

Bioresorbable PHA

Researchers from Graz University of Technology (Graz, Austria), together with colleagues from the Medical University of Graz, Vienna University of Technology and the University of Natural Resources and Life Sciences, Vienna (Austria), have managed to develop absorbable implants to promote bone healing which are broken down by the body. In this way, painful multiple operations – especially in children – can be avoided in the future. The *BRIC - BioResorbable Implants for Children* project, funded by the Austrian Research Promotion Agency (FFG), was successfully completed at the end of August.

The goal was finally achieved after four years of research. Scientists from Graz University of Technology and their colleagues in Graz and Vienna finally concluded the development stage of the BRIC – Bio Resorbable Implants for Children project. Bioresorbable implants are implants that are resorbed by the body over time. In contrast to traditional implants, such as plates, screws or pins, which have to be surgically removed after a certain time, bioresorbable implants do not have to be surgically removed. The BRICs are to be used in children, who suffer particularly from each surgical intervention.

The two Graz University of Technology teams led by Martin Koller, responsible for the biotechnology part, and Franz Stelzer, whose team processed the biopolymers into implants, managed to develop special polyhydroxyalkanoates (PHA, microbial biopolyesters), which can be processed into implants. "The production is completely independent of fossil resources, so there are no negative effects on the body. The implant is produced by bacteria and can be absorbed by the human body after it has fulfilled its task," said Martin Koller. Alternative biopolymers, such as polylactic acid, in contrast to PHAs, lead to a hyperacidity of the organism and bring about chronic inflammation. PHAs, on the other hand, are high-grade materials whose biotechnological production is based on renewable raw materials. **MT**

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Charge for carrier bags in the UK

A five pence mandatory charge for single use carrier bags will be introduced in the UK from Autumn 2015, the Deputy Prime Minister, Nick Clegg, announced recently.

Last year, over seven billion carrier bags were issued by supermarkets in England. Far too many ended up in landfill or scattered around the streets and rivers killing wildlife and costing tax-payers millions of pounds to clean-up. Similar charges in Ireland, Wales and Switzerland have led to an 80% reduction in the number of carrier bags issued.

"Plastic carrier bags blight our towns and countryside," Nick Clegg said. "They take hundreds of years to degrade and can kill animals. This is not a new problem. We've waited too long for action. That's why I am drawing a line under the issue now. The charge will be implemented sensibly - small businesses will be exempt. We will discuss with retailers how the money raised should be spent but I call on them to follow the lead of industry in Wales and donate the proceeds to charity."

Environment Minister Lord de Mauley said: "We have all seen the effects of discarded plastic bags caught in trees and hedges or ending up in rivers where they harm animals. Introducing a small charge for plastic bags will make people think twice before throwing them away. Year on year, the number of bags issued by retailers has been rising. Without a charge, the problem could escalate out of control and see our environment and animals suffer enormously."

There are also plans to incentivise businesses for bringing biodegradable plastic bags to market in England. A new high standard for these products will be developed with manufactures. Provided the bags meet the required criteria, these could be exempt from a charge.

Expansion of plant in Croatia

EcoCortec® (Beli Manastir, Croatia), a European subsidiary of Cortec Corporation® (St. Paul, Minnesota, USA) recently announced the phase three expansion of its Beli Manastir, plant. This expansion will double their manufacturing and warehousing capacities with this € 3 million investment. The new production hall will contain three new high-tech extrusion lines, confectioning line of VpCI® papers, and warehouse for various Cortec® products.

EcoCortec specializes in manufacturing Cortec Corporation's innovative Vapor phase Corrosion Inhibitor (VpCI) films and offers customers complete converting, extruding, and printing capabilities. They manufacture certified biodegradable films and bags according to customer

specifications in terms of product size and performance, and are very flexible when it comes to order sizes and meeting special customer requests.

The plant is located on a 10,000 m² site which places this facility in an excellent geo-strategic location of Central Eastern Europe. This new expansion, with new state of the art equipment, is a confirmation of EcoCortec's leadership in the field of biodegradable films manufacturing in Europe; and proof that their innovative ideas, quality products, and professional team obtain excellent results and growth even in the times of economic crises.

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