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Nucleonics Challenges Validity of Benitec's Australian Patent

HORSHAM, PA (September 7, 2004): Nucleonics, Inc., a biotechnology company focused on the development of novel expressed RNA interference-based (eiRNA) therapeutics, announced today that it has filed with The Commissioner of Patents in Australia a Request for Re-Examination of Benitec and Commonwealth Scientific and Industrial Research Organisation's (CSIRO) Australian Patent Number 743316, entitled "Control of Gene Expression." The Request cites 24 prior art publications showing that the patent claims are invalid because they lack novelty and do not involve an inventive step. Nucleonics also believes that the claims are ambiguous and lack adequate support in the specification.

In March 2004, Benitec filed an infringement suit in the United States against Nucleonics and others, citing its US issued patent Number 6,573,099. In addition, Benitec has filed an opposition in Australia to the grant of a patent for the seminal invention in RNA interference, the Fire/Mello Patent, while failing to cite this important earlier work in its own applications around the world. Benitec and CSIRO, independently, are also opposing the grant of a patent in Australia for an invention entitled "Gene Silencing" by Syngenta Limited.

"Nucleonics believes the Benitec intellectual property portfolio is fatally flawed, not only in Australia, but in the United States and elsewhere as well," said Robert Towarnicki, Nucleonics' chief executive officer. "We intend to vigorously defend our right to continue to develop needed therapeutics for chronic viral diseases such as Hepatitis B and Hepatitis C around the world."

About Expressed Interfering RNA (eiRNA)
Post-transcriptional gene silencing, also known as RNA interference or RNAi, is a phenomenon in which genes are silenced in a sequence-specific manner through targeted mRNA (messenger RNA) degradation. Researchers believe RNAi may offer potential as a novel way to silence genes involved in disease, including genes encoded by viruses such as Hepatitis B, Hepatitis C and HIV, as well as genes involved in the establishment of inflammatory diseases and cancer.

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Nucleonics is licensed under the Fire/Mello RNAi technology and employs an expressed interfering RNA (eiRNA) approach, whereby scientists insert plasmid DNA coding for relevant double-stranded RNA (dsRNA) into targeted cells, letting the cells produce and deliver specific dsRNA sequences. Cellular mechanisms then cleave the dsRNA into specifically encoded siRNAs (short interfering RNA), which silence the targeted genes. Nucleonics' researchers have shown the ability of long or short dsRNA strands produced in this way to stably silence genes, including Hepatitis B and HIV, in relevant cell lines. Moreover, they have silenced multiple genes, as well as HBV replication, in adult mice without triggering an interferon response. The plasmid DNA approach used by Nucleonics for expression of dsRNA has demonstrated human safety in over 500 patients to date, as part of research in the field of DNA-based vaccines. Nucleonics is initially directing its technology to the development of eiRNA therapeutics for Hepatitis B virus and Hepatitis C virus infections.

About Nucleonics, Inc.
Nucleonics, founded in January 2001, is an emerging biotechnology company focused on the development of novel RNA interference-based therapeutics for viral and other diseases. Privately owned Nucleonics is headquartered in Horsham, Pennsylvania.

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