Cancer Council Victoria

Research We Fund

Project:

Stopping fat metabolism to treat prostate cancer

Research team:

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Institution: University of Melbourne

Cancer type: Prostate

Years funded: 2019–2021

What is the project?

All cancer cells require fuel to survive and grow. Prostate cancer is reliant on fat (fatty acids) as a fuel source and tumours can get this fatty acid fuel from the blood or tumours can make their own via lipogenesis. We're aiming to determine whether blocking these processes slows the growth of tumours and whether this might be a new prostate cancer therapy.

What is the need?

Prostate cancer is the most diagnosed cancer in men, and the second leading cause of cancer death yet there still remain major gaps in the understanding and treatment of this disease.

Our recent work has demonstrated an important role for fatty acids in fuelling prostate cancer and that blocking fatty acid use reduces prostate cancer growth by up to 50%.

Prostate cancer is not the same in all men, and it is therefore essential to extend on our pilot data to determine which patients could benefit most from this therapy.

What are you trying to achieve?

We aim to understand in what subtypes of prostate cancer our fatty acid inhibition therapy is most effective. This information will help us to predict the patient sub-group in which dual targeting and /or combination therapies are most appropriate, which will lead to better treatment of prostate cancer.

Project timeline

Timeline	2019	2020	2021
Establish models and begin experiments assessing cancer progression and metabolism. Commence studies examining adjuvant therapies.			
Continue experiments in models.			
Complete studies, prepare manuscripts for submission to peer-reviewed journal.			

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