



VESKI Innovation Fellow

Dr Mark Shackleton

Research Project

Modelling human melanoma progression

Project Summary

Victoria and Australia have among the highest rates of melanoma in the world, and yet melanoma remains one of the greatest challenges to manage for all but the smallest of tumours.



During Dr Mark Shackleton's studies in the USA, he developed a highly efficient method of growing human melanoma tumours in mice in a way that may be similar to progression of this disease in humans.

Dr Shackleton and colleagues in the US discovered that a very high proportion of melanoma cells has the potential to spread disease within patients.

"This is really important. Previously it was thought that only a small fraction of cells was able to do that."

"Our results indicate that if we are going to design effective treatments, we need to keep in mind that we have to target a large number of cells within melanomas."

Dr Shackleton plans to establish his cutting edge technology in the Victorian cancer research community by founding the Melanoma Research Laboratory at Peter MacCallum Cancer Centre, in Melbourne.

Through this, his research program will identify fundamental mechanisms that cause melanomas to progress in patients, including key aspects of melanoma cell behaviour as well the genes that drive them.

"It has been wonderful to come back to my home town. This was always the place that I'd hoped to be able to continue my career. But it was also important to me that I was able to continue to do the work that I wanted to do. The position I have returned to at Peter Mac, along with the support of the VESKI Innovation Fellowship, has really enabled me to do that."

In association with the Melbourne Melanoma Project and his related role in caring for melanoma patients at Peter Mac as a medical oncologist, Dr Shackleton will also be ideally placed to translate discoveries made about human melanoma cell growth to the care of patients.

"I have been fortunate enough to have made some exciting breakthroughs in the area of melanoma biology during my work overseas in the US. The VESKI Fellowship really helps me to continue that work back here in Melbourne and my role as a doctor at Peter Mac ensures that I'm constantly reminded of the scientific questions that are most relevant to patients."

One hope for Dr Shackleton's work is to improve, through the use of models, the ability to predict melanoma behaviour in individual patients, and thereby optimize the selection of patients for promising new treatments.

Personal History

Dr Mark Shackleton is a Medical Oncologist and Group Leader of the Melanoma Research Laboratory at the Peter MacCallum Cancer Centre and commences his VESKI Innovation Fellowship in July 2010.

He spent the last 3-4 years based at the University of Michigan in a town called Ann Arbor, USA, developing expertise in melanoma cell biology.

Dr Shackleton was recently awarded a 2010 NHMRC Achievement Award, which is given to the highest-ranked applicant in Australia for the NHMRC's Career Development Award Level 1.

Dr Shackleton was born and raised in Melbourne. He is a medical graduate of Melbourne University and did his PhD at the Walter and Eliza Hall Institute of Medical Research.

His long-term hope was always to return to Australia and to a research facility like Peter Mac that could support his work. He describes Australia as a great place to do research and a great place to raise a family.

His wife Kylie also works in cancer research, based at Royal Melbourne Hospital.

They have two daughters, Ashleigh and Abigail.

Other VESKI Innovation Fellowship recipients:

Professor Andrew Holmes AM FRS FAA FTSE

Professor Marcus Pandy PhD

Dr Gareth Forde PhD

Dr Alyssa Barry PhD

Professor Michael Cowley PhD

Professor Sarah Hosking PhD

Associate Professor Ygal Haupt PhD

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VESKI Fellows in an ambassadorial role include:

Professor Adrienne Clarke AC

Professor Peter Doherty AC

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Dr Janine Kirk AM

For further information visit www.veski.org.au

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BACKGROUND INFORMATION

VESKI [Victorian Endowment for Science, Knowledge and Innovation] assists outstanding Australian scientists and leading innovators to undertake their research in Victoria and contribute to building an inspired community where innovation, ideas, and business provide benefits for Australia. VESKI is supported by the State Government of Victoria.

