

SINERGIUM BIOTECH S.A.: “An innovative collaboration model for public health”

Executive Summary:

Sinergium Biotech S.A. was born as the result of a public-private partnership to create production capability of vaccines in Argentina, transfer world-class technology to the country, and have a sustainable business model to expand operations to other product lines and markets. Many key factors contributed to the success of this model. Today, after 7 years, Sinergium sells more than 17 million doses every year and has a turnover of around 100 million, strongly impacting in the immunization strategy of the country, and demonstrating that a win-win partnership model between the private and the public sector is possible. How to expand this model to other markets and countries is one of the next big challenges to face, replicating this story for the benefit of public health worldwide.

Introduction

The influenza pandemic in 2009 highlighted the importance of having a steady supply of vaccines to assure a controlled public-health strategy. At that time, most of the influenza vaccines were produced in high-income countries, where those producers had the technology to produce pandemic vaccines. Argentina, as many other low or medium-income countries, was exposed to the shortage of vaccine supply. Also in the case of seasonal influenza vaccination, planning a public vaccination campaign without having a local supply in the country implied many additional challenges.

During those days, in 2009, Sinergium Biotech shareholders proposed to the Argentinean Ministry of Health (MOH) to build a new company and bring the technology of influenza production to the country. The private initiative proposal at that time, involved the construction of a new production facility for flu vaccines with 100% private investment and the association with a multinational company to transfer the technology (former Novartis, now Seqirus/CSL). Responding to that significant private effort, the Argentinean state would give Sinergium exclusivity to sell its production to the MOH for a number of years- this being the only obligation assumed from the public side. The private initiative was conceded with the “public interest” status, and consequently, a public international tender was issued under those terms. In February 2010 Sinergium Biotech won the tender and started the project.

Being sustainable... the first challenge for the Sinerigum team

Although Sinergium Biotech’s parent companies have been well recognized worldwide in the pharmaceutical industry for many years, reality is that starting a vaccine-production project with an influenza product is a challenge on its own. The influenza strains that are recommended to be used in the vaccine change not only every year, but also for every hemisphere, so -technically- there’s a new vaccine every 6 months. This gives the project an inherent challenge of a very tight production and supply timeline.

But it is also true that building a vaccine-production facility only for influenza is not sustainable. From the very beginning, the Sinergium leadership team understood very clearly that the facility had to be multi-product, with a world-class quality standard, demonstrated not only in the equipment to be used but also in its operational model, people expertise, and quality system, to be able to attract other productions and businesses in the very short term.

Today Sinergium Biotech S.A. not only produces influenza vaccines for the public market -around 10 million doses every season- but also made other alliances with multinational companies to manufacture a world-class pneumococcal vaccine (in association with Pfizer) and an HPV vaccine (with MSD). There has been a

tremendous increase in the doses produced (17 million doses per year), people employed (250 employees) and sales (a turnover of around 100 million). The inclusion of Argentina among the short list of 10 countries with technology to produce influenza vaccines, demonstrates the success of this business model.

Expanding the impact

The success of the private-public partnership model used by Sinergium was a combination of different activities and obligations, some of them assumed as critical-for-success by each party and others strongly requested by the Argentinean state in the contract. A balance of a strong 100% private investment, long-term links with worldwide recognized technology providers, and a strong collaborative environment with the Ministry of Health and regulatory agencies in Argentina, were also key to achieve this exponential growth in 7 years.

Sinergium strongly believes that this partnering model can be replicated for other businesses, and taken as a success case to tackle some public health issues worldwide, increasing vaccines coverage and access. The challenge that the Sinergium leadership team now face is how to replicate this model in other countries and other markets, and how to give visibility of this success story to other key players in the health environment around the world.

Additional backup information

1. In November 2009, after submitting the “private initiative” proposal to the MOH, the Argentinean presidency stated as “public interest” this proposal in the decree 1731/2009, and requested the MOH to call for a public tender. Once the tender was won and granted to Sinergium, the Argentinean Body of Health ANMAT set a technical team not only with the aim of overseeing and auditing the progress of the Project and the achievement of the agreed milestones, but also to collaborate closely in the design of the facility according to the local standards and requirements (standards aligned with Mercosur and EMA). ANMAT also proactively followed up the approval of the influenza product dossier to have it on time aligned with the end of the facility construction, and also set in place all the local quality control methods to be able to release the batches afterwards.

Sinergium also established and built some links with medical and scientific societies such as SADI (Sociedad Argentina de Infectología), SADIP (Sociedad Argentina de Infectología Pediátrica), SAVE (Sociedad Argentina de Vacunología) and Fundación Huesped, to develop awareness campaigns, foster scientific research on influenza and pneumococcal diseases, and build new training tools for the medical community involved in vaccines.

Moreover, Sinergium is part of the DCVMN (Developing Countries Vaccine Manufacturing Network), based in Geneva, a network of more than 50 manufacturers focused on fostering the production and quality of vaccines in developing countries. Apart of being member, Sinergium is part of the Executive Committee of the network.
2. The contract in place implies the monitoring of the delivered doses according to the pre-agreed plan with the MOH. Every year, the MOH defines the vaccine requirements according to the feedback from the immunization managers of each province, and sets a national requirement to Sinergium Biotech. Regarding deliveries, having the local production in Argentina had a significant impact in the time of delivery of doses to MOH. This year 2018, for example, the original plan of supply to the MOH was accelerated by 1 month, finishing the deliveries 1 month earlier than expected, allowing the MOH to program its distribution and launch the immunization campaign earlier. Also the public market usually has available doses earlier than the private sector. These important planning achievements for the public immunization campaign were impossible years before when the vaccines were fully imported.

Coverage indicators for flu vaccine in Argentina (and others) are available in the MOH webpage (<https://www.argentina.gob.ar/salud/inmunoprevenibles>). These indicators are part of the health reporting system of the MOH, and in some vaccines, aligned with the immunization objectives set by PAHO (Panamerican Health Organization).
3. The facility and its processes follows international standards for vaccine production and good manufacturing practices. These standards are regularly audited not only by the ANMAT, but also by our multinational partners. Also the vaccination coverage set by the MOH is aligned and targeted to the risk groups defined by WHO, and including the influenza vaccine in the NIP implies providing the vaccine to all these risk groups for free. The ANMAT also has an adverse effect monitoring system in place for all the vaccines included in the NIP, with continuous feedback and support from the manufacturing industry, medical community, patients, etc. All adverse effects are also reported by ANMAT to WHO, as part of the global influenza surveillance system.

As part of the different contracts with the MOH, Sinergium also has the obligation of providing some tools and materials, such as vaccination cards, awareness

campaign materials, the construction of one cold chamber in each province to improve the cold-chain in the country, supply new computers to the vaccination centers to improve the registration of the vaccinated people and follow up of second and third dose scheme, supply of refrigerators for the vaccination centers, supply of isolated Styrofoam polystyrene cases for the “last-mile” access, etc. All these materials and awareness actions are aimed to increase access of the population to the vaccines.

4. The original tender contract is still on-going, till 2022. There was an extension of 3 years due to a change in the technology for antigen production, from egg production to recombinant production, deriving to a re-planning of the whole investment. At the end of this period, MOH may extend the contract or call to a new tender.

100% of public influenza vaccine market in Argentina is covered by Sinergium’s facility. The technology transfer from the multinational companies is motivated due to a market access, only possible through these tenders that request local production. For these companies, having a world-class manufacturer also contributes to increase their production capacity for other markets.

5. This initiative is not technically a PPP from the Argentinean law point of view, because the resulting infrastructure (in this case the vaccine production facility) is private, and not public infrastructure. However, this is a good example of public-private partnership where a key strategic MOH supplier is developed using the procurement power of the Argentinean State.

The concept of this project is aligned with the “Washington Consensus”, where a private company is built to fulfill a public interest.

6. Regarding HPV, Sinergium Biotech made an agreement with MSD to tech transfer the formulation and filling of the tetravalent vaccine to supply to Argentinean MOH. The tender was awarded for a 5-year period, ending October 2019. Argentina included boys in the NIP, summing around 1,5 million doses every year (2-dose scheme). Sinergium also set a strong collaboration with Fundación Huesped, a very well recognized foundation focused on access to health and disease control, and with a special interest in HIV/AIDS, viral hepatitis, and sexual and reproductive health. This collaboration aims to foster the awareness and importance of HPV vaccination in the country. As the introduction of the HPV vaccine is quite new in our NIP, there is still no measured results on its impact. Fundación Huesped is working on a study of serotypes circulation after introduction of the vaccine that will be available in the following months. There is some publications showing the impact of introducing the vaccine for the benefit of girls and women in other countries.

7. Third-party key informants you may consult:

- MOH/DICEI (Dirección de Control de Enfermedades Inmunoprevenibles): Dr. Cristián Biscayart (privada@dicei.msal.gov.ar) / Dra. Analía Aquino (aaquino@dicei.msal.gov.ar)
- Fundación Huésped: Lic. Leandro Cahn (Leandro.cahn@huesped.org.ar) / Dr. Pedro Cahn (pedro.cahn@huesped.org.ar)
- SAVE (Sociedad Argentina de Vacunología y Epidemiología): Dra. Carla Vizzotti (cvizzotti@gmail.com)
- SADI (Sociedad Argentina de Infectología): Dr. Pablo Bonvehi (pbonvehi@intramed.net.ar)
- SADIP (Sociedad Argentina de Infectología Pediátrica): Dr. Eduardo Lopez (eduardoluislopez@fibertel.com.ar) / Dra. Silvia González Átala (silvia.segayala@gmail.com)

- CoNaIn (Comisión Nacional de Inmunizaciones): Dr. Pablo Yedlin (pabloyedlin@hotmail.com) / Dra. Mirta Roses (rosesperiago@hotmail.com)