

AparnaBio Introduces *InVivoPlex*TM –TUMOR Nanoparticle RNAi Delivery System First Tumor Targeted Reagent For *in vivo* Gene Function Research using RNAi or Gene Delivery

May 14, 2010, Rockville, Maryland. Aparna Biosciences announced the introduction of *InVivoPlex*TM –TUMOR, the first tumor targeted nanoparticle reagent for *in vivo* translation of RNAi gene function research to mouse models of cancer. This innovative nanoparticle reagent system was presented at the 101st Annual Meeting of the American Association for Cancer Research (AACR), in Washington, DC, April 17-21, 2010.

The revolutionary capability of RNAi to selectively inhibit genes, recognized by a Nobel Prize, has led to explosive growth in understanding of tumor cell biology. To date RNAi based gene inhibition to identify potential new drug targets has largely involved *in vitro* experimentation. However, translation of this understanding into effective therapeutic strategies, validation of new targets for drug development, and highly selective therapeutics requires efficient *in vivo* delivery of RNAi agents in animal models. To address this need, AparnaBio has developed the *InVivoPlex*TM –TUMOR nanoparticle RNAi reagent. It targets RNAi activity *in vivo* to tumors via their leaky blood vessels and importantly minimizes RNAi activity at organs where effects can be toxic or obscure effects at the tumor. *InVivoPlex*TM –TUMOR accelerates translation of research, an important stage in development of better treatments for cancer patients. *InVivoPlex*TM –TUMOR nanoparticle reagents are for research use only, but are based on AparnaBio's NanoElectroPlexTM clinically viable technology platform that is also being used to develop vaccines, therapeutics and imaging agents. *InVivoPlex*TM –TUMOR development has been supported by funding from the National Institutes of Health and the State of Maryland, and funding for marketing and late stage product development by a Technology Growth Program grant from the Office of Economic Development, Montgomery County, Maryland.

About *InVivoPlex*TM :

AparnaBio's *InVivoPlex*TM product family is based on the NanoElectroPlexTM proprietary technology platform for localization of nucleic acid agents at pathological tissues or specific cells associated with disease. AparnaBio is developing a portfolio of reagents for tissue targeted *in vivo* delivery. *InVivoPlex*TM –TUMOR, the first product released in this family, selectively delivers RNAi agents to vascularized tumors in mouse models of cancer. Development is ongoing to generate additional *InVivoPlex*TM products that provide ligand specific cell targeting. These reagents facilitate tissue selective target validation in animal models of disease, as well as RNAi drug discovery, and provide a foundation for development of tissue targeted RNAi nanoparticle therapeutics.

About RNAi:

RNA interference (RNAi) is a revolutionary, robust and reproducible method to selectively inhibit genes, based on a natural mechanism for selective regulation of gene expression. RNAi reagents, short interfering RNA oligonucleotides (siRNA) and plasmid expressed hairpin RNA (shRNA and miRNA), have been adopted widely for research and have enabled a rapid growth in understanding of how genes are turned on and off in cells, and represent a new approach to drug discovery and development. RNAi offers the opportunity to

discover critical biochemical pathways and regulatory factors underlying the pathology of disease, new targets for development of specific and highly selective medicines. Translation of RNAi from cell culture to *in vivo* animal models of cancer enables an essential step for advancing these discoveries to new therapeutics, and lays a foundation for therapeutic development of RNAi agents as a whole new class of highly specific therapeutics.

About AparnaBio:

AparnaBio is a privately held, early stage biotech company located in Rockville, Maryland. The Company was founded in 2007 by Drs. Martin Woodle and Puthupparampil Scaria to develop advanced biomedical nanoparticles for *in vivo* research and tissue targeted therapeutics for treatment of cancer and other diseases. AparnaBio has established a proprietary technology platform, NanoElectroPlex™, clinically viable nanoparticles for tissue targeted delivery for RNAi, gene therapy, and other agents with pharmacological properties that limit their therapeutic application. AparnaBio has attracted support from federal, state, and local governmental agents, including grants from NCI, NIAID, State of Maryland TEDCO and DBED, and Montgomery County.

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