

BPN (Biopolymer Network Limited), a biotech joint venture between AgResearch, Crop & Food Research and Scion, will unveil a surfboard made from Native New Zealand Flax today at a Science New Zealand display in the Wellington Airport.

BPN research is focused on creating products using renewable, natural materials or biomaterials instead of petrochemicals.

Scientists working for BPN created a harakeke or native New Zealand flax fibre to replace fibreglass in the surfboard, which is responsible for giving the board its strength and stiffness.



BPN CEO, Dr. Claire McGowan explains that BPN is focused on contributing to the development of a bio-based economy using natural, renewable resources like harakeke.

“BPN is looking to help set up New Zealand for a new economy based on sustainable products derived from biomaterials,” said Dr. McGowan.

“Biomaterials like the harakeke fibre used in the surfboard may ultimately be used for a range of products including boat cabinetry or automotive panels, or for kitchen or bathroom flooring and benchtops. Other uses for biomaterials include cosmetics, shampoos, skin creams, and replacements for polystyrene and packaging.”

The harakeke fibre surfboard was created to demonstrate that it is possible to make a water-resistant composite material using biomaterials, and to show real-life, everyday applications of scientific research.

“Synthetics have always had an advantage over biomaterials because they can get wet, so what the scientists were trying to do here was to crack the secret of a water-resistant biocomposite,” explains Scion scientist Dr. Roger Newman.

“The natural fibre is combined with synthetic resins and foams to make a lightweight, strong composite structure that gives the board water resistance and also a unique decorative effect, owing to the fact that harakeke fibres can be dyed,” he said. “An entirely biobased board could result from our work on biofoams and bioresins in the future.”

BPN works with the Foundation for Research, Science and Technology, Science New Zealand and a range of New Zealand export companies to develop the emerging sector of biomaterials. Science New Zealand Chief Executive, Anthony Scott says the harakeke surfboard is a model of science collaboration in New Zealand.

“Crown Research Institutes are applying advanced thinking and application to lead the way to improving New Zealand’s long-term sustainability. In this case, they combined their expertise in wood

and wool fibres to develop a new plant-based fibre, and to create a little red surfboard that's really green!' said Scott.

The harakeke fibre surfboard will be on display in the Wellington International Airport until the end of June.