

L0059 Antimicrobial coating innovations to prevent healthcare-associated infection

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Background: Worldwide, millions of patients are affected annually by healthcare-associated infection (HCAI), impacting up to 80,000 patients in European Hospitals on any given day. This represents not only public health risk, but also an economic burden.

Materials/methods: Through its Cooperation in Science and Technology programme (COST), the European Commission has recently funded a four-year initiative to establish a network of stakeholders involved in development, regulation and use of novel antimicrobial coatings for prevention of HCAI. The AntiMicrobial Coating Innovations (AMiCI) network currently comprises participants of more than sixty universities, knowledge institutes and companies across twenty-nine European countries and, to date, represents the most comprehensive grouping to target use of these emergent technologies in healthcare settings. By accessing the network's website (www.amici-consortium.eu), there is an ongoing opportunity for those interested to engage with the program.

Results: Infections and infectious diseases are considered a major challenge to human health in healthcare units worldwide. The project recognizes, and aims to address, the disparate perspectives of inventors and entrepreneurs; academic researchers; manufacturers; distributors; commercial, clinical, biocide and consumer affairs regulators; medicines agencies; clinical microbiologists; attending physicians; healthcare facility managers and procurement officers; environmental monitoring specialists and environmental protection agencies; hygiene companies; and, of course, patients and their carers. The AMiCI consortium is addressing this challenging these diversities of viewpoints through a series of consultation events and targeted transfer of personnel between industry and academic groups, strategically chosen to deal with the most pressing topics arising from those consultations, and development of coating capable of demonstrably reducing HCAI.

Conclusions: The AMiCI network focuses on scientific information essential for weighing the risks and benefits of antimicrobial surfaces in healthcare settings. Particular attention is drawn on nanomaterial-based antimicrobial surfaces in frequently-touched areas in healthcare settings and the potential of these nano-enabled coatings to induce (eco)toxicological hazard and antimicrobial resistance. Possibilities to minimize those risks, e.g. at the level of safe-by-design, are demonstrated.

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