

Development of Novel Strategies for Characterization of Biological Aerosols in Field Environments

1. **Research Title:** Development of Novel Strategies for Characterization of Biological Aerosols in Field Environments

2. **Individual Sponsor:**

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3. **Academic Area/Field and Education Level**

Chemical Engineering, Biomedical Engineering (BA/BS or MS level)

4. **Objectives:** The overall objectives are to develop, evaluate and optimize strategies to count and capture biological aerosols in field environments by interfacing commercial off-the-shelf instruments and identify key requirements for next generation instruments.

5. **Description:**

Biological surveillance is required to detect biological agents released for biological warfare or emitted by contaminated materials or infectious persons. Hazardous biological agents can be characterized by wipe sampling and air sampling throughout the suspected contaminated region. Current air sampling strategies used for routine field analysis are limited and outdated. Robust strategies incorporating advanced technologies are required to detect and capture hazardous biological aerosol threats in field environments.

6. **Research Classification/Restrictions:** none

7. **Eligible Research Institutions:** Indicate to what organizations this topic should be provided



DAGSI (Wright State University, AFIT, Ohio State University, University of Dayton, Miami University, Ohio University, University of Cincinnati) NOTE: Topics submitted to DAGSI must be approved for public release. Need PA Approval #



AFIT (only)



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