Researchers study how cancer cells respond to Mcl-1-inhibitory BH3-mimetics

October 2 2014, by Vanessa Solomon

Associate Professor Guillaume Lessene is leading a collaborative research project with Servier to test a potential new treatment for cancer.

The European pharmaceutical company Servier has established a collaborative partnership with the Walter and Eliza Hall Institute to facilitate the development of new agents that could be effective in treating several types of cancer, particularly blood cancers.

A research team at the Walter and Eliza Hall Institute, led by Associate Professor Guillaume Lessene, will test in preclinical models how cancer cells respond to treatment with the Mcl-1-inhibitory BH3-mimetics discovered by the Servier - Vernalis collaboration.

The results will indicate whether this new class of research compounds could be useful in the future for treating people with cancer, and which types of cancer the compounds would be most effective against.

Mcl-1 is part of a closely related group of proteins known as the 'Bcl-2 family', which also includes proteins called Bcl-2 and Bcl-xL. Like Mcl-1, Bcl-2 and Bcl-xL are also important in extending the lifespan of certain types of cancer cells.

Associate Professor Guillaume Lessene, joint head of the ACRF Chemical Biology division at the Walter and Eliza Hall Institute, said Mcl-1 was a promising therapeutic target for many types of cancer. "There is a considerable body of experimental evidence pinpointing Mcl-1 as the Achilles' heel for many cancers, particularly blood cancers ," he said. "Walter and Eliza Hall Institute researchers made the initial discovery explaining how Bcl-2 played a role in cancer more than 20 years ago."

"Since then the institute has been at the forefront of research revealing how the Bcl-2 family promotes cancer development and treatment resistance. Our researchers have considerable experience in evaluating and developing potential anti-cancer agents, including BH3-mimetics."

Jean-Pierre Abastado, Head of the Oncology Pole and Olivier Geneste, Director of Apoptosis Programs at Servier said, "the discovery of research compounds inhibiting selectively Mcl-1 reflects a long term commitment to drug discovery research targeting the Bcl-2 family of inhibitors of apoptosis. We are convinced that our collaboration with the Walter and Eliza Hall Institute will generate critical data and ideas helping the development of our anti Mcl-1 drug candidates and that our joint research efforts will facilitate bringing a highly innovative treatment to cancer patients."