

# Physiological Evaluation of Tight- and Loose-Fitting PAPRs – FY16 (927ZJRP)

## Objective

The primary objective of this study is to evaluate the metabolic and respiratory responses of wearers of tight- and loose-fitting PAPRs at three exercise intensities on a treadmill. Findings will be provided to the PSD Branch in support of module development.



## Applicable standards

- 42 CFR Part 84

## Key Partners

- CVSD Branch

## Stakeholders

- Manufacturers
- Wearers
- States which mandate PAPR use for Ebola patient care



## Project Scope

- Modify NIOSH IRB-HSRB protocol for PI & staff changes
- Procurement of PAPR specimens, filters & hoods; test & dry-run DAQ system with ABMS
- Collect & analyze human subject & ABMS data

## Milestones FY16

- Completed human subject testing on 4/6 PAPRs.
- Purchased 2/6 PAPRs for 4 teams.

## FY17

Completed human subject testing on 4/6 PAPRs.  
Begin ABMS evaluations on 3M VersaFlow and MaxAir CAPR

## Outputs

- Presentation at ACSM conference May 2015, San Diego, CA
- Presentation at ACSM conference May 2016, Boston, MA
- Published manuscript, December 2016, JISRP
- Presentation at IOM COPPE meeting, 6 March 2017, Eye dryness with PAPR use

## Outcomes

- Results incorporated into updates to PAPR module proposed for Title 42 CFR Part 84

Updated: 21 MAR 2017