

*Airliner Cabin Environment Research Overview Part 2: Chem.–Bio. Response Related Topics*

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An overview of R&D activities related to the chemical and biological (chem.–bio.) security of the airliner cabin environment, performed by the FAA-funded Air Transportation Center of Excellence (CoE) for Airliner Cabin Environment Research (ACER) will be presented. Research on the implementation of flyable sensor systems for chem.–bio. agent monitoring and whole cabin decontamination will be discussed. The challenges of chem.–bio. sensing within the airliner cabin environment, the extent to which these challenges can be met in the near to medium term with commercial off-the-shelf (COTS), government off-the-shelf (GOTS) and near-market (NM) sensor technologies and measures needed to transition sensor technologies developed for ground-based applications to airliner cabin use will be addressed. Work on sensor testing and airliner compatible backbone electronics will be described. The paper will touch briefly on the challenges of performing real-time in-flight decontamination and will then focus on work performed to assess the efficacy, materials compatibility and operational feasibility of whole airliner cabin decontamination conducted on the ground. Discussions of full-scale decontamination demonstrations on both narrow and widebody aircraft will be covered.

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