

# CORONAVATION

In these complex times  
of battling COVID-19,  
Israel is once again  
at the forefront of  
developing technologies  
to help stem the spread  
of the virus and treat it.

Here are just  
some of the Israeli  
“Coronavations”  
currently being used  
and developed.

## ASSESSING AND DIAGNOSING COVID-19

**BATM**, a leading provider of real-time technologies for networking solutions and medical laboratory systems, has entered into a collaboration with Novamed Ltd, an Israeli life sciences company operating in the in-vitro rapid diagnostics market, for the joint development and marketing of a rapid testing kit for home use for diagnosing COVID-19. The new kit allows people to test a sputum sample at home and receive results within a few minutes. BATM has also started shipping its new diagnostic kit for COVID-19, developed by Adaltis, for use by medical facilities, which provides results in under one hour on COVID-19 and other variants of coronavirus using real-time PCR (polymerase chain reaction), a molecular biology diagnostic lab technique.

**The Defense Ministry’s Directorate for Defense Research and Development** is working with **Vocalis Health** to deploy a state-of-the-art Artificial Intelligence method and technique to correlate voice with COVID-19 symptoms. This will enable an alert about early symptoms and monitoring at home by only using a smartphone. The study is being conducted under IRB approval, as required for clinical research.

**Ichilov Tel Aviv Medical Center**, in collaboration with the **Ministry of Health**, the **Innovation Authority**, the **Rambam Medical Campus in Haifa** and the startup **Geneyx** – backed by **BATM** – will collect samples from Corona patients and sequence their whole genomes in

search of innovative ways to diagnose and treat COVID-19, by identifying which genetic factors protect against the virus and which ones increase the risks.

### MANAGING COVID-19 PATIENTS

**Biobeat** developed a wearable device for continuous, noninvasive, accurate, medical-grade monitoring of vital signs including blood pressure, oxygen saturation, respiratory rate, heart rate, consciousness, cardiac output, stroke volume, body temperature, steps, and sweat in COVID-19 patients at several Israeli hospitals and at home. The wearable device automatically uploads the recorded data to a smartphone-based app and to the cloud, where it can be monitored remotely. Caretakers can intervene if needed, and users can receive alerts directly from the app.

**RenalSense**, a technology that continuously measures urine flow, automatically transmits real-time data and notifications of fluctuations to medical staff, 24/7. Urine output is a key metric in monitoring a patient's fluid state, especially in COVID-19 patients who suffer from pneumonia, which can jeopardize their kidney function. Acute Kidney Injury (AKI) is a severe symptom of COVID-19, especially for patients in a critical condition.

**TytoCare's** modular device and telehealth platform is allowing health-care organizations in the US, Europe and Israel to remotely examine and monitor potential and actual COVID-19 patients at home and in hospitals. Tyto Care exams of lungs, heart and temperature fully replicate an in-person checkup.

### TREATMENTS, VACCINES

**Kamada** is working to develop a "passive vaccine," a polyclonal immunoglobulin treatment for severely ill COVID-19 patients, using purified blood and

plasma samples from recovered patients.

**Enlivex Therapeutics** is developing Allocetra, a drug for treating patients with multisystem failure related to sepsis, a deadly pathological syndrome that resembles COVID-19.

**MIGAL Galilee Research Institute** is reformulating a poultry coronavirus vaccine under development as an oral vaccine against human COVID-19 that could be adapted to future forms of the virus. ■

