United Arab Emirate Initiatives

1. Chinese company to launch the world's first international phase III clinical trial at UAE

CNBG built the world's largest COVID-19 inactivated vaccine production facility, with construction standards and quality levels meeting international requirements.

The world's first phase III clinical trial of the COVID-19 inactivated vaccine officially kicked off Tuesday. The ceremony of "Sinopharm's China National Biotec Group (CNBG) COVID-19 inactivated vaccine International Clinical (Phase III) trial and the United Arab Emirates" was held simultaneously in Beijing and Abu Dhabi via video conference.

CNBG and UAE Group 42 signed a clinical cooperation agreement. This is the first company in China to conduct an overseas clinical trial of the COVID-19 vaccine.
During the ceremony, high officials of both countries issued clinical approval certificates to a Phase III of the COVID-19 inactivated vaccine to their concerned offices.

Ref. https://news.cgtn.com/news/2020-06-23/Chinese-company-to-launch-int-l-phase-III-clinical-trial-at-UAE-RyVigjO9WM/index.html

2. UAE fighting coronavirus with advanced, smart technology

The UAE is making use of advanced and smart technologies, including Artificial Intelligence, AI, drones and robots, to support its efforts to contain the virus.

- **World's largest COVID-19 lab outside of China**

Group 42, G42, the leading technology company based in Abu Dhabi, and global genomics leader, BGI, launched a new massive-throughput laboratory to address the need for population-scale detection and diagnosis of COVID-19 in the UAE. The lab is capable of conducting tens of thousands of real-time reverse transcription-polymerase chain reaction tests per day.

This new processing capacity will enable a rapid response to the current outbreak by accelerating the diagnosis, identification of suspected cases, the release of recovered patients, and the screening of close contacts and high-risk groups.

- **Genome sequencing**

Dubai's COVID-19 Command and Control Centre, CCC, announced the UAE's first full genome sequencing of the virus. The successful sequencing of the virus from a patient in Dubai was performed by researchers at the Mohammed Bin Rashid University of Medicine and Health Sciences, MBRU.

3. Radar to monitor vital signs such as body temperature, heart rate, breath rate and blood pressure.

Researchers at Khalifa University have developed tis radar technology that could be used in hospitals and from homes, reducing the need for house visits by doctors and for patients to be physically hooked up to machines. Scientists hope that in time, the radars could also be deployed at airports to monitor the health of passengers and prevent the spread of future pandemics. A prototype device for individual monitoring has already been built and researchers are now working on refining its design.

4. An affordable, simple, and easy-to-manufacture ventilator prototype has been developed by a team at Khalifa University.

The researchers have developed a working prototype and are now engineering the production plant to be able to produce the ventilators at scale to meet rising local and global demands. A unit has been set up to produce 250 ventilators.

5. Sterilisation robots

The General Administration of Civil Defence in Abu Dhabi has deployed robot TAF35 on the streets to support the sterilisation operations. The robot can be controlled from a distance of 300 metres and is capable of pumping large quantities of sanitising and disinfecting materials. In Dubai, the municipality conducted the massive National Disinfection Programme with advanced technology in sterilisation operations, such as

drones to enhance the speed and smoothness of these operations effectively and progressively.

Ref: Emirates News Agency: https://wam.ae/en/details/1395302837892

6. UAE's Abu Dhabi Stem Cells Centre Claims to Develop Vaccine for Coronavirus

The Abu Dhabi Stem Cells Center (ADSCC) has developed an innovative method which involves extracting stem cells from a patient's blood and reintroducing them into the lungs via inhalation of a mist, regenerating lung cells and preventing the immune system from overreacting. The treatment is reported to have successfully undergone an initial phase of clinical trials — with 73 patients making full recoveries without any adverse side effects. More trials are being conducted to have a clearer understanding of the treatment's potential in the coming week. The treatment has successfully undergone the initial phase of clinical trials, demonstrating its safety.

Ref: https://nfapost.com/uaes-abu-dhabi-stem-cells-centre-claims-to-develop-vaccine-for-coronavirus/12786/

7. Abu Dhabi Airports to deploy new technology to counter COVID-19

Abu Dhabi Airports has partnered with Tawazun Strategic Development Fund (TSDF) to launch the new CoDi BOT UGV (Unmanned Ground Vehicle), designed and manufactured by UAE-based company Marakeb Technologies, for the disinfection of viruses including COVID-19. The CoDi BOT UGV will be piloted during throughout Abu Dhabi International Airport, as well as being used as part of cabin desterilisation processes on passenger aircraft.

Ref: https://www.gulftoday.ae/business/2020/05/02/abu-dhabi-airports-to-deploy-new-technology-to-counter-covid-19

8. UAE start-up Immensa is making face shields and ventilator connectors to fight coronavirus

Dubai-based 3D printing start-up Immensa, which specialises in manufacturing spare parts used in the oil and gas industry, is switching gears to produce medical face shields to help stem the coronavirus outbreak. The company has supplied 5,000 face shields to different organisations and is aiming to produce 20,000 units a week

Ref: https://www.thenational.ae/business/technology/uae-start-up-immensa-is-making-face-shields-and-ventilator-connectors-to-fight-coronavirus-1.1000322