Award for turning wool into gold

August 31 2009

A Victoria University (New Zealand) scientist has won a prestigious innovation award for turning pure New Zealand Merino wool into gold.

Professor Jim Johnston was this week awarded one of five 2009 Bayer Innovators Awards for developing a world-first process in which nano-particles of pure gold and silver are embedded in New Zealand merino wool to create a luxury fibre that can be used in high-end fashion garments, textiles and carpets.

Professor Johnston, from the School of Chemical and Physical Sciences and the MacDiarmid Institute for Advanced Materials and Nanotechnology, received the top award in the Research and Innovation category, one of five categories in which the national award was made. Other categories included Information Communication Technology (ICT), Health and Science, Agriculture and Environment, and Design and Engineering.

"It is fantastic to be recognised and to have this degree of confidence shown in the cutting-edge research work that we're doing in our research group," says Professor Johnston who received his award from the Minister for Research, Science and Technology, Hon Dr Wayne Mapp.

Professor Johnston first developed the concept of using gold nano-particles as stable colourants for Merino wool in 2006 and since then the Research and Development has been progressed with his Victoria University PhD research students Kerstin Burridge and Fern Kelly, and recently with Dr Aaron Small. He has also been working with

AgResearch in Lincoln on some aspects of the product testing, and the World Gold Council, London has contributed important funding. Earlier this year, small quantities of gold and silver infused wool were spun into yarn and woven into scarves and made into carpet samples in the UK.

Professor Johnston says the technology has already attracted great interest from the New Zealand wool industry, Italian and UK designers and manufacturers, and estimates the process could become a commercial reality within 12 months. The group is working with New Zealand Trade and Enterprise and prominent New Zealand, UK and Italian companies to progress the technology and products to commercialisation.

"This is a very clever technology which does not require a huge, expensive plant and, from a New Zealand point of view, it proves that you don't have to be big but can open new high value opportunities through innovative science. With this technology, we are giving the New Zealand wool industry a boost by creating a unique added-value material with its own distinctive properties for high-end markets."

Source: Victoria University