoter Score (NPS) indicator improved from 30.2% in 2018 to 57.9% in 2022. The survey also shows that some variables increase the value perceived by consumers, such as the waiting time to be served and the type of use of the Hospital.

HCFMUSP won a 20-meter high mural, signed by the muralist Eduardo Kobra, which was inaugurated on January 24th. The art, painted on the side of the InRad, is called "Science and Faith". With the colors that characterize most of Kobra's works, it shows the hands of a doctor, with a lab coat and stethoscope, in a prayer position, and reinforces the message that there is no contradiction in believing in God and science.

The Living Space, on the first floor of the PAMB at HCFMUSP, was also contemplated with the mural "Metamorfoses" by the artist, inaugurated on June 14th. The mural – 34 meters high and 7.5 meters wide – shows butterflies that come out of the water and flutter upwards, and is a tribute to health professionals and patients at HCFMUSP. On the first floor of the PAMB are the Hematology Service and the Pró-Sangue Foundation, where up to 15,000 people circulate per day. The chosen opening date celebrates World Blood Donor Day. In addition to Brazil, Kobra has painted murals in the USA, Spain, Italy, Norway, England, Malawi, India, Japan and the United Arab Emirates.

In 2022, HCFMUSP continued to rely on the support of FFM in the various actions to develop comprehensive health care in its various Institutes and Units.

## Comprehensive Health Care Agreement for SUS Patients

### *The performance of HCFMUSP and FFM in the management and care of patients is shared*

Always committed to its mission to support the FMUSP/HC System in favor of providing excellent health care to the population, since 1988, FFM is a party to the Agreement signed with HCFMUSP and the São Paulo State Health Department.

Aimed at free care for SUS patients, the agreement provides for the joint implementation of a series of activities such as: billing for medical and hospital care services; management of human resources at HCFMUSP; investment in infrastructure works; purchase of medical equipment and hospital supplies; among others. The Agreement also guarantees the performance of special procedures, such as transplants of different organs, various implants and other highly complex procedures.

Access and care to the SUS throughout HCFMUSP (except InCor) are ensured by FFM, by allocating the System's human and financial resources to the Hospital itself, thus enabling HCFMUSP to reach levels of SUS care (outpatient care and hospitalizations) in an average percentage of 90%.

Assistance is carried out through health promotion activities for the prevention and treatment of diseases, with care in the outpatient, emergency and urgent care areas, diagnostic support services, hospital, clinical and surgical admissions, pharmaceutical assistance and physical rehabilitation.

HCFMUSP has 2,431 (Feb/2022) beds installed for medium and high complexity hospitalization, 469 of which are in the Intensive Care Units and 159 in the day hospital.

The Agreements entered into within the scope of the SUS, between the SES, HCFMUSP and FFM, have their own characteristics, with a preponderant differential due to the certification of HCFMUSP as a Teaching Hospital, where all production, actions and health services, in the scope of the SUS, must constitute a field of practice for teaching, research and technological incorporation.

The rules and policies for applying the resources of this agreement are instituted, dynamically, by the various governing bodies of HCFMUSP (Deliberative Council, Boards of Directors, Executive Boards and Superintendence) and FFM (Board of Trustees), which

continuously monitor the results achieved, mainly with regard to the cost of medical and hospital assistance.

The performance of HCFMUSP and FFM is shared, in the management and care of SUS patients, and stems from the express authorization of the State Executive Power, duly formalized in the appropriate legal instruments.

In order to achieve its objectives, FFM currently employs 11,382 employees (Dec/2022), of which more than 90% are directly dedicated to the assistance / care of SUS patients.

The employment contracts entered into by FFM are totally different from the contracts of public servants at HCFMUSP, with no incompatibility or subjection.

The purpose of hiring professionals by FFM is to meet the demand of SUS patients at HCFMUSP and the difficulties inherent to the Public Power in creating positions. The financial resources used in the payment of salaries come exclusively from the consideration for its activities in the health area.

In addition, it acquires on its behalf medicines, inputs, consumables, equipment, furniture, utensils and others, intended entirely for the assistance and care of SUS patients. It should be noted that FFM does not lend itself to the management of HCFMUSP's budgetary resources, nor does it receive any resources from that state authority.

As a charitable social assistance entity, FFM gained public recognition for its performance, having obtained and periodically renewed several certifications, among them the Certificate of Registration and Certificate of Beneficent Social Assistance Entity (CEBAS), granted by Ordinance SAS/MS No. 1205, of 12/13/2021, published in the DOU on 12/15/2021, valid from 12/15/2021 to 12/15/2024.

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

FFM has had this title since 1989 and, thanks to it, has access to tax immunity from taxes and social



# Integral Health Care Actions

contributions, providing the FMUSP/HC System with tax savings of around BRL 204 MM per year, resources that are totally destined to the FMUSP/HC System in the form of funding, hiring of human resources, acquisition of medical and hospital devices, modernization of the technological park, maintenance, reforms, expansions

and other initiatives that, in the end, have as beneficiaries the patient of the Unified Health System – SUS.

The **number of services performed**, in the last two years, by HCFMUSP and FFM, in joint action (except InCor, IMRea (page 61) and Icesp (page 57)), is shown on the next page:

2022							
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 unit
ICHC	21,325	16,296	39,225	550,160	7,683	6,293,667	6,928,356
IPq	926	33	-	65,103	2,753	0	68,815
IOT	3,903	3,652	15,293	57,662	44,638	134,074	259,222
ICr	5,658	1,937	14,817	61,849	33,014	791,219	908,494
InRad	-	-	-	3,374	200,816	0	204,190
HAS	103	-	-	19	1,283	82	1,487
<b>Total</b>	<b>31,915</b>	<b>21,918</b>	<b>69,335</b>	<b>738,167</b>	<b>290,187</b>	<b>7,219,042</b>	<b>8,370,564</b>

2021							
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 unit
ICHC	19,567	12,612	32,717	495,497	22,161	7,049,024	7,631,578
IPq	877	56	-	58,358	3,501	-	62,792
IOT	3,490	3,321	13,598	38,718	47,346	132,988	239,461
ICr	5,621	1,942	10,933	61,349	32,459	764,437	876,741
InRad	-	-	-	3,677	227,268	-	230,945
HAS	128	-	-	20	1,258	3,190	4,596
<b>Total</b>	<b>29,683</b>	<b>17,931</b>	<b>57,248</b>	<b>657,619</b>	<b>333,993</b>	<b>7,949,639</b>	<b>9,046,113</b>

## Special Procedures

*FFM and HCFMUSP jointly perform transplants and implants, highly complex procedures and pharmaceutical assistance to SUS patients*

### Transplants and Implants

In line with the objectives of the Comprehensive Health Care Agreement for SUS Patients, signed between FFM and HCFMUSP (Covenantors) and SES-SP, HCFMUSP and FFM jointly perform transplant and implant procedures that are of great importance to the

population and considered, by the Ministry of Health, as strategic for SUS care.

The number of transplant and implant procedures performed free of charge in the last two years was as follows:

STRATEGIC PROCEDURES - TRANSPLANTS AND IMPLANTS		
Description	Quantity	
	2021*	2022
Cochlear implant	72	37
Partial hepatectomy for transplant (living donor)	41	57
Unilateral nephroureterectomy for transplant	4	18
Allogeneic bone marrow hematopoietic stem cell transplantation - related	26	27
Allogeneic bone marrow hematopoietic stem cell transplantation - unrelated	10	16
Allogeneic cord blood hematopoietic stem cell transplantation - unrelated	-	-
Allogeneic peripheral blood hematopoietic stem cell transplantation - related	23	11
Allogeneic peripheral blood hematopoietic stem cell transplantation - unrelated	2	3
Autogenic bone marrow hematopoietic stem cell transplantation	11	14
Autogenic peripheral blood hematopoietic stem cell transplantation	55	55
Corneal transplant	61	103
Corneal transplant (in combined surgeries)	4	-
Corneal transplant (in reoperations)	3	1
Sclera transplant	-	-
Liver transplant (deceased donor organ)	170	177
Liver transplant (living donor organ)	41	62
Pancreas transplant	1	-
Kidney transplant (deceased donor organ)	124	143
Kidney transplant (living donor organ)	5	23
Simultaneous pancreas and kidney transplantation	8	1
<b>Total</b>	<b>661</b>	<b>748</b>

*(\*) Due to the restrictions imposed by the Covid-19 pandemic, in 2021, there was a reduction in the quantities of most transplants and implants.*

# Integral Health Care Actions

## High Complexity Procedures

Pursuant to the objective of the Integral Health Care to SUS Patients Agreement, signed between FFM and HCFMUSP (Covenantors) and SES-SP, HCFMUSP,

and FFM jointly perform High-Complexity Ambulatory Procedures, whose production in the last two years is demonstrated in the chart below:

AMBULATORY STATEMENT AUTHORIZATION FOR HIGH COMPLEXITY PROCEDURES - APAC		
Description	Quantity	
	2021 (*)	2022
Diagnosis in Clinical Laboratory	32,327	31,680
Radiology Diagnosis	68	88
Diagnosis by Tomography	1,684	1,974
Ultrasonography	40	21
Diagnostic Methods in Specialties	23,198	24,521
Appointments / Assistances / Follow-ups	6,095	6,532
Treatment in Oncology	5,525	5,200
Treatment in Nephrology	20,062	20,818
Dental Treatments	27	30
Specialized Therapies	996	680
Upper Respiratory Tracts, Head / Neck Surgery	0	0
Vision System Surgery	2,949	3,458
Genitourinary System Surgery	95	98
Reparation Surgery	260	228
Surgeries in Nephrology	83	117
Small Surgery and Surgery of the Skin, Subcutaneous Tissue and Mucous Membrane	0	0
Collection and Exams for Organ Donation Purposes	17,971	18,217
Follow-up and Post-Transplant Complications	12,953	13,844
OPMs Not Related to the Surgical Act	4,713	5,098
OPMs Related to the Surgical Act	729	687
Tissue Processing for Transplants	124	196
Clinical Treatments (other specialties)	3,235	3,684
<b>Total</b>	<b>133,134</b>	<b>137,171</b>

(\*) Due to the restrictions imposed by the COVID-19 pandemic in 2021, there was a reduction in the quantities of high-complexity procedures.



## Integral Pharmaceutical Assistance

In line with the objectives of the Comprehensive Health Assistance Agreement for SUS Patients, signed between FFM and HCFMUSP and SES-SP, pharmaceutical assistance is determinant for the solvability in health attention and services.

Ensuring the supply of drugs from the Specialized Component of Pharmaceutical Assistance (CEAF) is essential for maintaining patient treatment and complementing complex and high-cost medical-hospital procedures, such as transplants, for example.

In 2022, **36,643,895** CEAF medication units were distributed, representing BRL 122,417,973.52. Control of the dispensing of CEAF medications and the issuance of APACs are carried out through the Hospital Information System – SIGH Prodesp.

In 2022, the HCFMUSP Pharmacy served 978,621 outpatient prescriptions, with an average of 81,552/month. There is also a home medicine delivery service which, since 2013, has become free. About 57% of outpatients receive their medicine at home at no cost.

Located on the 8th floor of the PAMB (with decentralized pharmacies on the 4th and 9th floors of the ICHC, a pharmacy serving the Surgical Center on the 9th floor of the PAMB and a pharmacy for outpatient care in a building attached to the PAMB), HCFMUSP has the largest hospital pharmacy in Brazil.

Founded in the same year as HCFMUSP, 1944, today 182 employees work there, of which 72 are pharmacists and pharmaceutical residents, the rest being interns, technical and support level employees.

Much more than a drug distribution center, there is a true factory, where drugs, which are no longer marketed, are produced as they do not arouse commercial interest. Dilutions and dosages other than

those available on the market are also prepared, according to the patient's needs, or compositions different from the traditional ones.

In 2022, the production of medicines generated savings of around BRL 7,762,767.25. 53 types of standardized medication were produced, with a total of more than 7.6 million units, and 367 formulas (327,700 units) were manipulated in a personalized and individualized way, to meet medical prescriptions and the needs of patients. The pharmacy also dispensed 11 special products, produced for research protocols, in a total of 29,640 units. In addition to the drugs produced internally, 323 different drugs were purchased and unitised, totaling more than 2.0 million units to meet the prescriptions of hospitalized patients.

In 2022, it is worth highlighting the implementation of cycles to improve Pharmaceutical Assistance processes aimed at safety and innovation actions in the activities carried out, such as:

- a) Expansion of telehealth in pharmacy;
- b) Implementation of the HCFMUSP Management System and Electronic Records (MV) in the chemotherapy module;
- c) Evaluation of the strategic planning in the MV;
- d) Expansion of the customer satisfaction survey;
- e) Expansion of the vancomycin use management protocol;
- f) Elaboration of the Wilson Ram monthly bulletin;
- g) Partnership with the private sector to establish research and innovation projects and the Medical Science Liaison (MSL) course;
- h) Acquisition of an eccentric compressor machine with parliamentary funding.

## The Hospital Units and the Specialized Health Units of the FMUSP/HC System

*The FMUSP Clinics Hospital ranked first among public institutions in Brazil in a Newsweek ranking, in 2022*

HCFMUSP completed 78 years. It was created by Decree 13,192, of January 1943, and its official opening took place on April 19, 1944.

When opened, the hospital had 1,047 beds spread over 11 floors. From 1950 onwards, HCFMUSP gained momentum with the creation of the first Institutes. Over the years, it has consolidated its excellence and international recognition in teaching, research, assistance and innovation, standing out for its ethics, humanism, social responsibility, pluralism, pioneering spirit and commitment to health. Today, it also incorporates the most advanced innovation and technology in favor of health care.

In 600,000 m<sup>2</sup> of floor area, more than 20,000 employees work under the motto: "Together we are +HC, Together we are better". Over the past two years, HCFMUSP has faced one of the biggest challenges in its history, helping to save thousands of lives during the Covid-19 pandemic, the biggest health crisis in the modern world.

Considered the largest Hospital Complex in Latin America, HCFMUSP comprises 10 hospital institutions and outpatient units with 2,500 beds. More than 1.4 million outpatient consultations, 47,000 surgeries and 160,000 urgent and emergency consultations are performed annually.

Focused on assistance, teaching, research and innovation, the FMUSP Clinics Hospital Complex (HCFMUSP) is composed of the following hospital institutions: Instituto Central (ICHC) (including PAMB), Institute of Psychiatry (IPq), Institute of Orthopedics and Traumatology (IOT), Institute of Physical Medicine and Rehabilitation (IMRea), Institute for Children and Adolescents (ICr) (including ITACI), Heart Institute (InCor), Institute of Radiology (InRad), Hospital Auxiliar de Suzano (HAS), São Paulo State Cancer Institute (Icesp) and the recently opened Perdizes Institute (IPer).

It also has the Medical Research Laboratories (LIMs), the School of Permanent Education (EEP), the Teaching, Research and Innovation in Surgery Laboratory (LEPIC) and the Rebouças Convention Center (CCR).

In the field of innovation, the InovaHC District was created, aimed at creations and solutions in healthtech and startups with the aim of bringing efficiency to the entire health system in the country, and the HCFMUSP/InovaHC Artificial Intelligence Laboratory (In.Lab), a space for partners, startups and developers who already have or want to create artificial intelligence (AI) projects aimed at improvements and solutions in the patient journey and the health chain.

According to the classification of "The World's Best Hospitals 2022", a list organized annually by Newsweek magazine, in the United States, HCFMUSP leads among public hospitals in the country.

To get the final result, the capacity of institutions to adapt to new challenges and improvisation skills were considered. A calculation weighting of three categories was made: peer recommendation (national and international), patient experience and clinical staff performance indicators.



*Newsweek publicity image*

As a support foundation for the USP Medical School and its Clinics Hospital, FFM celebrates this new milestone, always mindful of its statutory objectives of supporting teaching, research and comprehensive health care at FMUSP and HCFMUSP.

The performance, in 2022, of Hospital Units (except for Icesp (page 57), IPer (page 63) and InCor) and Specialized Health Units are presented on the following pages.

## ICHC

### Institutional Data 2022:

Foundation: 1944

Constructed area: 178.5 mil m<sup>2</sup>

Accreditations: ONA II, CAP, PALC 2016, ISO 9001, OHSAS 18001, ISO 14001, Elderly Friendly Hospital Seal, SINASC Seal, Environment friendly, International Certification for Distinctive Assisted Infusion Therapy

### Care Indicators 2022:

Admissions: 21,325

Surgeries: 16,296

Urgent and emergency attention: 39,225

Outpatient appointments: 550,160

Imaging exams: 7,683

Lab exams: 6,293,667

Inaugurated in April 1944, the Central Institute (ICHC) gave rise to HCFMUSP. Pioneer in medical-hospital procedures, its structure concentrates most of the medical and multidisciplinary specialties, being composed of two interconnected buildings: the Central Building and the PAMB – Outpatient Clinic Building. The ICHC is known for the large number of Inpatient and Intensive Care Units, in addition to the Referenced Emergency Unit for more severe cases.

In January, the ICHC Neurosurgery Division received new equipment with advanced technology, which allows for less invasive brain surgeries. With the new equipment, the tumors are emptied in a less invasive procedure and performed in a shorter time compared to previous standards, keeping the brain structure healthy and preserved. In addition, for the patient, the postoperative recovery is faster.

In July, the ICHC innovated with the “Safe Surgery Alliance: a break that deserves respect” campaign, where a flash mob was used to attract the attention of the internal public to the importance of taking a time out. The scenario was an operating room, set up in the hall of the Institute, a place of great circulation of professionals. The main objective of the time out is to ensure surgeries with the correct intervention site, procedure and patient, and is characterized by the verification of essential items for anesthetic-surgical safety before the skin incision or the start of the invasive procedure. Another benefit of the checklist is to ensure that all equipment, materials and medications are available and identified to minimize impacts on care.

In August, during the *Global Stroke Alliance* Congress, the ICHC was recognized as an Essential Center for the Care of Cerebral Vascular Accidents (CVA) in Latin America by the *World Stroke Organization* (WSO).

At the time, a certificate was handed over that attests to the quality of treatment provided by the Institute's specialists to patients with cerebrovascular diseases under risky conditions and the medical and scientific contribution to the continuous improvement of comprehensive stroke care in Latin America.



(HCFMUSP release)



Stage set up in the hall of the ICHC to publicize the campaign “Safe Surgery: a break that deserves respect”

On August 20, teams of ICHC preceptors and residents participated in the task force to assess the surgical queue, promoted by SES-SP, which aims to speed up the surgeries accumulated during the pandemic period, when beds were prioritized for the care of the patient with Covid-19.

On September 27, ICHC professionals and transplant patients participated in the action, promoting the National Organ Donation Day. In front of the PAMB, participants guided the public on the importance of organ donation. At the Clínicas subway station, educational material was also distributed.

In November, the ICHC received a robot that will be used to perform procedures in Urology, Gynecology, Gastrosurgery, Head and Neck Surgery and General

Surgery. Accessories were also purchased to perform 160 surgeries with minimally invasive procedures. Entitled ICHC Robotic Surgery Project, the initiative will be developed and monitored by two recently instituted committees, following the management model

practiced at Icesp, with an Executive Committee and an Assistance Committee.

In 2022, in joint action with FFM, **6,928,356 assistance procedures** were carried out by the ICHC.

## IPq

### Institutional Data 2022:

Foundation: 1952

Constructed area: 22 thousand m<sup>2</sup>

Accreditations: ONA III

### Care Indicators 2022:

Admissions: 926

Surgeries: 33

Outpatient appointments: 65,103

Imaging exams: 2,753

The Institute of Psychiatry (IPq) is the largest and best equipped Center for Psychiatry and Mental Health in Brazil. Since its inception, it has been combining science and sensitivity to offer excellence in research, teaching and assistance.

Pioneer in the creation of specialized groups and services, the institute provides comprehensive and integrated care for the various types of psychiatric disorders and has an inpatient unit specialized in child psychiatry – the only one in Brazil. IPq is also a reference in functional neurosurgery, the result of the joint effort of multidisciplinary teams.

Between the 2nd and 5th of May 2022, the Adults-Day-Hospital (HDA) of the IPq held the therapeutic event “Experiences in the Forest”, aiming to provide employees, patients and their families with contact with plants and green areas that exist outside the Institute, in addition to promoting well-being, reducing stress and improving visitors' self-perception.

The activity provides a sensory experience by triggering the senses of touch, sight, smell and hearing. The space has three themed rooms with plants; video presentation of walking through the forest; waterfall sound and images.

The study “*Ictal SPECT in Psychogenic Nonepileptic and Epileptic Seizures*”, developed by IPq researchers, was awarded the *Dorfman Journal Paper Awards* for being recognized as the best original research article of the first two months of 2022.



IPq release



To stimulate the senses, some rooms were decorated with visual, sound, auditory and tactile stimuli

The *Dorfman Journal Paper Awards* was created in honor of *Wilfred Dorfman*, founding editor of the journal *Journal of the Academy of Consultation-Liaison Psychiatry*, and present the best scientific articles published annually in the categories of reviews, original articles and case reports. Articles are judged by the journal's board and editorial staff, according to the importance of the study's findings and innovation.

The IPq HDA's Program of Integrative and Supplementary Health Practices is one of the initiatives highlighted in the first edition of the project "Innovation Laboratory in Integrative and Supplementary Health Practices" of the Pan American Health Organization (PAHO), with the World Health Organization (WHO) and Ministry of Health.

In 2022, the IPq Program was chosen as one of the six innovative experiences in the field of Integrative and Complementary Health Practices (PICS) in the country, in celebration of the 16th anniversary of the National Policy on Integrative and Supplementary Health Practices (PNPICS) in the Unified Health System (SUS).

The PICS are therapeutic resources that seek to prevent diseases and restore health, with an emphasis on



welcoming listening, the development of a therapeutic bond and the integration of human beings with the environment and society.

In November, IPq won the ONA level 3 accreditation seal. IPq was the first psychiatric hospital in Brazil to obtain the ONA Quality Certification, in 2013, and is the only one to now reach Level 3.

Certification at its Level 3 means that, in addition to meeting patient safety criteria in all areas of activity,

including structural and care aspects, IPq features integrated management, engagement of top management and employees in the safety and management process, as well as a strategic and financial vision focused on the Institution's growth and sustainability.

In 2022, in joint action with FFM, **68,815 assistance procedures** were carried out by IPq.

## IOT

### Institutional Data 2022:

Foundation: 1953

Constructed area: 27.5 thousand m<sup>2</sup>

Accreditations: ONA I

### Care Indicators:

Admissions: 3,903

Surgeries: 3,652

Urgent and emergency attention: 15,293

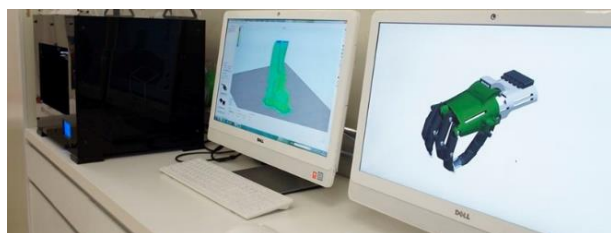
Outpatient appointments: 57,662

Imaging exams: 44,638

Lab exams: 134,074

The Institute of Orthopedics and Traumatology (IOT) at HCFMUSP completed 69 years. Inaugurated on July 31, 1953, the IOT was conceived by Prof. F. E. Godoy Moreira, professor of Orthopedics and Traumatology at FMUSP.

During these nearly seven decades, the Institute built a trajectory with remarkable events such as the inauguration of the Center for Microsurgery and Hand Surgery in 2010. The site was the first center of its kind in Brazil to have specialized teams with 24-hour service. In the same year, the IOT received accreditation as a FIFA Medical Center of Excellence, through the Discipline of Sports Medicine.



Rehab Lab facilities

In 2012, the Institute performed a knee cartilage transplant, an unprecedented technique in the country. In 2014, it performed endoscopic surgery to treat lumbar disc herniation in a less invasive way, lasting only 30

minutes, and the patient was discharged on the same day.

In 2019, Prof. Manlio Mario Marco Napoli, the only one in the country that has charge computed tomography technology, and the Research and Assistive Technology Laboratory (Rehab Lab).

In 2021, the Institute implemented Teleconsultation and Remote Visit, initiatives of the Digital Health Program.

Currently, IOT occupies two buildings, the first with 10 floors and the second with four. Both are intended for the treatment of diseases of the locomotor system. It has seven specialty laboratories and a clinical staff of approximately 160 doctors, including: orthopedists, residents in the specialty and its own group of anesthesiologists. Still part of this group: pediatricians, geriatricians, physiatrists, plastic and chest surgeons, urologists and cardiologists, who provide medical support to patients undergoing orthopedic treatment.

In July 2022, the IOT Humanization Working Group, in partnership with professionals from different areas, produced a series of videos, entitled Collaborator Moment, with tips on well-being and quality of life. In all, around 30 videos were published, with the aim of bringing psychological care, in addition to tips on how to take better care of the body and mind, in addition to topics such as citizen rights, interpersonal relationships, how to optimize time, among others.

In October, the IOT promoted a hybrid lecture on subjects related to mental illness at work, with the participation of 67 employees from the Institute and the HCFMUSP Complex. Issues involving the theme of suicide (attempts, ideations, suicidal behavior) deserved special attention, especially in the professional context.

To celebrate World Food Day and make employees aware of the importance of healthy eating, the IOT Nutrition Service promoted, on October 19, an event in

IOT release

which students and nutritionists were available to provide guidance on the steps to proper eating and healthy, in addition to answering questions and measuring the Body Mass Index (BMI) of each one. At the end, an information leaflet was distributed with important tips for health and good nutrition.

In 2022, the Modified Heck protocol (staggered protocol, where you start with a three-minute warm-up by walking and then start running and the speed is

increased every two minutes, until you reach a limit of 24 km/h), used for cardiovascular evaluation of athletes, has been scientifically certified by the *University of Central Lancashire* (UCLan), in the United Kingdom. In addition to being certified, the Modified Heck was adopted by the British for evaluating athletes in their Department of Sports Medicine.

In 2022, in joint action with FFM, **259,222 assistance procedures** were carried out by the IOT.

## IMRea

### Institutional Data 2022:

Foundation: 1975

Constructed area: **33.2 thousand m<sup>2</sup>**

Accreditations: **CARF, Accessibility Seal**

### Care Indicators:

Total quantity of Assistances (Vila Mariana, Umarizal, Lapa, and Clínicas Units): **227,988**

The Institute of Physical Medicine and Rehabilitation (IMRea) – initially called the Vergueiro Professional Rehabilitation Division (DRPV) and later the Rehabilitation Medicine Division (DMR) – 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 potential.

IMRea seeks to be a pioneer in rehabilitation care, through clinical research and technological innovations, with the development of strategies for assessing results for patients and society.

The Rehabilitation Programs are organized with an emphasis on multidisciplinary work, coordinated by a physiatrist and carefully developed by doctors, social workers, psychologists, physiotherapists, occupational therapists, speech therapists, nurses, nutritionists, physical educators and art educators. These are highly specialized teams, responsible for the planning, execution and monitoring of specific treatments, improved by the constant development and incorporation of new technologies.

The main disabilities treated by 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 delay in neuropsychomotor development, hemophilia, Down syndrome and benign disabling pain.

In 2020, due to the restrictions of the pandemic, IMRea also added tele-assistance, a distance service modality, to patients in a rehabilitation program. It is an extension of the multidisciplinary team care already provided by the IMRea team to the patient and caregiver, with the objective of monitoring home therapeutic guidelines and promoting continuity of Rehabilitation care for the patient.

IMRea is part of the RRLM and, currently, of the five RRLM Units in the Capital of São Paulo, four are part of IMREA: Vila Mariana, Lapa, Umarizal and Clínicas. The IRLM (page 61) is the fifth RRLM Unit in the Capital.

IMRea's headquarters is located in **Vila Mariana**, in the south of São Paulo, and serves an average of **241 patients a day**, including face-to-face and telemarketing services, and offers specialized exams and treatments with state-of-the-art equipment, which includes Robotics and Neuromodulation Laboratories (inaugurated in 2013), Assistive Technology Laboratory, Bioengineering with 3D resource and specialized Neuromuscular Block outpatient clinic.

The hospital has rooms adapted to provide patients and their caregivers with a humane welcome and comfort that meets their needs. In 2022, IMREA Vila Mariana carried out **160 admissions**.

The care team is composed of physiatrists, dentists, social workers, psychologists, physiotherapists, occupational therapists, nurses, speech therapists, nutritionists, physical education professionals, rehabilitation technicians, rehabilitation engineers, among other professionals, in addition to back-up specialists in the areas of cardiology, urology, infectology, radiology, psychiatry and general practice.

# Integral Health Care Actions

In the South Zone, in the Campo Limpo district, is located the **IMRea Umarizal**, opened in 2001. It serves around **88 patients a day**, including face-to-face consultations and tele-assistance, in the various rehabilitation programs. It offers state-of-the-art technology, such as the Robotics Laboratory and the Assistive Technology Laboratory, which aims to develop the maximum potential of patients. It offers specialized outpatient clinics, such as those for Neuromuscular Blockade, Acupuncture, Dentistry and laboratories specialized in Electroneuromyography, Isokinetic evaluation and training.

In the West Zone of the city, **IMRea Lapa**, inaugurated in 2007, currently sees around **156 patients a day**, including face-to-face and tele-assistance, in different rehabilitation programs. It offers specialized outpatient clinics, such as those for hemophilia and Comprehensive Care for People with Down Syndrome, which serves patients from zero to 18 years of age, with different programs according to age groups and different stages of development.

Specifically in this Unit, in addition to regular rehabilitation treatments, the *Re-AbilityLab* (LABs) stands out, which has laboratories where activities are carried out by a multidisciplinary team and specialized technicians, whose objective is to promote the maintenance and expansion of functional capacity and the patients' autonomy during the rehabilitation process.

LABS were designed and created so that all patients have access to innovations, technological tools and content that encourage protagonism and recognize the value of their own abilities. They are offered in an inclusive environment for people with functional restrictions and limitations in different life cycles. Activities and guidance are offered not only for people with disabilities, but also for their entire support network: their caregivers, family, friends, community students, health and education professionals, among others. In addition, the *Re-AbilityLab* aim to continue rehabilitation programs as a strategy to promote inclusion and improve the quality of life of people with disabilities, including for patients related to Post-Covid complications.

The Wheelchair Technology Center and management and development activities related to the distribution of OPMs also take place in this Unit.

Inaugurated in 2008, **IMRea Clínicas** is located within the HCFMUSP block and serves, in the various rehabilitation programs, about **49 patients a day**,

including face-to-face consultations and tele-assistance, which are referred by the specialized outpatient clinics of HCFMUSP, the Interconsultation of Hospital Physiatics of the HCFMUSP Complex, and by spontaneous demand of the Supplementary Health.

It handles more complex cases, such as neuromuscular diseases, cerebral palsy and/or delay in neuropsychomotor development, neurodegenerative diseases and musculoskeletal pathologies, in addition to having a Neuromuscular Block outpatient clinic and a specialized Electroneuromyography laboratory.

The year 2022 marked the resumption of several of the international mobility activities that make up the academic cooperation programs implemented by IMRea, including academic visits, observational internships of foreign undergraduate students in Medicine and the FMUSP *Winter School on Physical and Rehabilitation Medicine*, which, that year, received residents and students from the University of Chile and the Pontifical Catholic University of Chile, the University of Michigan, the Autonomous University of Cochila, the University of Sulaimani and the Almanzor Aguinaga Asenjo National Hospital.

As for activities related to the development of scientific research, in 2022 nine research projects were submitted and 15 scientific publications were published in indexed national and international journals, in addition to research guidance in master's, doctoral and post-doctoral work. IMRea also publishes the *Acta Fisiátrica Magazine* on a quarterly basis and, in 2022, four issues (44 articles) and a Supplement (45 Expanded Abstracts) were published at the XXVIII Brazilian Congress of Physical Medicine and Rehabilitation.

Also noteworthy, in 2022, was a chat between patients and the Olympic athlete Arthur Nory, who brought his Olympic medal and shared his experience of overcoming obstacles and achievements.



Chat with Olympic athlete Arthur Nory

IMRea-HCFMUSP archive

# Integral Health Care Actions

In 2022, the number of outpatient consultations at IMRea, including medical and dental consultations,

multidisciplinary consultations, both face-to-face and tele-assistance, and exams, was 227,988, as follows:

## PHYSICAL MEDICINE AND REHABILITATION INSTITUTE - IN-PERSON ASSISTANCES IN 2022

Unit	Medical Assistancess	Multiprofessional Services	Exams	Admissions	Total
Vila Mariana	15,604	73,744	4,391	160	<b>93,899</b>
Lapa	3,292	69,721	0	0	<b>73,013</b>
Umarizal	5,106	38,776	39	0	<b>43,921</b>
Clínicas	2,597	14,313	245	0	<b>17,155</b>
<b>Total</b>	<b>26,599</b>	<b>196,554</b>	<b>4,675</b>	<b>160</b>	<b>227,988</b>

ICr

### Institutional Data 2022:

Foundation: 1976

Constructed area: 38.8 thousand m<sup>2</sup>

Accreditations: ONA II

### Care Indicators:

Admissions: 5,658

Surgeries: 1,937

Urgent and emergency attention: 14,817

Outpatient appointments: 61,849

Imaging exams: 33,014

Lab exams: 791,219

The Institute for Children and Adolescents (ICr) is a reference in tertiary and multidisciplinary care, from birth to adolescence, with humanization as one of its premises. It has high diagnostic and therapeutic technology, in addition to 20 medical specialties that offer excellent care in cases of chronic and complex diseases, such as rare syndromes and kidney and liver transplants.

In its own headquarters, the Children's Cancer Treatment Institute (ITACI) (page 56), linked to ICr and, from 2022, to Icesp, stands out in the areas of Onco-hematology, stem cell and hematopoietic transplants.

In 2022, the ICr Allergy and Immunology Unit was elected as a Center of Excellence by the *World Allergy Organization* (WAO). With only ten referenced institutions in Latin America, to ensure active participation in the WAO, the ICr's Allergy and Immunology Unit needed to prove proficiency in the production of scientific research and in education and training programs, including master's and doctoral programs, in addition to have recognized clinical

performance in the areas of allergy, asthma and clinical immunology.

The ICr unit will join a select group of international institutions that will be able to provide scientific support for the development and dissemination of educational resources, guide research and training for junior members of the organization, collaborate with other Centers of Excellence around the world and participate in programs aimed at primary care in the area for the next three years.



New milk bank facilities

ICr release

In 2016, the ICr implemented its first self-service, next to the reception of the Specialty Outpatient Clinic. Continuously investing in technology, in 2022, the Institute will have six points. The kiosks also allow the patient to check-in in sectors such as receptions, nursing, pharmacy and outpatient collection, thus streamlining their service.

On April 12, the ICr inaugurated the Human Milk Bank in its Neonatal Center, which is located on the 10th floor of the ICHC, in the Obstetrics Clinic, and aims to increase the quality of health of newborns and maintain



breastfeeding after hospital discharge. The Human Milk Bank has become a national reference for professional training.

In August, the ICr promoted the exhibition “Breastfeeding: Educating to Support”. As a celebration of Golden August, the subway Clínicas Station hosted the exhibition, which sought to raise awareness for the importance of breastfeeding and the strengthening of the support network.

The ICr Pediatric Intensive Care Center underwent renovations, completed in August, which, in addition to revitalizing the environment, promoted a new organization of spaces for greater comfort for patients, families and employees. In addition to the renovation of the floor and the placement of lockers for employees and

their families, the wing B of the unit gained a restricted room for carrying out visits and teaching meetings with patients' families. An appropriate room was created for the storage of medical equipment. Three points for hemodialysis were also created, in addition to the renovation of isolation beds.

Between November 10th and December 9th, the campaign “Our Team Only Wins When They Play – Playing is preparing for the future” was promoted. With playful actions at the subway Clínicas station, the campaign reinforces the importance of games for developing childhood skills that are essential in adulthood.

In 2022, in joint action with FFM, **908,494 assistance procedures** were carried out by the ICr.

## InRad

### Institutional Data 2022:

Foundation: 1994

Constructed area: 14.3 thousand m<sup>2</sup>

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

### Care Indicators:

Outpatient appointments: 3,374

Imaging exams: 200,816

The Institute of Radiology (InRad) is a center of excellence and national and international reference with the most modern diagnostic and therapeutic imaging resources to serve outpatients and inpatients in the modalities of Radiology, Nuclear Medicine, Interventional Radiology and Radiotherapy.

An important characteristic is the investment in public-private partnerships, which make it possible to make vanguard projects feasible, such as the Cyclotron, which is the first Radiopharmaceutical Production Unit installed in a public hospital.

It is made up of two buildings. The main one houses outpatient conventional and interventional radiology and radiotherapy resources. In the annex building is the Nuclear Medicine Center (CMN), a pioneer in the development of radiopharmaceuticals, produced by Cíclotron, for treatment and research in oncology and neurology.

InRad also has the Center for Imaging Diagnosis of Breast Diseases (CEDIM) and the Technical-Scientific

Nucleus for Imaging Diagnosis (NDI). The latter implemented the digital image storage and distribution system, which gives access to information to any hospital unit and dispensed with the need to print reports and exam images.



*InovaHC District Facilities*

The HCFMUSP Technological Innovation Nucleus (InovaHC) has promoted, with the financial support of government agencies and private companies (through the Information Technology Law), the development of so-called “structuring projects”. These are technological innovation projects designed to promote the digital transformation of the patient's journey at HCFMUSP, thus implementing a technology adoption process, whose innovation results become a routine solution incorporated into the daily lives of patients/users and health professionals.

Directly linked to InRad, the InovaHC District, opened in 2019, is a space to house startups and innovation laboratories, in a modern structure. With a multidisciplinary environment, it encourages co-creation, the development of transformative solutions and validates new technologies, products and services, in

addition to encouraging innovation within the scope of HCFMUSP, managing the intellectual property produced and providing means to promote the transfer of scientific, technological and cultural knowledge to the public and private productive sector, with a view to improving national health.

On May 12, the InovaHC District held a lecture on the theme "Entrepreneurial Motherhood: Communication, Challenges and Innovative Solutions". The event, in a hybrid format, in person at *the HealthTech InovaHC* District Auditorium and online via the Zoom platform, aimed to connect professional mothers from different segments to exchange information about innovation, technological and strategic advances in communication between motherhood and professional life.

On August 1st, InovaHC launched the public notice for the third group of the In.Cube Program. The initiative lasts six months and aims to encourage innovation in health by offering an entrepreneurial journey for 16

projects by researchers, collaborators and professionals who develop activities related to HCFMUSP.

In.cube is the program carried out by InovaHC, which encourages innovation among researchers, collaborators and professionals and offers an entrepreneurial journey for research projects that develop activities related to HCFMUSP and FMUSP.

During the training journey, the selected teams receive weekly personalized follow-up and participate in the stages of deepening the theme proposed by the project.

On September 15, the launch of OpenCare 5G coordinated by InovaHC, the first private 5G network in healthcare, took place in the InRad auditorium. Thanks to this initiative, the promotion of health care in faraway places, which was something unthinkable, is getting closer and closer.

In 2022, in joint action with FFM, **204,190 assistance procedures** were carried out by InRad.

## Suzano Auxiliary Hospital

### Institutional Data 2022:

Foundation: 1960

Constructed Area: 20.9 thousand m<sup>2</sup>

Accreditations: ONA I

### Care Indicators:

Admissions: 103

Outpatient appointments: 19

Imaging exams: 1,283

Lab exams: 82

The Suzano Auxiliary Hospital (HAS) has a form of assistance focused on long-stay patients. This specialty makes the institution a fundamental arm of the Clinics Hospital in the Greater São Paulo area.

As of July 15, HAS had the support of medical teams from the ICHC and boosted its participation in the Joint Effort for Elective Surgery of the State of São Paulo, whose goal is to triple the number of procedures in public hospitals, which were dammed up due to the Covid-19 pandemic. The joint action breaks a paradigm of that unit acting only as a rear unit. Now, HAS is also responsible for the assistance area.

During the two and a half years of the pandemic, many patients who needed surgical treatment had their procedures postponed. The action, which unites ICHC and HAS, demonstrates the concern of HCFMUSP in

assisting more patients who are waiting for this assistance.



Photovoltaic plant installed in the Suzano Auxiliary Hospital

The multidisciplinary teams that work at the unit receive adults and children in different stages of illness. The aim is to restore the patient's functional capacity and reduce the impact of various sequelae.

Thanks to the renovations in the hospital, the last few years have marked its expansion to increase the service capacity and the amount of diagnostic and therapeutic resources.

In addition, management and monitoring tools were implemented in the Health and Social Assistance Network, aimed at dehospitalizing discharged patients

with social restrictions, both due to vulnerability and legal aspects.

On June 6, the HAS employees were presented with the features of the newly installed photovoltaic plant. In an area of approximately 653 m<sup>2</sup>, 296 panels were assembled to capture solar energy on the roof of Block C,

## LIMs

The Medical Investigation Laboratories (LIMs) at HCFMUSP, officially established in 1977, house more than 240 research groups in the various areas of medical and biomedical knowledge.

The Institution has 66 LIMs, which occupy an undeniable position of scientific leadership in Medicine and related areas. The prolific production of knowledge by the LIMs is distributed across the FMUSP/HC System. This configuration and its results indicate the success of the close dialogue between the scientific research activity and the day-to-day activities at the Clinics Hospital.

The scientific production of the FMUSP/HC System is impressive, with 13,653 articles published in journals indexed in the Web of Science database between 2018 and June 2022. The number of articles indexed in the ISI database in collaboration with international authors increased from 1,055 (36.6 %), in 2018, to 1,499 (41.7%) in 2021.

Among the more than 33,000 scientific works already cataloged at the Observatory of Intellectual Production (OPI), since 2011, 13,688 (39%) are open access. It is noteworthy that USP members were part of the world ranking of top scientists, according to a study published in the scientific journal Public Library of Science (PLOS) Biology released in 2020. Of this group, 25 are from the FMUSP/HC System. In 2021, the same magazine published a list of the 100,000 most influential researchers in the world. It included 30 professors from FMUSP.

For the first time in Brazil, in 2022, scientists used next-generation sequencing to identify species of *Leishmania*, a genus of protozoa that includes parasites that cause infectious diseases. The feat is part of the [study](#) of LIM 46.

Using faster and cheaper methods compared to previous DNA sequencing techniques, new generation technologies allow the reading of billions of fragments of genetic material simultaneously, making it possible to

aiming at saving resources and socio-environmental sustainability. The goal is to generate energy savings of around 517.54 MWh/year, an estimated 15% reduction in current consumption.

In 2022, in joint action with FFM, **1,487 assistance procedures** were performed by HAS.

sequence entire genomes or just specific areas of interest.

In the case of the study, the third-generation *MinION*<sup>™</sup> sequencer was used, a nanopore technology capable of reading nucleic acids in real time. For the first time in the country, researchers used this technology to discriminate *Leishmania* samples.

Although next generation sequencing technology is widely used in the diagnosis of infectious diseases, it has been little applied in the identification of *Leishmania* species.



Image: Reproduction

Third generation *MinION*<sup>™</sup> sequencer

The Biotechnology Laboratory, at Biosafety Level 2, of the Internal Biosafety Commission (CIBio) in Genetically Modified Organisms (GMOs) at HCFMUSP was inaugurated on March 14, 2022, in the IMT building.

The space, provided by FMUSP, underwent renovation and equipment acquisition. The Laboratory was certified by the National Technical Biosafety Commission, is registered in the PREMIUM Network, inserted in the Multiuser Equipment Center - USP Multi, in the PNIFE MCTI, and is managed by HCFMUSP CIBio and GMOs.

The location will allow the handling of GMOs, mainly lentiviruses, in a controlled and supervised environment, in accordance with current regulations, providing security for the development of research involving GMOs, with an increase in the sophistication of experimental designs.

It is equipped with an imaging system and cell counter, CO<sub>2</sub> incubators, safety cabins, water bath,

centrifuge, refrigerator, freezer, liquid nitrogen container, automatic pipettors and micropipettes, which allow the handling of high-grade biological agents risk 2, which will allow the development of activities and expansion of knowledge of scientific production in the area of biotechnology throughout the HCFMUSP complex.

The Executive and Associate Editors of the *Journal of the American Geriatrics Society (JAGS)* selected the study “Covid-19 is Not Over and Age is Not Enough: Using Frailty for Prognostication in Hospitalized Patients”, produced by HCFMUSP LIM 66, as the best journal publication in the area and awarded the “2021 Best Covid Paper Award”. The award ceremony was held during the 2022 American Geriatrics Congress, in May, in the United States.

The study shows that chronological age, by itself, does not determine the prognosis of Covid-19. It showed

that frailty can identify elderly people of similar ages with very different risks of death from the coronavirus. To understand the risks of SARS-CoV-2 infection, it is necessary to have a broader view that integrates information on comorbidities (presence of chronic diseases), acute clinical severity (data such as blood pressure, fever, mental status associated with the infection) and previous frailty (degree of independence for activities of daily living, level of physical activity, fatigue before Covid-19) of the patient.

The 2021 Best Covid Paper Award recognizes important and innovative work that is likely to make an impact in the area of clinical care for the geriatric population.

In 2022, the FFM continued its actions to support the initiatives of the HCFMUSP LIMs.

## EEP

Founded in 2009 and accredited by the State Council of Education of the State of São Paulo (CEE-SP) and by the Ministry of Education, the School of Permanent Education (EEP) has consolidated itself in recent years as a center of excellence in teaching in the area of health.

Its current portfolio includes technical courses, face-to-face, distance learning (EAD) and remote refresher and improvement courses, training with realistic simulation and virtual reality, preceptorships, practical workshops, internships, consulting, in addition to lato sensu specializations.



Imagem: HCFMUSP

Facade of the HCFMUSP School of Permanent Education

Even in the face of the challenging scenario of the Covid-19 pandemic, EEP sought innovations, improvements and new products to meet new demands and the market and numbers prove this new moment for the institution.

There are more than 300 courses and teaching activities. A performance strengthened in 2020 by distance activities. Aware of its social and educational role, EEP has developed free courses and tutorials to assist health professionals in coping with the new coronavirus. More than 165,000 students were trained.

More than 70 lato sensu Specialization courses, 64 Scholarship Specialization courses and 10 Multiprofessional Residency programs were offered. Only in specializations, there are more than 2,000 students enrolled.

In distance learning (EAD) the impact was even greater, in terms of the number of trained professionals and demand for more than 150 courses. Between 2020 and 2021, almost 2 million people accessed the institution's website and content.

In partnership with the Hospital Infection Control Group (GCIH), EEP has developed consulting services for public and private organizations from different sectors. One of the objectives of these actions was to ensure the safe resumption of activities and promote improvement actions in the corporate environment. The consultancies continue in partnership with other departments of the institutes, serving the corporate market more and more.

In December/2021, EEP obtained its re-accreditation with the CEE, valid for five years.

In 2022, FFM continued supporting actions for HCFMUSP's EEP initiatives.



## Other Health Units

*FFM and HCFMUSP develop actions aimed at improving other Health Units and Centers, intended for the free care of SUS patients.*

### House of Aids

Installed on the premises of the Pinheiros Health Center at SES-SP, the **Extension Service for the Care of HIV/AIDS Patients – House of AIDS (SEAP)** of the ICHC Infectious and Parasitic Diseases Division is an outpatient clinic and day hospital for teaching, research and interdisciplinary assistance to adult patients living with the human immunodeficiency virus. Inaugurated in 1994, it has been jointly operated by the FFM since 2004.

In 2007, this Service received the Governor Mário Covas Award from the Government of the State of São Paulo in the category “*Efficiency in the Use of Public Resources and Debureaucracy*”, in recognition of the management project developed with a focus on adherence to the treatment of patients living with HIV/AIDS. In the same year, it was classified in the “Gold” standard of the evaluation of specialized services in HIV/Aids throughout the national territory carried out by the Ministry of Health STD/Aids Department, through the evaluation of the QUALIAIDS System.

SEAP is the first of the public health network in the State of São Paulo aimed at people with HIV and, with the inauguration of its Physical Activity Laboratory, in 2019, it started to incorporate, in an innovative way, the practice of sports in the care proposal to patients with HIV, to minimize the effects of diseases associated with chronic AIDS and the use of antiretroviral drugs, with improved quality of life and adherence to treatment.

Through agreements signed between HCFMUSP and FFM, and SES-SP, in 2022, 3,793 patients were monitored at House of AIDS. Among patients living with HIV, 70.4% are male. The youngest patient is 19 years old and the oldest, 94 years old. Comprehensive care is provided by a multidisciplinary team, which includes infectologists, gynecologists and psychiatrists, nurses, psychologists, pharmacists, nutritionists, social workers, dentists, physical educators and technical and administrative support staff.

On July 27, the HCFMUSP SEAP carried out a rapid test effort for HIV detection, at the premises of the Pinheiros Bus Terminal, in the West Zone.

On December 1, House of AIDS carried out a campaign for rapid tests for sexually transmitted infections (STIs) at Largo da Batata, in the Pinheiros neighbourhood.

In both joint efforts, HIV, syphilis and hepatitis tests were performed with a small blood sample collected by finger prick. The results were ready in 20 minutes and were delivered by doctors, psychologists and social workers, in individual tents. In case of a positive diagnosis, the person was promptly welcomed by the team and referred to start treatment at SEAP, where the individual is assisted by a team of infectologists, psychiatrists, gynecologists, nurses, dentists, psychologists, social workers, nutritionists, pharmacists and physical educators.

During the joint efforts, the population also received guidance on ways to prevent sexually transmitted infections, condoms and information for greater dissemination of care.



House of Aids release

*The SEAP HC team celebrates another edition of the joint effort*

Aiming at the continuity of these actions, an Agreement was signed in 2022 between HCFMUSP and FFM and SES-SP. In 2022, through the FFM, 13,557 medical consultations and 28,203 consultations by the multidisciplinary team were carried out, totaling **41,760 outpatient procedures.**

29,302 prescriptions were filled in the pharmacy and, in 2022, 1,940 HIV tests, 1,380 syphilis tests and 2,350 viral hepatitis B and C tests were carried out.

## Children's Cancer Treatment Institute – ITACI

On December 17, 2022, the Onco Hematology Service (SOH) of ICr at HCFMUSP, known as ITACI, completed 20 years of activities in the care of children and adolescents, aged 0 to 19 years, with onco-hematological diseases.

FFM and HCFMUSP, through Agreements signed with SES-SP, develop, in joint action, the activities of ITACI, a reference in the care of children with cancer. Aiming at the continuity of these actions, in 2022, an Agreement was signed between HCFMUSP and FFM and SES-SP. Since November 30, 2022, the administration of ITACI has been carried out by Icesp, still in technical partnership with ICr, whose transitional phase should extend until December 2023.

In 2022, some of the restrictions on carrying out activities with patients were maintained as a result of the Covid-19 pandemic. Some cultural and social actions were resumed with external volunteers and supporters at the outpatient clinic. As a result, individualized schedules were maintained with hospitalized patients, in order to respect WHO and CCIH guidelines.

Occupational Therapy continued with activities through kits of painting, drawing and reading activities and online interactions with various NGOs. The Doutores da Alegria, were allowed to return in person, with two professionals, fully vaccinated. The NGO "Instituto Cão Terapeuta" has resumed consultations with the Oreo dog and, since September 2021, the ponies Nemo and Caramelo have been attending ITACI monthly for

activities carried out outdoors with hospitalized patients, with great success.



Itaci release

*The Oreo dog returned to integration activities with patients*

The Criarte Project returned to work at ITACI, with a smaller number of volunteers, thus resuming the recreational activities carried out with patients.

In 2020, ITACI achieved the ONA/IBES 3 Accreditation with Excellence certification, which was reaccruited in 2022.

In 2022, there were: **13,955** medical appointments; **50** Hematopoietic Stem Cell Transplants, 6 Autologous, 31 Allogeneic Related and 13 Allogeneic Unrelated; and 5,743 outpatient chemotherapy sessions, totaling **19,748** procedures.

## Butantã School Health Center

The Samuel Barnsley Pessoa School Health Center (CSEB) is a teaching-assistance unit at FMUSP, under the responsibility of the Departments of Preventive Medicine, Pediatrics, Internal Medicine and Speech Therapy, Physiotherapy and Occupational Therapy. The Center is dedicated to teaching and research in the area of primary care for undergraduate students in the field of health, medical and multidisciplinary residency, in addition to training technical-level professionals and others already working in services.

It is responsible for providing care in an area of 25,000 inhabitants in the Butantã region, encompassing two discontinuous nuclei, with socioeconomic, demographic and health conditions heterogeneity and vulnerability to illness. In 2022, through the FFM, the CSEB performed **5,487** outpatient procedures.



*CSEB Facade*

## Management Contracts

*In 2022, FFM was the social organization selected to manage the activities of the Perdizes Institute through a Management Contract*

In 2008, FFM started to be recognized as a Social Organization (private, non-profit legal entity, whose activities are directed to teaching, scientific research, technological development, protection and preservation of the environment, culture and/or health, receiving this title of the Public Administration itself and authorized to enter into Management Contracts with it to perform services not exclusive to the State).

Icesp, IRLM and Perdizes Institute base their management on the Social Health Organization (OSS) model, through the FFM.

After 14 years of operation, Icesp has already treated more than 127,000 SUS patients in a humane way, with high technical quality and developing research and teaching activities in all areas related to oncology.

Aimed at assisting patients undergoing rehabilitation, interdisciplinarity is the hallmark of the IRLM, whose team is made up of psychiatrists, physiotherapists, occupational therapists, social workers, psychologists, nurses, nutritionists, speech therapists, music therapists and physical educators.

In 2013, the HCFMUSP Cotoxó Auxiliary Hospital Division was deactivated, aiming at a total reconstruction, with a rear hospitalization unit and an Alcohol and Drugs Center. In 2022, the building was completed and equipped and was renamed Perdizes Institute. FFM was the social organization selected in the HCFMUSP Public Call to manage its activities, through a Management Contract.

## 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 Clinics Hospital of the University of São Paulo Medical School (HCFMUSP), with exclusive care for patients in the public health network.

Inaugurated in 2008, Icesp has established itself as a reference in oncology care in the country, providing assistance to around 127,000 patients in a humanized way, with high technical quality and developing research and teaching activities in all areas related to oncology.

In addition to the Main Unit located on Avenida Doutor Arnaldo, in São Paulo, the Institute has an Outpatient Unit in the city of Osasco and a specialized outpatient pharmacy, located on Rua da Consolação, which provides comprehensive oncological assistance with the supply of all high cost (oral chemotherapy and hormone therapy) and nutritional supplements.

Icesp is accredited by the Ministry of Health as a “High Complexity Assistance Center in Oncology”

(CACON), that is, the Institute has the technical conditions, physical facilities, equipment and human resources adequate to provide highly complex specialized assistance for the definitive diagnosis and treatment of different types of cancer.

Assistance with excellence is a basic premise in the care provided by Icesp and transcends the act of caring for the patient who is on its premises. The act of caring is linked to the concept of humanization, integral concern for the person and for everyone who has contact with them, whether family or friends.

Icesp is recognized as a center of excellence nationally and internationally, with important seals and accreditations. Due to its commitment to Quality and Safety, Icesp is accredited by the *Joint Commission International* – JCI (2014 – 2017 - 2020) and has the Hospital Amigo do Idoso Seal – membership and full level (2016). The Institute’s rehabilitation service is also accredited by the *Commission on Accreditation of*

# Integral Health Care Actions

Rehabilitation Facilities – CARF (2015 – 2017 - 2020) and the laboratories by the Clinical Laboratories Accreditation Program – PALC.

The numbers reflect an impressive and highly representative assistance production, with more than 470 thousand procedures performed annually.

SUMMARY OF ICESP ASSISTANCE IN 2022 - DR. ARNALDO UNIT	
Procedures Performed	Qty.
Medical appointments	201,864
Multiprofessional appointments *	125,276
Surgeries	6,510
Hospital Discharges	17,095
Chemotherapy sessions	36,613
Patients treated with chemotherapy	4,898
Radiotherapy sessions	38,690
Patients treated with radiotherapy	400
Urgent and emergency care	21,830
<b>Total</b>	<b>453,176</b>

\* Considers rehabilitation sessions and outpatient consultations, excluding social assistance consultations

SUMMARY OF ICESP ASSISTANCE IN 2022 - OSASCO UNIT	
Procedures Performed	Qty.
Medical appointments	8,770
Multiprofessional appointments	7,474
Chemotherapy sessions	2,673
Radiotherapy sessions	4,216
<b>Total</b>	<b>23,133</b>

\* Does not consider social assistance consultations

The year 2022 was also marked by several actions at Icesp that covered important moments, described as follows.

## Assistance Strategies

- Certification by the *ERAS Society* as one of the institutions that know and apply the policies and principles for optimizing the acceleration of the postoperative recovery process of patients through the ERAS Protocol (*Enhanced Recovery After Surgery*).
- Creation of the Patient Experience Program;
- Resumption of the Acolhida Program in face-to-face format;
- Creation of the Nutrivigilance Group;
- Improvement in the flow of qualified institutional discharges;
- Expansion of video teleconsultations;
- JCI educational visit in preparation for reaccreditation in 2023;

- Icesp was recognized among the best health units in the country in a Technovigilance analysis carried out by Rede Sentinela and ANVISA.

## Infrastructure Strategies

- Replacement of surgical lights;
- Use of two solar trees that absorb solar energy and convert it into electricity, as part of Enel's Energy Efficiency Programme;
- Installation of indoor cellular antennas;
- Carrying out a fire drill in all Icesp plants;
- Installation of a medication unit-dose machine;
- Acquisition of gas detectors.

## Management Strategies

- “You are part of this story” program, recognizing employees who have worked at Icesp for 5 and 10 years;
- Resumption of the “Cultivando o Progresso” Program, a Management Transparency program through which 8 Executive Board presentation



events were held with the participation of 913 employees, where the strategic objectives, implemented actions and actions being structured at Icesp were presented over the 2019 to 2022 cycle;

- Second round of the Employee Engagement Survey (e-NPS);
- Creation of INOVA Icesp, the institution's Innovation and Technology Center (CIT);
- Creation of the new Icesp website, expanding the scope of access to information and presenting the Institute as a reference in assistance, teaching and research in oncology;
- Creation of the USP *Comprehensive Cancer Research Network* – USP Cancer Research Network, which will consolidate all research related to cancer at the University of São Paulo and its associates.



Icesp received the Friend of the Environment Award

## Icesp awards

- 100 Most Influential in Health Award;
- Award at the 33rd Brazilian Congress of Pathology;
- Brazilian Institute of Social Health Organizations Award - Ibross: Icesp was honored as one of the best public hospitals in Brazil managed by Social Health Organizations (OSS). The award praised the institutions that serve the public health network considered the most efficient and well evaluated for offering quality and safety to patients;
- Friend of the Environment 2022 Award, in the Main Prize category, for the Energy Efficiency Project, received by the “Hospitais Saudáveis” network.”

## NPS Highlight

Icesp is in the excellent quality zone, according to the Net Promoter Score (NPS) methodology, used to measure the institution's patient satisfaction, with NPS 92. Throughout 2022, several areas reached the NPS 100 – maximum score of the indicator. They were: Nutrition;

Psychology; Social Service; Rehabilitation; Hematology; and Chemotherapy.

## Training campaigns

- Embarque Certo campaign for efficient use of elevators, which displaces approximately 8,000 people per day, including employees, patients, companions and visitors;
- Resumption of the Icesp theater, with presentation of the play “A Descantada”, to train the International Quality Goals;
- Delirium Awareness Week;
- Safe Surgery Week D-Day;
- II Week of Educational Games on International Quality Goals;
- Hand Hygiene Carnival;
- World Environment Day..

## Events

Among the 33 events held throughout 2022, the following stand out:

- Graduation of the group of residents of Clinical Oncology, Radiotherapy and Medical Physics;
- Organization of the XIII Octavio Frias de Oliveira Award;
- Organization of the 10th edition of the patients' parade, in support of the Pink October and Blue November campaigns;
- Preceptorship in Cancer Pain;
- IV Journey of Palliative Care;
- Homage to the National Volunteer Day;
- Humanization Day, with the theme “Humanization in the context of digital health”;
- Resumption of the Icesp *Run*, held on the National Cancer Awareness Day (November 27). In its 6th edition, the running and walking for health brought together more than 2,000 people with the aim of highlighting the importance of practicing regular physical activity to maintain health and prevent disease.
- “Our Achievements 2022” event, with the aim of disseminating and celebrating with employees the goals achieved and all the actions carried out at the Institute during the year.

## Milestones of the year 2022

- Celebration of 14 years of Icesp in May 2022;
- 1 year anniversary of the Advanced Special Care Nucleus (NACE) at Icesp held in April 2022;

- 8th anniversary of the Icesp Ambulatory Unit in Osasco, held in August 2022;
- 12th anniversary of Ambulatorial Pharmacy, in September 2022;
- Beginning of ITACI management by Icesp in December 2022.

In 2022, Icesp promoted several information campaigns and humanization actions, among which the following stand out:

- **Blue March Campaign:** realization of the photographic exhibition “Sobre Viver”, at the Luz station of the São Paulo subway line 1-Blue, with the aim of showing how it is possible to live well even with the use of a colostomy bag. There was also a live on Instagram, raising awareness about colorectal cancer, with the participation of Icesp's medical teams.
- **Green July Campaign:** celebrated on July 27, the State and World Day of Awareness and Combating Head and Neck Cancer was marked at Icesp by a series of special actions in celebration of Green July, with an exhibition of the Stock team car at the entrance to Icesp and visit by three-time champion Ricardo Maurício, itinerant awareness and prevention activities and a special edition of Understanding Cancer, with the participation of the multidisciplinary team.
- **Pink October:** in October, several actions were carried out with the aim of sharing information and promoting awareness about breast cancer, as part of the Pink October campaign. Actions were carried out by Payot for patients and companions (such as visagism, nail polishing, skin cleansing and makeup); musical performances by Seresteiros de Diadema; Blitz da Saúde, in partnership with InRad; distribution of pink “amigurumi” keychains for patients undergoing chemotherapy; and a special issue of Understanding Cancer on “interdisciplinary action for patients with breast cancer”.
- **Blue November:** with the aim of drawing attention to the prevention and early diagnosis of diseases that affect the male population, broadening the debate beyond prostate cancer. An awareness action was carried out at the Ana Rosa subway station; awareness actions for patients and caregivers on the ground floor; and the projection of information about Blue November on digital clocks spread across the streets of the city of São Paulo.

Throughout 2022, **Special Projects** were also carried out with the use of extrabudgetary resources and presented below.

## Donation Resources

- Completion of the **Icesp Facade Revitalization** work: the Icesp facade revitalization work, also called retrofit, was carried out with the aim of ensuring the safety of patients, employees and other people who transit in the region. The tiles covering the outside of the central tower were replaced with composite aluminum plates, similar to those on the institution's lateral towers.

## Resources from clinical research

The following projects were developed with extrabudgetary resources from clinical research activities, with investment for Icesp's Teaching, Research and Assistance actions.

- Inauguration of the **Living Area**, on the 23rd floor of Icesp. The area was inaugurated in May 2022 and is intended for members of the Institute's clinical staff, being an environment for meetings, integration activities and individual spaces for academic and scientific production.
- **Renovation of the Clinical Pathology area** in the Surgical Center: expansion of the physical space for the Pathology Laboratory within the Surgical Center. The new area has more modern equipment, as well as allowing the reorganization and improvement of the entire workflow. The site was inaugurated in November 2022 and is already in operation.
- Beginning of work on the **Refurbishment of the Research Pharmacy**, on the 10th floor: in order to provide the highest levels of technical quality and support growth projections for the coming years, the area is undergoing a restructuring process, with emphasis on modernizing the cold chain and handling infrastructure.
- Inauguration, in December/2022, of the **Image-Guided Intervention Center (CIGI)**: located inside the Surgical Center, the project aims to expand the treatment capacity of patients and the execution of interventional procedures in curative oncological treatments or control, with less invasive approaches, fewer side effects and faster recovery times.
- **Renovation of CT scanners:** with the acquisition of three new CT scanners, the project will result in the renovation of part of the technology park. This

represents more equipment time available for patient use, reducing the queue for exams and improving image quality.

- **Radiotherapy Upgrade:** the project, developed partially with funding through cooperation with the International Atomic Energy Agency (IAEA), will allow for the upgrading of parts of three of the seven Linear Accelerators that currently make up Icesp's radiotherapy park.
- **Update of the Clinical Research area:** the Research Center, located on the 12th floor, will be able to

incorporate new professionals and, after physical readaptation, will have an area dedicated to researchers. The goal is to meet the growth in demand for clinical research expected for the coming years.

- **Renovation of the Cooling Towers:** replacement of Icesp's air-conditioning cooling towers, located on the top of the building where the SES Health Surveillance Center (CVS) is located.

## Lucy Montoro Rehabilitation Institute Management Contract

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

The health care provided by the IRLM is multidisciplinary and interdisciplinary, specializing in the field of Physical Medicine and Rehabilitation. It seeks to promote the treatment of the limitation caused by the disability in order to reach the highest level of physical and functional independence of the patient, aiming at comprehensive rehabilitation and social inclusion, considering the characteristics and degree of disability presented.

The rehabilitation programs carried out covered the set of care offered to the patient, from their admission to the hospital until their discharge, depending on their disability, including all the care and procedures necessary to obtain or complete the diagnosis and the therapies necessary for the treatment.

Rehabilitation treatments were carried out in outpatient and inpatient programs, exclusively through the SUS, and provided for: multidisciplinary screening, medical outpatient clinic (evaluations and returns), rehabilitation program, guidance groups, team meetings, experience in adapted sports, activities interdisciplinary therapies, therapeutic garden, educational activity for patients and caregivers, dressing clinic, technical aid clinic and neurochemical block clinic. It also provides for family meetings, home visits, and networking, with community resources as needed.

To this end, it relies on a team made up primarily of: psychiatrists; consulting physicians in the specialties of internal medicine, cardiology, neurology and urology; social workers; psychologists; physiotherapists; occupational therapists; speech therapists; nursing professionals; nutritionists; physical educators, as well as technicians in orthoses and prostheses and in therapeutic workshops.

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

For inpatient rehabilitation programs, the IRLM is a reference in the State of São Paulo, sharing with the IMRea the position of the only health establishments in the State to offer this service model. Patients with acquired brain injuries, spinal cord injuries and other paralysis were treated.

In the outpatient clinic, rehabilitation programs are aimed primarily at the Child macroprocess (up to 6 years and 11 months), including physical disabilities resulting from cerebral palsy, myelomeningocele, obstetric paralysis and congenital malformations of the limbs.

The IRLM assistance production, in 2022, was as follows:

# Integral Health Care Actions

LUCY MONTORO REHABILITATION INSTITUTE ASSISTANCE PRODUCTION - 2022	
Description	Quantity
Hospital internment	596
Outpatient care - Medical Specialties	5,906
Outpatient care - Non-Medical Specialties	22,715
Dispensation of Orthoses, Prostheses and Means of Locomotion	(*) 3,371
Corujão - Dispensation of Orthoses, Prostheses and Means of Locomotion	(*) 1,024
<b>General Total</b>	<b>29,217</b>

(\*) Quantity merely informative and not considered in the Assistance Total

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

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

In January 2022, the Psychology Service promoted awareness about mental health. The campaign also discussed mental health care among employees and patients.

As of February, the IRLM began delivering orthoses, prostheses and mobility aids (OPMs) to patients undergoing a rehabilitation program. The initiative was conceived by SES-SP, with the objective of eliminating the queue of patients waiting for equipment.

All equipment is delivered to patients on a permanent basis. The provision of technical aids is an integral part of the rehabilitation process and is strictly linked to patient care in the program, as prescribed by the doctor and following the needs that patients have throughout the rehabilitation process.

In March, the Therapeutic Activity "International Women's Day at Lucy" was carried out, developed by the Nursing Service for mothers and guardians of children at

the Children's Clinic. The objective of the initiative was to carry out a presentation focused on Women's Health, focusing on the prevention of injuries and issues on the prevention of STDs, periodic examinations of women, rights and protection against domestic violence, and Labor Gymnastics.



IRLM release

Children playing in the outdoor area of the Children's Clinic

Between April 18 and 20, the IRLM promoted special therapeutic activities to celebrate Easter with child patients. The children attended a drawing and painting workshop, as well as a workshop on nutritious chocolate-based recipes adapted to the needs of each one of them, held at the Institute's Inclusive Kitchen.

In May, Mother's Day was celebrated with a focus on promoting, through writing, the expression of emotions, feelings and self-reflections related to the experience of motherhood.

On June 15, the IRLM, in partnership with the InovaHC District, held the free lecture "Adaptive Sport: Innovation and Adaptive Sports Practices - The handbike experience", which is part of the Trilhas de Controle

project, about innovation and inclusiveness in adaptive sports.

On September 2, the external area of the Children's Ambulatory was inaugurated. Located on the 3rd floor of the Institute, the Safari-themed Children's Outpatient Clinic will be used for complementary rehabilitation activities, such as sensory trails, in which therapeutic activities will be developed with patients treated in the rehabilitation program, also for events.

On that same date, there was also the first test of *Neurolith*, an unheard-of equipment in Brazil acquired by HCFMUSP, which promotes the physical and cognitive

improvement of patients with brain injury through non-invasive brain stimulation.

On October 24 and 25, the therapeutic activity "Children's Days: Curumim Tour" was held on the first floor of Shopping Jardim Sul, with the aim of offering a day of play for patients at the Children's Clinic and their families associated to an activity of inclusion and proximity of the IRLM with the community.

In December, the Children's Outpatient Clinic's Christmas therapeutic activity was carried out, with guidance on adapting Christmas recipes; manufacture of Christmas ornaments and toys from recycled material.

## Perdizes Institute Management Contract

On November 8, 2022, HCFMUSP inaugurated its ninth Institute, Perdizes Institute (IPer), which was created with a grandiose mission: to become one of the world's leading centers of reference in the treatment of alcohol and drug addicts.

The ambitious goal is justified: the "Global Burden of Disease" study, carried out annually by the scientific journal *The Lancet*, points out in its most recent edition that Drug Use Disorders occupy the 9th place in terms of causes of disability, ahead of all other Psychiatric Disorders (Depression 11th, Dementia 13th, and Anxiety 14th). Alcohol Use Disorders rank 20th.

In this scenario, Brazil suffers from the lack of scientifically based public policies, still dominated by ideologically compromised views and without measurable measures of effectiveness, and the lack of systematic research, combined with a strong sociocultural stigma.

Built on the same site where the Cotoxó Auxiliary Hospital operated for more than 40 years, the space needed to be completely modernized to house the three blocks and 200 beds, spread over a constructed area of 23,000 m<sup>2</sup>.

Of its 200 beds, 80 are dedicated to alcohol and drug addicts. The others are dedicated to transitional care for patients at the Clinics Hospital, located just three kilometers away. These activities are already under development in two towers that have already been inaugurated. In May 2023, the completion of the third tower is expected, which will house the innovation area of HCFMUSP, an incubator center for startups focused on developing solutions for the health area.



Facade of the Perdizes Institute of HCFMUSP

HCFMUSP release

The new Institute also arrives to expand the university tripod, that is, the university structure that foresees research, teaching and extension activities (service to the population) with a fourth vector: innovation.

With a collaborative and multidisciplinary character, IPer's activities have already started involving several departments of HCFMUSP. As a rear hospital, it combines more than ten specialties (Cardiology, Pediatrics, Orthopedics, Neurology, Speech Therapy, Physiotherapy, Occupational Therapy, Surgery, Anesthesiology, Forensic Medicine, Internal Medicine, in addition to Psychiatry). Cardiology already develops, at IPer, activities together with Psychiatry (smoking treatment).

Other disciplines are also aligned in interdepartmental activities with Psychiatry, such as Pediatrics (20 of the 80 A&D beds are for children and adolescents – something unheard of in Brazil), Rehabilitation Medicine (research on A&D in partnership with IMRea) and Anesthesiology (strong support in the teaching area). Other activities are planned to be integrated in the short term.

# Integral Health Care Actions

The management of the IPer will be the responsibility of FFM in its management contract model, following the example of what already occurs at Icesp and at the IRLM. Thus, the work is based on meeting targets, which begin with the admission of 12 new cases per day, totaling 400 new cases per month, in addition to 1,200 return consultations per month.

With 770 employees and an annual budget of BRL 90 million, IPer mirrors the excellence of the USP Medical School, Clinics Hospital and the University of São Paulo itself, and was created to become an example of advanced medicine, bringing solutions to the Brazilian population for a problem that is getting worse every day and that deserves all the attention.



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# Other Health Care Initiatives



*FFM develops, together with HCFMUSP, other assistance activities.*

## Adult and Pediatric Kidney Transplant Project

Aiming at assistance, by the HCFMUSP Urology Division, to be provided to 375 patients with Chronic Kidney Disease from Hospital Samaritano, who need medium and high complexity care, in 2021, an Addendum to the Agreement signed between the HCFMUSP and FFM and SES-SP was signed.

This project includes, in addition to providing care, the training of professionals from other services to meet the needs of these patients.

In 2022, there was continuity in planning activities, acquisition of materials and medicines, and hiring and

training of human resources. The transitions are taking place gradually.

The project acquired a robot, to be incorporated into the team of surgeons, which will be used to perform procedures in Urology, Gynecology, Gastrosurgery, Head and Neck Surgery and General Surgery. Accessories were also purchased to perform 160 surgeries with minimally invasive procedures.

During the period, 592 outpatient consultations and 124 hospital stays were performed, totaling **716 procedures**.

## Protocol for the Treatment of Patients with Cleft Lip and Palate

The Craniofacial Surgery Protocol for the Treatment of Patients with Cleft Lip and Palate, developed by the ICHC Plastic Surgery and Burns Division, was made possible through donations from *Smile Train*, through the FFM, started in 2008, which benefit patients with cleft lip and palate that require reconstruction of defects in the lip, nose, alveolus and palate, and their repercussions on speech and facial growth.

In 2022, 85 patients were seen in **71 surgical procedures**, distributed between cheiloplasties and primary palatoplasty and other secondary procedures.

In addition to the surgeries, **outpatient consultations** were performed, around 17 patients per week, making a total of approximately **864 patients attended per year**.

In 2022, a total of **175 consultations** were performed by **Speech Therapy**, thus totaling **1,110** (surgical, outpatient and Speech Therapy) **procedures**.

## Student Financial Support Program – AFINAL

To help make up for the lack of financial resources, which hinders the performance of students with great academic potential, FMUSP has been offering, since 2007, the *Afinal* Scholarship, with funds obtained through donations from individuals and companies, destined exclusively to help low-income students.

The *Afinal* Scholarship is part of the Project Strengthen an FMUSP Student, a scholarship fund to increase the aid program, with resources from the FMUSP Board, the HCFMUSP Superintendence, FFM and FZ, in addition to some donations from individuals.

To receive the benefit, the student goes through a

strict selection process, with the presentation of documents that prove the family's socioeconomic situation and, through scoring, enters a list in descending order of need.

There was a significant increase in students requesting financial support for difficulties related to the pandemic. FMUSP, through FFM, provides an emergency aid grant to assist students who underwent an assessment based on socioeconomic criteria and proved to be in vulnerable situation.

In 2022, **112 scholarships** were awarded.



## Actions of the Center for Emergency Care in Reconstructive Microsurgery and Hand Surgery of the HCFMUSP IOT (CEMIM)

The creation of the CEMIM of the HCFMUSP IOT was due to the large increase in the number of patients with highly complex trauma. The phenomenon of motorcycle accidents, urban violence, chaotic traffic and high speed contributed to this situation.

Since the 1980s, numerous publications have demonstrated scientific evidence of the importance of treatment in the acute phase of trauma. Adequate primary treatment promotes better results, decreases the complication rate, the incidence of infection, the

length of hospital stay and health costs, in addition to reducing mortality and amputation rates related to trauma.

Aiming at the continuity of these actions, started in 2014, an Agreement was signed in 2022 between HCFMUSP and FFM and SES-SP.

In 2022, **664** surgeries and **2,526** outpatient consultations were performed, totaling **3,190 procedures**.

## NGA Várzea do Carmo

By means of Agreements signed with SES-SP, FFM and HCFMUSP, the Clinical Gastroenterology Service of HCFMUSP is responsible for attending the Endoscopy and Hepatology Service of the Núcleo de Gestão Assistencial (**NGA Várzea do Carmo**), a SES-SP specialty outpatient clinic that operates in downtown São Paulo.

The service came to fill a gap in the care of secondary patients by the SUS, solving most cases and referring the most complex cases to specialized treatment at HCFMUSP.

The Várzea do Carmo outpatient clinic is a reference for 39 municipalities in Greater São Paulo. Cases are referred from primary care services, such as AMAs, UBSs and emergency care hospitals.

Aiming at the continuity of these actions, started in 2010, a new Amendment to the Agreement signed in 2018 between SES-SP and HCFMUSP and FFM was signed in 2022.

In 2022, FFM and HCFMUSP, in joint action, carried out **15,346 consultations**, with 8,488 exams and 6,858 consultations.

## Emílio Ribas Institute

The **Emílio Ribas Infectology Institute (IIER)** is one of the oldest public institutions in Brazil still active today. It is a hospital specialized in the treatment of infectious diseases completely dedicated to SUS users.

Currently in the process of restructuring and modernization, its complexity is of a tertiary level, where it is possible to carry out consultations, laboratory and imaging tests, surgical procedures and hospitalizations in a single place.

In 2014, an agreement was signed between SES-SP, FFM and HCFMUSP, aiming at the execution of the

Operationalization Project of IIER Management, Actions and Services, which ended in the same year. In 2016, 2017, 2020, new agreements were signed with SES-SP, aiming at the execution, by the ICHC Central Laboratory, of laboratory services.

In 2021 and 2022, Additional Terms were signed to the agreement signed in 2020, guaranteeing the continuity of these laboratory services, which totaled, in 2022, **325,541** exams.

## Implementation of the State Network of High-Cost Medication Dispensing Centers – CEDMAC

The Coordinating Center of the State Network for High-Cost Medication Dispensing Centers - CEDMAC is a partnership between SES-SP and HCFMUSP for dispensing immunobiological medications in Rheumatology.

Throughout 2022, the ICHC Rheumatology Division, together with FFM, carried out the entire care process for patients using immunobiological therapy, from the evaluation, indication of treatment and monitoring of the application of drugs to the monitoring of functions of pharmacovigilance, pharmacoeconomics and efficacy.

Consultations related to the application of zoledronic acid and clinical evaluations of outpatients were also carried out, within the scope of administrative requests for non-standardized medication.

In 2022, the number of visits exceeded the proposed targets, despite periods of drug shortages by the Ministry of Health.

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

Aiming at the continuity of these actions, started in 2009, an Agreement was signed in 2022 between HCFMUSP and FFM and SES-SP.

In 2022, in a joint action, FFM and HCFMUSP, through the Division of Rheumatology, performed an average of 1,095 monthly routine consultations, totaling an annual average of **13,140 consultations**.

## Air transport of the organ procurement team for liver and digestive system organ transplants

Aiming to benefit HCFMUSP patients on the waiting list for organ transplants of the digestive system, private air transport services are used by teams from the HCFMUSP Division of Liver Transplants and Organs of the Digestive System, when removing organs for transplants, located outside the capital of São Paulo.

The goals of this initiative, developed jointly by FFM and HCFMUSP, are to increase the number of procurement and transplants and reduce the average

waiting time for the organ, ensuring the quality of the cold ischemia conditions recommended for transport.

In 2022, an Agreement was signed between SES-SP and HCFMUSP and FFM, which made it possible to carry out an air transport of a liver from Rio de Janeiro.

The reduced demand is justified by the availability of commercial flights and/or possibility of chartering the team by the Brazilian Air Force.

## Icesp Rehabilitation Center

IMRea, beneficiary of a donation arising from a public civil action filed by the Public Ministry of Labor against a company, made the installations of the ICESP Rehabilitation Center, inaugurated on 09/22/2008, feasible.

Icesp's Rehabilitation Service focuses on assisting people with disabilities, whether transitory or permanent, with a view to optimizing their functional potential, in the physical, psychological and social participation areas.

Rehabilitation is focused on stimulating functional potential and independence, but it also seeks to help patients adapt to their limitations in order to live as fully and independently as possible. To this end, it has

physiatrists, physiotherapists, speech therapists, neuropsychologists, occupational therapists, rehabilitation nurses and physical educators.

The Rehabilitation Center became the first in its branch in the oncology area in Latin America to gain accreditation from the Commission on Accreditation of Rehabilitation Facilities (CARF), an entity known worldwide for establishing rigorous standards to accredit this type of outpatient service.

In 2010, it was recognized by the National Accreditation Organization (ONA), in the following year ONA level II and, in 2014, by the Joint Commission International (JCI), methodologies that establish specific

## Other Health Care Initiatives

requirements and accredit the quality and safety of health services.

In 2020, it was reaccredited by the Commission on Accreditation of Rehabilitation Facilities (CARF), the most renowned international accreditation in rehabilitation, recognized worldwide for its high levels of quality

requirements, whose accreditation took place in 2015 and 2017.

The permanent, continuous and participatory evaluation 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 2022.



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# COVID-19 Confrontation Projects

*As of 2020, several initiatives were developed aimed at understanding the SARS-CoV-2 virus, Covid-19 and their effects and impacts on human health.*

## Evaluation of the impact of exposure to the Covid-19 pandemic on the development and school readiness of Brazilian children: the *Brain Games Cohort*

This study, developed by the Department of Pediatrics at FMUSP, was made possible through a contract signed, in 2022, between the Harvard Graduate School of Education and FFM.

Through the study it will be possible to evaluate, through the *Strengths and Difficulties Questionnaire* and

the IDELA instrument, in the context of the pandemic, the mental health and school readiness of children aged 5 to 7 years who live in the region of Butantã, São Paulo, and participated in the Brain Games study.

## Evaluation of the effectiveness, safety and immunogenicity of booster doses of vaccines against SARS-CoV-2 in patients with autoimmune rheumatic diseases, compared with controls without a history of autoimmunity

This study, developed by the ICHC Rheumatology Division, was made possible through a Cooperation Agreement signed in 2022 between FFM, HCFMUSP and Instituto Todos pela Saúde.

Through this research, it will be possible to assess, in patients with autoimmune rheumatic diseases, the risk of infection/hospitalization/death by Covid-19 after booster

doses and the factors that affect the vaccine response; the distribution of SARS-CoV-2 variants among those vaccinated infected; the type and frequency of post-vaccination adverse events; and strategies to improve vaccine response in non-responsive patients, such as temporarily discontinuing immunosuppressant drugs and using booster doses.

## Level of acceptance of the Covid-19 Vaccine and assessment of vaccine efficacy and the circulation of SARS-CoV-2 variants among professionals working at HCFMUSP and Hospital Geral de Roraima

This study, developed by the ICHC Infectious and Parasitic Diseases, was made possible through a Cooperation Agreement signed in 2022 between HCFMUSP, FFM and Instituto Todos pela Saúde.

The project seeks to verify the distribution of variants SARS-CoV-2 viral strains in incident cases of Covid-19 among

healthcare workers and to assess whether these variants compromise the neutralizing capacity when treated with sera from people who have recovered from Covid-19 or who have been vaccinated.

## Post-Covid-19 Syndrome - Covid-19 vaccinated cohorts and Covid-19 (unvaccinated) survivors cohorts

This study, developed by InCor's Pulmonology Division, was made possible through a Cooperation Agreement signed in 2022 between HCFMUSP, FFM and Instituto Todos pela Saúde.

The project seeks to assess the medium/long term physical, psychological and cognitive repercussions on

patients with moderate and severe Covid-19; to identify the incidence and risk factors associated with late onset; and to elaborate therapeutic intervention protocols to treat these late manifestations.

## Active Pharmacovigilance Study of Post-Vaccination Adverse Events With the Covid-19 Adsorbed Vaccine (Inactivated) - Sinovac / Butantan Institute

This study, developed by CSE Butantan, was made possible through a contract signed in 2022 between the Butantan Institute, CSE Butantan and FFM.

Through it, it will be possible to evaluate the safety of the Sinovac adsorbed vaccine and possible adverse events.

## Complications of Post-Infectious Pain Due to the Coronavirus – Covid-19

This study, developed by the ICHC Clinical Neurology Division, was initiated in 2022, through own resources.

Its objective is to evaluate the presence of sequelae and chronic pain in patients recovered from Covid-19.

## The Genetic Diversity of the Coronavirus in Brazil

This study, developed by the IMT, was made possible through an Agreement signed in 2021 between the FFM and the Bill and Melinda Gates Foundation and continued in 2022.

The project seeks to assess the particularities of dissemination and obtain frequency rates such as

morbidity, mortality, lethality, percentage of asymptomatic carriers capable of transmitting the disease and seroprevalence in the healthy population to explain the epidemic and better propose action measures.

## Interferon Lambda for Immediate Antiviral Therapy at Diagnosis (ILIAD): Randomized, double-blind, placebo-controlled, multicenter phase II study to evaluate the effect of peginterferon lambda in the treatment of Covid-19

This study, developed by the ICHC Infectious and Parasitic Diseases Division, was made possible through a contract signed in 2021 between the University Health Network, HCFMUSP and FFM and continued in 2022.

Through it, it will be possible to evaluate the safety and tolerability of immediate treatment with

Peginterferon Lambda 180 mcg on days 0 to 5 of hospitalization in hospitalized patients with moderate Covid-19 and compare clinical outcomes with the control group.

## Phase I/II Clinical Trial for dose escalation and evaluation of safety and clinical response of the Anti-SARS-CoV-2 serum produced by the Butantan Institute

This study, developed by the ICHC Infectious and Parasitic Diseases Division, was made possible through a contract signed in 2021 between the Butantan Foundation, HCFMUSP and FFM and continued in 2022.

Through it, it will be possible to evaluate the effectiveness of a dose of the Anti-SARS-CoV-2 serum produced by the Butantan Institute, administered within 5 days of the onset of symptoms, to avoid serious illness.

## Study to Evaluate the Evolution of SARS-Cov-2 Lineages and Establish Sequencing Laboratories to Support Capital City Halls

This study, developed by IMT, was made possible through a Donation Agreement signed in 2021 between FFM and Magazine Luiza S/A and continued in 2022.

The project seeks to train epidemiological surveillance laboratories in different regions of the country, which can help to obtain greater genomic data

that will allow the evaluation of the most prevalent viral profiles and the most frequent mutations and to compare results with other world centers, allowing a better description of the genomic plurality and evaluate how this affects the dynamics of the Covid-19 epidemic in Brazil.

## Prevalence of Oral Manifestations in Positive Patients for Covid-19

This study, developed by the ICHC Infectious and Parasitic Diseases Division, was made possible through a Cooperation Agreement signed in 2021 between the Latin American Association for the Promotion of Oral Health and Dental Research, HCFMUSP and FFM and continued in 2022.

Through it, it will be possible to assess: a) the prevalence of oral manifestations in patients positive for Covid-19 and characterize the oral manifestations associated with it; and b) the oral microbiome of patients with Covid-19, comparing patients with or without oral lesions.

## The impact of the Covid-19 pandemic on the health of mothers and children in the first 1000 days of life

This study, developed by the FMUSP Department of Preventive Medicine, was made possible through a contract signed in 2021 between the Maria Cecília Souto Vidigal Foundation and FFM and continued in 2022.

The project intends to deepen the investigation of the impact of the Covid-19 pandemic in Brazil on several indicators of maternal and child health and health care for mothers and children in the first 1000 days of life.

## Evaluate the evolutionary behavior of hemostasis in SARS-CoV-2 infection and evaluate the impact of therapeutic interventions of anticoagulation and antiplatelet aggregation on the clinical outcomes of infected patients

This research, developed by the ICHC Hematology, Hemotherapy and Cell Therapy Service of the Hematology and Hemotherapy Division, was made possible through an agreement signed in 2021 between FFM and the Ministry of Health and continued in 2022.

Through it, it will be possible to contribute to the understanding of the pathophysiological response to

SARS-CoV-2 infection; subsidize the development of new drugs or strategies to prevent unfavorable clinical evolution in those infected; identify biomarkers to detect patients at higher risk of developing severe respiratory failure and/or thrombotic events; and identify drugs available on the SUS with potential clinical benefit in combating Covid-19.

## Investigation of neutralizing antibodies in SARS-CoV-2 infection

This study, developed by the ICHC Infectious and Parasitic Diseases Division, was made possible through an Agreement signed in 2021 between *Regeneron Pharmaceuticals, Inc.*, USP and FFM and continued in 2022.

Through it, it will be possible to identify neutralizing antibodies against SARS-CoV-2 in patients diagnosed with Covid-19 or who received vaccine formulations against SARS-CoV-2.

## Evaluation of Vaccine Efficacy and Circulation of SARS-CoV-2 Variants at HCFMUSP

This study, developed by IMT, was made possible through a Partnership Agreement signed in 2021 between FFM, FMUSP and the Itaú Foundation for Education and Culture and ended in 2022.

The project sought to determine the impact of immunization with Coronavac, or other Covid-19

vaccines, among HCFMUSP collaborators and to assess whether SARS-CoV-2 variants compromise the neutralizing capacity when treated with serum from people who have recovered from Covid-19 or who have been vaccinated with Coronavac or other vaccines.

## Impact of the Covid-19 pandemic on the spread of antimicrobial and biocide resistance in the environment from the sewage of health units that receive patients with Covid-19

This study, developed by IMT, was made possible through an Agreement signed in 2021 between FFM and the *Fondation Mérieux* and continued in 2022.

The project seeks to assess the impact of the Covid-19 pandemic on the spread of resistance to antimicrobials and biocides in the environment, especially sewage from

health facilities that receive patients with Covid-19, municipal sewage and slums, providing timely information on the risk potential for the spread of antimicrobial resistance on the environment and its consequences for public health.

## Verbal autopsy in the diagnosis of Covid-19

This study, developed by the Department of Pathology at FMUSP, was made possible through an Agreement signed in 2021 between FFM and *Vital Strategies*, Inc. and continued in 2022.

The project seeks the development of strategies and changes in the verbal autopsy questionnaire for the diagnosis of Covid-19.

## Evaluation of ex vivo and in vivo cellular and humoral immune response of DNA vaccine containing multiple epitopes for T cell epitopes against SARS-CoV-2 in BALB/c mice

This study, developed by the Discipline of Clinical Immunology and Allergy of the Department of Clinical Medicine at FMUSP, was made possible through an Agreement signed in 2021 between FFM, FMUSP and Diomics Corporation and continued in 2022.

Through it, it will be possible to establish a diagnostic test for Covid-19, through the detection of delayed cutaneous hypersensitivity against synthetic peptides, encoding T-cell epitopes of SARS-CoV-2.

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

In order to raise funds to support HCFMUSP, citizens, physicians and researchers launched, in 2020, the #HCCOMVIDA campaign, which featured the *Viralcure* portal, aimed at raising funds.

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 "Submission of Proposals Call n. 01/2020 - Research in Covid-19 FMUSP-HC System", whose objective was to support research projects by researchers linked to the FMUSP/HC System that contributed to the knowledge of the SARS-CoV-2 virus, Covid-19 and its effects and impacts on human health and society.

The 16 selected projects, which continued their activities in 2022, were:

- Investigation of 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 due to 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), subproject Post-Covid-19

Fatigue Syndrome: evaluation of pregnant and postpartum women;

- Myocardial viral and inflammatory profile in SARS-CoV2 (VIPHeart-SARSCoV2) infection;
- Covid-19 and the study of the action of antihypertensive drugs and hydroxychloroquine on the renin-angiotensin system in lung tissue: an experimental study;
- Randomized and paired clinical trial comparing regional anti-coagulation modalities in continuous venovenous hemodialysis in patients with Covid-19;
- Minimally Invasive Autopsy in Covid-19: 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;
- Brain MRI assessment of fatal Covid-19 at minimally invasive autopsy;
- CO-FRAIL Study: Association between Frailty and Adverse Outcomes in Middle-Aged and Elderly Adults Hospitalized for Covid-19;
- Plasma prognostic markers of severity for Covid-19.



## Treatment of patients with Covid-19 with convalescent plasma transfusion: Multicenter, open-label, randomized, controlled trial

This study, developed by the ICHC Infectious and Parasitic Diseases Division, was made possible through an Agreement signed in 2020 between Finep, HCFMUSP and FFM and ended in 2022.

Through it, it was possible to evaluate the efficacy and safety of convalescent plasma transfusion in hospitalized patients with severe and potentially serious pulmonary disease due to Covid-19.

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

This research, developed by IMT, was made possible through a Work Order signed in 2020 between FFM and the *Foundation for Innovative New Diagnostics* and ended in 2022.

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

## Phase 3, randomized, double-blind, placebo-controlled study to evaluate the efficacy and safety of Ad26.COVS.2 for the prevention of SARS-CoV-2-mediated Covid-19 in adults aged 18 years and older

This study, developed by the Departments of Infectious and Parasitic Diseases and Preventive Medicine at FMUSP, was made possible through Agreements signed in 2020 between FFM and *Family Health International* with a subsidy from the NIH, and continued in 2022.

Through it, it will be possible to evaluate the effectiveness of Ad26.COVS.2 in the prevention of moderate to severe Covid-19 confirmed by molecular test, compared to placebo, in adults seronegative for SARS-CoV-2.

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

This study, developed by the ICHC Infectious and Parasitic Diseases Division, was made possible through a Technical-Scientific Cooperation Agreement signed in 2020 between the Butantan Foundation, HCFMUSP and FFM and continued in 2022.

Through it, it will be possible to evaluate the general effectiveness of two doses of an adsorbed Covid-19 Vaccine (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 (reverse transcription loop-mediated isothermal amplification) nucleic acids and its applicability in diagnostic screening using saliva samples from contacts of positive individuals for Covid-19 among athletes, students and teachers of the public network in the municipality of São Caetano do Sul

This project, developed by the Department of Infectious and Parasitic Diseases at FMUSP, was made possible through a Partnership Agreement signed in 2020 between the Itaú Foundation for Education and Culture, FMUSP and FFM and continued in 2022.

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

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

This project, developed by the ICHC Hematology, Hemotherapy and Cell Therapy Service of the Hematology and Hemotherapy Division, was made possible through a Donation Agreement signed in 2020 between BRF S/A and FFM and continued in 2022.

Its main objective is to assess the viability of using blood from immunized patients (plasma) to treat new infections, in addition to developing research on the use of anticoagulants.

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

This project, developed by the Department of Infectious and Parasitic Diseases at FMUSP, was made possible through a Partnership Agreement signed in 2020 between the Itaú Foundation for Education and Culture, FMUSP and FFM and continued in 2022.

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

Reassessment of Mortality from Natural Causes in the City of São Paulo during the Covid-19 Pandemic

This project, developed by the Department of Clinical Medicine at FMUSP, was made possible through a Partnership Agreement signed in 2020 between the Itaú Foundation for Education and Culture, FMUSP and FFM and continued in 2022.

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 during this period, using classic methods of demography and epidemiology, so that the exact profile of the impact of the coronavirus can be revealed.

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

Impact of the new coronavirus (Covid-19) pandemic on mental health in participants of the Longitudinal Study of Adult Health (ELSA-Brasil) in the State of São Paulo

This research, developed by HU-USP, was made possible through an Agreement signed between the FFM and the *Global Genomic Medicine Collaborative*, in 2020, and ended in 2022.

Through it, it was possible to identify the impact of the Covid-19 pandemic on mental health in participants

of the ELSA-Brasil de São Paulo, made up of USP employees, and to evaluate the effectiveness of psychological interventions offered virtually to participants who have a previous history of psychiatric disorders, high severity mental symptoms or who wish to undertake such interventions.



## Innovation Projects

*The HCFMUSP Technological Innovation Center (InovaHC) develops technological innovation projects designed to promote the digital transformation of the patient's journey at HCFMUSP, whose results become a routine solution incorporated into the daily lives of patients/users and health professionals.*

## National Center for Research and Innovation in Mental Health (CISM)

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This project, developed by IPq, was made possible through a Donation Term signed, in 2022, between Banco Industrial do Brasil S/A, HCFMUSP and FFM.

Over the next 10 years, CISM will create three modules: a) a Precision Neuroscience Module, exponentially expanding the brain and behavior investigations of the Brazilian High Risk Transgenerational Cohort for Mental Conditions; b) an

Evaluation and Incubation Module for Digital Interventions in Mental Health, promoting technological innovations that can be accelerated to be used within the scope of the SUS and the university system; and c) a Module for the Implementation of Science and Technology Transfer to Society, evidence-based interventions through implementation in the cities of Indaiatuba and Jaguariúna.

## Development of medical imaging software for analysis of perfusion and cerebral blood permeability from magnetic resonance imaging (MRI) without using intravenous gadolinium contrast

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This project, developed by InRad, was made possible through an Addendum to the Technical and Scientific Cooperation Agreement signed in 2022 between Philips Medical Systems Ltda., HCFMUSP and FFM.

Through it, it will be possible to develop a software for processing ASL MR images with the objective of extracting information about the functionality of the blood-brain barrier in the brain, without the need for the application of an intravenous contrast agent.

## Advanced planning and guidance for emerging embolizations

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This project, developed by InRad, was made possible through a Partnership Agreement signed in 2022 between GE Healthcare do Brasil, HCFMUSP and FFM.

Through it, it will be possible to investigate and develop a new software for planning and guidance in the field of prostatic artery embolization for the treatment of benign prostatic hyperplasia and cancer, and in other emerging embolizations.

## Spine CT data cooperation

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This project, developed by NIT-HCFMUSP, was made possible through an Addendum to the Cooperation Agreement signed in 2022 between AIGORA GMBH, HCFMUSP and FFM.

Through it, it will be possible to share 30 CT images of spines of patients aged between 12 and 18 years old with Adolescent Idiopathic Scoliosis or other spinal deformity, aiming at the development of AI algorithms.

## Cooperation of chest X-ray data with diagnosis of tuberculosis

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This project, developed by NIT-HCFMUSP, was made possible through an Addendum to the Cooperation Agreement signed in 2022 between AIGORA GMBH, HCFMUSP and FFM.

Through it, it will be possible to share 526 images of chest X-rays of patients with radiological diagnosis of tuberculosis, aiming at the development of AI algorithms.

## Skull computed tomography data cooperation

This project, developed by NIT-HCFMUSP, was made possible through an Addendum to the Cooperation Agreement signed in 2022 between AIGORA GMBH, HCFMUSP and FFM.

Through it, it will be possible to share 100 studies of CT scans of the skull aimed at the development of AI algorithms.

## Use of Immersive Virtual Reality for Cognitive Rehabilitation of Patients with Severe Traumatic Brain Injury

This project, developed by LIM 62, was made possible through an agreement signed in 2022 between the Ministry of Health and FFM.

Through it, it will be possible to develop and adapt a cognitive training tool, using immersive virtual reality,

in young adults diagnosed with Severe Traumatic Brain Injury.

This project is supposed to help in the treatment of this disease and allow a greater understanding of the benefits that this technology can bring to this population.

## Develop a platform MVP based on *Federated Learning* so that partners can safely and quickly integrate their models with HC to validate their AI Algorithms without having direct access to hospital data

This project, developed by NIT-HCFMUSP, was made possible through a contract signed in 2021 between Siemens Healthcare Diagnósticos Ltda, HCFMUSP and FFM and ended in 2022.

Through it, it was possible to enable, through Federated Learning, the validation and training of models for applications with AI in Health using data from HC-FMUSP, which has the reality of public health in the country.

## InspirAr - Digital Monitoring to Aid in the Treatment of Patients with Asthma

This project, developed by FOFITO, was made possible through a contract signed in 2021 between Astrazeneca do Brasil Ltda., FMUSP and FFM and continued in 2022.

Through it, it will be possible to develop a functional and scalable application that brings together strategies

to help patients with asthma, with a view to allowing the patient to monitor their symptoms, the use of medication, control their physical activity and learn about asthma, with the follow-up of qualified professionals.

## Application of OPEN RAN architecture focused on 5G applications in the context of digital health

This project, developed by NIT-HCFMUSP, was made possible through an Agreement signed in 2021 between ABDI, HCFMUSP and FFM and continued in 2022.

Through it, it will be possible to deploy and evaluate 5G technology using the Open RAN architecture concept

in real cases in the health area. Open RAN (Open Radio Access Networks) is a movement that tries to democratize parts of the telecommunications network and, thus, not depend on large telecommunications equipment manufacturers.

## 7 Tesla Resting State Denoising

This project, developed by NIT-HCFMUSP, was made possible through a contract signed in 2021

between Siemens Healthcare Diagnósticos Ltda, HCFMUSP and FFM and continued in 2022.

Through it, it will be possible to use advanced AI techniques, specifically in pattern recognition, to better distinguish the signal caused by brain activity from the noise signal, allowing less noisy Functional Magnetic

Resonance (fMR) results at rest, which, ultimately, will facilitate the interpretation of the image by the medical team.

## Clinical decision support platform with machine learning in medical images

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This project, developed by NIT-HCFMUSP, was made possible through an Agreement signed in 2021 between Huawei do Brasil Telecomunicações Ltda., HCFMUSP and FFM and continued in 2022.

Through it, it will be possible to create a distribution and automation channel for artificial intelligence algorithms for medical images in Brazil.

## Cushion 4.0: Intelligent reactive seating system with clinical monitoring for wheelchair

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This project, developed by IMRea, was made possible through an Agreement signed in 2021 between Finep, HCFMUSP, Dilepé Ortopedia Técnica Ltda. and FFM and continued in 2022.

The objective of the project is to develop Cushion 4.0, an intelligent system for clinical monitoring, which

captures user variables and provides automatic adjustments to the wheelchair seat, preventing complications from long periods sitting in the same position, such as low back pain and ulcers pressure.

## Predictive Monitoring in Person-Centered Care Using Smart Watches

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This project, developed by IMRea and NIT-HCFMUSP, was made possible through a Cooperation Agreement signed in 2021 between Samsung Eletrônica da Amazônia Ltda., HCFMUSP and FFM and continued in 2022.

The study is carried out with volunteer patients recovering from Covid-19, who collect measures of vital signs and sleep through smart watches and validate their use, in comparison to gold standard equipment, in the context of early medical intervention.

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

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This project, developed by NIT-HCFMUSP, was made possible through a Technical-Scientific Cooperation Agreement signed in 2020 between CISCO Comércio e Serviços de Hardware e Software do Brasil Ltda., HCFMUSP and FFM and continued in 2022.

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

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

This project, developed by NIT-HCFMUSP, was made possible through a Partnership Agreement signed in 2020 between the Itaú Foundation for Education and Culture, HCFMUSP and FFM and ended in 2022.

The same project also has the support of Petrobrás - Petróleo Brasileiro S/A, through a Term of Donation still in force in 2022.

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

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

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

## Open innovation for healthcare in the fight against Covid-19

This project, developed by NIT-HCFMUSP, was made possible through an Agreement signed in 2020 between the IDB, HCFMUSP and FFM and continued in 2022.

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

## InterRad Platform - Request for integrated imaging exams and scheduling

This project, developed by NIT-HCFMUSP, was made possible through an Agreement signed in 2020 between ABDI, HCFMUSP and FFM and continued in 2022.

Through it, it will be possible to develop an Exam Request System that supports physicians in ordering the best exam for their patient, as well as a Scheduling System that automates the process of scheduling imaging exams using artificial intelligence.

## Industry 4.0 technologies applied to the patient monitoring process

This project, developed by NIT-HCFMUSP, was made possible through an Agreement signed in 2020 between ABDI, HCFMUSP and FFM and continued in 2022.

Through it, it will be possible to carry out, through a pilot project, a study of industry 4.0 technologies applied

to the process of monitoring patients throughout their relationship journey with the hospital/physician, including pre-hospitalization, hospitalization and post-hospitalization.

## Application of industry 4.0 technologies in intelligent rehabilitation equipment connected to the LucyIO Platform

This project, developed by IMRea, was made possible through an Agreement signed in 2020 between ABDI, HCFMUSP and FFM and continued in 2022.

Through it, it will be possible to carry out a study on the application of industry 4.0 technologies in medical equipment, using the production process of an

intelligent rehabilitation equipment (cycle ergometer) connected to a digital rehabilitation platform - LucyIO Platform

## Structuring of an innovation program aimed at generating new business and accelerating the development of startups in the Health area



This project, developed by NIT-HCFMUSP, was made possible through an Agreement signed in 2020 between SDE, HCFMUSP and FFM and ended in 2022.

With this initiative, an attempt was made to create the conditions to transform HCFMUSP's scientific and

technological knowledge into new services and products, through technology transfer, generation of business ideas and acceleration of the development of health startups.

## Implementation of a Research and Development Laboratory for projects related to Artificial Intelligence with applications in precision medicine and general diagnosis

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This project, developed by NIT-HCFMUSP, was made possible through a Technical-Scientific Cooperation Agreement signed in 2020 between Siemens Healthcare Diagnósticos Ltda., HCFMUSP and FFM and ended in 2022.

The proposal foresaw the implementation of a R&D lab, focused on the development of projects related to Artificial Intelligence with applications of precision medicine and diagnostics in general.

## Use of artificial intelligence and mobile app to estimate vaccination protection coverage

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This project, developed by the USP Innovation Center, was made possible through an Agreement signed in 2019 between FFM and the Ministry of Health, and continued in 2022.

The project includes the development of an application that will use artificial intelligence to digitize

the population's Vaccination Booklets; tell the health worker which vaccines a person still needs to receive; and send the collected information to the Government database, SI-PNI.

## Thermolabile drug logistics control center

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This project, developed by NIT-HCFMUSP through an agreement signed between the Ministry of Health and FFM, in 2017, is justified by the need for the Ministry of Health to structure a control center for the logistics of

thermolabile drugs that can be operated and integrated by any Ministry supplier, either current or future.

These activities started in 2019 and ended in 2022.

## Developing and testing the *Motherly* app: an automated intervention to promote young mothers' mental health

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This research was initiated, in 2018, by the FMUSP Department of Psychiatry through contracts signed between FFM and Fundação Maria Cecília Souto Vidigal and between FFM and *Grand Challenges Canada*. In 2019, a Grant was signed with *The Open Society Policy Center*, aiming at its continuity.

Through this study, it will be possible to develop an application (app), which will accompany pregnant women, in order to guarantee the mental health of young mothers. The app will be installed on the patients'

smartphones, so that they can report their daily lives and receive messages of support that help ensure their well-being.

The project seeks to obtain data that will prove or not the improvement in the mental health of patients and will accompany mothers from the second trimester of pregnancy until the first three months of the child, also measuring the development of the baby at the beginning of life.

These activities continued in 2022.

## Systematization of the Xenotransplantation Method in Brazil

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This project, started in 2018 and developed by the ICHC Clinical Immunology and Allergy Division, was made possible through a Term of Scientific Technical Cooperation signed between EMS S/A and FFM.

Due to the progressive increase of candidates on the organ waiting list, xenotransplantation

(transplantation performed between different species) offers the best perspective to meet this need.

Given the need for additional organs in Brazil and the new perspectives for the clinical application of porcine xenotransplantation, this project aims to systematize this new methodology in Brazil.

These activities continued in 2022.



# Research Projects

## *FFM participates in relevant research projects in the various fields of health sciences, developing basic and applied research, as well as diagnostic methods*

### Economic burden of severe respiratory syncytial virus disease in Latin American infants and children from Argentina, Brazil, and Colombia

This research, developed by ICr, started in 2022, was made possible through a Letter-Contract signed between the *Fundación Infant*, from Buenos Aires, and FFM.

Through this study, it will be possible to estimate the direct (medical and non-medical) and indirect costs

related to acute illness caused by Respiratory Syncytial Virus (RSV) in hospitals and nursing homes in Argentina, Brazil and Colombia and compare them with those not resulting from RSV.

### US-South America Initiative for Genetic-Neural-Behavioral Interactions in Human Neurodegenerative Research

This research, developed by the ICHC Clinical Neurology Division, started in 2022, was made possible through two Agreements signed between *The Regents of the University of California*, San Francisco and FFM, with a grant from the Rainwater Charitable Foundation and Alector, LLC.

Through this study it will be possible to identify the unique genetic and socioeconomic status factors that drive the presentation of Alzheimer's disease and frontotemporal dementia in South American countries compared to the USA.

### ELEA - Longitudinal Study of HIV and Aging in Brazil

This research, developed by the FMUSP Department of Infectious and Parasitic Diseases, started in 2022, was made possible through a *Subaward* signed between Vanderbilt University Medical Center and FFM, with a grant from the NIH.

Through this study it will be possible to define the burden of concomitant endemic infections and socioeconomic factors associated with chronic non-communicable diseases and geriatric syndromes among older people with HIV in Brazil.

### HOPE – HIV Obstruction by Programmed Epigenetics

This research, developed by LIM 60, was made possible through an Agreement signed in 2022 between the J. David Gladstone Institutes and the FFM, with a grant from the NIH.

This study will contribute to the understanding of the functioning of NKT cells in the disease caused by HIV-1 and how these cells can contribute to the innate defense against HIV-1 infection.

### Preclinical brain lesions related to Alzheimer's disease and other neurodegenerative diseases

This research, developed by LIM 22, was made possible through an Application signed, in 2022, between the Alzheimer's Association and FFM.

Through this study, it will be possible to evaluate the clinical and anatomopathological profile of a large

number of individuals submitted to necropsy at the SVOC, intended for an interdisciplinary research network that may cover aspects of normal aging and related chronic-degenerative diseases.

### NutriNet-Brasil Cohort – Food and Chronic Noncommunicable Diseases (CNCD)

This study, developed by the Department of Preventive Medicine at FMUSP, was made possible through an Agreement signed in 2022 between FFM, FMUSP and *Fellows of Harvard College*.

Through this research, it will be possible to prospectively study the influence that diet quality has on morbidity and mortality from CNCDs in Brazil, particularly including obesity, diabetes, arterial

hypertension, dyslipidemia, myocardial infarction, stroke and breast, prostate and colon cancer.

## Rare de novo and hereditary variations in the genome of patients with obsessive-compulsive disorder

This study, developed by IPq, was made possible through Agreements signed between FFM and *Baylor College of Medicine*, with a grant from the NIH, in 2021, and the *Icahn School of Medicine at Mount Sinai*, in 2022.

Through this study it will be possible to investigate genomic risk variations for the development of

obsessive-compulsive disorder and related disorders in patients and their families. Correlation analyses of these genomic variants with clinical variants will also be performed (example: comorbidities and severity of symptoms).

## Translational Study of the Metabolic and Anti-Inflammatory Effects of Formulas Based on Apple and Pomegranate Poscas

This research, developed by LIM 26, was made possible through a Research Agreement signed in 2022 between *Companhia dos Temperos Ltda.*, USP and FFM.

Its objective is to demonstrate the results and mechanisms associated with the effects on metabolism and on the control of chronic inflammation of formulas containing pomegranate or apple cider vinegar.

## US-South America Initiative for Genetic-Neural-Behavioral Interactions in Human Neurodegenerative Research

This study, developed by the ICHC Clinical Neurology Division, was made possible through an Agreement signed in 2022 between FFM and *The Regents of the University of California*, San Francisco.

Through this study it will be possible to determine genetic, cognitive, cerebral and socioeconomic factors that discriminate patients with Alzheimer's disease from countries in South America and the USA.

## Validation of the Global Development Scale (GSED) for the Brazilian Context – Phase 2

This project, developed by HU-USP, continued the project called "Validation of the Global Development Scale (GSED) for the Brazilian Context – Phases 1 and 2", and was made possible through an Agreement signed in

2022 between the *World Health Organization* (WHO) and FFM.

The main objective of the project is to create an instrument for global assessment of child development to be used worldwide.

## Validation and implementation of a screening strategy for colonization by Carbapenem-Resistant Enterobacterales based on a Rapid Immunochromatographic Test

This study, developed by the ICHC Hospital Infection Control Group, was made possible through an Agreement signed in 2022 between FFM, HCFMUSP and *Jhpiego Corporation*.

Through this study it will be possible to evaluate the sensitivity, specificity, positive and negative

predictive values and accuracy of an immunochromatographic test without culture in plates, in comparison with a direct commercial multiplex PCR of clinical samples.

## *Is a synthetic pheromone trap a sensitive surveillance tool for sand fly vectors of Leishmaniasis?*

This study, developed by the FMUSP Department of Preventive Medicine, was made possible through an Agreement signed in 2022 between FFM, FMUSP and the *University of Warwick*.

Considering the importance of vector control to contain the transmission of *Leishmania infantum* to

vertebrate reservoirs including humans, the objective of this research is to collect data on the entomological effectiveness of the synthetic pheromone in relation to routine capture methods, to demonstrate its sensitivity as a surveillance trap.

## *Profile of autoantibodies against the blood-brain/nerve barrier in central and peripheral chronic inflammatory demyelinating diseases*

This study, developed by LIM 62, was made possible through an Agreement to be signed, in 2022, between FFM and the Ministry of Health.

With it, it will be possible to develop tools for the diagnosis and prognosis of patients with acquired inflammatory demyelinating diseases.

## *Home-based transcranial direct current stimulation associated with behavioral therapy via smartphone app in the treatment of major depressive disorder: a randomized, double-blind, placebo-controlled clinical trial*

This study, developed by IPq, was made possible through an Agreement signed in 2022 between FFM and the Ministry of Health.

The use of an app-based therapy could introduce therapeutic alternatives for depression that do not use

medication and increase patients' engagement and autonomy in relation to treatment, increasing their adherence and reducing the stigma related to the disease.

## *Application of Meditation Practice in Neuropsychiatry: From Neurobiology to Adjunctive Treatment in Epilepsy and Psychogenic Non-Epileptic Seizures (PNES)*

This research, developed by IPq, was made possible through a Donation Term signed, in 2022, between the Mahle Institute and FFM.

Through this study, it will be possible to evaluate the effectiveness of applying Raja Yoga breathing and

meditation techniques as a treatment for patients with epilepsy and patients with PNES, within a follow-up period of three months after starting treatment.

## *São Paulo-Minas Gerais Center (SaMiTrop) for the Treatment of Chagas Disease*

Continuing the study called "*Research Center for Biomarkers in Neglected Tropical Diseases of São Paulo - Minas Gerais*", this project, developed by IMT, was made possible through a contract signed, in 2022, between FFM and NIH.

It is intended to identify methodologies and tools to increase the number of patients diagnosed with Chagas disease, so that treatment is offered and to identify strategies and biomarkers that make it possible to improve patient follow-up and help in the evaluation of new candidates for treatment.

## *Evaluation of the inflammasome pathway profile in patients with sickle cell anemia on different treatment regimens*

This research, developed by the Hematology, Hemotherapy and Cell Therapy Service of the ICHC Hematology and Hemotherapy Division, was made possible through an agreement signed, in 2021, between FFM and the Ministry of Health.

This study replaced the research entitled "*Impact of the SARS-CoV-2 coronavirus infection in patients with sickle cell syndromes treated at HCFMUSP and Fundação Pró-Sangue Hemocentro de São Paulo*:"

*incidence, clinical repercussions and morbidity and mortality”.*

Through it, it will be possible to describe the monocyte response pattern in patients with Sickle Cell

Anemia, with different treatment regimens, with emphasis on immunophenotyping, and to compare it with healthy donors and between treatment groups.

## The Effectiveness of On-Demand Pre-Exposure Prophylaxis in a cohort of cisgender men who have sex with men, transgender women and transvestites

This research, developed by the FMUSP Department of Preventive Medicine, continued the project called “The use of pre-exposure prophylaxis (PrEP) by people with high exposure and vulnerability to HIV in the context of Brazilian health services: effectiveness of its use under demand and the predominantly remote clinical follow-up protocol - (Combina Project – phase 3)”, was made possible through

a Letter of Agreement signed in 2022 between PAHO and FFM.

Through this study, it will be possible to evaluate the effectiveness of on-demand PrEP, taking as reference the rates of: incidence of HIV infection, permanence and adherence to the scheme and the occurrence of adverse events that lead to interruption of the use of prophylaxis.

## Clinical evaluation of the antidepressant effect of the use of probiotics in bipolar disorder and possible mediating effects of systemic and intestinal inflammatory markers of the microbiota

This research, developed by IPq, was made possible through an Agreement signed in 2021 between the *Milken Institute* and FFM and continued in 2022.

Its objective is to evaluate the effect of probiotic supplementation in the improvement of depressive

symptoms in patients with Bipolar Disorder, along with monitoring the levels of intestinal and serum inflammation biomarkers.

## Virus Surveillance and Discovery in Brazil

This research, developed by the FMUSP Department of Infectious and Parasitic Diseases, was made possible through an Agreement signed in 2021

between *Abbott Laboratories*, FFM and FMUSP and continued in 2022.

Its goal is to understand the extent of viral diversity in human populations and to track new viral strains.

## Ultra-processed food consumption and cancer incidence and mortality: estimating current and future projected burdens in Europe considering different scenarios

This research, developed by the FMUSP Department of Preventive Medicine through an Agreement signed between the Imperial College of Science, Technology and Medicine and FFM, started in 2021 and continued in 2022.

Through this study, it will be possible to investigate and evaluate the associations between the consumption of ultra-processed foods and the risks of developing cancer, cardiometabolic diseases and mortality.

## Intervention for the implementation of continuous care monitoring for people living with HIV/AIDS

This research, developed by the FMUSP Department of Preventive Medicine through an Agreement signed between *ViiV Healthcare UK Ltd*, FMUSP and FFM, began in 2021 and continued in 2022.

Through this study, it will be possible to test an intervention to improve the monitoring of continuous

health care for people with HIV infection linked to SUS services, with the hypothesis that the intervention will bring improvements to the Clinical Monitoring System, comparing the effects with two service control groups.



## Quantitative Evaluation of Intracranial Pressure Curves Obtained by a Non-Invasive Method in Patients with Traumatic Brain Injury

This study, developed by the ICHC Clinical Neurology Division, was made possible through a contract signed in 2021 between *Braincare Desenvolvimento e Inovação Tecnológica S/A* and FFM and continued in 2022.

Through it, it will be possible to evaluate intracranial pressure and compliance with a new non-invasive method of measurement in patients who are victims of Traumatic Brain Injury of all severities.

## Multicriteria Decision Analysis to support Technology Incorporation Processes in Oncology

This research, approved in Roche's "Conexão *Hárpia*" public notice, was made possible through a contract signed, in 2021, between FFM and Roche, and is developed by Icesp and continued in 2022.

Through it, it will be possible to develop a multicriteria decision analysis method that can support processes of prioritization and resource allocation in high-cost technologies aimed at cancer treatment, in a hospital context.

## ARBOBIOS: Translational study for identification, characterization and validation of diagnostic tests and severity markers in arboviruses

This research, developed by the FMUSP Department of Infectious and Parasitic Diseases, was made possible through a contract signed, in mid-2021, between *bioMérieux S.A.*, *bioMérieux Brasil*, FFM and FMUSP and continued in 2022. Its objective is to identify and validate prognostic biomarkers for diseases caused by Dengue Virus (DENV), Chikungunya (CHIKV) and Zika

(ZIKV), which allow early stratification of the risk of developing the evolutionary forms of the diseases that represent the highest morbidity and mortality: severe dengue (DG), post-Chikungunya chronic inflammatory joint disease (post-CHIKV-DAIC), and congenital ZIKV syndrome (CVS) with neurological disorder, respectively.

## Alzheimer's disease in the olfactory epithelium: correlation with the environment

This research, developed by LIM 5, was made possible through an Application signed, in 2021, between the Alzheimer's Association and FFM and continued in 2022.

Despite the growing recognition of air pollution as a modifiable risk factor for dementia, the mechanisms of

how air pollution influences cognitive decline remain unclear.

This study intends to investigate the effects of environmental pollution, quality of life indices and the development of Alzheimer's Disease in residents of the city of São Paulo.

## Genomics of the Brazilian population

This study, developed by CEGH-CEL, started in 2021 through its own resources and continued in 2022.

Its objective is to enable the increase of genotyped samples of the Brazilian population, as well as the

organization of the data generated with the help of the CEGH-CEL infrastructure, so that the data can be shared with other researchers.

## Veterinary clinical study using the ZIKA virus (ZIKV) as oncolytic therapy against spontaneous canine CNS tumors

This study, developed by CEGH-CEL, started in 2021 through its own resources and continued in 2022.

Through it, it will be possible to evaluate the safety and efficacy of ZIKV as an oncolytic agent in canine

patients with intracranial tumors inoculated with the virus, advancing in the understanding of a possible new therapeutic form for dogs and humans with tumors of the CNS (Central Nervous System).

Randomized double-blind clinical trial with active controls to evaluate the safety, immunogenicity and consistency of the immune response by batches of the tetravalent influenza vaccine (inactivated and fragmented) from Butantan Institute

This study, developed by the ICHC Infectious and Parasitic Diseases Division, was made possible through a contract signed in 2021 between the Butantan Foundation, HCFMUSP and FFM and continued in 2022.

Through it, it will be possible to verify that the quadrivalent vaccine produced by the Butantan Institute is not inferior in immunogenicity and is as safe as the trivalent vaccines from the same producer.

*Treatment of depression in the elderly with repetitive transcranial magnetic stimulation by the Theta-Burst method*

This study, developed by IPq, was made possible through an Agreement signed in 2021 between *The Chancellor Masters and Scholars of the University of Oxford* and FFM and continued in 2022.

Through this research, it will be possible to develop local expertise in the use of state-of-the-art neuroimaging techniques and the exploration of response markers to magnetic stimulation treatment in geriatric depression.

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

This study, developed by IPq, was made possible through a contract signed in 2020 between NARSAD – *The Brain and Behavior Research Fund* and FFM and continued in 2022.

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

Through it, it will be possible to verify whether the Theta Burst Stimulation method is a therapeutically

*Magnetic Resonance Imaging (MRI) iron and protein aggregation detection for assessing pathology and progression of Alzheimer's disease: voxel-by-voxel histological validation*

This study, developed by InRad, was made possible through a Subaward signed in 2021 between *The Regents of the University of California – Berkeley* and FFM, with a grant from the NIH and continued in 2022.

Through this research, it will be possible to validate by histology the MRI method for detecting iron and protein accumulation, with the aim of evaluating the neuropathological progression associated with the Alzheimer's disease for future clinical use.

BERTHA: Interstitial Lung Disease Associated with Rheumatoid Arthritis: Characterization of Lung Disease Progression

This study, developed by the ICHC Rheumatology Division, was made possible through a Term of Agreement signed in 2021 between Associação Beneficente Syria - Hospital do Coração, HCFMUSP and FFM and continued in 2022.

Through it, it will be possible to characterize the progression of interstitial lung disease (ILD) associated with rheumatoid arthritis (RA) and identify a signature of biomarkers that, associated with clinical variables, is capable of identifying the patient at risk of progressing to ILDRA.

## Production of pituitary cells from iPSC to expand the diagnosis and treatment of hypopituitarism

This study, forwarded by the ICHC Endocrinology and Metabolism Division, through FFM, to the Ministry of Health PRONAS/PCD, was approved in 2021 and started in 2022.

The overall objective of the study is to establish a methodology to obtain pituitary cell models in patients with congenital hypopituitarism.

## Establishment of a platform for the production of genetically reprogrammed immune cells to combat onco-hematological diseases

This study, forwarded by the HCFMUSP Hematology and Cell Therapy Service, through the FFM, to the Ministry of Health for presentation and approval of projects within the scope of PRONON, was approved in 2021 and started in 2022.

The objective of the study is to establish a multiple platform for the production of immune cells

reprogrammed with anti-CD19 and anti-CD99 CARs, starting from peripheral blood cells and/or cryopreserved SCUP, with the intention of applying them in the future as Cell Therapy products against onco-hematological diseases.

## Impact of a Cancer-Associated Thrombosis Treatment Program on clinical outcomes in cancer patients from three public institutions in the State of São Paulo

This study, forwarded by Icesp, through the FFM, to the Ministry of Health PRONON, was approved in 2021 and should be started in 2023 due to pending documentation.

The objective of the study is to implement the multidisciplinary program for the treatment of

thrombosis associated with cancer of ICESP in two public institutions of oncological treatment in the State of São Paulo and to compare the clinical and pharmacoeconomic outcomes before and after the implementation of the program.

## Epidemiological, molecular and translational study in head and neck squamous cell carcinoma: applications in diagnosis and treatment

This study, forwarded by Icesp, through the FFM, to the Ministry of Health PRONON, was approved in 2021 and should be started in 2023 due to pending documentation.

Through this study, it will be possible to investigate several aspects of squamous cell carcinoma of the head

and neck, focusing on non-smokers and non-alcoholic patients, as well as on young people, in the search for improvements in prevention strategies (primary and secondary), diagnosis and treatment, based on the integration of epidemiological and molecular data.

## Acceptability and Performance of an Automated Portable Augmented Reality Optical Biopsy Technology for Gastrointestinal Cancer Screening: A Clinical Study in Brazil

This project, developed by Icesp and made possible through an Agreement signed between *Baylor University* and FFM, with a subsidy from NIH, began in 2021 and ended in 2022.

Through this research, it was possible to evaluate the technology of High Resolution Microendoscopy with Augmented Reality in terms of performance, efficiency and impact.

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

This study, forwarded by Icesp, through the FFM, to the Ministry of Health PRONON, was approved in 2020 and started in 2022.

Through it, it will be possible to establish clinical-functional indicators and investigate the biological markers of premature aging and dementia in Down

Syndrome and characterize the care demands and intervention perspectives, for the promotion of mental health and prevention of 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 Icesp, through the FFM, to the Ministry of Health, for presentation and approval of projects within the scope of PRONON, was approved in 2020 and started in 2022.

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

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

This project, developed by IMT, was made possible through an Agreement signed in 2020 between FFM and the *Fondation Mérieux* continued in 2022.

The objective of the research is the development of programs and research activities focused on infectious diseases that affect public health and vulnerable populations, mainly in the Amazon region.

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

This study, developed by IPq, was made possible through an Agreement signed in 2020 between the Schizophrenia International Research Society and FFM and ended in 2022.

Through it, it was 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 imaging with spectroscopy.

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

This study, developed by the ICHC Clinical Neurology Division, was made possible through an Application signed in 2020 between the the *Alzheimer's Association* and FFM and continued in 2022.

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 FMUSP Department of Preventive Medicine, was made possible through a Statement signed in 2020 between FFM and

*Johns Hopkins University*, with a grant from NIH and continued in 2022.

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

## Association of Systemic Atherosclerosis with Neurodegenerative and Cerebrovascular Disease: a Clinicopathologic Study

This study, developed by the Discipline of Geriatrics of the FMUSP Department of Internal Medicine, was made possible through an Application signed, in 2020, between FFM and the *Alzheimer's Association* and continued in 2022.

Through this research it will be possible to investigate the association between atherosclerosis in coronary, carotid and cerebral 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 LIM 40, was made possible through a Subagreement signed in 2020 between FFM and the *Johns Hopkins University* and continued in 2022.

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

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

## Landscape latitudinal genomics and ecology of *Anopheles Darlingi*

This study, developed by the FSP-USP Department of Epidemiology through a contract signed in 2020 between FFM and Health Research Incorporated with a subsidy from NIH, continued in 2022.

This study is expected to identify and quantify the main factors (ecological, entomological, socioeconomic)

that drive the 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*, on larger scales.

## BASE – Games for Socio-Emotional Learning: an early intervention program in early childhood education

This study, developed by the FMUSP Department of Pediatrics, was made possible through a contract signed in 2020 between the *Harvard Graduate School of Education* and FFM and continued in 2022.

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

## Brazilian Autopsy and Imaging Study

This study, developed by the FMUSP Department of Pathology, was made possible through a contract signed in 2020 between the Bill and Melinda Gates Foundation and FFM and ended in 2022.

Through it, it was 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.

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

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This study, developed by the ICHC Clinical Immunology and Allergy Division, was made possible through a contract signed in 2019 between *Joan & Sanford I. Weill Medical College of Cornell University* and FFM with a grant from NIH, and continued in 2022.

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.

## Efficacy evaluation of nivolumab in prostate adenocarcinoma with and without abnormalities in DNA repair pathways

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This project, developed by Icesp and made possible through a contract signed in 2019 between the *Conquer Cancer Foundation* of ASCO and FFM, ended in 2022.

The research aimed to determine the antitumor effect of nivolumab in patients with metastatic

castration-resistant prostate cancer after progression to taxane-based treatment in positive and negative DRD tumors.

## Diagnosis and monitoring of Alzheimer's disease using locus coeruleus volumetry

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This project, developed by InRad and made possible through a Letter of Collaboration issued by the *Grinberg Laboratory - University of California San Francisco*, started in 2019 and continued in 2022. The objective of the study is to develop an algorithm based on magnetic

resonance imaging, histologically validated to assess volumetric changes of the locus coeruleus, which capture the neuropathological progression associated with Alzheimer's Disease for clinical use.

## Establishment of a reference genome for the Brazilian population – Brazilian Reference Genome Project

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This project, developed by the USP Institute of Biosciences, was made possible through an Agreement signed in 2019 between FFM and MS and continued in 2022.

Our population is very heterogeneous in terms of 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 financed by the Ministry of Health. This will allow better diagnosis/prevention of diseases with genetic components in Brazilians and the design of public health policies based on our genetics.

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

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This project, developed by HU-USP and made possible through a contract signed in 2019 between FFM and the *University of Birmingham*, ended in 2022. The objective of the study was to investigate, in patients with atrial fibrillation and with professionals that assist these patients, the understanding of the existing barriers to the

implementation of adequate treatment, using vitamin K antagonist anticoagulants, in primary care.

## Unraveling causal factors related to tau protein neurotoxicity in Alzheimer's disease

This research, developed by the Discipline of Geriatrics of the FMUSP Department of Internal Medicine and made possible through a Letter of Collaboration issued by the Grinberg *Laboratory* of the University of California, began in 2019 and continued in 2022.

Through this study, it will be possible to elucidate the specific cellular factors that contribute to the accumulation of tau in neurons, in order to advance the understanding of the cellular mechanisms of neurodegeneration and identify therapeutic targets for the Alzheimer's disease.

## Evaluating the prevalence trend 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 and made possible through a contract signed in 2019 between the *Vitalant Research Institute*, FFM and FMUSP, continued in 2022.

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

With this study, it will be possible to follow up the cohort of patients with sickle cell anemia and the blood

## Consultancy to develop curriculum and collect data to evaluate a group parenting intervention in Boa Vista

This study, developed by the FMUSP Department of Pediatrics and made possible through a contract signed in 2019 between FFM and the International Development Bank - BID, ended in 2022.

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

The objective was to make families aware of 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 second stage was developed in the city of Boa Vista (RR), a city with more than 300 thousand inhabitants, and the objective was to impact all vulnerable children, up to two years old.

## AIDS and Cancer Specimen Resources

This project, developed by the ICHC Infectious and Parasitic Diseases Division and made possible through an Agreement signed in 2021 between FFM and The George Washington University with a grant from NIH, continued in 2022.

Through this study, it will be possible to analyze and compare tumor tissues, regarding the presence and profile of intratumoral infiltrative immune response, in HIV-infected and non-infected individuals who died.

## Effect of inhaled terlipressin on coagulation, tissue perfusion, hemodynamics, airway mucosa and early mortality in controlled hemorrhagic shock rescue in pigs

This research, which started in 2018 and ended in 2022, was developed by the Surgery of the Digestive System Division of the FMUSP Department of Gastroenterology and made possible through a

Partnership Agreement signed between Laboratório *Ferring*, USP and FFM, whose project was approved in the company's innovation notice.



The hypothesis is that terlipressin boosts the “protective” effect against organ damage, since it may have a direct effect on the alterations observed in the

microcirculation. In addition, it may have a beneficial hemodynamic effect, preserving systemic pressure and portal and renal flow.

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

This is a cross-cultural study funded by the *National Institute for Health Research-UK*, through Bristol University (UoB) and the *London School of Hygiene & Tropical Medicine*. The research, developed by the FMUSP Department of Preventive Medicine, started in 2018 and ended in 2022.

The initiative sought to implement an intervention for violence against women in eight UBS and evaluate: changes in the identification, welcoming and referral of cases of violence against women; and changes in sexual and reproductive health in women's experiences of violence identified in the services.

## Study of the Functional Treatment of Disabling Pain Due to Osteoarthritis of the Knee in a Program of the Unified Health System

This research, developed by IMRea, was approved in 2018 by the Ministry of Health PRONAS/PCD. Its activities began in 2021 and continued in 2022.

The objective of this study is to prioritize the current rehabilitation treatment of knee osteoarthritis in the SUS, in patients with intense pain and severe osteoarthritis,

associating it with the conventional treatment described by Skou et al., 2015, thus with cognitive orientation, segmental desensitization with the paraspinal blockade (Imamura et al., 2016) or with the radial and focal shockwaves and by the treatment with the intra-articular injection of hyaluronic acid.

## Treatment of neck metastases from thyroid carcinoma by ultrasound-guided percutaneous thermal ablation

This project, developed by Icesp, was approved, in 2018, by the Ministry of Health PRONON. Its activities began in 2020 and continued in 2022.

Through this study it will be possible to bring new information about the diagnosis and treatment of

thyroid cancer, notably in those patients who have cervical metastatic lesions that can be treated percutaneously by thermal ablation.

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

This study, developed by the Department of Pediatrics at FMUSP through a contract signed between the FFM and the *Swiss Tropical and Public Health Institute*, began in 2018 and ended in 2022.

Through this study it was possible to investigate the impact of adversities, in early life, on children and adults and to identify the most critical interventions to improve the health of the population in low- and middle-income countries.

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

This study, developed by the HCFMUSP Anesthesiology Division, was made possible through a contract signed in 2018 between the *Kingston General Health Research Institute*, HCFMUSP and FFM and ended in 2022.

It aimed to gain more information about the use of glutamine as a nutritional supplement in severely burned patients, who are at greater risk of developing infections.

## Classifiers for early diagnosis of Autism Spectrum Disorder using eye tracking

This project, developed by IPq, was approved in 2017 by the Ministry of Health PRONAS/PCD. Its activities started in 2020 and ended in 2022.

Its main objective is to develop computational methods that contribute to the early and more objective

diagnosis of Autistic Spectrum Disorder (ASD), based on eye tracking signals, as well as to develop classifiers and cluster analysis to define ASD subtypes.

## Mama's Portraits

This project, developed by Icesp, was approved in 2016 by the Ministry of Health PRONON. Its activities started in 2019 and continued in 2021.

Through this study, it will be possible to analyze the molecular alterations of breast cancer through whole

exome sequencing; correlate molecular findings with other data; and to develop a computerized system that integrates the different databases of patients with breast cancer for integrated analyses.

## Randomized trial to prevent vascular events in HIV – REPRIEVE (A5332)

This research, developed by the Discipline of Immunology of the FMUSP Department of Internal Medicine and the Department of Preventive Medicine through contracts signed between FFM and *Partners Healthcare (founded by Brigham and Women's Hospital*

*and Massachusetts General Hospital)*, with a grant from NIH, started in 2017 and continued in 2022.

Its objective is to evaluate, in patients being treated for HIV infection, the effects of pitavastatin in the prevention of major adverse cardiovascular events.

## Linking and retaining people with HIV in public health services: a demonstration project in the city of São Paulo, Brazil

This research, developed by the FMUSP Department of Preventive Medicine through an agreement signed in 2017 between FFM and the *AIDS Healthcare Foundation do Brasil*, continued in 2022.

Through it, it will be possible to study the frequency, access barriers and vulnerability profiles of attachment

and different patterns of retention of HIV-infected people in public health services in the city of São Paulo, as well as to analyze the effects of health technologies, which aim to reduce these events in the Brazilian context.

## OCD Project – Research on Brain Markers Associated with Obsessive-Compulsive Disorder

This research, developed by IPq through a contract signed in 2017 between FFM and the *Research Foundation for Mental Hygiene (The New York Psychiatric Institute)* with a grant from NIH, continued in 2022.

With this study it will be possible to identify reproducible brain markers that correspond to obsessive-compulsive disorder (OCD) behaviors, which may eventually be used to reveal manifestations of OCD and other mental disorders.

## Arbobios: A Translational Study for the Identification, Characterization and Validation of Severity Biomarkers in Arbovirus Infections

This study, developed by IMT through an agreement signed in 2017 between FFM, USP, FAPESP and BioMérieux S/A, ended in 2022.

Through it, it was possible to identify prognostic biomarkers for Dengue, Chikungunya and Zika diseases,

which allow the early stratification of the risk of developing the evolutionary forms of the diseases that represent higher morbidity and mortality.

## Phase III Clinical Trial to evaluate the efficacy and safety of the Dengue 1, 2, 3, 4 (attenuated) vaccine from the Butantan Institute

This study, developed by the ICHC Clinical Immunology and Allergy Division, was made possible through a Technical-Scientific Cooperation Agreement signed in 2016 between the Butantan Foundation, HCFMUSP and FFM and continued in 2022.

To date, there is no licensed dengue vaccine that protects 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.

## A double-blind, phase 2b/3 study of the safety and efficacy of injectable cabotegravir compared to oral tenofovir disoproxil fumarate/emtricitabine daily for pre-exposure prophylaxis in HIV-uninfected cisgender men and transgender women who take sex with men

This research, developed by the Discipline of Immunology of the FMUSP Department of Internal Medicine and the Department of Preventive Medicine through contracts signed between FFM and Family Health International, with a grant from NIH, began in 2016 and continued in 2022.

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 to analyze possible drug interactions between sex hormone therapies for transsexuals.

## Use of Laser Fluorescence with SPY ELITE, PINPOINT and FIREFLY Robotic Platform in the Surgical Treatment of Cancer

This project, started by Icesp in 2016 and ended in 2022, was approved by the Ministry of Health PRONON.

Through this study, it was possible to determine the incidence of complications related to postoperative tissue ischemia in the short and medium term; analyze and compare the influence of circulatory mapping;

evaluate the effectiveness of the method for identifying lymph node structures and treat patients with digestive, urological and gynecological tumors; and evaluate the impact of local and systemic complications and the influence of the use of fluorescence on the hospital cost of the surgical treatment of cancer.

## Programs and policies for obesity prevention in low- and middle-income and transition countries - evidence-building studies and program evaluation

This project, developed by NUPENS/USP through an agreement signed between FFM and The *University of North Caroline at Chapel Hill*, started in 2016 and continued in 2022.

This research will produce: studies on food consumption patterns; studies on the prevalence of

obesity, hypertension, diabetes and other chronic diseases related to food in Brazil; studies on price elasticity for non-essential food and beverages; and a database with the nutritional composition of beverages and processed foods sold in Brazil.

## Cohort study of pregnant women to assess the risk of birth defects and other adverse pregnancy outcomes following Zika Virus infection — ZIKAlliance Consortium

This study, developed in 2016 by the FMUSP Department of Infectious and Parasitic Diseases through a contract signed in 2016 between FFM and the *European Union* (represented by the *European Commission*), ended in 2022.

Its objective was to assess the causal relationship between Zika virus infection during pregnancy and birth defects.

## Multiplex Test for Chagas Disease Cure Assessment

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This study, developed by LIM 46 through a contract signed in 2016 between FFM and the *University of Georgia* with a grant from NIH, continued in 2022.

Its objective is the development of a cure test that can identify individuals previously exposed to infection

by the protozoan *Trypanosoma cruzi* and who have progressed to cure, with or without therapeutic treatment.

## Influenza Incidence Study among children and adolescents in Araraquara, Brazil, 2016-2017

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This study, developed by IMT through a contract signed in 2016 between HCFMUSP, FFM and Sanofi Aventis Farmacêutica Ltda., continued in 2022.

This is an amendment to the project entitled "Study of the incidence of dengue in Brazil, in municipalities of high and medium endemicity: Goiânia – GO and

Araraquara-SP" below, which aims to determine the incidence of symptomatic infections by the influenza virus and other viruses in the cohort studied, which supports the evaluation of future vaccination strategies against dengue.

## Study of the Incidence of dengue in Brazil, in municipalities of high and medium endemicity Goiânia - GO and Araraquara-SP

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This study, developed by IMT through a contract signed in 2014 between Sanofi Aventis Farmacêutica Ltda., HCFMUSP and FFM, continued in 2022.

Its main objective is to outline and implement epidemiological studies that support the evaluation of future dengue vaccination strategies.

## Peruvian/Brazilian Amazon Center of Excellence in Malaria research

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This research, started in 2010 by ICB-USP through a contract signed between FFM and the *University of California*, with a grant from NIH, was completed in 2018. In 2019, aiming at its continuity, a contract was signed between FFM and the Yale University, also with a grant from NIH.

Through it, it will be possible to determine the diversity of malaria vectors found in this region and to evaluate the impact of different economic activities on the population structure of the vectors.

These activities continued in 2022.

## Prospective evaluation of the use of isoniazid in the prophylaxis and prevention of pulmonary tuberculosis (TB) in HIV-infected patients

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This research, developed by LIM 56, was made possible through an Agreement signed in 2010 between FFM and the Ministry of Health, which started in 2013 and ended in 2022.

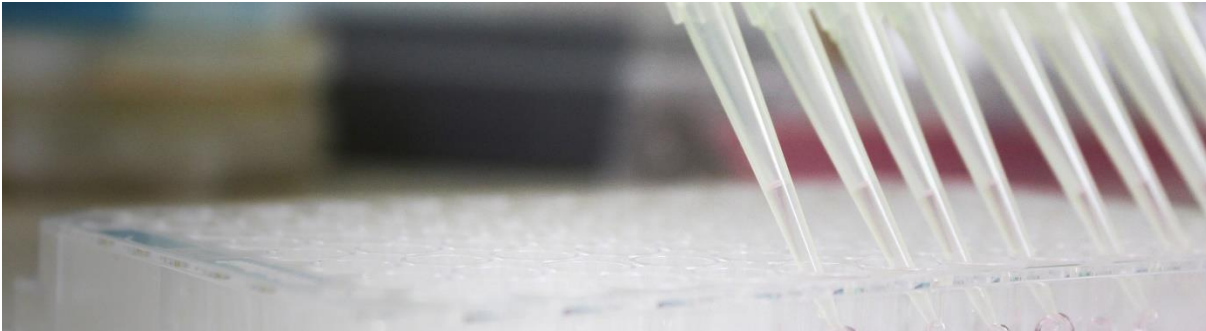
Despite several studies indicating isoniazid (INH) as a prophylactic to reduce the incidence of Tuberculosis

(TB) in the HIV-infected population, this measure is not widely met in all services in Brazil.

This study aimed to evaluate the incidence of TB in individuals, adherence to prophylaxis, as well as its effectiveness compared with a historical series of services.

## Clinical Studies

*Clinical studies are considered the main instrument for validating innovation in the health sector.*



*Illustrative image*

FFM, in support of HCFMUSP and FMUSP, has actively participated in Clinical Studies, the results of which are of great interest to the academic community and society in general.

A Clinical Study is considered any investigation in human beings, aiming to discover or verify the pharmacodynamic, pharmacological, clinical and/or other effects of product(s) and/or to identify adverse reactions to the product(s) under investigation with the objective of verify its safety and/or effectiveness.

Clinical Research, clinical trial or clinical study are the terms used to describe a scientific investigation process involving human beings.

Clinical studies conducted by FMUSP professors take place at HCFMUSP facilities, where basic lab and imaging tests necessary for their development are also carried out. The most advanced exams are carried out in research laboratories, using equipment from the PREMium Network.

Clinical research management is linked to the HCFMUSP Clinical Board. The sector responsible for forwarding research partnerships is the Clinical Research Office (EpeClin), a facilitator with a multidisciplinary and multiprofessional approach, which promotes the

encouragement, development and integration of Clinical Research at HCFMUSP. The sector offers regular training to the FMUSP/HC System community and external public.

All studies are approved by Ethics Committees and coordinated by researchers who are part of the FMUSP/HC System.

In addition to playing an important role in clinical research, the projects are fundamental in the training of human resources and contribute to the generation of financial resources, which make investments in the area feasible.

Clinical studies are considered the main instrument for validating innovation in the health sector, with the aim of ensuring that research is carried out within the technical-scientific, ethical and legal parameters established by international consensus.

In order to carry out any type of clinical research, in addition to approval by the Ethics Committees, it is necessary to have free and informed consent from the participants, maintenance of privacy and confidentiality of information.

In 2022, FFM managed **622 clinical studies** (number on 12/31/2022).



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# Training Projects

## Main Training Projects

*The training projects aim at transmitting high-quality knowledge in an ethical and innovative way.*

### Fellowship in Latin American Hepatobiliary Surgery

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This initiative, developed by the ICHC Liver and Digestive Organ Transplants Division, was made possible through an agreement signed in 2022 between FFM, HCFMUSP and the *Americas Hepato-Pancreato-Biliary Association Foundation*.

The objective of this “fellow” is to train graduates of the digestive tract surgery residency in the area of transplantation and hepatobiliary surgery, which is lacking in Latin America.

### Angola Project – Higher education of Angolan health professionals

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This project, developed by EEP-HCFMUSP, was made possible through a contract signed in 2022 between FFM, HCFMUSP and the Ministry of Higher Education, Science, Technology and Innovation of the Republic of Angola.

The objective of this project is the implementation of the International Cooperation Program for the higher education of Angolan health professionals, living in Brazil, with full time and exclusive dedication.

### Training Project - Training-Action directed towards Managers on the Relationship between Mental Health and Work - Contributions of the Psychodynamics of Work

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This project, developed by FOFITO, was made possible through a contract signed in 2022 between the FFM and the Federal Court of Santa Catarina and ended in 2022.

The aim of this training-action was to encourage discussions and learning among managers on specific issues involving the relationship between mental health and work in light of the Psychodynamics of Work.

### Development and Training of Hubs to Perform Minimally Invasive Autopsies in Brazil

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This study, developed by the FMUSP Department of Pathology, was made possible through a Letter of Agreement signed in 2022 between PAHO and FFM.

Its objective is not only to train three autopsy hubs to perform minimally invasive autopsies, but also to

support these hubs to become trainers in this technique and to be a reference for training and qualification for other Death Verification Services of the Region.

### Fellowship Program in Uro-Oncology at Icesp

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This initiative, developed by Icesp, was made possible through a contract signed in 2018 between FFM and *Zodiac Produtos Farmacêuticos S/A*, and continued in 2022.

The objective of this program is to create specialists in the treatment of urological cancer capable of performing high complexity surgeries.



## Electronic Platform for Teaching and Training in Remote Surgery Based on Synthetic Reality

This project, developed by the ICHC Urology Division, was made possible through a Donation Agreement signed in 2021 between the UMANE Association, HCFMUSP and FFM and continued in 2022.

Through it, it will be possible to contribute to training and improvement in surgical technique applied

to Kidney Transplantation and other highly complex surgeries, through investment in an electronic platform for teaching and training in remote surgery based on synthetic reality and dependent tutor, for doctors, nurses, nursing technicians, scrub nurses and clinical engineers.

## Training Course for Primary Care/Family Health Strategy (ESF) professionals for Phantom Limb Pain in amputees

This project, forwarded by IMRea, through FFM, to the Ministry of Health PRONAS/PCD, was approved in 2021 and started in 2022.

The general objective of the course is to train health professionals to recognize the best diagnosis of phantom limb pain and secondarily to create an information and care platform for this type of patient.

## Training Course for Primary Care/Family Health Strategy (ESF) professionals to integrate Rehabilitation into the Line of Care for Adults with Stroke

This project, forwarded by IMRea, through the FFM, to the Ministry of Health PRONAS/PCD, was approved in 2021 and started in 2022.

The general objective of the course is to train and improve the technical and scientific knowledge of

professionals for the prevention of disabilities through early referral to the rehabilitation network for victims of stroke, in an integral way, with coordinated actions between primary care and the rehabilitation at the tertiary level.

## Training Course for health professionals from the Primary Care Network, in the care and follow-up of people with disabilities in Primary Care

This project, forwarded by the IRLM, through the FFM, to the Ministry of Health PRONAS/PCD, was approved in 2020 and started in 2021 and continued in 2022.

Through it, it will be possible to offer a specific qualification and continuing education course to health

professionals in the Primary Care network in 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 latest research on the topic.

## Training for physicians in Allogeneic Skin Transplantation

This study, developed by HCFMUSP EEP, was made possible through a Letter of Agreement signed in 2020 between PAHO and FFM and ended in 2022.

Its objective was to update the knowledge of health professionals from centers and burn units for diagnosing, referral and performing skin transplants in Brazil.

## Training in basic and advanced laparoscopy in a program associated with Santiago's PUC-Chile Medical School

This study, developed by the ICHC Division of Surgery of the Digestive System and Coloproctology, was made possible through a Private Instrument of Educational Fund signed, in 2020, between Johnson & Johnson and FFM and continued in 2022.

Its objective is to provide training in basic and advanced laparoscopy to the Trainers of the Training Center (Virtual) in a program associated with the PUC-Chile Medical School, developing basic video-surgery skills through simulated models.

## Professional training program in the area of research and innovation in pharmaceutical products

The objective of this project, developed by the FMUSP Department of Gastroenterology through an agreement signed in 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 Care, part of which will be carried out in the field of practice at the HCFMUSP Residency and part at the Research and Development Center of Brainfarma itself.

These activities continued in 2022.

## Specialization Course in Health Education at the University of São Paulo for Professors at the Higher School of Health Sciences at the State University of Amazonas

This project, prepared by the FMUSP Department of Internal Medicine, started in 2019 through a contract signed between FFM and the University of the State of Amazonas (UEA), ended in 2022.

Its objective was the development of a Specialization Course in Health Education at FMUSP for professors at the Superior School of Health Sciences at

UEA, whose proposal for training health professions in the 21st century is to transform education centered on the transmission of content into a content integration education. Such a paradigm shift fundamentally depends on the transformation of the educator; therefore, changing training begins with the professor development.

## Improvement Course in Manufacture and Maintenance of Lower Limb Prostheses, Fixed and Articulated Suopodal Orthoses and Maintenance in Means of Locomotion

This project, prepared by IOT, was approved in 2018, through a Term of Commitment signed between the Ministry of Health and FFM, within the scope of PRONAS/PCD, and ended in 2022.

Aimed at improving workers in the orthoses and prostheses workshops, the objective was to improve

capabilities and technical skills for the manufacturing and production process of orthoses, prostheses and adaptation of wheelchairs, with emphasis on the lower limbs.

## Training in Critical Oncology Patient Care and Imaging Diagnosis in Oncology

This Icesp project, approved in 2016 by the Ministry of Health PRONON, would start at the end of 2018, but had its execution suspended for reanalysis in 2019.

Its objective is to train professionals who work in the SUS network in the care of critical cancer patients to

perform Magnetic Resonance, Computed Tomography, Bone Densitometry, Contrast Tests, Mammography, Radiological Protection and Digital Radiology.



# Health Policy Projects

**Health Policy projects are aimed at defining processes and technologies intended to improve the diagnosis and treatment of diseases, among others.**

Programs and policies for obesity prevention in low-income, middle-income and transition countries - evidence-building studies and program evaluation

This study, developed by NUPENS, was made possible through an Agreement signed in 2022 between The University of North Caroline at Chapel Hill and FFM.

This study aims to propose and evaluate policies for the prevention of obesity and other chronic diseases related to food in Brazil.

Mental Health and Work: Initiatives to Subsidize the Construction of an Institutional Policy for Prevention, Return and Permanence at Work: Influence of Organizational and Relational Factors in the Processes of Return and Permanence at Work: A Case Study

This project, developed by FOFITO, was made possible through a Contract signed in 2022, between the National Treasury Attorney's Office (PGFN) and FFM.

The initiative aims to develop actions at a strategic and operational level, with a view to building a permanent institutional mental health policy at the PGFN.

Local Integration of Refugee Migrants: promoting child development

This project, developed by CEDI-FMUSP, was made possible through a contract signed, in 2022, between the Volunteers Association for International Service Brazil – AVSI and FFM.

Through this initiative, it will be possible to develop a methodology for a program to promote child development for children aged 0-4 years from families

undergoing migration or refugees in the municipality of Boa Vista, RR, based on the *Rech Up and Learn* model and compatible with the methodology under development for the “Programa Criança Feliz”, promoted by the Ministry of Citizenship, Special Secretariat for Social Development.

Elaboration of Quick Technical Notes for the Assessment of Health Technologies to subsidize the response to judicialized items in the Unified Health System

This study, started in 2022 and developed by the HCFMUSP Health Technology Assessment Center, was made possible through a Letter of Agreement signed between PAHO and FFM. Its main objective is to develop Technical Notes for the evaluation of health technologies based on topics demanded by court judges.

Judicialization of health is defined as the volume of lawsuits against the SUS to request the provision of medical treatments based on the right to health provided for in the Brazilian Constitution.

Updating of the Clinical Protocol and Therapeutic Guidelines and preparation of studies and research on the Assessment of Health Technologies to support the incorporation of Technologies into the Unified Health System

This study, developed by the HCFMUSP Health Technology Assessment Center, was made possible through a Letter of Agreement signed in 2022 between PAHO and FFM.

Its main objective is to develop and update Clinical Protocols and Therapeutic Guidelines and health

technology assessment studies, based on topics requested by the Ministry of Health Department of Management and Incorporation of Technologies and Innovation in Health, in agreement with PAHO.

## Preparation of studies and research on Health Technology Assessment to support the incorporation of Technologies into the Unified Health System

This study, developed by the HCFMUSP Health Technology Assessment Center, was made possible through a Letter of Agreement signed in 2022 between PAHO and FFM.

Its main objective is to develop health technology assessment studies, following the methodology established by the Ministry of Health, providing agility in the process of producing information for decision-making.

## Development and validation of the current version of the Qualiaids Questionnaire to assess the organization of the SUS outpatient services responsible for treating HIV infection

This study, started and finished in 2022, was developed by the FMUSP Department of Preventive Medicine and made possible through an Agreement signed between UNAIDS and FFM.

Its main objective was the development and updating of the Qualiaids Questionnaire, a methodology for evaluating the organization of outpatient services of the SUS for the treatment of HIV/AIDS infection.

## Systematic Review of International Methodological Guidelines for the elaboration of in vitro ATS

This study, approved in Roche's "Conexão Hárpia" public notice, was made possible through a Term signed in 2022 between Roche and FFM and is developed by the FMUSP Department of Pathology and the HCFMUSP Health Technologies Assessment Center.

Its main objective is to elaborate a systematic review of methods of evaluation of technologies for in vitro diagnosis.

## The impact of exposure to multiple air pollutants on maternal and child health: using the Environmental Surveillance Coordination database

This study, developed by CEDI-FMUSP, was made possible through an agreement signed in 2021 between the Ministry of Health and FFM and continued in 2022.

Through it, it will be possible to develop a set of air pollution guidelines for Brazil, in order to guarantee healthy environments for the birth and development of

children, aiming at the formulation of public policies on the emission of pollutants, which will contribute to the reduction of respiratory diseases in childhood, an important cause of infant morbidity and mortality, in addition to reducing the number of premature births, low birth weight and congenital anomalies.

## Genomic epidemiology of malaria in a gold mining area in Pará, Brazil

This project, developed by IMT and made possible through a Cooperation Agreement signed in 2021 between FIOTEC, FFM and the researcher, continued in 2022.

Through this initiative, it will be possible to generate data-to-action and characterize the parasite population and transmission dynamics in gold mining regions in the municipality of Jacareacanga, State of Pará.

## How to make childbirth interventions and their outcomes more visible to information systems?

This project, by FSP-USP and made possible through a Cooperation Agreement signed in 2021 between FIOTEC, FFM and the researcher, continued in 2022.

Through this initiative, it will be possible to increase the visibility, granularity and quality of the SINASC variables associated with childbirth care, in order to analyze how the appropriate and inappropriate use of interventions impacts maternal and child outcomes.

## Using a database of multiple environmental pollutants to establish critical exposure limits to air pollution in maternal and child health in Brazil

This project, developed by CEDI-FMUSP and made possible through a Cooperation Agreement signed in 2021 between FIOTEC, FFM and the researcher, continued in 2022.

Through this initiative, it will be possible to estimate critical limits of exposure to environmental pollution by

multiple agents, through the construction of curves of exposure-response models in maternal and child health, evaluating the outcomes of maternal mortality, fetal deaths, neonatal mortality, prematurity and congenital malformation.

## A validation study of a dietary assessment instrument to track the consumption of ultra-processed foods in several countries

This study, developed by NUPENS through a Grant signed in 2021 between the *London School of Hygiene & Tropical Medicine* and the FFM, continued in 2022.

Through this research it will be possible to adapt and validate in India, Ecuador and Senegal a tracker for

the consumption of ultra-processed foods that are developed and validated in Brazil and to start a process of implantation of this tracker in the health surveillance system of those countries.

## Improved Civil Aviation Accessibility

This project, developed by FOFITO and made possible through a contract signed in 2021 between FAI-UFSCar, FMUSP and FFM, continued in 2022.

Through this initiative, it will be possible to collaborate in the elaboration of the diagnosis regarding

accessibility conditions at Brazilian airports; in the analysis of the best accessibility practices in national and international civil aviation; and the development of an Air Transport Accessibility Manual covering assessment methodologies and indicators.

## Work and Mental Health: The Work of Attorneys and Employees of the National Treasury Attorney's Office

This project, developed by FOFITO and made possible through a Contract signed in 2021 between the Ministry of Economy Regional Administration Superintendence in São Paulo and FFM, continued in 2022.

Through this initiative, it will be possible to map and diagnose mental health and the work environment at the Regional Treasury Attorney's Office in the 3rd Region, so that relevant actions are taken to improve the working conditions of the environment and its members.

## Programa Criança Feliz Improvement Review

This project, developed by CEDI-FMUSP and made possible through an Agreement signed in 2021 between the *Lego Foundation*, FMUSP and FFM, continued in 2022.

Through this initiative, it will be possible to review the contents, materials and methods of the parenting and early childhood stimulation program promoted by

the Ministry of Citizenship, Special Secretariat for Social Development, entitled "Programa Criança Feliz".

## Promoting responsive care and proper nutrition among adolescent and young pregnant women, adolescent mothers and fathers, and their children

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This project, developed by IPq and made possible through a contract signed in 2021 between UNICEF and FFM, continued in 2022.

Through this initiative, it will be possible to develop and monitor the implementation of a home visit methodology, supported by the Primeiros Laços project, an INDP initiative, focusing on adolescents and young women who are pregnant and/or have small children,

which can be adapted to the Programa Criança Feliz; and design and monitor the implementation of educational instruments and materials in electronic format on the topic of adequate and healthy nutrition for children and adolescents, to be produced and distributed for implementation in the territories of the Platform of Urban Centers.

## PROVMED 2030 Study - Development and application of dynamic models for analysis of provision and needs of physicians and specialists in Brazil

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This study, developed by the FMUSP Department of Preventive Medicine, was made possible through a Letter of Agreement signed in 2020 between PAHO and FFM and ended in 2022.

Its main objective was to develop medical workforce demand and supply indicators applied to the Brazilian reality.

## Medical Workforce Survey in São Paulo and Maranhão

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This study, initiated in 2020 by the FMUSP Department of Preventive Medicine and made possible through a letter issued by *Queen Mary University of London* to FFM, ended in 2022.

Through this research, it was possible to understand the different ways in which the Brazilian economic crisis affects the health system and its workforce, particularly doctors.

## Research program on the environmental impact of the Brazilian diet

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This study, initiated in 2019 by NUPENS through a Grant signed between the *Climate and Land Use Alliance* and FFM, ended in 2022.

Through this research, it was possible to evaluate the Brazilian diet, simultaneously considering its

nutritional quality and its 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 Supplementary Health

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This project, developed by the FMUSP Department of Preventive Medicine, was made possible through an Agreement signed in 2019 between FFM and the Ministry of Health and continued in 2022.

The research aims to understand why patients go to court in search of health technologies; what are the

technologies, medications and treatments claimed in lawsuits filed against SUS and health plans in the State of São Paulo; as well as the Judiciary decisions and possible regulatory gaps in the face of these claims.

## Development of technical support to support decision-making at ANVISA, especially related to technology assessment processes, preparation of the Agency's regulatory framework and production of regulatory impact studies

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This project, started in 2019 and continued in 2022, was prepared by NIT-HCFMUSP and made possible

through an agreement signed between ANVISA, HCFMUSP and FFM.

Its objective is to develop technical-scientific support services to support decision-making at Anvisa, especially related to technology assessment processes,

preparation of the Agency's regulatory framework and production of regulatory impact studies.

## Research Project for the Implementation of the Bowel and Multivisceral Transplant Program in the Unified Health System – SUS

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This project, developed by the ICHC Digestive System Surgery and Coloproctology Division and made possible through an Agreement signed in 2019 between FFM and the Ministry of Health, started in 2022.

The study will make it possible to build a complete and consistent history for the procedure, generating opportunities for costing and development of work

processes and clinical protocols to support the creation of a Bowel Transplant Program in the SUS in the future, 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 benefits to affected patients and their families.

## Health Plans and Insurance in Brazil: judicialization, regulation and Public and Private interfaces

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This research, developed by the FMUSP Department of Preventive Medicine, was made possible through an agreement signed in 2018 between the Ministry of Health and FFM.

Through this study, it was possible to map and systematize data in order to point out trends related to prices of medical-hospital activities, private expenses and use of health services.

These activities started in 2019 and ended in 2022.





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# Institutional Projects

*Institutional projects are mainly aimed at improving, expanding and maintaining the physical and technological infrastructure of the FMUSP/HC System facilities*

## Project for the Acquisition of Equipment and Supplies for the Hemoglobinopathies Outpatient Clinic and the Hematology Lab of the HCFMUSP Hematology Service

This project, coordinated by the ICHC Hematology and Hemotherapy Division, was made possible through a Term of Commitment signed, in 2022, between FFM and the Public Ministry of Labor – Labor Prosecutor's Office of the Municipality of Patos de Minas.

The project provides for the acquisition of equipment and supplies for diagnosing hemoglobinopathies, tracking family members and offering the test for genetic counseling, and managing patients with severe complications of sickle cell disease.

## MOLECULAR: Incorporation of New Technologies in the multi-user equipment PREMIUM NETWORK: new approaches in the study of cancer and diseases at the molecular level

This project, coordinated by the LIMs Executive Board was made possible through an Agreement signed in 2022 between FFM, HCFMUSP and Finep.

Over the last 15 years, the FMUSP/HC System has been developing a network of multi-user equipment

considered a national model (PREMIUM Network). The objective of the project is to provide the Network with innovative technologies for the study of cancer and other diseases at the molecular level.

## Replacement of the Video Endoscopy System for the ICHC Gynecology Division due to obsolescence

This project was made possible through an agreement signed in 2022 between FFM and the Ministry of Health.

The acquisition of a system for videolaparoscopy and hysteroscopy surgeries will replace equipment with outdated technology, installed in the ICHC Gynecology Division.

## Acquisition of equipment for LIM 26

This project was made possible through an agreement signed in 2022 between FFM and the Ministry of Health.

The acquisition of videoendoscopy and electric scalpels for the LIM 26 will provide a real setting for procedures in human beings, seeking more safety and avoiding possibilities of eventual complications.

## Renovation of the HCFMUSP Geriatrics Outpatient Clinic

The project to renovate the ICHC Outpatient Clinic Geriatrics Division was made possible through a Transfer Agreement signed in 2022 between FFM, the Ministry of Health and CEF.

This renovation will enable the creation of healthy spaces that will bring a sense of well-being, including lighting, visual communication and acoustic and thermal comfort.

## Reform of the ICHC Gynecology Division

The project to renovate and adapt the ICHC Gynecology Sector, which has not received investments in infrastructure for over 20 years, was made possible through three Transfer Agreements signed, in 2020, 2021 and 2022, between FFM, CEF and the Ministry of Health.

This reform, whose works have not yet started, will contribute to the improvement of care and the elaboration of technical protocols for various pathologies, including infertility treatments.

## Renovation of the HCFMUSP LIM 31

This project was made possible through a Transfer Agreement signed in 2021 between FFM, CEF and the Ministry of Health and continued in 2022. The renovation

works, which have not yet started, aim at reforming the HCFMUSP LIM 31, with the aim of adapting it to Biosafety level 1 and 2 (NB1 and NB2).

## Renovation of the ICHC Microbiology Lab

This project, coordinated by the ICHC Microbiology Lab, was made possible through a Transfer Agreement signed in 2020 between FFM, CEF and the Ministry of Health and continued in 2022.

With the execution of the renovation and adaptation, whose works have not yet started, it will be possible to install automated equipment, in a lending model, which cannot be acquired due to the lack of space and the current infrastructure.

## Renovation of the ICHC Gastrosurgery Outpatient Clinic

This project, coordinated by the ICHC Surgery of the Digestive System and Coloproctology Division, was made possible through a Transfer Contract signed in 2020 between FFM, CEF and the Ministry of Health and continued in 2022.

Its objective is the renovation and adaptation of this unit, whose works have not yet started, which provides comprehensive and quality assistance to overweight and obese patients, emphasizing specialized pre- and post-surgical outpatient care.

## Renovation of the ICHC Trauma Center

This project, coordinated by the ICHC General Surgery and Trauma Division, was made possible through a Transfer Agreement signed in 2019 between FFM, CEF and the Ministry of Health and continued in 2022.

With the renovation, whose works have not yet started, the diagnosis and treatment of the critical patient will be carried out in the same physical location, comprising the resuscitation phases, endovascular interventions and invasive surgical procedures.

## Revitalization Project for the Inpatient Unit for Digestive Surgery

Through a Partnership Agreement signed between ABDIB, FFM and HCFMUSP, in 2020, ABDIB committed to disclosing information about this project to its associates, with the aim of encouraging donations of resources for its realization.

The renovation of hospital beds will ensure greater privacy for patients, readjusting the number of beds per room (from four to two), providing greater efficiency in hospital infection control and greater patient safety.

This agreement continued in 2022.

## Replacement of magnetic resonance equipment for InRad and IOT due to obsolescence

This project was made possible through an agreement signed in 2021 between FFM and the Ministry of Health and continued in 2022.

Its objective is to replace the magnetic resonance equipment installed at InRad and IOT, which have outdated technologies and lack of up-to-date advanced diagnostic tools, which directly impact patient care.

## Replacement of equipment for the ICHC Geriatrics Service due to obsolescence

This project was made possible through an agreement signed in 2021 between FFM and the Ministry of Health and continued in 2022.

Its objective is to replace equipment with outdated technology installed in the ICHC Geriatrics Division.

## Acquisition of equipment for the ICHC Gastroenterology Diagnostic Center

This project was made possible through an agreement signed in 2021 between FFM and the Ministry of Health, which continued in 2022 and aims to acquire an endoscope reprocessor and a flexible videoendoscopy

system to perform high and medium complexity procedures at the ICHC Gastroenterology Diagnostic Center.

## Acquisition of Equipment for the HCFMUSP LIM 04

Through two agreements, signed in 2019 and 2021, between FFM and the Ministry of Health, the LIM 04 will be equipped to: a) carry out research on therapeutic strategies for the treatment of breast implant

encapsulation after radiotherapy; and b) promotion of a remote monitoring program for patients with chronic wounds, using an application.

These activities continued in 2022.

## Acquisition of equipment for the ICHC Neurosurgery Division

This project was made possible through an agreement signed in 2021 between FFM and the Ministry of Health, which continued in 2022 and aims to acquire

an ultrasonic aspirator for the ICHC Neurosurgery Division, aiming at reducing surgical procedure, morbidity, and risk of operative sequelae.

## Replacement of equipment for the ICr due to obsolescence

Through two agreements, signed in 2019 and 2021, between FFM and the Ministry of Health, ICr will be equipped to: a) perform digestive endoscopies, bronchoscopy, colonoscopies and endoscopic

retrograde cholangiopancreatography; and b) adequate neonatal transport.

These activities continued in 2022.

## Replacement of equipment for the at ICHC Obstetrics Division due to obsolescence

This project was made possible through an agreement signed in 2020 between FFM and the Ministry of Health and continued in 2022.

Its purpose is to replace equipment with outdated technology installed in the ICHC Obstetrics Division.

## Acquisition of computers for the HCFMUSP Informatiza Project

Since 2013, the "Informatiza Project" was created to implement the Electronic Medical Record in all institutes of the HCFMUSP Complex, seeking to offer greater agility and efficiency in carrying out outpatient consultations, urgent and emergency care, surgeries, hospitalizations, laboratory tests and distribution of medications.

Through parliamentary amendments, this project, made possible through agreements signed in 2020 between FFM and the Ministry of Health, aimed to acquire 94 computers, to be installed in the various HCFMUSP institutes.

These activities ended in 2022..

## Acquisition of Electroencephalographs for InCor

This project was made possible through an agreement signed in 2020 between FFM and the Ministry of Health and continued in 2022.

Its objective is the acquisition of an electroencephalograph equipped with the technological

innovation necessary to meet the demand for postoperative cognitive dysfunction and to carry out non-invasive treatment at InCor.

## Acquisition and Replacement of equipment for the ICHC Surgical Center due to obsolescence

This project was made possible through an agreement signed in 2020 between FFM and the Ministry of Health and continued in 2022.

Its objective is the acquisition and replacement, due to obsolescence, of various equipment and materials

used by the ICHC Surgical Center, which will allow for better room turnover, greater productivity and an increase in the supply of highly complex surgeries for the SUS.

## Replacement of the video endoscopy system for the LIM 2626 due to Obsolescence

This project was made possible through an agreement signed in 2020 between FFM and the Ministry of Health and ended in 2022.

The replacement of the LIM 26 video endoscopy systems was intended to teach simple and advanced endoscopic procedures within the scope of surgical endoscopy.

## Replacement of Neuroendoscope for IPq due to Obsolescence

This project was made possible through an agreement signed in 2020 between FFM and the Ministry of Health and continued in 2022.

The Neuroendoscope is a fundamental tool for performing endonasal surgeries in the pituitary region. Currently, the equipment installed in the IPq is obsolete and needs to be replaced.

## Modernization of the IOT Orthopedic Workshop

This project was made possible through an agreement signed in 2020 between FFM and the Ministry of Health and continued in 2022.

Its objective is to modernize the IOT Orthopedic Workshop, which will improve quality and reduce manufacturing and delivery time for orthoses and prostheses.

## Acquisition of equipment for the ICr Neonatal Hearing Screening

This project, made possible through an agreement signed in 2020 between FFM and the Ministry of Health, continued in 2022.

Its objective is the acquisition of equipment for the ICr Neonatal Hearing Screening, which are currently borrowed from other areas.

## Acquisition of Permanent Equipment and Materials for IMRea

Through two agreements signed, in 2017 and 2019, between FFM and the Ministry of Health, acquisitions of permanent equipment and materials were made possible for the IMRea outpatient and inpatient areas.

Activities related to the Agreement signed in 2017 were completed in 2021, while those related to the Agreement signed in 2019 continued in 2022.

## Replacement of computers for Icesp due to obsolescence

Through two agreements signed, in 2020 and 2021, between FFM and the Ministry of Health, the replacement, due to obsolescence, of 137 Icesp

computers will be made possible. These activities continued in 2022.

## Technological updating of Icesp equipment

Through two agreements signed in 2017 between FFM and the Ministry of Health, the following were made possible: a) technological updating, at Icesp, of Monitors,

Video Laparoscopy System, Rigid Endoscopes of the Surgical Center and replacement of Servers due to obsolescence; and b) technological updating of

outpatient equipment, Surgical Centers, Material and Sterilization Center, Assistance, Physiotherapy, Day Hospital, Hospitalization, Radiology, Rehabilitation, ICU and other areas.

These acquisitions started in 2019 and continued in 2022.

## Maintenance of the Research and Innovation Infrastructure of the FMUSP and HCFMUSP System

This project, coordinated by the LIMs Executive Board, was made possible through an Agreement signed in 2019 between FFM, HCFMUSP and Finep and continued in 2022. The objective is to guarantee, through preventive maintenance services and acquisition of parts, the maintenance of two important research

infrastructures, which are the Multiuser Equipment Network Program (PREMiUM Network) and the FMUSP Central Animal Facility, which serve the entire community of researchers from the FMUSP/HC System, external national researchers and international, 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 two subprojects of the PREMiUM Network, which have a strongly multidisciplinary character, intense interaction with Engineering, explore 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 2022.

## Multiuser Equipment Network Program (PREMiUM)

With the objective of stimulating the FMUSP/HC System's research and innovation activities, the FMUSP Board of Directors and the LIMs Executive Board created the Multiuser Equipment Network Program (PREMiUM). This Program aims to create conditions for all FMUSP/HC System researchers, and those outside it, to have access to the most modern technologies of contemporary biomedical research and, at the same time, optimize the application of specialized financial and human resources.

The purpose of implementing this Network is therefore 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 various 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.

The equipment that makes up the PREMiUM Network is state-of-the-art and is operated by highly qualified technicians to offer the best possible result.

The services provided by the multi-user centers are available on their own website with forms, guidelines and rules of procedures available on the page itself. ([www.premium.fm.usp.br](http://www.premium.fm.usp.br)).

The Program is structured in such a way that each set of equipment with the same purpose constitutes a multi-user center. The Network currently has 62 active centers. The equipment and services currently offered are divided into the following groups:

### Equipment:

- Cytometry;
- Experimental Models;
- BioBank;
- Structural and Functional Genomics;
- Special Analysis;
- Imaging; and
- Microscopy and Microscopic Technique;

### Services:

- Scientific Documentation;
- Authentication of Cell Lineages;
- Biological Sample Storage Center;
- Waste Commission;
- Cytology and Histopathology;
- Clinical and laboratory evaluation; and
- Advanced therapies

The NB2 Multiuser Center became operational in March 2022, already certified by the National Technical

Commission on Biosafety (CTNBio). The laboratory is registered in the PREMiUM Network and is managed by the HCFMUSP Internal Commission on Biosafety in Genetically Modified Organisms. It will carry out activities with genetically modified organisms at level 2 of biosafety, which will allow the expansion of knowledge

and qualification of scientific production in the field of biotechnology.

The PREMiUM Network model has been presented at national and international research management events and has been receiving positive evaluation, both internally and externally.

## Infra-LIMs 2015 - Expansion of the HCFMUSP Multiuser PREMiUM Network equipment park

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The HCFMUSP and FMUSP Academic System has the PREMiUM Network – Multiuser Equipment Network Program of the HCFMUSP and FMUSP System.

In 2017, an agreement was signed between Finep, HCFMUSP and FFM to expand and update this Network with the introduction of the following essential technologies for the development of new lines of research at technological levels at the frontier of knowledge: 1) Creation of a 3D printing Center for nano,

micro and macrostructures for application in regenerative medicine, anatomical models and others; 2) Creation of the Multiuser Center for Cardiac Optical Coherence Tomography and expansion of the Imaging Platform in the Autopsy Room; and 3) Expansion of the Bioinformatics Multiuser Center and the Information Technology Center.

These activities ended in 2022.

## Maintenance, Operation and Consolidation of PREMiUM - Multiuser Equipment Network Program of the FMUSP/HC System

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Aiming to consolidate the PREMiUM – Multiuser Equipment Network Program of the HCFMUSP and FMUSP System, an agreement was signed between Finep, HCFMUSP and FFM in 2017, which continued in 2022.

The general objective of the project is to enable preventive and corrective maintenance of high-cost equipment and advanced technology installed in the Network; in addition to the acquisition of equipment that complement the existing centers and the hiring of highly specialized labor.

# Abbreviations in this Report

ABDI	Brazilian Agency for Industrial Development
ABDIB	Brazilian Association of Infrastructure and Basic Industry
ANVISA	National Health Surveillance Agency
AMA	Ambulatory Medical Assistance of the São Paulo Municipal Health Department
APAC	Authorization of Outpatient Procedures
CARF	Commission on Accreditation of Rehab Facilities
CCIH	Hospital Infection Control Committee
CCR	Rebouças Convention Center
CEAF	Specialized Component of Pharmaceutical Assistance
CEBAS	Certificate of Charitable Social Assistance Entity
CEDI-FMUSP	FMUSP Child Development Center
CEF	Caixa Econômica Federal
CEGH-CEL	USP Center for Human Genome Studies and Stem Cells
CNPq	National Council for Scientific and Technological Development
DRS-1/SES	Regional Department of Health 1 of the State Department of Health (Greater São Paulo)
EEP	Permanent Education School
FAB	Brazilian Air Force
FSP-USP	School of Public Health at the University of São Paulo
FAI-UFSCar	Institutional Support Foundation for Scientific and Technological Development of the Federal University of São Carlos
FAPESP	Research Support Foundation in the State of São Paulo
FFM	Fundação Faculdade de Medicina
Finep	Financier of Studies and Projects
FMUSP	University of São Paulo Medical School
FOFITO	FMUSP Department of Speech Therapy, Physiotherapy and Occupational Therapy
<i>Fonajus</i>	Congress of the National Health Forum of the National Council of Justice
FZ	Zerbini Foundation
HAS	HCFMUSP Suzano Auxiliary Hospital
HCFMUSP	Clinics Hospital of the University of São Paulo Medical School
Hemominas	Minas Gerais Hematology and Hemotherapy Center Foundation
Hemope	Hemope Foundation (Pernambuco)
Hemorio	Arthur de Siqueira Cavalcanti State Institute of Hematology (Rio de Janeiro)
ICB-USP	Institute of Biomedical Sciences of the University of São Paulo
Icesp	Cancer Institute "Octavio Frias de Oliveira" of the State of São Paulo
ICHC	Central Institute of HCFMUSP
ICr	HCFMUSP Children and Adolescents Institute
IMRea	HCFMUSP Physical Medicine and Rehabilitation Institute
IMT	Tropical Medicine Institute of São Paulo, USP Medical School
InCor	HCFMUSP Heart Institute
InovaHC	HCFMUSP Technological Innovation Center
InRad	HCFMUSP Radiology Institute
IOT	HCFMUSP Orthopedics and Traumatology Institute
IPer	HCFMUSP Perdizes Institute
IPq	HCFMUSP Institute of Psychiatry
IRLM	Lucy Montoro Rehabilitation Institute
ITACI	Children's Cancer treatment Institute of the HCFMUSP Children's Institute
LEPIC	HCFMUSP Teaching, Research, and Innovation in Surgery Lab
LIM	HCFMUSP Medical Research Lab



# Abbreviations in this Report

LIM 04	HCFMUSP Microsurgery Lab – Plastic Surgery
LIM 05	HCFMUSP Environmental and Experimental Pathology Lab
LIM 22	HCFMUSP Cardiovascular Pathology Lab
LIM 26	HCFMUSP Experimental Surgery Research Lab
LIM 40	HCFMUSP Immuno-Hematology and Forensic Hematology Lab
LIM 46	HCFMUSP Medical Parasitology Lab
LIM 56	HCFMUSP Dermatology and Immunodeficiencies Research Lab
LIM 62	HCFMUSP Neurosurgery Medical Research Lab
LIM 66	HCFMUSP Aging Medical Research Lab
MS	Ministry of Health
MPT	Ministry of Labor
NIH	National Institutes of Health
NUPENS/USP	Center of Epidemiological Research in Nutrition and Health, Faculty of Public Health, University of São Paulo
OMS	World Health Organization
ONA	National Accreditation Organization
OPAS	Pan American Health Organization
OPM	Orthoses, Protheses and Means of Locomotion
PAMB	HCFMUSP Ambulatory Building
PNIFE MCTI	National Research Infrastructure Platform of the Ministry of Science, Technology and Innovation
PRONAS/PCD	National Program to Support the Health Care of Persons with Disabilities
PRONON	National Support Program for Oncology Care
Roche	Produtos Roche Químicos e Farmacêuticos S/A
RRLM	Lucy Montoro Rehabilitation Network
ServCEX-FMUSP	FMUSP Culture and University Extension Service
SES-SP	Secretary of State for Health of São Paulo
SI-PNI	Information System - National Immunization Program
SINASC	Information System on Live Births
SSO	Occupational Health Service
SUS	Unified Health System
SVOC	Capital Death Verification Service
UBS	Basic Health Units of the Municipal Health Department of São Paulo
UNICEF	United Nations Children's Fund
USP	University of São Paulo

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**Photos and Texts**

FFM Archive  
FFM Journal  
HC Online  
FMUSP 2018-2022 Management Report  
USP School of Medicine website  
FMUSP Clinics Hospital Archive  
USP Medical School Archive

The information in this report was provided by all areas of FFM and the FM/HCFMUSP System and by the Coordinators of the projects herein described.

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