July 2018 (CHORD-18) Competition Awarded Chordoma Research Grants

Listed in alphabetical order

Yip, Stephen
BC Cancer Agency (Vancouver)

Immuno-modulation of chordoma via selective chemical inhibition of SWI/SNF complex - lessons from SMARCB1-loss tumours

Dr Stephen Yip is testing a new strategy to make immunotherapy more successful in treating chordomas. He previously discovered that a subtype of chordomas have unique genetic mutations that may make them more sensitive to immunotherapy drugs. Building on this knowledge, he and his team will now test a library of drugs to find ones that can mimic these mutations in other chordoma tumours in the hopes of making them more susceptible to immunotherapies. Chordomas are difficult to treat partly because they are often located next to vital body parts such as the brain and spinal cord. These tumours also have very few genetic mutations which allows them to hide from the immune system, which is why immunotherapy drugs have not been effective in treating chordomas.

Zadeh, Gelareh
Princess Margaret Cancer Centre - UHN

Analysis of the epigenomic landscape of chordoma

Dr Gelareh Zadeh will lead the largest biological study of chordoma ever undertaken. She and her team will use the biggest collection of chordoma tumour samples to date and state-of-the-art technology to study the biological features that could predict whether chordoma tumours are likely to come back after surgery. The researchers will also develop a software tool to predict whether a tumour will re-grow and respond to treatment. Chordoma is a rare, slow-growing but aggressive tumor with a 30-85% chance of re-growth and average survival of less than 6 years. The biological processes that drive chordoma development and re-growth are not well understood. The findings from this study will allow doctors to make personalized decisions for each patient. The researchers will also build on their knowledge of chordoma biology to identify and test new drug targets.