RH 17-4

Biomarker Profiles Across Various Biofluids

1. **Research Title:** Biomarker Profiles Across Various Biofluids
2. **Individual Sponsor:** List the AFRL research topic sponsor's contact information

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

   Biology, physiology (MS or PhD level)

4. **Objectives:** The objective of this research is to establish a time profile and correlation of key stress and cognitive biomarkers in sweat, saliva and blood plasma.
5. **Description:** Biofluid-based Biomarkers can provide valuable insight into the cognitive readiness of an individual. In order to accurately assess them relative to cognitive state, research is required to understand how those biomarkers change across both time and different biofluids. Sweat and saliva for example, can be collected non-invasively, however biomarker concentration and stability may be effected by external influences (local inflammation, contamination). In order to fully utilize biomarkers for cognitive state assessment, a concentration profile over time across various biofluids must be established.
6. **Research Classification/Restrictions:** unclassified/unrestricted
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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If you are submitting a topic for the USAFA, indicate if you are also interested in sponsoring a USAF Cadet in summer 2015 (Average cost for USAF Cadet for 33 days is $5000)

☐ Yes ☐ No