

Associate Professor Rohan Davis

Griffith Institute for Drug Discovery (GRIDD), Griffith University, Australia

TITLE: Chemical and Biological Investigations of Natural Products from Australian Flora and Fauna

ABSTRACT: Australia is one of 17 countries described as megadiverse. While these 17 megadiverse nations cover <10% of the global surface, they collectively support >70% of the Earth's biodiversity. Biodiversity typically equates to chemical diversity, an important element for those undertaking biodiscovery, thus the use of Australian-sourced biota for natural products drug discovery and chemical biology research has a strategic advantage, since this unique resource has only been superficially explored for new pharmaceutical agents and chemical probes. This presentation will: (i) give a brief overview of NatureBank - a unique biodiscovery platform based on natural product extracts and fractions derived from Australian plants, fungi and marine invertebrates; (ii) describe the identification and biology associated with several new natural products that have recently been discovered by the Davis group and their potential impact to the field of biodiscovery; and (iii) detail the design and synthesis of several drug-like screening libraries that were created using isolated natural product scaffolds and semi-synthetic methodology.

BIOSKETCH: Rohan Davis received his BSc (Hons) degree in chemistry and biochemistry from the University of Melbourne (1992). He subsequently worked as a research assistant on the AstraZeneca/Griffith University natural product drug discovery program (1994–1996) before undertaking PhD studies on marine invertebrate chemistry (1997–2000) under the supervision of Professors Ronald Quinn and Anthony Carroll. After 2 years of postdoctoral research at University of Utah with Professor Chris Ireland working on an anti-cancer drug discovery project, he returned to Griffith University in 2003 where he is currently an Associate Professor. His research involves all aspects of biodiscovery including the design and synthesis of unique screening libraries based on natural product scaffolds. Rohan has authored 166 publications, holds 2 patents, and for the past 5 years he has been part of an “Aussie-Kiwi” research team that publishes the well-known and highly-cited annual marine natural products review in *Natural Product Reports*. He has led both industry and academic projects that have resulted in the identification of >1000 natural products from plant, marine invertebrate and microbial sources. A/Prof. Davis is the Manager of NatureBank, which is a unique Australian biodiscovery resource located at Griffith University.

For more details on A/Prof. Davis' research please visit:

griffith.edu.au/institute-drug-discovery/unique-resources/naturebank

orcid.org/0000-0003-4291-7573

publons.com/researcher/2890317/rohan-a-davis/