



Press Release

Next Generation RNAi Technology Discovered by AiRNA Pharmaceuticals and Boston Biomedical Published in *Nature Biotechnology*

The new 15bp aiRNA has superior gene silencing properties than the standard 19-21bp siRNA

NORWOOD, Mass, [December 3rd] -- AiRNA Pharmaceuticals, Inc., a RNAi therapeutics company based on next generation proprietary RNAi technologies, and Boston Biomedical, Inc., a biotechnology company developing novel therapies targeting cancer stem cells, today announced that asymmetrical interfering RNA (aiRNA), a new fundamental RNAi technology discovered by the companies, is being published in the December issue of *Nature Biotechnology*. The publication titled “Asymmetric RNA Duplexes Mediate RNA Interference in Mammalian Cells” highlights that the smaller 15 bp aiRNA can target a variety of genes with superior efficiency than the standard 19-21 bp siRNA. Furthermore, the new aiRNA structure can target genes more selectively with significantly less off-target effects than the standard 19-21 bp siRNA. These results establish aiRNA as a new and superior structure to silence genes.

“We are extremely excited by the discovery of the aiRNA technology given its broad and profound potential for medicine and its superior gene silencing properties” said Dr. Chiang J. Li, senior author of the article, Chairman and Chief Executive Officer of Boston Biomedical. “We believe this break-through will have far reaching benefits in the development of RNAi therapeutics, particularly with the technology’s potential ability to target any of the disease-causing genes.”

The new aiRNA technology centers on proprietary asymmetric structures which contrasts with the current paradigm that relies primarily on symmetric siRNA duplexes of 19-21 bp in length. The novel asymmetric structure is responsible for the gene silencing advantages of aiRNA, including reduced off-target effects, improved gene silencing efficiency, durability, and reduced synthesis cost.

The discovery of RNAi promises to revolutionize medicine due to its unlimited potential to treat genetic, epigenetic and infectious diseases. The siRNA-based approaches have

met with many challenges including non-specific off-target effects, synthesis cost, and limited efficacy for some genes. The new aiRNA technology may help to unleash the enormous potential of RNAi as a whole new class of therapeutics for human diseases.

The journal article can be accessed on-line at

<http://www.nature.com/nbt/journal/vaop/ncurrent/abs/nbt.1512.html>

About RNA Interference (RNAi)

RNAi (RNA interference) is a revolutionary discovery in biology with broad and profound implications for biology and medicine, and was awarded the 2006 Nobel Prize for Physiology/Medicine. RNAi is a natural cellular process and a catalytic mechanism of gene silencing. The discovery of RNAi promises to revolutionize medicine due to its unlimited potential to treat genetic, epigenetic, and infectious diseases. Such a natural process can, in theory, be harnessed to target any disease genes, including “undruggable” targets. Like antibody technology, RNAi may have the enormous potential to become an entirely new class of drugs for human medicine.

About AiRNA Pharmaceuticals, Inc. (AiRNA)

AiRNA Pharmaceuticals, Inc. is a private biotechnology company focused on developing novel human therapeutics based on RNAi. The company is dedicated to addressing unmet medical needs by leveraging its proprietary asymmetrical interfering RNA (aiRNA) technology (Nature Biotechnology, Volume 26, issue 12, 2008), proprietary small RNA technologies, and product development expertise. With its commanding position in fundamental intellectual property on the next generation RNAi technology and the knowhow, AiRNA Pharmaceuticals is well positioned to be a leader in RNAi medicine. <http://www.airnapharma.com>.

About Boston Biomedical, Inc. (BBI)

BBI is a private biotechnology company focused on discovering and developing novel cancer therapeutics targeting cancer stem cells. Cancer stem cells, which are resistant to current therapeutics, are highly tumorigenic initiators (seeds) of metastasis, and are believed to be fundamentally responsible for continued malignant growth. BBI's proprietary platform technology **TPIV**[®] enables the discovery of cancer stem cell pathways (**CSCP**). BBI's **TXBIO**[®] technology allows efficient discovery of molecules targeting specific pathways. BBI has built a leading pipeline targeting cancer stem cells of solid tumors. <http://www.bostonbiomedical.com>.

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