You are invited to attend a seminar by Professor Andrea Yool

Professor and Head, Discipline of Physiology,
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Title
Therapeutic strategies based on pharmacological inhibition of aquaporins

Regulation of fluid levels in living organisms is a vital physiological process. Aquaporins (AQPs) belong to the family of major intrinsic proteins found across all forms of life. The 13 classes of mammalian AQPs are distributed widely and are found in the brain, eye, kidney, lung, and vascular system, and have been anticipated as therapeutic targets for controlling tissue swelling in response to trauma or disease including oedema and cancer. However, until recently, pharmacological agents other than toxic mercurials that can target AQPs have been lacking. Professor Yool and colleagues have developed a series of novel small-molecule compounds derived from diuretics that have been shown to target specific aquaporins 100-fold more potently than the parent compound bumetanide, with relatively little effect on salt transporters. In a parallel line of research, Professor Yool and colleagues are assessing herbal extracts for AQP-blocking activities that could explain some of the therapeutic effects of complementary medicine natural products. This work is uncovering a variety of novel drug-like pharmacological tools for AQPs with potential for applications in basic research and translation to human health.

Event details

Date: Tuesday 3 May 2011
Time: 4 pm
Venue: Lecture Theatre
Building 207, Level 3, Room 2
RMIT Bundoora campus west
Clements Drive (off Plenty Road)
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