

Newsletter



Aerospace Medicine Research Center

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News:

MedUAV research project - Medical Resupply & Casualty Evacuation Vertical Take Off and Landing Unmanned Aerial Vehicle

During 2007 Lebanon war, once again we have been witness to the added risk and loss of life during combat casualty care, timely delivery of essential medical supplies and evacuation of casualties under hostile fire. Force protection of military first responders is becoming complicated by increased involvement in peacekeeping operations, counter terrorism, and humanitarian assistance. One future solution in specific medical scenarios is a medical Unmanned Aerial Vehicle concept.

The MedUAV, is a medical resupply and Casualty Evacuation (CASEVAC) Vertical Take Off and Landing (VTOL) Unmanned Aerial Vehicle (UAV), Utilizing a new Mobile Life Support for Trauma and Transport (MLSTAT) system. The technology will enable to resupply medical logistic to combat medics and facilitate them to provide the best treatment, stabilization and subsequent evacuation of combat casualties from hostile situations onboard the MedUAV autonomously.

The research in Phase I formulated a concept of design, to enable later in phase II to demonstrate the feasibility of producing enabling technologies for the MedUAV. These include: proficient system for navigating through urban or wooded terrain to a site of combat injury, to select a safe and suitable site for autonomous landing and

take-off with communication capability with the human medical team, and minimal operating and guidance from combat troops. This will enhance the potential for appropriate first responder care and evacuation, performed by combat medics, during the so called "Golden Hour" of combat casualty care, utilizing the benefits and new abilities of the MLSTAT onboard the MedUAV.



The MedUAV research and development lead to primary two streams of technologies approaches for the flying vehicle design: The first one is a Medical Rotary UAV option - to convert a current operational military MedEvac Helicopter, tested and registered it for dual use. It will maintain the ability for fly by wire with flight crew on board and on the same vehicle an option to fly safely autonomously as a VTOL UAV. The second technology option is to design an innovated aerial vehicle concept for a Med VTOL UAV. The proposed design is a turbine powered VTOL vehicle, based on two ducted lift fans, contained inside the vehicle's fuselage.

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