



Maryland Fire and Rescue Institute Awarded Fire Safety Grant By The Department of Homeland Security

VivoMetrics® LifeShirt® to be used to Monitor Physiology of Fire Fighters during Training Exercises

College Park, M.D. – June 1, 2005 - Senator Paul Sarbanes, Congressman Steny Hoyer, and University of Maryland President C.D. Mote, Jr. have presented a Department of Homeland Security Federal Assistance to Firefighters Grant in the amount of \$750,000 to the Maryland Fire and Rescue Institute. The grant will be used to study firefighter physiology using the VivoMetrics LifeShirt at the Center for Firefighter Safety Research and Development, which was established by the University of Maryland to develop new technologies to reduce firefighter injuries and deaths. The Center includes experts from the University of Maryland including the Maryland Fire and Rescue Institute; the A. James Clark School of Engineering's Fire Protection Engineering Department; Small Smart System Center; and the Maryland Information Network Dynamics Laboratory (MIND Lab).

"The University of Maryland is uniquely able to bring together in one Center a group of nationally recognized units with a mission that focuses solely on the academic, educational, and technological problems of first responders," said Dan Mote, President of the University of Maryland. "Because of this unique combination, the Center is an asset for the nation, blazing a trail in research and programs at this critical time in our nation's history. We are very proud of the work of MFRI and the Center. We appreciate the leadership and vision of Senator Sarbanes and Congressman Hoyer in their support of outstanding contributions to all who are engaged in emergency services."

Both Senator Sarbanes and Congressmen Hoyer are members of the Congressional Fire Services Caucus. Sarbanes is one of two Senate co-chairs of the Congressional Fire Services Caucus, with Hoyer serving as a House co-chair. Both Sarbanes and Hoyer were very active in helping establish and fund the Assistance to Firefighters Grant Program and in the awarding of the current grant, which is the first research grant made under the program.

"This grant will allow the Maryland Fire and Rescue Institute to continue our work to enhance the safety of firefighters on the scene of an incident", said Steve Edwards, Director of the Maryland Fire and Rescue Institute. "The research we will undertake over the next year will allow us to accurately monitor a firefighter's physiologic responses as they participate in training evolutions. The ability to instantly obtain

biofeedback on a firefighter's vital signs is a key first step in improving our ability to locate and protect rescue personnel on the fire ground".

Mr. Edwards also announced that MFRI will be contracting with VivoMetrics Government Services, based in Ventura, California, to provide LifeShirt Systems for this project. The LifeShirt System is a comfortable garment worn beneath a fire fighter's protective gear to monitor vital signs and capture high resolution physiologic data, in essence, every breath and every heartbeat. Throughout this study, the LifeShirt will be used to monitor and record the physiologic responses of firefighters during "hot" fire fighting drills and training exercises. The LifeShirt System measures respiration, heart rate, blood oxygen saturation, activity, posture and temperature.

High stress, in addition to smoke inhalation, increases the risk of fatality to these first responders. Many times, physical strain goes undetected until it's too late for firefighters to escape from hazardous situations. It is hoped that by measuring physiologic data from firefighters, a better understanding of normal physical reaction to these circumstances can be gained – leading to lowered injuries and fatalities on the job and during training for firefighters and other first responders.

"We're excited to work with MFRI as they are the leading fire training institute in the country, if not the world. And as this is our second grant, we are thrilled that the Department of Homeland Security has once again recognized the value and potential of the LifeShirt to aid first responders," said Andrew Behar, President of VivoMetrics Government Services. "Firefighters react quickly to emergencies and their bravery can sometimes make them the last to realize that they are at the point of heat exhaustion or physical collapse. We hope that the results from this study will enable safety officers and fire captains to optimize their team's efficiency and improve safety."

About The Maryland Fire and Rescue Institute of The University of Maryland

The University of Maryland, nationally recognized for advanced technology research, has formed the Center for Firefighter Safety Research and Development. This Center is uniquely qualified to carry out the mission of improving firefighter safety through the research and development of improved communications systems, on-scene accountability, and firefighting equipment. There are extensive resources and expertise found within the Center for Firefighter Safety Research and Development. The close working relationships between key entities within the Center brings the potential for effective solutions in response to the need for vast improvement on this issue. These entities include:

- Maryland Fire and Rescue Institute (MFRI)
- Fire Protection Engineering Department (FPED)
- Small Smart System Center (SSSC)
- Maryland Information and Network Dynamics Laboratory (MIND Lab)

It is the mission of the Center for Firefighter Safety Research and Development to develop and support research that will improve firefighter safety by focusing the resources and specialized talents of the University of Maryland toward advanced uses of technology in an effort to reduce firefighter deaths and injuries. It is the further mission of the Center to provide crossover technology and advancements to the nation's law enforcement and other public safety agencies so that improved safety measures can benefit all first responders.

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