



Marina Biotech Announces that Licensee Mirna Therapeutics Reported Initiation of a Phase 1 Clinical Trial of Anticancer Drug MRX34

Novel SMARTICLES® technology used to deliver first-ever microRNA oncology compound in clinical development

BOTHELL, Wash., May 13, 2013 – Marina Biotech, Inc. (OTC Pink: MRNA), a leading nucleic acid-based drug discovery and development company, today announced that the Company’s licensee, Mirna Therapeutics, has reported that they have initiated a Phase 1 clinical study of MRX34, the first miRNA to advance into a human clinical trial for cancer. The Phase 1 trial is being conducted in patients with unresectable primary liver cancer or metastatic cancer with liver involvement.

“We are pleased to see the SMARTICLES delivery technology advance into another clinical development effort,” stated Richard Ho M.D., Ph.D., Executive Vice President, Research and Development at Marina Biotech. “With the initiation of this trial, Marina will be the only company with a delivery technology that is being used to deliver both single-stranded and double-stranded oligonucleotide therapeutics in clinical trials. We look forward to Mirna’s continued advancement of this program and the validation of our oligonucleotide delivery platform.”

The Phase 1 MRX34 study will follow a standard oncology study design, consisting of an initial dose-escalation phase followed by an enrichment phase, and is expected to enroll up to 48 patients in total. MRX34 is a miRNA “mimic” of tumor suppressor miR34 delivered using SMARTICLES. Mirna filed its first Investigational New Drug Application with the U.S. Food and Drug Administration for MRX34 earlier this year. Additional information on the study and enrollment can be found at clinicaltrials.gov (<http://clinicaltrials.gov/ct2/show/NCT01829971>). Mirna’s program is funded in part by a Cancer Prevention and Research Institute of Texas (CPRIT) Commercialization grant.

About Amphoteric Liposomes

Amphoteric liposomes define a novel class of liposomes, which are pH dependent charge-transitioning particles that provide for the delivery of a nucleic acid payload (e.g., siRNA, microRNA, antisense, decoy, etc.) to cells either by local or systemic administration. Amphoteric liposomes are designed to release their nucleic acid payload within the target cell where the nucleic acid can then engage a number of biological pathways, including the RNA interference pathway, and thereby exert a therapeutic effect. Currently, Marina Biotech amphoteric liposomal delivery technology includes non-DiLA2 based amphoteric liposomes (or SMARTICLES®) and DiLA2 based amphoteric liposomes.

About Marina Biotech, Inc.

Marina Biotech is a biotechnology company focused on the development and commercialization of oligonucleotide-based therapeutics utilizing multiple mechanisms of action including RNA interference (RNAi) and messenger RNA translational blocking. The Marina Biotech pipeline currently includes a clinical program in Familial Adenomatous Polyposis (a precancerous syndrome) and two preclinical programs -- in bladder cancer and myotonic dystrophy. Marina Biotech has entered into an agreement with both Mirna Therapeutics and ProNAi Therapeutics to license Marina Biotech's SMARTICLES® technology for the delivery of microRNA mimics and DNAi, respectively. In addition, Marina Biotech announced exclusive licensing agreements with Monsanto Company for Marina Biotech's delivery and chemistry technologies and with Girindus America for the supply of CRN-based oligonucleotides. Marina Biotech recently entered into non-exclusive agreements with Novartis Institutes for Biomedical Research and Tekmira Pharmaceuticals to license Marina Biotech's CRN and UNA nucleic acid modification chemistries, respectively. Marina Biotech's goal is to improve human health through the development of RNAi- and oligonucleotide-based compounds and drug delivery technologies that together provide superior therapeutic options for patients. Additional information about Marina Biotech is available at <http://www.marinabio.com>.

Forward-Looking Statements

Statements made in this news release may be forward-looking statements within the meaning of Federal Securities laws that are subject to certain risks and uncertainties and involve factors that may cause actual results to differ materially from those projected or suggested. Factors that could cause actual results to differ materially from those in forward-looking statements include, but are not limited to: (i) the ability of Marina Biotech to obtain additional funding in the near term; (ii) the ability of Marina Biotech to attract and/or maintain manufacturing, research, development and commercialization partners; (iii) the ability of Marina Biotech and/or a partner to successfully complete product research and development, including preclinical and clinical studies and commercialization; (iv) the ability of Marina Biotech and/or a partner to obtain required governmental approvals; and (v) the ability of Marina Biotech and/or a partner to develop and commercialize products prior to, and that can compete favorably with those of, competitors. Additional factors that could cause actual results to differ materially from those projected or suggested in any forward-looking statements are contained in Marina Biotech's most recent periodic reports on Form 10-K and Form 10-Q that are filed with the Securities and Exchange Commission. Marina Biotech assumes no obligation to update and supplement forward-looking statements because of subsequent events.

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