



## VESKI Innovation Fellow

Associate Professor Ygal Haupt PhD

### Research Project

*Regulation of Tumour Suppression*

### Project Summary

The most important agent of the body for fighting cancer is the cellular protein p53. It plays a key role in responding to assaults that damage DNA. Upon activation, p53 acts to eliminate cells of cancerous potential by halting their growth. In more than 50% of all human cancers, it loses its anticancer properties through mutation. In an insidious manner, mutation of p53 not only robs it of its ability to prevent cancer, but also confers it with new cancer promoting capacity. To better treat cancer we need to understand how both normal p53 and mutant p53 are controlled. Detailed dissection of the regulatory mechanisms of both forms of p53 is allowing us to identify new potential therapeutic anticancer targets.



A key partner of both normal and mutant p53 is the promyelocytic protein, PML. We have recently identified an important mechanism by which PML levels are controlled. We intend to explore the implications of this regulation further and examine how it influences p53. Human cancers will be screened for the involvement of these proteins, to gain new insights into cancer onset.

We intend to identify small molecules that are able to control the levels of these anti-cancer agents through a high throughput screen and translate this knowledge to the clinic. The intended practical outcome of these studies is to aid cancer diagnosis and provide new anti-cancer drugs.

### Personal History

Assoc/Prof Haupt was born in Israel and has dual Australian and Israeli citizenship. He completed his PhD at the Walter and Eliza Hall Institute of Medical Research.

His wife Dr. Sue Haupt is a research scientist who is working in his laboratory at Peter MacCallum Cancer Centre where he will take up his VESKI Innovation Fellowship. Sue and her family are originally from Melbourne. They have three children together.

Assoc/Prof Haupt has published extensively in top journals for many years and authored some of the most highly cited journal articles on p53 over more than a decade. His high profile has seen him a frequent speaker at international conferences and meetings.

**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

Dr Ross Dickins PhD

**VESKI Fellows in an ambassadorial role include:**

Professor Adrienne Clarke AC

Professor Peter Doherty AC

Professor Alan Trounson

Mr Brian Jamieson

For further information visit [www.veski.org.au](http://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.

