

The Project

The scholarship is funded by NSW Health and aims to build capacity within the NSW pharmaceutical and biological therapeutics sectors. The project involves collaboration with a pharmaceutical company and provides rich opportunities for training and research at their premises.

The project aims at finding new medicines for treatment of psychiatric and neurological disorders, including schizophrenia and Parkinson's disease. The overall goal is to speed up the medicine discovery process and increase the overall quality of identified drug molecules. The PhD candidate will specialise in machine learning and artificial intelligence and develop methods and build models that can be used to predict the pharmacological profile of new drug molecules from their chemical structure. Through the industry collaboration, the PhD candidate will have access to a unique collection of more than 100,000 chemical structures and associated high content biological data to train models.

The PhD project is supervised by experts from two academic groups in Australia - experts in artificial intelligence and in structure-based drug design, respectively, and from the Danish biotech company, Saniona, which is specialised in treatment of brain diseases by developing drugs that modulate ion channels.

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