
Science vs. Covid-19: the University has the Floor (+ Photos)

By: Mairyn Arteaga Díaz / Special for CubaSi
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Since the first patient was diagnosed with COVID-19 in Villa Clara by mid-March 2020, the alert system went off in the central province of Cuba to deploy a whole set of measures that would slow down the advance of the disease.

The Marta Abreu de Las Villas Central University has played a key role, encompassing both advice on decision-making and the development of agricultural plans, hosting isolation centers and even research on bioscience matters. The High Studies House has been a beacon on the battlefield.

The House of High Studies became since the first infected patient with the new coronavirus was diagnosed in the territory a soldier defending his position on the front line. The scientific and research activity –associated or not with COVID-19- has not stopped, either by teleworking or in stages, from branch centers to the UVC, experts keep working because once the turmoil of COVID-19 what has been achieved will become essential.

Broadly speaking, the University of Villa Clara has moved fast, and in almost two months of living with the pandemic has hosted isolation centers for suspects or patient contacts, gives advice to the Provincial Defense Council on decision-making, develops special plans for seeds for agricultural hosting and does not give up on activities associated to biosciences.

The Path of a Mathematical Operation

With procedures that comprise the physical-mathematical modeling, artificial intelligence and geo-referenced information, a subgroup of the university is in charge of predicting the curb the disease could take in Villa Clara's lands, crucial information to take a certain measure, support on which has relied the Provincial Defense Council.

Yanet Rodríguez Sarabia, dean of the Faculty of Mathematics, Physics, and Computing, and head of the team that within the Scientific Center specializes in computerization and automation, explains that the models, for example,

forecast the advance of COVID-19 in the province and allow to establish its variability in the province. Result of the collective work of about 15 people, who from their homes are determined to clarify the path of the new coronavirus in this region.

The analyzes, according to Rodríguez Sarabia, reach the municipality level and a strong emphasis is made on two of the most affected areas so far: Camajuaní and Santa Clara.

The development of real-time surveys to measure the population's perception of risk in the face of the new coronavirus and the increase in communication about it are among the main actions that the Social Sciences Council has done in Villa Clara to outline ways of acting against the pandemic.

Anabel Díaz Hurtado, PhD in Sociological Sciences, tells how, in addition to the survey that probes risk perception, another survey was also generated related to social isolation and how it's seen by citizens, both are online, so that sets of actions could be made to present to the Provincial and municipal Defense Councils; at the same time, support groups have been created at the Villa Clara Society of Psychologists who using internet and other means of communication, work for the well-being of communities when social isolation is imminent to prevent transmission chains.

Here are Biosciences

Water distillation used by the local hospital Celestino Hernández Robau, one of those that treats COVID-19 patients in the territory, became, in mid-April, the routine of the Center for Chemical Bioactives (CBQ), from the "Marta Abreu de Las Villas".

Born as such in the early 1990s and founded by Commander Fidel Castro Ruz, the Center for Chemical Bioactives stands as an institution that investigates, develops, generates and markets products with biological action and technical services, used in human health, veterinary, agriculture, construction and others; and in line with this it has not stopped its actions despite the new coronavirus.

To date, Vitrofur has continued to be manufactured, the entity's star product and its main exportable item, a chemical sterilizer essential in the disinfection of the culture media used by bio factories in Cuba and in the world.

Productions are the center's raison d'être today, especially because they know that once the pandemic is over, requests will grow and they must be prepared to respond to demand.

Plant biotechnology to order

Obtaining starting materials for banana cultivation, destined for the different bio factories in the country, appears as another strength of the Central University in the days of COVID-19.

From the Institute of Plant Biotechnology (IBP) an estimate of 75 thousand positions had been marketed during the last month, of which 27 thousand for Villa Clara and the rest for Cienfuegos, Mayabeque and Granma.

In a staggered way and with all the security measures - usual in a center of this type - reinforced by the presence of the new coronavirus, the IBP continues, in addition, with investigations in the cultivation of bananas, somatic embryogenesis in coffee, forestry and the development of a project with the Center for Genetic Engineering and Biotechnology, specifically referring to agricultural biotechnology, according to Dr. Osvaldo Fernández Martínez, director of the institution.

Just before the contagion of the new coronavirus began in the country, the IBP concluded the harvest of the national potato seed in its areas, seven varieties that have already been sorted and stored in refrigerators and now covered-crop houses are replanted with short-cycle crops -to contribute to the self-sufficiency of nearby communities- like chard, tomato, cucumber, pepper, and beans.

Today, in times of pandemic, when it's demonstrated that the one with seeds has power, in the IBP, work is even more organized and efficiently, which is the only way to work these days, said Fernández Martínez, because if there is something that cannot be stopped is agriculture.

Located about nine kilometers from the city of Santa Clara, the Marta Abreu Central University of Las Villas - a

large campus - does not rest, much less in times of pandemics. Its unusual calm is only on the outside: inside, not necessarily the physical inside of buildings, a work is generated that will guarantee serenity after the battle. And while this is not over, the soldier remains on the frontline. As it has been for almost 70 years.

Amilkal Labañino / CubaSi Translation Staff
