



## News Release

### **Marina Biotech Granted European Claims Covering Bacteria Mediated Gene Silencing**

**City of Industry, Calif. (January 3, 2017)** - Marina Biotech, Inc. (OTCQB: MRNA), a biopharmaceutical company focused on the development and commercialization of innovative therapeutics for disease intersections of arthritis, hypertension, and cancer, today announced that the European Patent Office intends to grant the company a patent for Bacteria Mediated Gene Silencing (EP 08768475.9, European Patent 2173875).

The granted claims relate to the company's tkRNAi technology being utilized in its CEQ508 program that is being developed to treat familial adenomatous polyposis (FAP). Marina's patent portfolio around tkRNAi and its CEQ508 program includes 14 issued patents worldwide. The claims are broad, and cover a prokaryotic vector comprising a promoter for generating siRNAs. Targets for the siRNA include beta-catenin. The vector can include an invasion factor, and a lysis regulator. An invasive bacterium including the vector is also encompassed. Marina Biotech will continue to expand its development of tkRNAi to cover other therapeutic targets as permitted by the granted patent- including Ras, APC, HER-2, MDR-1, MDR-2, FATP4, SGLUT-1, GLUT-2, GLUT-5, apobec-1, MTP, IL-6, IL-6R, IL-7, IL-12, IL-13, Ra-I, IL-18, p38/JNK MAP kinase, p65/NK-kB, CCL20, Claudin-2, Chitinase 3-like 1, apoA-IV, MHC class I and MHC class II.

"We are excited by the recent positive developments from the CEQ-508 program and looking forward to expand bacteria mediated gene silencing to other therapeutic areas protected by our patent portfolio, including oncology, diabetes, and hyperlipidemia", stated Dr. Vuong Trieu, Chairman of the Board at Marina Biotech. "This unique ability to orally deliver oligo therapeutics across different species and kingdoms will open up applications not possible with any other delivery platforms".

#### **About Marina Biotech, Inc.**

Marina Biotech is a biotechnology company focused on the development and commercialization of innovative therapeutics for disease intersections of arthritis, hypertension, and cancer. Our pipeline includes combination therapies of oligonucleotide-based therapeutics and small molecules. The Marina Biotech pipeline currently includes a clinical program in Familial Adenomatous Polyposis (a precancerous syndrome). By its merger with IthenaPharma, Marina Biotech recently acquired IT-102/IT-103- next generation celecoxib- which will be developed together with CEQ508 as a therapeutic enhancer for therapies against FAP and CRC. IT-102/IT-103 are also being developed for the treatment of combined arthritis/ hypertension and treatment of pain requiring high dose of celecoxib. Additional information about Marina Biotech is available at <http://www.marinabio.com>.

#### **Marina Biotech 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 successfully integrate its business operations with those of IthenaPharma; (ii) the ability of Marina Biotech to obtain funding to support its clinical development; (iii) the ability of Marina Biotech to attract and/or maintain manufacturing, research, development and commercialization partners; (iv) the ability of Marina Biotech and/or a partner to successfully complete product research and development, including preclinical and clinical studies and commercialization; (v) the ability of Marina Biotech and/or a partner to obtain required governmental approvals; and (vi) 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 filings with the Securities and Exchange Commission. Marina Biotech assumes no obligation to update or supplement forward-looking statements because of subsequent events.

For Marina inquires:  
Joseph Ramelli  
CEO  
Marina Biotech, Inc.  
(626) 964-5753