THE UNIVERSITY OF SYDNEY

FACULTY OF SCIENCE

RESEARCH SUPPORT FUNDING SCHEMES REPORT FORM

DATE: 29 April 2024

NAME: **Xuyu Liu**

SCHOOL: School of Chemisty

SCHEME: **Selby Research Award**

PROJECT: A PROTAC-based Discovery Platform for Advancing Precision Medicine

REPORT: This capacity-building grant is crucial for maintaining a competitive advantage in the field of Chemical Protein Engineering. The Selby Research Award provided me a seed funding and enabled me to develop innovative lead compounds and establish long-term collaborations with clinical and biomedical experts such as Prof. Shaun Jackson, A/Prof. Arnold Ju, and Dr. Freda Passam. These partnerships have been pivotal in facilitating the clinical translation of my research findings in Sydney.

The Selby Research Award also opened opportunities to expand collaborations with global leaders. For instance, I have been invited by Prof. Yimon Aye, Prof. Lucio Barile, Dr Alessandro Gori, and Dr. Bhavesh Premdjee to present our discoveries at the École Polytechnique Fédérale de Lausanne (EPFL), Università Svizzera Italiana (USI), National Research Council of Italy, and the international pharmaceutical company Novo Nordisk, respectively. This international exposure is poised to yield new collaborations and high-impact results, suitable for publication and the development of new intellectual property, thereby enhancing my position for future research and commercialization grant applications, including ARC, NHMRC, and MRFF Fellowships and Project Grants.

Additionally, these collaborations fostered by the Selby Research Award are crucial in forming a multidisciplinary research team, equipped with critical expertise in imaging, microfluidics, bench-to-bedside translation, and commercialization.

Were there any research outcomes/outputs tied to this funding? Yes, my collaborations with Prof. Shaun Jackson, A/Prof. Arnold Ju, and Dr. Freda Passam are expected to generate new knowledge regarding the application of PROTAC technology for thrombosis treatment for the first time. Primary research data will be communicated through publications in high-quality journals such as Nature Chemistry, Nature Chemical Biology, Angewandte Chemie, Journal of the American Chemical Society, ACS Central Science, and Cell Chemical Biology, accompanied by extensive supporting information.