got hold of some SeaCell fabric and made herself some work gloves. Finding herself cured after a few months of wearing the gloves, she started to put SeaCell into the clothes she makes.

Marketing director of smartfiber, Natalia Kohne, says pictures of mothers bursting into tears upon describing the difference SeaCell clothes were making to their long-suffering children had moved her very much, but had not surprised her. "I believe in our company," she explains, "and it doesn't surprise me that other people are starting to see that this is not a fairy tale, that you really can wear something that gives so much benefit."

Sports breakthrough

A more recent breakthrough in the world of sports clothing is a 50-50 SeaCell-merino combination on offer from New Zealand-based performance sports and activewear brand Orca, a triathlon gear specialist. This is the greatest proportion of SeaCell that any manufacturer has used so far and Orca has found the combination ideal for a next-to-skin collection called Bodyskn, part of its Restday range. It is promoting its inclusion of SeaCell by saying the fibre will deliver "active elements" to the skin whenever worn, over the whole lifetime of a garment. So, to add to the soft hand, thermo-regulating, anti-odour and durability qualities from merino, the company says its Bodyskn products will help stimulate blood flow and regenerate skin cells by releasing the carbohydrates, minerals, vitamins and amino acids present in seaweed. This works in beauty products; SeaCell is about using textiles as the medium rather than creams or lotions. Natalia Kohne confirms that the effects of SeaCell are long-lasting, withstanding up to 80 washes.

Natural PCM

Her company has been working on several other products, all involving the same process of applying patented value-add technology to Lyocell. Smartcel clima fibres have been winning approval in applications of textiles with climate-regulation properties. "People like comfort," Ms Kohne continues. "Temperature regulation is the most important benefit that smartcel clima brings because you really can feel it. At the same time, the additives are all natural, based on rapeseed oil, and it's very clean technology. She says tests have shown it's safe and comfortable to wear a jacket with wadding that is treated with smartcel clima for eight hours at -20ºC with only a baselayer garment underneath it.

Clothes turned into skincare

Another new idea involves adding zinc as an active ingredient to the Lyocell as an alternative method for turning sports apparel into skincare products. It's a development called smartcel sensitive, which can, according to the manufacturer, enhance the body's defences against infection as well as speed up the healing of inflammation and wounds on the skin. Woven into the fibre, zinc acts directly on the skin. The product has received Oeko-Tex standard 100 certification.



Equestrian sports have proved to be an interesting market for smartcel clima temperature regulation technology.

smartfiber

Ms Kohne explains: "We've done this by weaving zinc oxide into the textile. It's particularly good for underwear applications. You only need 5% of our fibre for the zinc to work well and you can mix it with almost anything, including wool. Wool doesn't work with silver because of the natural sulfides from the animal, but it does work with zinc. This is great for sport. People do sport because they want to be healthy, but then they go around wearing plastic.

More fresh thinking

This idea is attractive to many, so much so that some of the suggestions people across the industry are keen to try out using smartfiber products have not yet reached the ears of the German company. Professor Mirela Blaga, for example, of the textile, leather and industrial management faculty at the Technical University of Iasi in Romania has come up with the concept of using a combination of SeaCell and fabric woven from soybean fibre in footwear linings.

Speaking at the Autex conference in Lithuania in June, Professor Blaga said her research showed this combination was suitable for use in the linings of shoes. "We have to keep looking at this," she said, "and we will continue our research, but so far we can say that, yes, there are possibilities for additional comfort and extra antimicrobial and moisture management capabilities."

This comes as news to Natalia Kohne, but, again, not as a surprise. The opportunities for using her company's products are certain to grow wider, in her opinion.