

Ascent Scientific Licenses Novel Dynamin Toolkits from Children's Medical Research Institute and University of Newcastle

15th March, 2011, Bristol, UK, Sydney and Newcastle, Australia - Ascent Scientific together with Children's Medical Research Institute and The University of Newcastle today announced that they have entered into a license, supply and distribution agreement for a range of small molecule dynamin inhibitors for research – these are novel tools for investigating cellular processes. The agreement was facilitated by Bio-Link Australia, a life sciences commercialisation company.

Dynamin is a key protein involved in the cellular process of endocytosis, a process that involves the uptake and recycling of extracellular material by mammalian cells. Endocytic pathways are also utilised by viruses and toxins to gain entry into cells. Dynamin also participates in cell cycle progression and has shown to have critical roles in centrosome cohesion and cytokinesis.

Dynamin inhibitors have applications for researchers investigating cell signalling pathways, the cell cycle and cellular division and a range of medical conditions including cancer, infectious diseases including HIV and botulism and neurological conditions such as epilepsy.

The laboratories of Professor Adam McCluskey (University of Newcastle) and Professor Phillip Robinson (Children's Medical Research Institute) have developed the first set of rationally designed mechanism-based pharmacological inhibitors of dynamin. These inhibitors are a range of small molecule chemicals that stop endocytosis through inhibition of the GTPase dynamin, a key protein involved in the initiation and completion of endocytosis.

McCluskey and Robinson have developed a unique portfolio of multiple classes of these small molecule dynamin inhibitors. These molecular classes selectively target different domains of dynamin providing novel research tools for understanding endocytosis biology and its role in intracellular processes and disease.

Professor McCluskey said *We are very pleased that these dynamin inhibitors, which we designed and developed with the intent that they be utilized to further explore the chemical biology of dynamin and endocytosis biology, will now be available to researchers worldwide through Ascent Scientific.*

Professor Robinson remarked, *This palette of inhibitors provides a new means to regulate dynamin's activity by independent molecules and with more than one mechanism of action, allowing scientists to more definitively assign a particular biological function to dynamin. This strategy is more powerful than relying on the use of a sole inhibitor.*

Steve Roome PhD, Commercial Director for Ascent Scientific, comments *"These groundbreaking tools provide a means for scientists to inhibit dynamin activity, and modulate endocytosis. Potent cell-permeable in vitro and in cell based inhibitors, together with control molecules are available individually, and in kit form — providing researchers with a variety of novel ways to explore dynamin-mediated cellular processes".*

References:

- Hill et al (2010) *J.Med.Chem.* 53: 4094
- Joshi et al (2010) *Mol Cancer Thera* 9:1995
- Hill et al (2004) *Bioorg.Med.Chem.Lett.* 14: 3275
- Hill et al (2009) *J.Med.Chem.* 52: 3762
- Zhang et al. (2007) *New J. Chem* 32(1): 28



About Children's Medical Research Institute

Established in 1958 by Sir Lorimer Dods' goals to advance and enhance health care for the benefit

of the community. Today, CMRI is committed to excellence in biomedical science, engaging in fundamental research into the causes, prevention, early diagnosis and relief or cure of disease in children. CMRI scientists aim to understand the basic inner workings of our cells and to find better ways to prevent and treat diseases which rob children of their chance at a long and healthy life. Many diseases that affect children, such as cancer and epilepsy, have the same origins in adults. CMRI's website can be found at www.cmri.org.au



About University of Newcastle

Established in 1965, the University of Newcastle in regional NSW (according to the Lonely Planet's guide, the 9th most visit city on the planet) is the most research intensive university outside of an Australian capital city. Ranked ninth among Australia's universities for research, Newcastle's reputation is for innovation, excellence and research with impact.



About Bio-Link Australia

Bio-Link Australia Pty Ltd. is a life sciences commercialisation company which facilitates partnerships in the biopharma and diagnostic industries. Bio-Link has offices in Sydney and Melbourne, Australia, and clients including leading Australian and international medical research institutions and biotechnology companies. Further information about Bio-Link Australia can be found at www.bio-link.com.



About Ascent Scientific

Ascent Scientific offers a range of high quality receptor ligands and synthetic chemistry services at competitive prices. Our Low-Cost Ligands™ range of products includes receptor ligands and signaling tools for research in areas such as glutamate, GABA, ion channels, cannabinoids, opioids, 5-HT and more. We also offer cost-effective custom synthesis of a wide range of chemical entities, including organic molecules, fluorescent labels, standards and references, stable isotope labels, and receptor ligands.