

# CPO 24 Alakai Defense Systems, Inc.

## Project Summary

Alakai's main objective was to provide standoff detection of fentanyl & narcotics to the PRIED and other available Deep UV (DUV) sensor systems by 1) taking DUV Raman signature data on fentanyl samples and writing fentanyl detection algorithms, 2) adding fentanyl detection algorithms for PRIED and other available DUV sensor systems' detection libraries, and 3) demonstrating standoff detection of fentanyl with PRIED and other available DUV systems in the Washington DC metro-area.



Figure 1. Alakai's PRIED system in use.

## Project Timeline

SOFWERX Provides Notice to Proceed: 01 June - 03 June 2019  
Completion of 1<sup>st</sup> Signature Collection: 04 June 2019 - 31 January 2020  
Detection experiment: 10 March 2020  
Final Report: 01 June 2020

### Fentanyl List (Mar 3, 2020)

Acetyl Fentanyl  
Benzoyl Fentanyl HCl  
Benzoylbenzyl Fentanyl HCl  
Benzyl Fentanyl HCl  
Despropionyl meta-Fluorofentanyl

Fentanyl Citrate  
Fentanyl HCl  
Meta-fluoro Furanyl Fentanyl HCl  
Ortho-fluoro Furanyl Fentanyl HCl  
Para-fluoro Furanyl Fentanyl HCl

## Resources Consumed

**Total Cost: \$125,612.94**



## Project Results:

Alakai Defense was able to demonstrate 1-3m (3-10ft) standoff detection of two types of commercially procured Fentanyl in a third-party, Government directed and witnessed blind test. Alakai has added 18 fentanyl compounds and/or precursors into the PRIED library.

