

Project title	Targeting chemotherapy resistance with anti-cancer drugs derived from spider venom
Recipient	Mr John Tanner
Institution	Curtin University
Research description	<p>Chemotherapy resistance is one of the main reasons for the failure of cancer treatment and it affects most types of cancer including skin, lung, bowel, prostate and breast. These cancers make up 50% of new cancer cases and 45% of cancer deaths in WA (WA Cancer statistics 2014).</p> <p>There is a need to find new types of anti-cancer drugs that can complement existing drugs and help us reduce the impact of chemotherapy resistance. An interesting source of chemical compounds to find such new drugs is the venom of spiders, which can kill cancer cells by perforating the cell membrane. This is very different to how other chemotherapy drugs work.</p> <p>This project uses computer simulations to study the cell membrane interactions of three spider venom compounds that have anti-cancer activities against melanoma, breast and prostate cancer cells. The results will help us understand how the binding to cell membrane relates to the compounds anti-cancer activity.</p>
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