PRESS RELEASE

For immediate release

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RadiciGroup, partner in the AMICROTEX project for R&D of innovative anti-bacterial fabrics.

AMICROTEX, a project financed through POR FESR 2007-2013 (European funds for regional development), was initiated with the goal of developing an innovative range of anti-microbial textiles. These fabrics, which are designed to reduce bacterial contamination and nosocomial infections, will be certified through in vitro and clinical tests for use in the medical and surgical environment. AMICROTEX is a partnership initiative involving operators in the textile chain: yarn manufacturers (*RadiciGroup*), weavers (*Tiba Tricot Srl*, *Tessitura Lazzati SpA*, *Leucadia SpA*), garment manufacturers (*Alsco Italia Srl*), laundries, consulting companies (*Ecoconsult Srl*), scientific institutions and hospital centres (*Fondazione Centro San Raffaele*, *Gruppo Ospedaliero San Donato Foundation*), all of which are committed to making their contribution to the development and marketing of innovative anti-bacterial fabrics for use in the medical/health care field.

Antibacterial fabrics can potentially reduce the harmful effects of bacterial colonization and, therefore, can aid both the consumer (less risk of contamination and odour formation) and the fabric itself (less loss in strength and quality). Despite the fact that antimicrobial functionality has already been proven effective in in-vitro studies, no study has yet been carried out to determine how effective antibacterial fabrics can be in preventing hospital fabric contamination and, consequently, the development and spread of nosocomial infections. The AMICROTEX project aims at responding to the need for hospital infection containment by making available anti-bacterial fabrics of proven efficacy at an affordable cost for the heath-care market. These fabrics would be really innovative, given the fact that there are no products of a similar nature on the market as of today. AMICROTEX would thus open up a whole new, yet unexplored, market sector. Once the efficacy of these fabrics is proven, their use should become mandatory on the basis of simple medical and legal considerations.

RadiciGroup has decided to collaborate on the AMICROTEX project by supplying the yarn used to make the innovative anti-microbial fabrics. Two companies in the Group's Fibres Business Area, **Noyfil SpA** (Italy) and **Noyfil SA** (Switzerland), will be involved in the project. These leading European manufacturers of a wide range of polyester yarn will provide AMICROTEX with a very special product: **Starlight® feel***.

* ***Starlight® feel*** *is the new RadiciGroup brand name for the bacteriostatic yarn previously sold under the name* ***Nanofeel®****.*

This bacteriostatic yarn is manufactured using nanoparticle technology, whereby silver metal nanoparticles inside a silicon dioxide matrix are incorporated into the yarn during extrusion, and thus into the fabric when it is woven. Each silicon dioxide particle contains smaller silver metal nanoparticles located on the surface of the matrix and agglomerated in the entire silicon particle structure. The silver metal particles serve as a reservoir of silver ions (Ag+) that are the actual active agents against bacteria.

Silver nanoparticles, present both on the surface as well as inside the matrix, ensure the uniform distribution of nanoparticles in the yarn and provide both immediate and long-term bacteriostatic activity.

Incorporating nanotechnology into the yarn spinning process endows **Starlight® feel** polyester yarn with the following properties, which set it apart from traditional products.

- Higher colour fastness: no colour change thanks to colour pigment masters added during extrusion and the new-generation active ingredient, which is not subject to oxidation.
- Prevention of bad odours caused by microorganisms: since bacteria proliferation is inhibited even after repeated washing, the effect of the microorganisms is minimized.
- Long-term efficacy and wash resistance: silver ion nanoparticles ensure longer efficacy, far superior to the other products tested.
- Low environmental impact: no need for special yarn finishing processes downstream, which would require high consumption of water and energy.
- No deterioration of the yarn's mechanical properties: the incorporation of the active agent does not alter the mechanical properties of the fibre, nor does it hinder textile processing downstream in any way.

Starlight® feel bacteriostatic properties have been tested by performing a series of analyses assessing antimicrobial activity and long-term efficacy.

Antimicrobial efficacy and duration were tested according to the methods specified in ISO 20743/JIS 1902 (*Textiles and absorbent articles).* Articles were graded according to the system for assessment of antimicrobial efficacy devised by the German *Hohenstein Research Institute*.

The test results for antimicrobial efficacy place **Starlight® feel** in the "strong" class (the highest possible in the *Hohenstein Research Institute* system), even after repeated washing of the textile articles (up to 300 washes at 40°C).

As of today, the AMICROTEX project has produced the first few metres of antibacterial fabric, which have been tested for antibacterial efficacy at CENTRO TESSILE COTONIERO e ABBIGLIAMENTO SpA and ISTITUTO SAN RAFFAELE. These antibacterial efficacy tests proved positive. Testing of antimicrobial activity after repeated washing and industrial bleaching, as required for medical textile garments, are now in progress. The first hospital coats are also being made for testing in a hospital environment.

For more information on the AMICROTEX project, please visit: www.amicrotex.com

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RADICIGROUP_With 2010 consolidated sales of EUR 1.162 billion, RadiciGroup is one of Italy's leading chemicals multinationals, a diversified group specializing in chemicals, plastics and synthetic fibres. Among the Group's key strengths is the synergistic vertical integration of its polyamide production chain. RadiciGroup products are exported all over the world and are widely used in applications such as apparel, sports, furnishings, automotive, electrical/electronics, household appliances and consumer goods. **www.radicigroup.com.** RadiciGroup, with its Chemicals, Plastics and Synthetic Fibres Business Areas controlled by parent company Radici Partecipazioni SpA, is part of a larger industrial group that also includes textile machinery and energy businesses. **www.radici.com**

RADICIGROUP FIBRES_RadiciGroup is a leading European manufacturer of a vast range of yarn — from PA6 and PA66 to PET, BCF and high-tenacity, polyamide and polyolefin artificial grass yarn, acrylic, elastane — and green products, such as solution-dyed recycled PET, solution-dyed PLA, and solution-dyed staple fibre and BCF. Thanks to its comprehensive knowledge of the production process — from polymerization to spinning — and its expertise in innovative production and processing technologies, RadiciGroup can provide its customers with state-of-the-art, high value-added products that meet the most stringent requirements._ **www.radicigroup.com/fibres**

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