



The naturally non-toxic material helps reduce the rate of infection after surgery, without the need for medicine | Photo source [Chalmers University of Technology, Sweden](#)

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## SKIN-LIKE BIOMATERIAL IS NATURALLY NON-TOXIC AND ANTIBACTERIAL



SCIENCE

### The new biomaterial could be used as urinary catheters and cartilage replacements, as well as for localised medicine applications

**Spotted:** A multi-disciplinary team from Sweden's Chalmers University of Technology have accidentally created a new biomaterial. Initially trying to produce a bone-replacement type of substance, the team found the alternative material to be excitingly adaptable. Through a nanostructure adjustment of the components that make up plexiglass, the researchers created a soft, flexible material that is naturally antibacterial.

The new biomaterial could be used as urinary catheters and cartilage replacements, as well as for localised medicine applications. Able to be used at a variety of temperatures, it can be 3D-printed as well as injected and will provide a range of applications for medical teams across a diversity of disciplines. The material can be treated with the same antimicrobial peptides the body's immune system naturally produces, and with scientists facing continued growth in antibiotic resistance, a natural non-toxic material helps reduce the rate of infection after surgery, without the need for medicines.

The finding has been patented by a start-up company called Amferia, set up by several of the researchers involved in the project. The company already owns another of the university team's products — an antibacterial wound patch. Producing flexible biomaterial for widespread use is now the business' main goal.

Other innovations spotted by Springwise that use skin as inspiration are [washable mesh sleeves](#) that replace heavy plaster casts, and [fake rhino horns](#) which are so realistic that they pass infrared analysis.

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25th March 2020

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### **Takeaway:**

In 2018, for the first time in history, persons aged 65 or above [outnumbered](#) children under five years of age globally. Science and technology must catch up with this rapidly ageing world population, and the United Nations identifies [inequalities](#) in access to health care, as well as in health outcomes for older people. Wellbeing for the full cycle of life requires broad, entrepreneurial thinking and collaborative approaches.