

Cancer Therapeutics reveals new targeted drug

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Singapore: Cancer Therapeutics, an Australian company focused on translating cancer biology research into novel treatments for cancer, has validated the performance of a new targeted drug, CTx-294886, in combination with Avastin (bevacizumab - Genentech/Roche) in a preclinical model of breast cancer. The company has also developed a new high throughput screening (HTS) platform for the identification of small molecule inhibitors of protein ubiquitination, a key element in the essential cellular process of protein homeostasis, which is an exciting new target pathway for cancer treatment.

The anti-tumour response to CTx-0294886, a potent small molecule inhibitor of Focal Adhesion Kinase (FAK) and Vascular Endothelial Growth Factor Receptor 3 (VEGFR3), was compared with that of the company's first product CTx-0294945, a potent selective FAK inhibitor. CTx-0294886 in combination with Avastin, showed additional benefits to those previously demonstrated by CTx-294945. In both cases the small molecules in combination with Avastin inhibited angiogenesis, and increased the duration of tumour response in a model of basal breast cancer. In addition CTx-294886 in combination with Avastin also provided a highly statistically significant increase in the median survival time compared to the Avastin only group.

The new Ubiquitin HTS platform closely replicates cellular ubiquitination pathways, and provides a mechanism for HTS of multiple targets.

Ubiquitins are small regulatory proteins that attach to other target proteins allowing their destruction and recycling. This process requires a family of dedicated enzymes, such as ligases, for completion. E6AP, an E3 ligase, was selected to

validate the platform. E6AP ubiquitinates p53 and PML in human papilloma virus (HPV) related and other cancers. Both p53 and PML are well known suppressors of tumour growth so substances that inhibit E6AP would be expected to retard tumour growth in cancers such as cervical and head and neck cancers. The platform was able to identify several small molecules that are now undergoing further investigation.

Dr Warwick Tong, CEO of Cancer Therapeutics, said, "Having achieved preclinical validation for our first product candidate in conjunction with Avastin, we are delighted to be announcing that our second candidate is even more potent at prolonging and strengthening the effects of Avastin. We are excited to have two targeted molecules that will allow rational combinations with other therapies in the fight against cancer. We are now starting to reap the benefits of our highly collaborative approach to drug discovery, working hand in hand with some of the top research institutes in Australia and our international partner, Cancer Research Technology UK".

Dr Ian Street, chief scientific officer, Cancer Therapeutics, added, "The launch of our new Ubiquitin HTS platform opens up the potential to collaborate with industry by screening chemical libraries to address multiple targets in this new and exciting area of cancer biology. We are ready to begin discussions with other companies who would like to work with us to include their targets of interest and screen their chemical libraries using this platform."