Warwick Chemistry Departmental Seminar

Distinguished Professor Margaret Brimble DNZM, FRS

School of Chemical Sciences and the Maurice Wilkins Centre for Molecular Biodiscovery,
University of Auckland, New Zealand

Thursday 2 May

4.00 pm, Physics Lecture Theatre, Science Concourse

"Nature's Medicine Chest: Opportunities for Synthesis and Drug Discovery"

The synthesis of several bioactive natural products as "privileged scaffolds" for drug discovery will be described. This lecture will also showcase research on the synthesis of peptides, lipopeptides and glycopeptides as a platform for the discovery and development of peptide therapeutics as agents to treat neurogenetic disorders, infectious disease, cancer and diabetes. One example includes the peptidomimetic drug candidate trofinetide (NNZ2566) that has been granted orphan drug status and fast track designation by the US FDA and is currently being evaluated in a final phase III clinical trial undertaken by Neuren Pharmaceuticals (see: http://www.neurenpharma.com/IRM/content/default.aspx) to treat Rett Syndrome. The synthetic chemistry that resulted in the founding of the "spin-out" company SapVax with US$5.5 million investment from BioMotiv in Cleveland, Ohio to develop a suite of "first-in-class cancer vaccines" based on a novel self-adjuvanting peptide chemistry platform for immuno-oncology applications (see: https://sapvaxllc.com) will also be described.

Biography

Dame Margaret Brimble FRS *is the Director of Medicinal Chemistry and a Distinguished Professor at the University of Auckland where her research program focuses on the synthesis of bioactive natural products, antimicrobial peptides, cancer vaccines, glycopeptides, self-assembling peptides and peptidomimetics. She has published >475 papers, 70 reviews and is an inventor on >35 patents. In 2018 she was elected a Fellow of the Royal Society London, awarded the Royal Society of Chemistry George and Christine Sosnovsky Award in Cancer Therapy and conferred the Queens Honour Dame Companion of the New Zealand Order of Merit (DNZM). She won the 2016 Marsden Medal, the 2012 RSNZ Rutherford (NZ's top science prize), MacDiarmid and Hector Medals, the 2011 Royal Australian Chemical Institute Adrien Albert Award, the 2010 RSC Natural Products Award, the 2007 L'Oreal-UNESCO Women in Science laureate in Materials Science for Asia-Pacific, a 2015 IUPAC Distinguished Women in Chemistry/Chemical Engineering Award. She is Past-President of IUPAC Organic and Biomolecular Division III, an Associate Editor for Organic Letters, Past-President of the International Society of Heterocyclic Chemistry and Past-Chair of the Rutherford Foundation RSNZ. She discovered the first drug named "trofinetide" to treat Rett Syndrome and Fragile X syndrome that is in phase III clinical trials with Neuren Pharmaceuticals. Margaret also co-founded the spin-out company SapVax with US$6 million funding from BioMotiv USA to take self-adjuvanting cancer vaccines based on a novel chemistry platform, to clinical trial (see: https://sapvaxllc.com).*