



Ministry of Science &amp; Technology

## DST supported SAIF facility at Panjab University partners with Molekule, USA, to donate air purification units to hospitals in India



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**in** COVID wards and ICUs at several hospitals in Chandigarh, Punjab, Uttarakhand, and Himachal Pradesh will soon be able to improve their ventilation facilities with the help of air purification units from a US-based company through an effort by Panjab University.

Department of Science and Technology supported Sophisticated Analytical Instrumentation Facility, Panjab University Chandigarh (SAIF, PUC) has collaborated with Molekule, a USA based air purifying manufacturer, to assemble and optimise Molekule's air purifiers in about 10 hospitals so far this activity is still going on the number is likely to change with progress of this work.

The partnership has led to donation of air purifiers Molekule & Air Pro RX units to hospitals across the country. Nearly 6 states have been covered till date, with efforts going on to cover most of the Covid affected states of India to help aid in the battle against the virus and provide patients, doctors, and staff with much-needed clean air.

Installation of the air purifier will help prevent transmission of COVID 19 through exposure to aerosolized respiratory droplets by facilitating adequate indoor air purification and ventilation in the hospitals. It can help address concerns to the health of citizens and healthcare workers arising on account of the COVID-19 pandemic.

Molekule's core technology, Photoelectrochemical oxidation (PECO), is designed to destroy airborne pollutants like viruses, bacteria, mold, or chemicals in the air known as *Volatile organic compounds* (VOCs). Tests on PECO for these Molekule Air purifiers indicate upto 99.99% inactivation of coronavirus strains (porcine & bovine) and H1N1 flu virus, upto 95% destruction of VOCs and ozone (airborne chemicals), and upto 99.9% destruction of bacteria, mold, and viruses in the air.

In the first batch, Molekule Air Purifier Mini & Molekule Air Pro RX units were received, assembled, and tested at SAIF, PUC, by its technical staff members. Molekule Air Pro RX units had been originally designed for medical purposes in the United States and optimized for air purification in multipurpose facilities in hospitals to cater for huge areas such as emergency wards, ICUs, and so on and can now play a significant role in containing the rapid spread of COVID 19 in India.

“There have been numerous compelling stories of repurposing of DST supported scientific infrastructure and knowledge Centers, such as the SAIF at Panjab University, in effective addressing of COVID-19 demands with speed and scale. An important lesson is that the scientific and technological infrastructure, human and knowledge resources can become deep assets to fight any clear and present crisis requiring speedy actions,” said Prof Ashutosh Sharma, Secretary, DST.



Before distributing units to hospitals, the instrument's features were explained to Directors/Chief medical officer, / medical superintendents of various Hospitals. SAIF Chandigarh employees helped in setting up these air purifiers at emergency wards, ICUs, COVID wards, and even waiting rooms to prevent the transmission of coronavirus.

#### **Details of installation of the air purifiers**

1. 42 units were distributed amongst Panjab University COVID care center (100 beds capacity), Health Centre, and Dr. Harvansh Singh Judge Institute of Dental Sciences & Hospital, Panjab University



2. 40 units presented to Chief Minister, Himachal Pradesh for Indira Gandhi Medical College, Shimla



3. 60 units along with 1 Molekule Air Pro RX unit were handed over to Director, PGIMER, Chandigarh.



4. 30 units unit were handed over to Dr. Amandeep Kang, Principal Director Government Multi-Specialty Hospital, Sector 16, Chandigarh





5. 20 units unit were handed over to Dr. Jasbinder Kaur, Principal Director Government Medical College, and Hospital, Sector-32, Chandigarh



6. AIIMS, Bathinda receives 20 Molekule Air Purifiers units from SAIF, PU



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