

WEHI (Walter and Eliza Hall Institute) - An innovative approach to tackling treatment resistance in medulloblastoma by using bioinformatics and machine learning

Medulloblastoma is a devastating brain cancer with few treatment options that largely affects children and young adults. It is the most common childhood brain cancer. Sadly, for patients that relapse following treatment, there are no effective therapies and relapse is lethal.

Researchers at the Walter and Eliza Hall Institute (WEHI) have developed a 'street map' of the genes involved in medulloblastoma. Like a map shows streets connecting places, the genetic map shows connections between different genes that contribute to more aggressive tumours. In this project, WEHI researchers will expand this genetic map to discover the genes and pathways that control tumour dormancy, drug resistance and relapse. Using computational biology techniques, WEHI researchers aim to discover how cells that are tolerant to existing therapies survive treatment and become resistant to treatment. With this knowledge, weak points in the survival process will be identified that could then be targeted by drugs and used in combination with existing effective therapies to prevent relapse and resistance.



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