



NORTH ATLANTIC TREATY ORGANIZATION  
SCIENCE AND TECHNOLOGY ORGANIZATION



# Aeromedical Interests of the Future

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  - Dr. Dale Daborn, GP
- Capt Francois Helleringer
- Capt Rifat Ugurlatan, MD, PhD
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# Potential Issue Focus

- Selection of aircrew
  - Improved psychological resilience and cognitive/task management testing
  - Baseline MRI
  - Age selection
  - Genomic testing with consideration for functional protein expression
- Onboard Oxygen Generating Systems Development
  - Some airframes use OBOGS for emer. O<sub>2</sub> and patient use
  - Between FL250 – 400
  - O<sub>3</sub> levels climb at these levels
  - Is O<sub>2</sub> only allowed to pass through molecular sieve
  - Respiratory impact
  - O<sub>3</sub> higher affinity for negative dipole beyond electromagnetic plates



# Aeromedical Evacuation

- UAS Tactical Robotics

- AIRMULE(Cormorant) - Israeli use
- Time to recover to safe locations
  - Extract rapidly and remove to treatment location w/in 10 minutes
  - Flying further require treatment in-flight or prior
- Pick up patient
  - Accelerative forces on carried patient
- Deliver medical supplies
- Telemetric/video-fed provider



AIRMULE

- Traditional Enhancement

- Directional IR countermeasures
  - Augments traditional suppression fire
  - RF hazard to ground personnel
- Datalink to MTFs
  - Identify suitable locations
  - Telemetry on patient status
    - Prepares medical personnel to receive patients
  - Bandwidth concerns

