



## ASX/Media Release

### **Benitec's Gene Silencing Technology Used by Johns Hopkins' Scientists in the Development of a Treatment for Radio-Resistant Prostate Cancer**

**31 May 2011, Melbourne, Australia:** Benitec Ltd (ASX:BLT), a world leader in RNA-based gene silencing for human therapeutics, today welcomed the publication of research by scientists at the Johns Hopkins University School of Medicine, in Baltimore, Maryland, USA, who demonstrated the potential of Benitec's gene silencing technology to provide effective human therapeutics for prostate cancer. Their results were published this month in the prestigious international scientific journal *The Journal of Clinical Investigation*\*.

The independent researchers in the US used a form of Benitec's DNA-directed RNA interference technology (ddRNAi) as a key component of their therapeutic molecule in preclinical studies both *in vitro* and *in vivo*. A short hairpin RNA (shRNA) molecule which silences a key repair gene was combined with a molecule which targets prostate cancer cells, resulting in the prostate cancer cells being unable to survive after treatment with radiotherapy.

"An estimated 1 in 6 men will be diagnosed with prostate cancer...The risk of recurrence is...approximately 50% for men with locally advanced disease, a condition that is primarily managed by radiation therapy. Thus, new technologies that improve the therapeutic index of radiation therapy for local disease have the opportunity to significantly affect the morbidity and mortality of prostate cancer," the researchers state in their paper.

The researchers concluded, "This targeted treatment markedly enhanced the benefits of radiation therapy in both cellular and tumor models...."

Encouragingly they also point out that the shRNAs used in this prostate cancer study could also be useful in many other radiotherapy-resistant cancers.

Benitec's own R&D programs in the areas of drug-resistant lung cancer, chronic cancer-associated pain and hepatitis B are aimed at demonstrating the efficacy and safety of the technology which is capable of silencing any gene(s) associated with a serious life threatening human disease or medical condition.

Dr Peter French, CEO of Benitec said, "Whilst this study is still at an early stage, it is very pleasing to see the power and the potential of Benitec's ddRNAi technology being demonstrated by independent researchers around the world to develop potential new therapies for the treatment of serious human diseases such as cancer. Benitec looks forward to partnering our patented technology with major pharmaceutical companies to facilitate bringing ddRNAi-based therapeutics to the market for the benefit of patients suffering from a range of disease conditions".

**\*Reference:**

Ni X, et al, *J Clin Invest*. 2011 May 9. pii: 45109. doi: 10.1172/JCI45109

Prostate-targeted radiosensitization via aptamer-shRNA chimeras in human tumor xenografts.

The article is available at: <http://www.jci.org/articles/view/45109>

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## About Benitec [www.benitec.com](http://www.benitec.com)

Benitec Limited is developing new novel treatments for chronic and life-threatening conditions based on a transformational technology, DNA-directed RNA interference (ddRNAi) - sometimes called expressed RNAi. The technology's potential to address unmet medical needs and, potentially, to cure disease results from its demonstrated ability to permanently silence genes which cause the condition.

Benitec now either owns or exclusively licences from CSIRO more than 40 granted or allowed patents in the field of RNA interference for human therapeutic applications. Patents have been granted in key territories such as the USA, the UK, Japan, Europe, Canada and Australia. In addition, Benitec has almost 50 patent applications pending for which it is the owner or exclusive licensee from CSIRO, and has further intellectual property under development as a result of its pipeline program.

Benitec trades on the Australian stock exchange under the symbol "BLT". The Company was founded in 1997 and has been publicly held since 2001. The Company aims to deliver a range of novel ddRNAi-based therapeutics to the clinic in partnership with the pharmaceutical industry. In-house it is pursuing a focused R&D strategy in infectious diseases, cancer and chronic cancer-associated pain, as well as programs with licensees that have advanced to pre-clinical and/or clinical trials.