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BENITEC ANNOUNCES PUBLICATION OF INDEPENDENT RESEARCH SUPPORTING TRIBETARNA™ FOR ADDITIONAL CANCER INDICATIONS

- Two research groups report importance of beta III-tubulin in pancreatic and kidney cancer
- Provides potential for Benitec's Tribetarna™ program to expand beyond lung cancer

Sydney Australia, January 8, 2015: Benitec Biopharma Limited (ASX: BLT, OTC:BTEBY) is pleased to advise that two peer-reviewed scientific papers were published recently that expand the range of cancers that express significant levels of beta III-tubulin, the gene targeted and silenced by Benitec's Tribetarna™ therapeutic. Researchers from the University of New South Wales (UNSW) in Sydney and the University Medical Center in Hamburg, Germany, independently published findings that associate the presence of beta III-tubulin with pancreatic cancer and renal cell cancer, respectively. Though preliminary, these new findings further support beta III-tubulin as an important target for difficult-to-treat cancers, and potentially open the door for Benitec to pursue additional indications with Tribetarna™ beyond its current development for non-small cell lung cancer.

Dr Peter French, CEO and Managing Director of Benitec Biopharma, commented, "It is pleasing to see that Benitec's target gene for non-small cell lung cancer is being implicated in an ever-widening range of solid cancers. This means that by merely changing the delivery agent, we should be able to improve the treatment for a broad range of cancer sufferers by using the same ddRNAi construct to target beta III-tubulin."

The UNSW researchers, who published their findings in the journal *Oncotarget*, found that beta III-tubulin is highly expressed in pancreatic cancer cells and tissue, and that silencing beta III-tubulin expression using RNA interference inhibited the growth and tumorigenic potential of pancreatic cancer cells. Silencing beta III-tubulin using ddRNAi in an *in vivo* orthotopic model of human pancreatic cancer also significantly reduced the tumor volume and the incidence of metastases (spreading of cancer cells to other organs)[1]. Professor Maria Kavallaris, a co-author on the paper, carried out the initial pre-clinical studies on Benitec's Tribetarna™ program.

Findings from researchers at the University Medical Center in Hamburg were published in the *World Journal of Urology*[2]. They reported that beta III-tubulin was increased in most forms of renal cell cancer (RCC), which accounts for 90% of all kidney cancers. In

[1] McCarroll JA, Sharbeen G, Liu J, Youkhana J, Goldstein D, McCarthy N, Limbri LF, Dischl D, Ceyhan GO, Erkan M, Johns AL, Biankin AV, Kavallaris M, Phillips PA. **Beta III tubulin: A novel mediator of chemoresistance and metastases in pancreatic cancer.** *Oncotarget*. 2014 Dec 10.

[2] Quaas A, Rahvar A, Burdelski C, Koop C, Eichelberg C, Rink M, Dahlem R, Schlomm T, Tsourlakis MC, Simon R, Minner S, Sauter G, Steurer S. **Beta III tubulin overexpression is linked to aggressive tumor features and shortened survival in clear cell renal cell carcinoma.** *World J Urol,* 2014 Dec 21.

clear cell RCC (which the American Cancer Society estimates as ~70% of RCC), the presence of beta III-tubulin was significantly associated with advanced disease stage, metastases, and shortened overall survival.

Furthermore they stated, "Our finding that high TUBB3 [i.e. beta III-tubulin] immuno-staining was significantly associated with unfavorable tumor phenotype and shortened survival in clear cell cancers fits well with data available from other cancer types. High levels of TUBB3 have already been linked to adverse phenotype and poor prognosis in various cancer types, including breast, lung, colon, ovarian, prostate, and several neurological cancers."

About Tribetarna™

Tribetarna™ is a ddRNAi-based therapeutic, designed to overcome chemotherapy resistance in cancers by silencing the beta III-tubulin gene. Delivered intravenously, the Tribetarna™ construct targets the TUBB3 gene at three separate sites. As such, it acts as a "triple therapy" even though it is a monotherapy, and minimises the ability of the cancer cells to escape the therapy. Pre-clinical *in vitro* and *in vivo* studies have demonstrated very high levels of silencing of TUBB3 in non-small cell lung cancer (NSCLC) cells, and, in combination with chemotherapy, can induce a doubling in overall survival. Benitec is currently undertaking preclinical IND enabling studies with a China-based CRO, Pharmaron, with the aim of conducting a clinical trial in Europe and other countries on using Tribetarna™ as an adjunctive treatment in combination with chemotherapeutic agents.

For further information regarding Benitec and its activities, please contact the persons below, or visit the Benitec website at www.benitec.com.

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About Benitec Biopharma Limited:

Benitec Biopharma Limited is an ASX-listed biotechnology company (ASX:BLT; OTC:BTEBY) which has developed a patented gene silencing technology called ddRNAi or 'expressed RNAi'. ddRNAi has the potential to produce 'single-shot' treatments and even cures for a range of chronic and life-threatening human conditions. Based in Sydney, Australia with labs in Hayward CA (USA) and collaborators and licensees around the world, the company is developing ddRNAi-based therapeutics for diseases including hepatitis C and B, drug resistant lung cancer and wet age-related macular degeneration. Benitec has also licensed ddRNAi to other biopharmaceutical companies for human therapeutic applications including HIV/AIDS, Huntington's Disease, cancer, chronic neuropathic pain and retinitis pigmentosa. For more information visit www.benitec.com.