The funding provided by the ANZSBT supported investigations into the role of calcium in mediating the altered phenotype of cryopreserved platelets. This was the first study to comprehensively analyse the impact of intracellular calcium chelation on cryopreserved platelet quality and function, providing critical information as to how cryopreserved platelets are altered by intracellular calcium. This research was published in the peer-reviewed journal Transfusion in 2020 and was subsequently included in a PhD dissertation.

Key research outcomes:

- We determined that calcium plays a crucial role in mediating cryopreservation-induced damage to frozen platelets
- The addition of a calcium chelator, BAPTA-AM, prior to freezing significantly reduces this damage without altering platelet function
- This study highlights calcium signalling as a potential target to improve the overall quality of cryopreserved platelet components