



Fiocruz - Manguinhos campus - Rio de Janeiro (Brazil)



## Plug and Play/Self-Amplifying RNA Technology - “for a safer, healthier and fairer world”

### Contribution to all partners at the 75<sup>th</sup> World Health Assembly

Selected in September 2021 by the Pan American Health Organization (PAHO) in the World Health Organization (WHO) call for COVID-19 mRNA vaccine technology transfer hubs in emerging economies, for development, production, supply and technological transfer in Latin America and Caribbean of Bio-Manguinhos/Fiocruz mRNA-based vaccine.

#### Our project:

- Based on the Plug and Play/ Self-Amplifying RNA Technology;
- Proprietary technology (royalty-free);
- Proprietary plasmid and formulations - designed at Bio-Manguinhos;
- Three different constructions engineered to direct SARS-Cov-2 antigens to the desired cellular compartment;
- Formulation employing liposomes that encapsulates the RNA;
- Technological domain for other vaccines & biopharmaceuticals;
- Tackle also future infectious-disease challenges;
- Wide installed API manufacturing capacity.

#### Our candidate vaccine:

- Enhanced and prolonged antigen expression;
- Lower effective RNA doses, potentially resulting in better safety;
- Intrinsic adjuvant effect;
- Potential apoptosis of vaccine-carrying cells due to vaccine self-amplification, leading to enhanced cross-presentation;
- Option for single-vector delivery of multiple or complex antigens.

#### Our commitment:

- Vaccine supply and tech transfer of our technology for other manufacturers, in contribution to the Worldwide Public Health.

Bio-Manguinhos/Fiocruz is an institution of the Brazilian Ministry of Health with long tradition in vaccines manufacturing and supply to the National Immunization Program. Up to May 2022, we have **delivered over 180 million doses of Covid-19 (recombinant) vaccine**. Globally we provide our yellow fever vaccine, which is pre-qualified by WHO since 2001. In addition, we are **member of the Developing Countries Vaccine Manufacturers Network (DCVMN)** and we were selected as **the representative of Brazil at the BRICS Vaccine Research and Development Center**, since its inception.