

## ASX/Media Release

### Initial results from Lung Cancer Collaboration published in *Cancer Research*

#### Benitec's DNA-directed RNAi technology suppresses BIII-tubulin in a human lung cancer model

**16 June 2010, Melbourne, Australia:** The Directors of Benitec Limited (ASX:BLT) are pleased to announce the publication of a paper in the prestigious scientific journal *Cancer Research* by Associate Professor Maria Kavallaris from Children's Cancer Institute Australia for Medical Research (CCIA) and the University of New South Wales (UNSW), relating to the association between beta tubulin and chemotherapy resistance in cancers.

The authors reported that the BIII-tubulin protein has a key role in the pathobiology and aggressiveness of human lung cancer by influencing drug sensitivity, tumor incidence and progression. Of significance for Benitec, the researchers demonstrated in an animal model of human lung cancer, that suppressing BIII-tubulin using Benitec's technology of DNA-directed RNAi significantly increased the sensitivity of the cancer to standard chemotherapy drugs, including DNA-damaging agents. Furthermore, they found that suppressing BIII-tubulin decreased the incidence and progression of lung cancer independently of chemotherapy drugs.

Peter French, CEO, Benitec said "The authors concluded that the results they gained using the technology of DNA-directed RNA interference, for which Benitec has worldwide rights for human therapeutics, directed to BIII-tubulin in non-small cell lung cancer, *'have direct clinical relevance and raise the possibility that future therapeutic strategies aimed at specifically blocking BIII-tubulin activity may have the dual advantage of suppressing lung cancer growth while enhancing the chemosensitivity of the tumour cells'.*"

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#### **Background on Publication & Study**

In October 2009 Benitec Ltd announced a collaboration with Associate Professor Maria Kavallaris for the development of a DNA-directed RNAi therapeutic for lung cancer.

The paper is entitled "BIII-Tubulin is a multifunctional protein involved in drug sensitivity and tumorigenesis in non-small cell lung cancer" by Kavallaris and her CCIA co-workers Joshua McCarroll, Pei Pei Gan and Marjorie Liu, was published in *Cancer Research* online on 15 June 2010

Lung cancer is the leading form of cancer worldwide in terms of incidence and mortality. Non-small cell lung cancer (NSCLC) accounts for more than 80% of all lung cancers. BIII-tubulin is a microtubule-associated protein that is significantly increased in a range of cancer cells, including non-small cell lung cancer cells. First line therapy for NSCLC includes a combination of a tubulin-binding agent (TBA) (taxanes) and DNA-damaging agents (platinums - cisplatin or carboplatin). The prognosis for patients with advanced NSCLC however remains dismal as the tumours rapidly become resistant to these drugs. Upregulation of the microtubule associated protein BIII-tubulin is associated with clinical resistance to these drugs, which is what makes the Benitec- CCIA approach so promising.

### **About Benitec**

Benitec is an Australian biotechnology company focused on licensing its extensive intellectual property portfolio and developing therapeutics to treat serious diseases using its proprietary ddRNAi technology. For additional information, please visit [www.benitec.com](http://www.benitec.com).

### **About Children's Cancer Institute Australia for Medical Research**

Children's Cancer Institute Australia for Medical Research is the only independent medical research institute in Australia devoted to research into the causes, better treatments, prevention and cure of childhood cancer. Our vision is to save the lives of all children with cancer and eliminate their suffering. Founded in 1976 by a dedicated group of parents and doctors who wanted to do something more in the fight against children's cancer, CCIA opened its first laboratory in 1984. The Institute, located at the Lowy Cancer Research Centre at UNSW, now employs over 160 staff and students, including more than 110 scientists. Research at CCIA comprises a multifaceted approach to improving the outcome of childhood cancer sufferers. Our research programs focus on translational research aimed at defining and achieving improved treatment and survival rates for children with cancer.

CCIA is affiliated with the University of New South Wales (UNSW) and Sydney Children's Hospital.