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Viva la vaccinación!

Cuba is the only country in Latin America to have developed Covid-19 vaccines — and they are highly effective. The only problem is production capacity

These are hard times in Cuba. The supply situation has deteriorated dramatically – even staple foods are running short –, the currency is losing value, public anger and frustration are turning into street protests, and now Covid-19 numbers are also skyrocketing. In just 10 days, the daily number of cases has doubled. With over 3,500 infections per, the health system is experiencing a stress test. At the same time, however, it's the fight against Covid-19 that is the greatest source of hope. The vaccines developed on the island show a high levels of effectiveness – not only in clinical studies, but also in practice.

The government in Havana took a great risk with its May 2020 decision not to import any vaccines – neither from Russia nor from China, nor through participation in the Covax vaccine platform. Instead, the Cubans decided to rely solely on developing their own vaccines. Many were sceptical: why should the Caribbean island succeed where billion-dollar pharmaceutical companies failed?

The explanation lies in Cuba's biotech sector, which has been systematically built up since the 1980s as an island of efficiency in the socialist economy. From the very beginning, a focus was on developing vaccines, not only for domestic consumption, but also for export to countries in the Global South. It's this established structure of research and production that has enabled Cuba in a very short time to make two vaccines ready for use.

Cuba's two highly effective vaccines

Both of them, 'Abdala' and 'Soberana 02', are based on the protein-based vaccine method that has been used for decades against polio, tetanus and others. In contrast to the novel mRNA vaccines from BioNTech and Moderna, this is 'old school' technology. But it has major advantages: the Covid-19 vaccines can be produced in existing factories, experience

indicates few side effects, and no extreme cooling is necessary.

But that's not all: the vaccines are also highly effective. Cuban scientists have published the results of the Phase III studies, according to which, Abdala achieved an effectiveness against symptomatic illness of 92.3 per cent after three doses, and. Soberana 02 an equally impressive 91.2 per cent.

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Critics have questioned these figures, pointing to a lack of transparency and a lack of documentation in scientific journals. In real life application, these figures may indeed get some adjustment. Even if the Phase III studies included more than 40,000 persons each, the absolute numbers on which efficacy rates are calculated are not high: For Soberana-02 it was 5 cases of illness in the vaccinated group versus 51 in the placebo group.

Cuban vaccines vs. Delta mutation

But beyond the studies, as to effectiveness, the vaccination campaign speaks for itself. Vaccinating the country's medical staff at the beginning of March immediately lowered the number of infections among health workers. Since mass vaccinations began in May in Havana, this pattern was repeated among the general population of the Cuban capital.

More than seven million doses have now been administered, the vast majority of them in Havana, which was the original epicentre of infections. In all other provinces the incidence rate is rising sharply. Meanwhile, in the capital, where more than half of the population has already been vaccinated, the rate of infection has been falling to half of its peak.

We may seee, as in other countries with high vaccination rates, a certain rebound of infection rates as the aggressive Delta strain is spreading fast. So far, the Cuban vaccines seem to produce good anti-body responses also against Delta, but it is too early to tell whether – like with other vaccines – the high effectiveness rates also hold fully against the new mutation.

A Phase III trial of the Soberana 02 vaccine was also conducted in Iran, with 24,000 participants. As a result, the Cuban vaccine has already been granted emergency approval there. In Cuba itself, mass vaccinations have been proceeding without formal approval; only just now Abdala has been

given emergency authority, and authorization for Soberana 02 is still pending. The Cuban regulatory authority is likely to issue this only once the available data meet all the guidelines and protocols of the WHO.

Exporting to allies around the world

In addition to overcoming the pandemic in its own country, Cuba is also hoping to export its vaccines. But at the moment Cuba is facing high hurdles in the expansion of its vaccine production. The 100 million doses of vaccine that had once been announced to be produced this year will remain a theoretical possibility. The ingredients that are needed have become extremely scarce worldwide because companies everywhere are increasingly focusing on the development of protein-based vaccines – be it Novavax in the US, Sanofi / GlaxoSmithKline in Europe, or Anhui in China.

Even if Cuba is 'sovereign' in its own vaccine development, as the name 'Soberana' suggests, this is not the case with the equipment to be imported and the ingredints needed. In addition, as with everything in Cuba, there is the heavy burden of the US embargo. Not only does this limit opportunities to acquire machinery and inputs, but Washington's threats to international banks turn financial transactions with the island into complex and costly manoeuvres.

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As a result, Cuba will initially have enough on its plate with producing vaccines to inoculate its own population nationwide. However, as a gesture of solidarity, an initial shipment of 30,000 doses of the 'Abdala' vaccine was sent to its ally Venezuela, whose oil shipments to Cuba have dwindled but are still indispensable for supplying the island. Another twelve million doses have been promised, but no date has been given as to when these will be delivered.

Cuba will also seek further export opportunities, preferably with advance financing, as well as licensing agreements with countries like Argentina or Vietnam, which have their own production capacities. In the past the WHO has purchased Cuban vaccines for its health campaigns in countries of the Global South, and could do so again in the current pandemic. In the medium term, protein-based vaccines like the Cuban ones are also well suited for booster shots.

Cuba's economic crisis continues

As important as these prospects may be, Cuban vaccines may solve the country's health crisis, but not the economic one. That remains the task of a reform agenda aimed at stimulating the entire economy and not just hoping for the biotech sector to become a bountiful cash cow.

The fight against the pandemic in Cuba, as elsewhere, is a race against time between the pace of vaccinations on the one hand and the spread of the virus and its variants on the other. If things go well, the vaccination campaign will bring relief to Cuba's hospitals, gradually pull the country out of lockdown measures and allow it to open up to international tourism in time for the all-important winter season. Pre-pandemic, tourism was the island's most important industry and its foreign currency revenues are an indispensable to overcome the current crisis.

But also beyond the island, Cuban vaccine development holds a. In this era of global supply chains, all ideas of 'self-reliance' have rapidly been discarded as antiquated. The pandemic forced even the Western industrialised nations to learn that globalisation cannot be relied upon in times of need. Whether masks or vaccines, when the going gets tough, it's not only "America First", but every country tends to look for itself first.

The fact that Cuba's biotech sector has succeeded in developing its own vaccine despite the country's limited resources is nothing short of sensational. Given the recent increase in infection rates, Cuban society is facing tense months ahead. But with the pace of the current vaccination drive there is good reason to hope that towards winter, the country will have achieved a level of immunity to make it one of the first in Latin America to reach 'post-Covid times'.



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