



## Opportunity

# Antimicrobial Textiles

### Overview

What makes sweaty socks smell? It's not moisture but the bacteria that grow in the damp fabric. Fabric-bred bacteria aren't just a smelly sock problem. Fabric-bred bacteria are also responsible for hospital-acquired infections affecting nearly 9% of hospital patients in both developed and resource-poor countries (World Health Organisation). This translates into 1.7 million hospital-associated infections in the US – causing or contributing to 99,000 deaths each year. technology prevents the spread of such deadly infections by enabling the production of antibacterial medical-grade textiles, air filters, and wall panels.

### Technology

This technology is a final-step, cost effective, antibacterial nanoparticle finish for woven (or fibrous) thermoplastic polymer textiles such as polyester (PET), polypropylene (PP), polyvinyl chloride (PVC) and associated poly-cotton blends. The practice of coating textiles with antibacterial nanoparticles is not new. However, a cost effective, scalable, continuous method for “locking-in” of the anti-bacterial nanoparticle into the textile so that one can wash the textile under hospital washing machine conditions without the need to replenish the nanoparticle has proven elusive.

This textile coating technology addresses this unmet market need.

### Benefits

WHO Statistics show that there are 7.94 million nurses registered in Europe and USA. Assuming the average cost of a standard reusable uniform to be around \$40, a total annual value of \$634 million can be estimated for this segment alone. The University of Limerick is interested in seeking partners to exploit the commercial potential of this technology by entering into licensing and collaboration arrangements that mutually benefit both parties.

### Applications

Medical filters

Medical uniforms

Medical fabrics

Companies producing sports wear.

### Commercial Opportunity

The technology is available for license, or as the basis of further development projects..

Development partner

Commercial partner

Licensing

University spin-out

Seeking investment

**Further IP information, links, etc.**

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## Opportunity

Patent: European patent EP2686475B (GB, France, Italy, Germany, Spain and Ireland).

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### Figures



Fig 1: Dangerous Bacteria are commonly found in Hospital uniforms: In a US Study, 65% of medical personnel confessed to changing their lab coat less than once a week, despite knowing it was likely contaminated. Fifteen percent admitted changing it less than once a month. Superbugs such as MRSA can live on these polyester coats for up to 56 days.