

## Scaling up

Collagen peptides from fish scales are being used to provide moisture management and superior softness in a unique fibre that is attracting growing interest around the world. Jonathan Dyson reports.

UMORFIL, a functional fibre developed in Taiwan that combines both animal and botanic properties, is being targeted at the European and US markets in order to build on its success in Asia, where its range of performance benefits are proving increasingly attractive to both male and female consumers.

Launched in 2012 as part of its Beauty Fiber range by Camangi, a technology and textile company based in Taipei, UMORFIL's name is taken from the Latin

antex

Women's fashion created from UMORFIL.

'Umor' (moisture) and French 'Fil' (yarn). Janis Lee, sales and marketing director at Camangi, explained to Twist that UMORFIL offers both advanced moisture management and exceptional softness, thanks to its use

of collagen peptides from fish scales, which are bonded together with viscose fibre using biotechnology.

Collagen is a fibre-shaped protein that forms the main component of connective tissue in mammals, and plays a vital role in the elasticity and regeneration of skin, bones, muscles and joints in humans. As the body ages it loses its ability to make collagen, which is why skin sags and wrinkles, and joints become stiffer and less flexible.

Lee explained that supplementing the body with collagen protein is believed to provide it with the amino acids necessary to manufacture and support collagen in order to remain healthy and active. "According to medical literature, materials which contain an appropriate amount of collagen peptide amino acid can provide skin-friendly and

health care properties, making skin smooth and elastic and advancing blood circulation, providing a younger feel and appearance,"

Lee said that due to the presence of the amino acids from collagen peptides, UMORFIL is ideal for next-to-skin wear. "UMORFIL is friendly to the skin due to its moisturising function," she said. "It is also soft and cozy to wear - wearing UMORFIL feels like a second skin, and creates a memory of softness"

Tests have also proven UMORFIL to be anti-static, deodorising, antimicrobial and anti-UV. Lee added that it also provides thermoregulation, and is suitable for sensitive

A particularly significant advantage of UMORFIL is that the amino acids remain active even after the garment has been washed several times. Lee explained that this means UMORFIL's functional properties continue to perform for a longer period of time than many performance fibres



UMORFIL yarns, ingredients, and product tags.

and fabrics, whose functional properties are created through applying a coating technology rather than natural ingredients within the fibre itself.

She added that UMORFIL enhances the performance of viscose fibre. "UMORFIL is the first fibre that combines both animal (ocean collagen peptide) and botanic (viscose) features," she explained. "The unique bio-tech bonding procedure changes the DNA of viscose fibre. Through adding a new ingredient into the fibre, we change the properties of viscose and add more value to

Another attraction of UMORFIL is its environmental credentials. The fish scales used to extract the collagen peptides are recycled from the waste on Taiwan's coastline, while the viscose fibre used in UMORFIL is certified in line with OEKO-TEX Standard 100. All UMORFIL production takes place in Taiwan, and Lee added that because coating technology isn't required to provide the functional properties, the footprint of a textile product made from UMORFIL is further reduced. In addition, at the end of its life, a garment made from UMORFIL will decompose naturally in the earth due to the properties of the material.

UMORFIL can be blended with all types of both staple and filament fibres, including cotton, linen, silk, wool, Tencel, Modal, and a variety of synthetic fibres. Lee explained that the different properties mean it complements a wide range of fibres in different ways. "When mixed with polyester and nylon, UMORFIL can provide better moisture management, and when blended with wool and linen, it can enhance the softness of the fabric," she said. Lee added that UMORFIL will also soon launch a new filament UMORFIL fibre with a polyester base.

UMORFIL is suitable for both knitted and plain woven textile products, such as underwear, yoga wear, shirts, functional accessories and denim, as well as bedding sheets. Lee noted that since its launch three years ago, UMORFIL has been used in particular for denim, innerwear and bedding.

A major brand currently using UMORFIL is Bobson Jeans, a well-known denim label in Japan and Taiwan. Lee explained that as part of its spring/summer 2013 collection, Bobson used UMORFIL in a new collection called Zero-Friction, designed to meet the growing demand for comfortable denim that can be worn every day as part of an active lifestyle. Zero-Friction is positioned at a premium level, with the price 50% higher

than previous Bobson products.

"Zero-Friction has become popular among female consumers, with a good reputation for being soft and skin-friendly," said Lee. The collection has so far sold more than 150,000 items, and in 2014, Bobson launched a range of men's denim products using UMORFIL.

UMORFIL has also collaborated with several spinners and fabric manufacturers in Taiwan, such as Tai Yuen Textile, HerMin Textile and Tainan Spinning. Now UMORFIL is aggressively looking for overseas partners throughout the value chain.

UMORFIL works closely with each of its partners, which become a member of the official UMORFIL Club. Brands using UMORFIL can apply to the UMORFIL lab for a fabric certificate, and if successful are issued with a tag that can be used with the

## 'UMORFIL has featured in the Marks & Spencer Innovation Hub'

final product in store.

Lee added that UMORFIL is the only textile product that has been officially certified as Halal, meaning it can be used to meet the growing demand for Muslim fashion, such as in dishdasha or abaya fabric.

UMORFIL is well-established in Taiwan and Japan, and is now targeting expansion in the US and Europe. "From 2015, we have started to explore the US and European market, with marketing in New York, Milan, Paris and London," said Lee. "We are ready to collaborate with more customers in these

In 2015, UMORFIL exhibited at Texworld

New York, Premiere Vision Paris and Texworld Paris. where it featured within the Avantex exhibition, seminar and catwalk show. UMORFIL was also invited to participate in the Textifood exhibition within the France pavilion at Milano Expo 2015. Textifood, the latest in a series of Futurotextiles



Fish scales are used to extract collagen peptides.



A selection of UMORFIL fabrics.

exhibitions, presented fibres made from plant or animal sources, whose non-edible by-products are used to create textiles. UMORFIL collaborated with French designer Christine Phung, who created a dress produced using UMORFIL, inspired by the metallic sheen of flying fish.

Lee said that the international promotion of UMORFIL has benefited from the strong marketing experience of the Taiwan Textile Federation, which has helped promote the fibre in new global markets, as well as within Taiwan, where UMORFIL exhibits at the Taipei Innovative Textile Application Show (TITAS).

In 2015, UMORFIL won the silver medal at the Concours Lepine awards in Paris, which celebrate innovation in industry, while UMORFIL was also featured in the Marks & Spencer Innovation Hub in London, which highlights a range of sustainable high performance textiles.

UMORFIL will exhibit at booth 5R83 at Premiere Vision Paris, on February 16-18, 2016. 3