



## **PRESS RELEASE**

# **IIT Hyderabad CfHE incubated startup develops low-cost & portable Emergency Use Ventilator**

**Pursuant to device certification, Aerobiosys Innovations aims to produce at least 50-70 IoT-enabled units per day through collaboration with an Industrial Partner**

**HYDERABAD, XX April 2020:** Indian Institute of Technology Hyderabad [Center for Healthcare Entrepreneurship \(CfHE\)](#) incubated startup Aerobiosys Innovations has developed a low-cost, portable, emergency-use Ventilator.

Called 'Jeevan-Lite,' this device offers protection to healthcare providers as well as it is Internet of Things-enabled and can be operated through a phone app. It can also be battery-operated, enabling its deployment in areas without assured power supply.

The 'Minimal Viable Product' with the required functionality of this ventilator has already been developed. Pursuant to device certification, Aerobiosys Innovations aims to produce at least 50 to 70 units per day through collaboration with an Industrial Partner.

**Reviewing the progress of this device, Prof. B.S. Murty, Director, IIT Hyderabad, said,** "Senior citizens and elderly patients affected by COVID-19 will need ventilators for emergency life support. Aerobiosys has gone one step ahead by providing personal protection to the healthcare providers through IOT-enabled monitoring."

Jeevan Lite can perform both the invasive and non-invasive ventilation across a comprehensive set of modes and settings. It can be used for pediatric and adult patients and will work on rechargeable lithium-ion Batteries in an uninterrupted manner for five hours without power supply.

**Speaking about this project, Prof. Renu John, Faculty Co-Head, Center for Healthcare Entrepreneurship, and Head, Department of Biomedical Engineering, IIT Hyderabad, said,** "Jeevan lite solution from Aerobiosys, unlike other low-cost models, is loaded with features including wireless connectivity and remote monitoring that makes it unique and equipped to meet the demands of a pandemic situation like the COVID-19 infection. I strongly urge the industry partners and the government to come up to hand hold the start-up towards a large scale-up."

Aerobiosys Innovations plans to provide Jeevan Lite at a price of Rs. 1 lakh (USD \$1,315 approx.) which is significantly economical compared with existing products in the market. To cut down the cost and facilitate remote electronic access to the device,



Aerobiosys has developed a mobile App that communicates with the unit and seamlessly controls the functional features of the ventilator.

This would provide enough isolation to the patient and also protection to healthcare providers and family members. The ventilator can be controlled using the app and provides real-time display of the waveforms. Each breath of the patient is recorded and transmitted to the doctors via a connected App to enable telemedicine support. The device has a provision for attaching an oxygen cylinder and also can operate on its own in ambient air.

**Aerobiosys Co-founders Mr. Rajesh Thangavel and Mr. Cyril Antony are confident that the design for manufacturing of their device can be delivered by first week of April 2020.**

**Mr. Cyril Antony said** that Jeevan Lite had all the essential features to treat COVID-19 infected patients as mentioned by the experts in pulmonology and critical care across India and that the startup was collaborating with Hyderabad-based tertiary care hospitals for clinical validation and device certification.

**Mr. Rajesh Thangavel added,** “We are estimating to serve about 1 lakh people in the first three months. We plan to produce at least 50-70 units of our devices per day.”

For the elderly and the vulnerable population, especially those with co-morbid 'conditions' such as heart diseases or Type 2 Diabetes, Covid-19 can be life threatening unless ventilator assistance is provided. The design and features of Jeevan Lite are in compliance with the requirements mentioned by the Ministry of Health, Director General Life Sciences, Defence Research and Development Organisation (DRDO), Chairman Technical Committee and Indian Council of Medical Research (ICMR).

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**[ABOUT CENTER FOR HEALTHCARE ENTREPRENEURSHIP](#)** (CfHE): CfHE was established in December 2015 at Indian Institute of Technology Hyderabad with an objective to catalyze healthcare innovation with a focus on affordable solutions to address healthcare needs of India. This program aims at bringing together engineers, clinicians, entrepreneurs and the business community on a single platform to design and innovate in the field of healthcare, biomedical devices, and services to create a social impact.

The Center plays a pivotal role in identifying the clinical gaps where the Biomedical engineers can make a big difference. The program focuses on changes at grass root level in an Indian context to address the unmet needs both in the rural and urban health care sector.

**About [IIT Hyderabad](#)**

Indian Institute of Technology Hyderabad (IITH) is one of the six new Indian Institutes of Technology established by the Government of India in 2008. In a short span of around a



decade, the institute built on an imposing 570-acre campus and has been ranked among the top ten institutes for four consecutive years in the [National Institute Ranking Framework \(NIRF\)](#) released by the Ministry of Human Resource Development (MHRD), Government of India. The Institute was also ranked #10 in the first edition of [Atal Ranking of Institutions on Innovation Achievements](#) (ARIIA) introduced this year by MHRD to systematically rank all major higher educational institutions and universities in India on indicators related to 'Innovation and Entrepreneurship Development' among students and faculties.

IIT Hyderabad has close to 210 full-time faculty, 2,855 students of whom 20 per cent are women, nearly 200 state-of-the-art laboratories and five research and entrepreneurship centers. The Institute has a strong research focus with more than Rs. 500 crore of sanctioned research funding while Ph.D. scholars account for about 30 per cent of total student strength. IITH students and faculty are at the forefront of innovation with more than 1,500 research publications and patent disclosures, 300 sponsored/consultancy projects and 50 industry collaborations. IITH has MoUs with 50 universities in the U.S., Japan, Australia, Taiwan and Europe. IITH has been pioneering change in pedagogy with fractal academic programs that atomizes course modules, encourage interdisciplinary learning spanning innovative technology, fundamental science, liberal arts and creative arts like photography, theatre and painting.

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