

## No Pilot, No Problem: Unmanned “Flying” Laboratory Lifts Off in a TATRC First



**Representatives from DPI, TATRC, USAARL, Joint Program Committee-6, Medical Evacuation Proponency Division, Joint Program Committee-1, and the logistics community participated in DP-14's first test flight.**

**T**eam TATRC does it again! On 29 October, the first flight and demonstration of the DP-14 Unmanned Aerial System (UAS) was successfully held at the Warren Grove Gunnery Range in New Jersey. The project originated from TATRC's Medical Intelligent Systems Lab and concluded the first phase of a research collaboration between TATRC, the U.S. Army Aeromedical Research Lab (USAARL), and DPI UAV Systems (DPI). This study was developed under a Joint Program Committee-6 (JPC-6) funded research project entitled, “Emergency Medical Resupply and En-route Care UAS Research Platform.”

This project seeks to provide a “flying laboratory” designed to enable research of emerging UAS and autonomous en-route care systems as a means to augment traditional medical resupply and casualty



**DP-14's “maiden-flight” event performed without the exterior skins of the aircraft to prove out mechanical performance and system stability during a manually controlled flight.**

evacuation (CASEVAC) efforts in austere environments. During Phase 1, the DP-14 aircraft was designed, built, and tested, culminating in this successful “maiden-flight” event performed without

the exterior skins of the aircraft to prove out mechanical performance and system stability during a manually controlled flight.

During Phase 1, an Environmental

Factors Data Acquisition System (EFDAS) system was designed and built by USAARL and used to collect data during the event, measuring conditions that affect patient safety during flight. During the next phase, DPI will complete the build and flight testing of the DP-14 UAS, adding the required vehicle autonomy and network capabilities, resulting in a UAS testbed for autonomous medical transport and evacuation research. The

final flight demonstration is planned for late next spring. Attendees included representatives from DPI, TATRC, USAARL, Joint Program Committee-6, Medical Evacuation Proponency Division, Joint Program Committee-1, and the logistics community.

Dr. Gary Gilbert of TATRC's MISL Lab stated, "By leveraging emerging technology to develop faster, more efficient methods of medical resupply and CASEVAC, TATRC

is ensuring Warfighter resiliency and maintaining the Army's competitive advantage over potential adversaries." A big shout out to all involved who made the first flight of this one-of-a-kind aircraft such a success! Dr. Gary Gilbert and Mr. Nathan Fisher, of TATRC's MISL Team look forward to continued collaborations with this esteemed group of partners. ■■■