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With or Without You: Cuba's Pharma Revolution Couldn't Wait

Charles Arthur

Writer, editor and Researcher. Former editor at the UN Industrial Development Agency, and worked on UN development Programs in Haiti and Palestine

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In the late 1970s, in order to minimize the impact of the US embargo, the Cuban government began its first investments in pharmaceutical production plants. A UNIDO project, beginning in 1978, enlisted the expertise of an Indian company, Sarabhai Chemicals, to help Cuba establish its first chemical synthesis plant for the production of generic pharmaceutical products. At that time, Cuba's leader Fidel Castro was determined to develop the country's pharmaceutical sector, and deliver healthcare to the population.

Castro paid special attention to research into vaccines and treatments for fighting various cancers, and, in 1981, he set up six Cuban researchers in a small laboratory in a house in Havana. "He used to visit the scientists almost every day. He would often come by very late at night," Merardo Pujol Ferrer, business development director for Heber Biotec, the marketing company for Cuban biotech products, told The Miami Herald.

In May 1981, the scientists harvested the first batch of leukocyte interferon, marking the beginning of Cuba's efforts to develop its own biotechnology industry. Interferon didn't turn out to be a cure for cancer as doctors had hoped, but did prove beneficial against dengue fever which broke out in Cuba in the 1980s. The small Havana lab was upgraded and became the Center for Biological Research.

Biotech's potential

At the beginning of the 1980s, across the world there was increasing recognition of the potential of biotechnology. A group of scientists, concerned about the wide gap in know-how between the developed and developing countries, recommended that UNIDO establish an international center in a developing country to help close that gap.

At a meeting in Belgrade, in December 1982, interested countries enthusiastically endorsed UNIDO's initiative to offer grant funding via a competitive application process to facilitate the creation of a biotechnology development center. A committee of experts, coordinated by UNIDO, was tasked with visiting and assessing the suitability of the countries proposing to host the international center: Belgium, Cuba, India, Italy, Pakistan and Thailand, spending 7-10 days in each country between March and May 1983.

A UNIDO-led delegation travelled to Havana in April. Sergio Jorge Pastrana was, at that time, head of the department of international cooperation at the Cuban Academy of Sciences, an institution with the rank of a Ministry, dealing with all of the country's scientific and technological activities. He was tasked with accompanying the delegation on site visits and was asked to translate when the delegation met President Castro.

What Castro told UNIDO

Pastrana recalls that during the meeting Castro said, "We have just started to build and, as we speak, the site is being prepared by heavy machinery..." He was interrupted by a UNIDO member of the delegation who said, "*Comandante*, the analysis is yet to be made. We will report soon and, in a month or so, the Board will decide about the site... Please, do not hurry."

As Pastrana tells it, Castro answered, "It is OK, do not worry. If you decide that Havana will be your site, we will share the Center with UNIDO. If not, it will be ours. Why hesitate and wait, when it is so urgently needed? The more centers we can have, as soon as possible, the better."

Cuba goes ahead

A UNIDO meeting in Madrid in September 1983 agreed on setting up an International Center for Genetic Engineering and Biotechnology but could not reach agreement on its location. At that meeting, Cuba withdrew its application to host the center and instead backed India's bid. At the same time, it announced it was opening its own center, which would doubtless cooperate with the UNIDO center when it materialized.

Cuba's Center for Genetic Engineering and Biotechnology (CIGB), which absorbed the earlier-established Center for Biological Research, opened on 1 July 1986, with around 300 employees. "This center is big, but I hope the scientific results that are obtained will also be great," said Castro at the opening ceremony.

Today, the CIGB, which now employs around 1,700 workers, is known for its innovative work in developing vaccines, therapeutic molecules, and other biotechnological products. It has played a crucial role in Cuba's response to various health challenges, including the COVID-19 pandemic. (*COVID-19: Long-term Support for Biotech Yields Vaccine Promise in Cuba*, n.d.) Cuba's biotech and pharmaceutical industrial sector is now comprised of 21 research centers and 70 factories, under the umbrella of BioCubaFarma.

The mooted international center – the International Center for Genetic Engineering and Biotechnology (ICGEB) – was eventually co-hosted by Italy and India, with locations in Trieste and New Delhi. Matangkasombut (1984) writing in the Asian Pacific Journal of Allergy and Immunology, provides the details of how the decision was made. It finally started operations as a special program of UNIDO in 1987. In 1994, it became an independent, international organization.

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