

# Research Diary

## **Jeevan-Lite: Center for Healthcare Entrepreneurship, IIT Hyderabad**

**KID: 20200117**

Aerobiosys Innovations Pvt. Ltd. a Medtech startup incubated at Center for Healthcare Entrepreneurship (CfHE), Indian Institute of Technology Hyderabad has developed a portable, cost-effective, IoT-enabled, battery-operated pressure and volume triggered ventilation system called “Jeevan-Lite” to save lives from COVID-19 infected patients.

JCB India Ltd. has come forward to support Team Aerobiosys to take this product for mass manufacturing. Currently, JCB has incorporated the design and product engineers to work on this project with an intention to go for mass manufacturing in a few weeks. A working prototype is ready with team Aerobiosys, currently, they are building Alpha Prototype with actual production intent parts and the required functionality as outlined in ICMR and MoHFW guidelines. Jeevan Lite is a class 2-B product currently in TRL 6 and expected to move to mass manufacturing by end of May 2020.



Jeevan Lite can perform both the invasive and non-invasive ventilation across a comprehensive set of modes and settings. It can be used for both Pediatric and adult patients. Ventilator being a life-saving device, Aerobiosys has incorporated rechargeable Lithium-ion Batteries in Jeevan Lite that can give uninterrupted ventilation for 5 hrs continuously without power supply. Jeevan Lite comes with an App-based software wherein the ventilator can be controlled using the app and real-time display of 4 critical waveforms and can be monitored virtually from anywhere, making it user friendly and easy to handle. The idea of the team is to provide a remote and non-contact operation mode to reduce the chances of viral infection for healthcare providers. Hence each breath of the patient is recorded and transferred to doctors via connected App to enable telemedicine support.

The Start-up company Aerobiosys has been set up as part of the one-year Entrepreneurship Program in Healthcare Entrepreneurship at the CfHE by two young entrepreneurs Cyril Antony and Rajesh Thangavel. The Company has been supported through the seed grants from BIRAC BIG grant and CfHE seed grant.

## **Nemocare Raksha Plus from Center for Healthcare Entrepreneurship**

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An IoT enabled smart Wearable device with geolocation capabilities and an intelligent integrated decision support platform to provide disease surveillance by remotely monitoring suspected COVID-19 patients and tracking signs of disease progression.

Nemocare, a Start-up from CfHE, IIT Hyderabad has developed a continuous monitoring wearable device that will aid in remote monitoring of vitals along with geolocation and prognosis of affected and quarantined patients.



It will also aid in tracking their symptoms and the doctors will be alerted on detection of deterioration. We will also be able to understand the disease itself by monitoring positive cases and will help biopharma companies and academic institutes that are developing therapies by helping understand the efficacy and effectiveness of candidates.