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For more information:

Robert Benkowski, CEO

DesignPlex Biomedical, LLC

bob.benkowski@designplexbio.com

(800) 214-1009

**TechFW Client DesignPlex Bio wins license for NASA/JPL ventilators**

DesignPlex Biomedical, a TechFW client, is one of eight U.S. manufacturers selected May 29, 2020 by NASA's Jet Propulsion Laboratory (JPL) to receive a royalty-free license to commercialize a new ventilator tailored for coronavirus (COVID-19) patients.

DesignPlex Biomedical specializes in taking Class 2 and 3 medical devices from concept to clinical and commercial products. It provides mechanical design, electronics design, systems integration and contract manufacturing. Operating in a new, purpose-built design studio and manufacturing space in Fort Worth, TX, DesignPlex Bio partners with clients to improve their product’s reliability, add new functionality or reduce the cost of goods.

“We’re excited to be selected by JPL to commercialize this technology,” said Bob Benkowski, CEO of DesignPlex Biomedical. “We have a fantastic team and our design and manufacturing experience in the cardiovascular space and pneumatic controllers can be directly applied to NASA’s COVID-19 ventilator.”

More than 100 applications were submitted. ATRON Group in Dallas was the only other Texas manufacturer selected.

The prototype, which was [created](https://www.jpl.nasa.gov/news/news.php?feature=7661) by JPL engineers in 37 days, received an [Emergency Use Authorization](https://www.jpl.nasa.gov/news/news.php?feature=7655) from the Food and Drug Administration April 30.

Called [VITAL](https://medeng.jpl.nasa.gov/covid-19/ventilator/) (Ventilator Intervention Technology Accessible Locally), the high-pressure ventilator was designed to use one-seventh the parts of a traditional ventilator, relying on parts already available in supply chains. It offers a simpler, more affordable option for treating critical patients while freeing up traditional ventilators for those with the most severe COVID-19 symptoms. Its flexible design means it also can be modified for use in field hospitals.

VITAL was developed with input from doctors and medical device manufacturers. A prototype of the JPL device was successfully tested by the Human Simulation Lab in the Department of Anesthesiology, Perioperative and Pain Medicine at Mount Sinai on April 23.

The Office of Technology Transfer and Corporate Partnerships at Caltech, which owns the patents and software for VITAL, was offering a royalty-free license for commercialization of the device to selected companies.

A modified design, which uses compressed air and can be deployed by a greater range of hospitals, was recently tested at the UCLA Simulation Center in Los Angeles. A high-fidelity lung simulator tested almost 20 different ventilator settings, representing a number of scenarios that could be seen in critically ill patients in an intensive care unit.

For more information about NASA's work in fighting COVID-19, visit:

[**https://www.nasa.gov/coronavirus**](https://www.nasa.gov/coronavirus)

**News Media Contact**

Bettina Inclán / Matthew Rydin / Karen Northon
NASA Headquarters, Washington
202-358-1600 / 202-603-7522 / 202-358-1540
bettina.inclan@nasa.gov / matthew.m.rydin@nasa.gov / karen.northon@nasa.gov