Philadelphia University Awarded $1.7 Million to Establish Laboratory for Engineered Human Protection

“Protective equipment – respirators, clothing, and eye protection – is not adequate for extended search and rescue campaigns.”
RAND Science and Technology Policy Institute Report (September 2003)
Protecting Emergency Responders: Lessons Learned from Terrorist Attacks

PHILADELPHIA (September 2, 2004) — In today’s volatile world, it is critical that military personnel and civilian first responders be outfitted with the most technologically advanced equipment, including state-of-the-art protective apparel. Realizing this need, Congress allocated $2.1 million in the Defense Appropriations bill, $1.7 million of which will be directed to establish a Laboratory for Engineered Human Protection (LEHP) at Philadelphia University. LEHP will be a comprehensive research initiative centered on the development of more sophisticated and effective protective-garment systems.

Philadelphia University researchers and the Laboratory for Engineered Human Protection will partner with the Natick Soldier Center in Natick, Massachusetts, which has developed and published an extensive knowledge base of comfort and protection research. Working with Natick, LEHP will focus on revolutionizing fabric and apparel systems for the purpose of protecting military and, ultimately, civilian first responders. LEHP will become a national hub for the development, coordination and integration of these complex systems, and a catalyst for the transfer of technology to apparel-manufacturing companies. LEHP will also identify and coordinate collaborative efforts between manufacturing companies with the goal of developing more comfortable and appropriate protective gear than what is currently available. In addition to

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systematic research efforts on comfort, protection and performance, LEHP will study psychophysical factors and parameters, perceived user-confidence data and factors, and conduct research in textile and garment engineering and material science. Moreover, LEHP will sample production of apparel systems, evaluate cost structures, and continually analyze the trade-off among comfort, protection, and life-cycle cost.

“Philadelphia University has been a national and international leader since its founding as the first U.S. textiles school in the 1884,” says James P. Gallagher, Ph.D., president of Philadelphia University. “While our University has expanded into many other academic areas, we have been and continue to be at the forefront of textiles and materials technology. It is only fitting that, with funding from Congress, we establish this important resource here and begin to fill some of the voids that exist in protecting those who put their lives on the line everyday to protect their fellow citizens. We are excited to be in a position where we will improve protective apparel and have a positive impact on economic development in Philadelphia and in the Commonwealth of Pennsylvania.”

David Brookstein, Sc.D., dean of Philadelphia University’s School of Textiles and Materials Technology and principal investigator for LEHP states “the Laboratory for Engineered Human Protection will not only address the nation’s critical need to more effectively protect the military, but it will also enhance the high-technology manufacturing base for Pennsylvania. While most of the commodity-based textile and apparel industry that helped to build Pennsylvania has gone offshore, this new initiative will replace some of that industry with exciting new economic activity.”

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The Laboratory for Engineered Human Protection will serve as an economic catalyst that will support Pennsylvania apparel manufacturers that are concerned with protective apparel systems. Included are Ricochet Manufacturing and Boathouse Sports in Philadelphia and Elbeco, Inc. in Meyersdale, Pa.

Philadelphia University, founded in 1884, is an accredited, private university with 3,100 part- and full-time students from 38 states and 47 countries. The University offers more than 40 undergraduate and graduate degree programs leading to the bachelor of science, bachelor of architecture, master’s, and doctoral degrees. Academic programs encompass architecture, design, business, engineering, textiles, science and health.