

| Fellowship title | Identifying new effective treatments for mesothelioma |
|----------------------|--|
| Fellow | Dr Willem Lesterhuis |
| Institution | The University of Western Australia |
| Research description | <p>This research focuses on mesothelioma, a fatal cancer of the lining of the lung, caused by exposure to asbestos. Western Australia has the highest incidence of this cancer in the world, because of the mining, transport and high use of asbestos here. Chemotherapy has some effect in a number of patients, but always short-lived. Immunotherapy, which boosts the immune system against cancer, appears promising with some patients showing a remarkable decrease in cancer burden, but unfortunately this does not happen very often. The outcome for people with mesothelioma has not improved in more than a decade.</p> <p>Firstly, the intention is to investigate whether chemotherapy and immunotherapy are more effective when they are used in combination. The idea has always been that chemotherapy has only harmful effects on the immune system, but research shows that some of these drugs may actually have beneficial effects. However, it's not known which chemotherapeutics can be best combined with immunotherapy. Here, the intention is to test all different classes of cancer chemotherapy for their ability to work in combination with immunotherapy, and study the mechanisms that determine the combined anti-cancer effect.</p> <p>Secondly, the intention is to investigate why some people with cancer who are treated with immunotherapy have a full regression of their cancer, while others have no response to the therapy at all. By investigating which cells and molecules are responsible for the anti-cancer effect, and by subsequently reinforcing those processes using already available drugs, The aim to increase the cure rate.</p> <p>Lastly, the intention is to investigate which cells and molecules are involved in the fast growth of mesothelioma, and to aim to identify drugs that stop this process.</p> <p>This will be conducted using mesothelioma animal models, and samples from mesothelioma patients. Since many of the drugs tested are already in clinical use, the findings can be rapidly translated into the clinic; for some of the drugs this may be within 5 years.</p> |
| Funding from CCWA | \$20,000 for 2018 (\$80,000 in total for 2017-2020) |
| Fully supported | In the name of Australia Post |