



Ministry of Foreign Affairs

Brazil - Dynamic health sector offering innovation and business opportunities

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Dynamic health sector offering innovation and business opportunities

The Brazilian Ministry of Science, Technology & Innovation (MCTI) is developing a national AI strategy. It sees AI as a key technology to improve productivity and quality of life, and address social inequality. MCTI is stimulating the development of AI applications in two ways. First, by creating eight new AI applied research centers, funded by the São Paulo Science Foundation (FAPESP) and the private sector. And secondly, by accelerating 100 AI-related innovation projects via the AI Open Innovation program, funded by MCTI and the private sector. Health is one of MCTI's four priority areas.

Research variety, research excellence

An increasing use of big data in Brazilian healthcare is being enabled by Brazil's research excellence – in hospitals; at the public health institute, Fiocruz (Center of Data and Knowledge Integration for Health); and in institutes like the University of São Paulo's Institute of Mathematics & Computer Sciences, Unicamp's Institute of Computing and the Federal University of Pernambuco's Center for Informatics.

Research areas include cohort studies, genomic epidemiology, tropical and lifestyle diseases, and bioinformatics. In 2018, Brazil ranked 12th globally in the number of academic publications on AI.

Examples of Brazilian AI applications already developed include risk assessment of repeat heart failure (UniCamp), diagnosis of intracranial hemorrhaging using images (medical diagnostics company Grupo Fleury), and using a cognitive AI robot to monitor patients for early sepsis risk alerts (Laura Fressatto Institute).

Open access databases

Brazil's public healthcare system is implementing a National Network of Health Data (RNDS), accessible by patients and professionals. Several Open Access research data platforms have also emerged. Including

ABraOM, the largest genome database on elderly people in Latin America, and Genomas Brasil, a new initiative to sequence 100,000 genomes for the development of precision medicine.

Covid-19 as catalyst

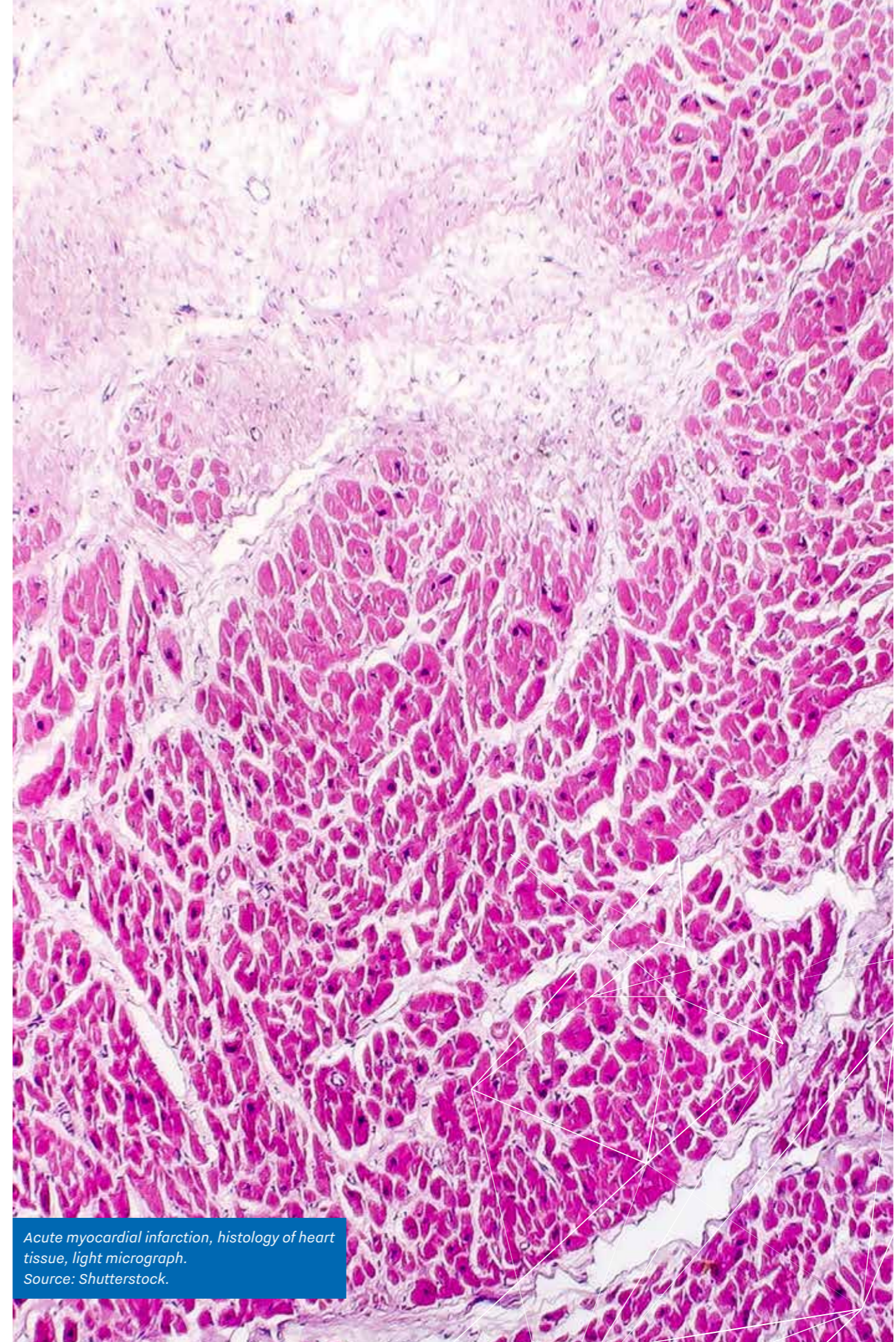
Unsurprisingly, COVID-19 is accelerating Brazil's digital transformation of healthcare. Notable examples include an application developed by the University of São Paulo to identify respiratory problems by analyzing a person's voice over the phone, and an application developed by startups at the Albert Einstein private academic hospital that combines face recognition with at-a-distance fever detection using thermographic cameras at the hospital's entrance.

Multinational interest

Brazil's sizeable healthcare market and research capabilities are also attracting multinationals into the Brazilian AI ecosystem. IBM chose Brazil for its first AI Engineering Research Center in Latin America, co-funded by FAPESP and hosted by the University of São Paulo. Microsoft (who support AI development work for example at the Nove de Julho Hospital for fall prevention) is creating an AI Industry Board to promote responsible use of AI and share best practices. Dutch academic publisher Elsevier is also active in Brazil in data-driven, value-based healthcare.

Healthcare is also a priority area for IAN Brazil. Big Data in Life Sciences & Health was the topic of a recent innovation mission to Brazil, which included the FAPESP Research Program on eScience and Data science, and connected academics from life sciences, natural sciences and engineering to academics in social sciences and humanities.

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Acute myocardial infarction, histology of heart tissue, light micrograph.
Source: Shutterstock.



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