

## **MINCYT-Argentina Report. Actions against the COVID-19 pandemic at national and regional level.**

To face the current pandemic context, the Coronavirus COVID-19 Unit has been established at national level and is being led by the Ministry of Science, Technology and Innovation. The purpose of this Unit is to make it available to the National Government the capacities of the scientific system and any human resources, infrastructure and equipment required to deal with the Coronavirus/COVID-19 emergency. Main efforts are focused on the following areas:

1. A network of institutes for diagnosing the disease, to expand the diagnostic capacities of the health system by using the capacities of the scientific system, specifically its equipment and HR. At present the network includes more than 15 institutes with the infrastructure and staff required to screen for COVID-19; this network may be expanded.

2. Detection Kits and Respirator Development. Scientific groups are developing strategies to manufacture detection kits, while other groups have focused on developing rapid tests and respirators for the health system. Of note is the local development of “NEOKIT-COVID-19”, a fast and inexpensive test to detect SARS-CoV-2 that delivers results in less than two hours, and will allow us to make 200,000 tests per month, as well as the development of “COVIDAR IgG”, a serum test to determine if a person has antibodies against the new coronavirus SARS-CoV-2 based on blood or serum samples.

Another set of actions supports the development of supplies; for example, initiatives by developers and institutions are in place to provide health centres, security forces and other institutions all over the country with the required PPE, such as face masks manufactured using 3D printers.

3. Knowledge Creation. The National Government is informed by two scientific groups – one group monitors and models the development of the COVID-19 epidemic at the national level by using numeric and statistical tools and the other assesses the social, economic and cultural impact of the pandemic in our country.

Scientific Papers on COVID-19. The National System of Digital Repositories (SNRD) provides access to the COVID-19 collection, a number of papers on this subject, which are stored at the repositories of the various institutions that make up the open access system <https://repositoriosdigitales.mincyt.gob.ar/vufind/>

4. Argentina is developing the following treatments for COVID-19 patients: 1) convalescent plasma therapy (using plasma from patients who have recovered from COVID-19); 2) An injectable drug based of gamma globulin extracted from convalescent plasma; 3) Development of llama-derived nanobodies targeting the viral “spike” protein; 4) Ivermectin therapy; 5) Development of a preventive antiviral derived from sea urchin eggs.

5. Software Development. We supported the Ministry of Health and the Chief of the Cabinet of Ministers in the development and validation of an application for self-assessment of COVID-19 symptoms: <https://www.argentina.gob.ar/coronavirus/app>

6. Three calls for funding projects to respond to Coronavirus:

A call supported by the Agency for the Promotion of Research, Technological Development and Innovation (R&D&i Agency) to fund 64 project outlines for a maximum amount in pesos equal to USD 100,000. The Federal Coordination and Strengthening of Science and Technology Capacities Programme COVID-19 has been launched, under the Federal Council of Science and Technology (COFECYT), to link the local capacities of national S&T agencies with the demands of the provincial governments (including their municipalities) and the Autonomous City of Buenos Aires. The Programme has received 532 proposals and the selected projects will be given up to \$1.000.000 each. Finally, under an agreement made between the Ministry of Science, Technology and Innovation, the National Agency for the Promotion of Research, Technological Development and Innovation, and the Bunge and Born Foundation, a fund of nearly \$40,000,000 has been established to cofund a number of scientific and technological research projects aimed at contributing knowledge to deal with the effects of the COVID-19 epidemic.

As regards partnering with international counterparts, the MINCYT through the National Directorate for Cooperation and Institutional Integration of the Secretariat for STI Planning and Policies is actively participating in international dialogues with science authorities (UNESCO, CEPAL, IADB and a number of monitoring meetings with other organizations). At regional level we are collaborating with CELAC, SEGIB and CYTED in formulating strategies and setting up scientific networks.

In the context of MERCOSUR we secured funding for biomedicine projects through the MERCOSUR Structural Convergence Fund (FOCEM), with an extraordinary budget of almost 16 million dollars to coordinately fight against COVID-19 by means of the “Research, Education and Biotechnologies applied to Health” Project.

At bilateral level, strategic efforts are being conducted to explore solutions and exchange scientific information, while calls are being directed to fund research projects on COVID-19 related issues (France, Cuba, CABBIO). In addition, the CILAC 2021 Forum is being organized and will be held in Argentina, with a COVID-19 specific call to open in that framework.

The post-pandemic international context will require us to work together and find joint responses, particularly with regard to production processes. Our major challenge should be to promote production networks, technological developments and research to meet the needs of our region, and this certainly requires having enough funding to achieve the proposed goals.