



Brazilian Research Ecosystem

National research funding

MCTI

The Ministry of Science, Technology and Innovation (MCTI) coordinates Brazil's national policies in science, technology, and innovation. It oversees agencies such as CNPq and FINEP, and is responsible for developing strategies to advance technological innovation, scientific research, and sustainable development. MCTI also plays a key role in Brazil's partnerships with international organizations, helping to establish cooperative research projects in areas like climate change, biotechnology, and renewable energy.

CNPQ

The National Council for Scientific and Technological Development (CNPq) is an agency of the Brazilian Ministry of Science, Technology and Innovation (MCTI). It is the main national body responsible for funding research in Brazil and operates through project grants, scholarships and international cooperation programs.

FINEP

FINEP Innovation and Research is an agency linked to MCTI that invests in technological innovation in public, private and academic institutions, as well as in public-private partnerships through loans, grants and transfers. It manages the National Science and Technology Development Fund (FNDCT) and several sector-specific funds.

CAPES

The Brazilian Federal Agency for Support and Evaluation of Graduate Education is a foundation linked to the Brazilian Ministry of Education. It is the main source of public funding for post-graduate scholarships, promotes capacity-building among teachers and professors and also engages in international cooperation programs.

Brazilian Academy of Sciences

The independent, non-governmental, non-profit Brazilian Academy of Sciences (ABC) has played an important role in fostering science in Brazil since it was founded in 1916. As Brazil's national science academy, ABC publishes a large number of scientific research papers and promotes cooperation with international researchers.

ABC receives contributions from its 700 individual and corporate members, as well as financial support from government agencies.

State research funding

FAPs AND CONFAP

Each Brazilian state has a state research funding body (*Fundação de Amparo à Pesquisa* or FAP), typically funded by a percentage of state tax revenue. FAPs have a remit of funding research activities in their state with a high degree of flexibility and autonomy. Types of activities funded can include traditional research as well as exchanges, study tours and start-ups. FAPs typically operate on the ideal of reciprocity and are generally eager to partner with Australia.

CONFAP (*Conselho Nacional das Fundações Estaduais de Amparo à Pesquisa*) is the national council representing all state research funding agencies (FAPs) in Brazil. It plays a crucial role in coordinating efforts among FAPs, fostering collaboration between Brazilian states and international partners, and promoting the development of science, technology, and innovation across the country. CONFAP also facilitates joint research initiatives and funding opportunities, strengthening Brazil's global research networks and partnerships, including those with Australia.

FAPESP

The FAP of the state of São Paulo is by far the most relevant for international collaboration in terms of funding capacity and research impact. It stands out not only within Brazil but also globally due to its substantial funding capacity and significant research impact. FAPESP invests heavily in scientific and technological development, supporting a wide range of projects across various fields, from environmental sustainability to cutting-edge technology.

One of its key strengths lies in fostering international partnerships through joint research calls, exchange programs, and academic collaboration agreements. These initiatives create opportunities for researchers from São Paulo to engage with top institutions worldwide. FAPESP's programs often attract international researchers and institutions. In the context of international cooperation, FAPESP's role is crucial for establishing and strengthening bilateral academic and research ties.

Public-private research

The National Confederation of Industry

(*Confederação Nacional da Indústria* – CNI) is the industry peak in Brazil. It is a national umbrella organisation made up of state industry bodies. At the state level, one of the key bodies is SENAI (*Serviço Nacional de Aprendizagem Industrial*). SENAI is funded through a government collected industry levy. SENAI was originally tasked with developing and providing apprenticeships and VET training, but has evolved now into a major industry research body, directly funding 28 national innovation centres. They are actively looking for international partners for these innovation centres. In addition to these national centres, state-based SENAI arms often fund their own research centres related to the main industries of their states.



BNDES – Brazilian Development Bank

The Brazilian Development Bank (BNDES) is Brazil's largest provider of long-term financing, especially for the private sector. BNDES supports technological innovation by offering credit lines, funding programs, and grants for innovation projects within Brazilian companies, especially those that promote sustainable development and green technologies. The bank also invests in research initiatives that foster productivity, competitiveness, and socioeconomic development in Brazil. BNDES has a history of funding projects that involve international collaboration, making it a potential source of support for joint Brazil-Australia initiatives.

S System (SENAI, SENAR, SENAC, SEBRAE)

The S-system is a group of non-profit private entities that provide VET training in Brazil. They are mainly financed through 1-2.5% employer payroll levies, which are collected through the social security system. The exception to this is SENAR, which is financed by a levy on the sale of agricultural goods.

- SENAI is the industry-funded provider for VET and industrial services. SENAI has established 26 innovation centres dedicated to applied research for 28 industrial sectors in Brazil.
- SENAC is the commerce and management equivalent of SENAI which covers industries such as hospitality, tourism, financial services and accounting.
- SENAR is the agribusiness equivalent body and
- SEBRAE focusses largely on culture and retail sectors. For each major economic sector, there are national bodies responsible for funding applied research aiming at providing short-term solutions for current issues within Brazilian industries.

Sector specific

Embrapa

The Brazilian Agricultural Research Corporation (Embrapa) is a state-owned enterprise under the Ministry of Agriculture, focusing on agricultural and livestock research. Embrapa is known globally for its advances in tropical agriculture, contributing to food security and sustainable agricultural practices. It collaborates internationally, making it an ideal partner for joint research with Australia.

Embrapii

The Brazilian Agency for Industrial Research and Innovation (Embrapii) supports innovation within industry by funding R&D projects in collaboration with research centres and companies. Embrapii focuses on strategic areas like advanced manufacturing, health, and digital transformation. They encourage international partnerships, offering significant opportunities for joint Brazil-Australia industrial research initiatives.

Fiocruz

The Oswaldo Cruz Foundation (Fiocruz) is a leading public health research institution in Brazil, under the Ministry of Health. Fiocruz conducts research, develops vaccines, and offers healthcare solutions aimed at controlling diseases and improving public health. It has a long history of international cooperation, which could be expanded to include Australian research bodies in areas like infectious diseases, vaccine development, and medicine.



Butantan Institute

Instituto Butantan is a renowned biomedical research centre in Brazil, affiliated with the São Paulo State Department of Health. It specializes in vaccine development, immunobiologicals, and the production of antivenoms, playing an important role in public health. With extensive expertise in infectious disease research and biopharmaceutical innovation, Instituto Butantan has a strong record of international collaboration, presenting opportunities for partnerships with Australian institutions in areas such as vaccine research, biotechnology, and public health initiatives.

Institutional agreement frameworks

Science, Technology and Innovation Treaty

The Agreement for Cooperation on Science, Technology, and Innovation between Australia and Brazil, established in 2017, aims to strengthen bilateral collaboration in research and technological development. This treaty fosters joint initiatives in areas such as renewable energy, agriculture, biodiversity, and advanced manufacturing. It encourages the exchange of knowledge, scientists, and innovation between institutions, promoting sustainable solutions and economic growth. The agreement reflects both countries' commitment to leveraging their complementary strengths to address global challenges and enhance scientific cooperation on an international scale.

DoE-CONFAP MoU

The Department of Education has signed jointly with the National Council for State Research Funding Agencies (CONFAP) an MoU that strengthens the research collaboration of Brazilians and Australians by streamlining funding from FAPs joint research projects which are funded by a major Australian research body.

To support the MoU, the Department of Education and CONFAP run virtual research collaboration events every six months on topical issues. The goal of these events is to match-make researchers in Australia and Brazil.

Other opportunities

The Department of Industry, Science and Resources runs the Global Science and Technology Diplomacy Fund (GSTDF). The strategic element of the Global Science and Technology Diplomacy Fund (GSTDF) helps develop research collaboration with select partner countries in targeted areas. Australian organisations are eligible for funding to support bi-lateral and multilateral activities that involve at least one priority partner and one priority theme. Brazil is currently a priority partner under the GSTDF.



Summary of the Brazilian Innovation System – Main Players

<p>Government – Ministries</p> <ul style="list-style-type: none"> ✓ Ministry of Science, Technology, Innovation and Communication (CNPq, FINEP) ✓ Ministry of Education (CAPES) ✓ Ministry of Health ✓ Ministry of Agriculture 	<p>Science</p> <ul style="list-style-type: none"> ✓ Universities (Federal, State and Private) ✓ Federal Institutes ✓ Research Institutes/ Centres (Public, Private) ✓ Scientific Associations/ Networks (INCTs, EMBRAPA)
<p>Funding</p> <ul style="list-style-type: none"> ✓ National Bank for Economic and Social Development (BNDES) ✓ Funding Authority for Studies and Projects (FINEP) ✓ Foundation for State Research Funding Agencies (FAPs – state bodies) ✓ Brazilian Association for Industrial Research and Innovation (EMBRAPII) ✓ Regulatory Agencies (ANEEL, ANP, ANATEL, ANA, etc.) ✓ Legal Framework for Science, Technology and Innovation 	<p>Industry</p> <ul style="list-style-type: none"> ✓ Multinational companies ✓ Supply chains (Regional, National) ✓ Industry Associations ✓ Business Network for Innovation (led by the Brazilian Industry National Confederation) ✓ Technological Parks ✓ National Association for Research and Development of Innovative Business (ANPEI)

