

## Cage fighting" with neuroblastoma



*Dr Andrew Care: Macquarie University*  
Engineering a protein nanocage for targeted ionophoric-copper therapy

Neuroblastoma is the most common solid tumour in young children, yet no significant progress has been made over the last 10 years to improve survival, which for those diagnosed with high-risk neuroblastoma is less than 50 per cent. Unfortunately, current treatments also have severe lifelong side effects that diminish the emotional well-being and social integration of survivors.

There is hope. Recently, copper has been shown to drive neuroblastoma growth, proliferation and metastasis. Dr Care's project aims to engineer an innovative natural nanoparticle (called a 'Protein Nanocage') that can selectively target and disrupt copper levels inside neuroblastoma, causing tumour cell death. This nanotechnology is specifically designed to have high efficacy while minimising the harmful impacts treatment can have on healthy growing cells, improving patient outcomes.

This project received further support through Cancer Australia's [Priority-driven Collaborative Cancer Research Scheme](#).