

Media release

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FECRI researchers showing results for Langerhans Cell Histiocytosis

- *Researchers at the Fiona Elsey Cancer Research Institute have identified of a new immune cells subset only seen in Langerhans cell histiocytosis (LCH) lesions.*
- LCH is a rare cancer like condition, mostly found in children, but can also appear in adults.
- *“Langerhans cell histiocytosis: A malignant myeloid neoplasm or disorder of immune regulation?”*

Dr Jenée Mitchell and Professor **George Kannourakis**

Journal: Acta Paediatrica June 2021

Researchers at the Fiona Elsey Cancer Research Institute have made progress in have identifying a new immune cells subset only seen in lesions associated with Langerhans Cell Histiocytosis (LCH) lesions.

This research has been recently recognised and published in international medical journal, *Acta Paediatrica*. It is hoped that these findings will lead to a better way to treat patients with LCH

LCH is a rare type of cancer, mostly found in children. It results in lesions forming in any organ, which can lead to organ dysfunction and permanent damage. The lesions, which are often found in the bone and skin, contain mutated immune cells called ‘LCH cells’ along with a range of other immune cells, which create an inflammatory environment and tissue damage.

Professor George Kannourakis, Honorary Director at FECRI, and an Oncologist and Haematologist with years of experience in treating and monitoring patients with LCH, has worked with researchers and clinicians around the world on this condition. The immunology-based research led by Professor Kannourakis at the Ballarat based Institute, has advanced the understanding of LCH and created promising leads on how we can target the immune system to combat this.

This published research undertaken by Dr Jenee Mitchell, reviews the groups research over 23 years, indicating the major role of immune cells and in particular T cells, in forming lesions in patients with LCH. This includes seminal discoveries, with the identification of a new immune cells subset only seen in LCH lesions

Institute Director at the Fiona Elsey Cancer Research Institute, Professor Kannourakis said that “Our research has major implications on how patients with LCH are treated. Therapies based on modulating the immune response in LCH targeting these cell subsets may prevent patients receiving intensive chemotherapy. “

Dr Jenee Mitchell completed her PhD on this condition and now continues her work as a Postdoctoral Research Fellow at the Institute. Dr Mitchell is now an expert in this niche field.

“This publication is a great example of the ground-breaking work that the team here at the Institute is doing into the immunology of cancer. Dr Mitchell is a great example of a researcher and woman pursuing an international career from a regional base. Our program is building great momentum and will continue to produce outcomes.” stated Professor Kannourakis.

FECRI currently has 8 PhD students from Federation University and 12 senior scientific staff. The program is community funded and the only cancer research Institute in regional Australia. Other key projects being conducted at the Institute are:

- Ovarian cancer
- Breast cancer
- Immunology
- Bowel cancer
- Chronic Lymphocytic Leukaemia
- Renal cancer

File photos are available from the Institute on request of Professor George Kannourakis and Dr Jenee Mitchell. Phone interviews available on request.

A video animation summary of the paper available via Youtube
<https://youtu.be/2QnkTb8BSzw>

All media enquiries, please contact Sarah Stapleton- Marketing and Fundraising Manager at FECRI on 0475 383 687 or sarah@fecri.org.au.

Please tag the Institute on all social media using @fionaelseycr