

2 June 2016

The Directors of the two Centres of Research Excellence, the MacDiarmid Institute and the Dodd-Walls Centre, today both congratulated Associate Professor Cather Simpson on her company winning the AgTech section of the World Cup Tech Challenge in Silicon Valley. Associate Professor Simpson is a Principal Investigator with both Centres of Research Excellence.

The Director of the MacDiarmid Institute, Professor Thomas Nann, said he was very pleased to hear of the win and that it showed how pure research as supported by the MacDiarmid Institute and the Dodd-Walls Centre can lead to huge commercial potential.

“Engender’s win in the AgTech section is the first win in this World Cup Tech Challenge by an Australasian company. This is a significant achievement and huge news for the New Zealand technology start-up sector.”

The Director of the Dodd-Walls Centre, Professor David Hutchinson, said he was delighted with Cather's victory, especially as the entry was initiated through the DWC's engagement with SGForum earlier in the year.

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Welcoming the news earlier this week that Engender had secured \$4.5 million in investor funding, both directors said it was great to hear that Engender was a step closer to commercial reality and commended Associate Professor Cather Simpson on her work in both materials science and photonics.

MacDiarmid Institute for Advanced Materials and Nanotechnology Director Professor Thomas Nann said he was pleased to see MacDiarmid research again being used for commercial applications in the dairy industry.

“This technology gives dairy farmers a low cost way to control the composition of their herd, and provides much better outcomes than the existing technology.”

He said that Associate Professor Simpson’s work relates to the materials science focus of the MacDiarmid Institute.

“Associate Professor Simpson has developed an entirely new high-tech process to sort sperm into male and female. She does this by manipulating materials to create tiny channels in order to develop an entirely new ‘microfluidic’ device.”

Dodd-Walls Centre Director Professor David Hutchinson said that Associate Professor Simpson’s research also relates to the focus of the Dodd-Walls Centre for Photonic and Quantum Technologies.

“Once she has created these tiny channels, she uses light pulses to sort the sperm and direct them down the appropriate channels.”

Professor Nann said the win was a huge compliment for Associate Professor Simpson’s work in

both materials science and photonics and an example of two Centres of Research Excellence (CoREs) each contributing from different angles to enable a researcher to create a totally new technology.

“Associate Professor Simpson’s work in materials science and photonics are quite separate but it is in the coming together of these two aspects of her research, each supported by a different CoRE, that this achievement has been made.”

Professor Hutchinson said that the Dodd-Walls Centre, NZTE and Callaghan Innovation visited Silicon Valley to explore high-tech agriculture earlier this year.

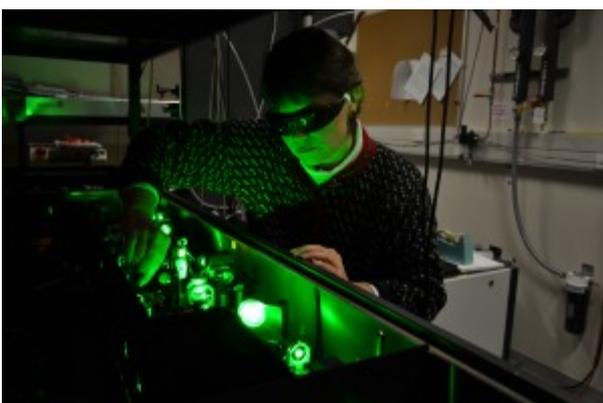
“The idea of entering the World Cup Tech Challenge was sparked through a conversation we had with representatives of the Silicon Valley Forum while visiting tech incubator Plug and Play.”

Associate Professor Simpson said that smart dairy farmers wanted to control the composition of their herd and at the top of their list is the sex of their offspring.

“There’s only one solution currently available for dairy sex selection and it’s expensive and doesn’t work very well, so farmers are frustrated. Engender is using novel microfluidics and laser photonics to sort sperm with X or Y chromosomes using the same physics that NASA uses to propel solar cells in space, but applied to single cells.”

She indicates that the business opportunities are huge. “The AI market for agriculture is US\$2.4 billion. Dairy is New Zealand’s biggest export earner and when Engender succeeds, it is projected to raise New Zealand’s GDP by 0.2%”

This doesn’t stop with dairy, either. “We’ve got our eyes on the pork industry next.”



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(from World Cup Tech Challenge website)

World Cup Tech Challenge is where the next generation of emerging tech companies from around the world meet to compete for the World Cup in Tech title. Startups accepted into the World Cup Tech Challenge are in a pre-global stage, meaning they have launched their products in their respective local markets and now ready for a global launch.