



Grants/contracts

VivoMetrics, Storm King get grant for firefighters study

A Medical Device Daily Staff Report

The Department of Homeland Security's Office for Domestic Preparedness has awarded a grant for "Physiologic Assessment of Wildland Firefighters During Their Annual Pack Test" to **Storm King Mountain Technologies** (Camarillo, California) and **VivoMetrics Government Services** (Ventura, California).

The two companies will partner to gather and study high-resolution physiologic data on 500 wildland firefighters during their annual "pack test." This is a test to determine fitness of wildland firefighters in which they wear a 45-pound pack and must walk 3.5 miles in 45 minutes or less. This year three firefighters died during a pack test in Montana.

The study will gather high-resolution physiologic data and traditional paramedic data gathered via VivoMetrics' LifeShirt system in order to describe the physiologic response to the strenuous physical test given wildland firefighters.

The physiologic data will be used to establish guidelines for monitoring wildland firefighters during pack tests, training scenarios and deployment. The entire project must be completed in 12 months.

The primary objectives are to measure respiration, ECG, SpO₂, body temperature, posture and activity as experienced by wildland firefighters over the course of a pack test; develop a greater understanding of the time course and scale of physiologic responses to the stress associated with a pack test; and develop guidelines for monitoring the physiological responses of wildland firefighters to help increase the likelihood of safely completing future pack tests, training scenarios and deployment.

The total grant amount is \$748,699.

Jim Roth is president of Storm King Mountain Technologies. Ten years ago, his brother, a wildland firefighter, and 12 others were tragically killed fighting a fire on Storm King Mountain in Colorado. Roth subsequently started his company of the same name, dedicated to improving safety for firefighters.

Noting that firefighters die every year during the pack test exercise, Storm King Mountain Technologies and VivoMetrics said the grant represents an opportunity for them to contribute to improving safety for such firefighters.

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