



September 14, 2017

## **Marrone Bio Innovations Debuts Highlight Video from the Great Lakes Restoration Information Fair**

### **Event Celebrated Major Milestone in Evaluating Zequanox® Molluscicide to Control Invasive Zebra and Quagga Mussels Under Large-Scale Open Water Conditions**

DAVIS, Calif., Sept. 14, 2017 (GLOBE NEWSWIRE) -- Marrone Bio Innovations, Inc. (NASDAQ:MBII) (MBI) a leading provider of bio-based pest management and plant health products for agriculture, turf, ornamental and water treatment markets, released a [new video](#) today that features highlights from the recent Great Lakes Restoration Initiative Information Fair. The focus of the event was to bring awareness to the organizations that work to combat non-native invasive species and to restore habitats for native species of plants, fish and animals in the Great Lakes and for recreational and fishery uses.

The event highlighted the completion of the [Round Lake Native Mussel Restoration Research Project](#), which included applications of Zequanox®, a reduced-risk biocontrol developed by Marrone Bio Innovations. Zequanox was developed to specifically target invasive zebra and quagga mussels. The objective of the Round Lake Native Mussel Restoration Research Project is to evaluate Zequanox as a restoration tool for the Great Lakes region.

The three-minute video features aerial footage showing Zequanox applications during the project, underwater footage of invasive Zebra and quagga mussels plus footage and comments from speakers at the Information Fair. To view the video visit <https://marronebioinnovations.com/molluscicide/zequanox/>.

#### **About the Round Lake Restoration Project**

As part of the the Round Lake Restoration Project, Zequanox was applied in open water to evaluate its effectiveness against zebra and quagga mussels, as well as its ability to protect native freshwater mussels and other native aquatic species against the invasive mussels with large scale, uncontained applications in lakes.

This project was undertaken in collaboration with the U.S. Geological Survey, the State of Michigan Natural Features Inventory, the Tip of the Mitt Watershed Council, Columbus State University, Bowling Green State University, the University of Wisconsin-Oshkosh and MBI. Funding for the Round Lake Restoration Project was provided by the Great Lakes Restoration Initiative (GLRI), which is administered through the U.S. Environmental Protection Agency (USEPA).

#### **Economic & Ecological Impact of Invasive Species**

- | Invasive zebra and quagga mussels, *Dreissena polymorpha* and *D. rostriformis bugensis*, respectively, have had severe economic and ecological impacts throughout the Great Lakes region.
- | In terms of economic impacts, the dreissenid invasion has created an estimated total economic impact of more than \$5 billion (Jenkins 2001; Pimental et al. 1999; IMO 2001), as a result of compromised infrastructure by clogged water intake pipes, damaged mechanical parts and increased corrosion rates of steel and concrete.
- | Ecological effects of the enormous changes in nutrient cycles and food webs brought on by these invasive mussels include:
  - Crashes of top predator fish populations;
  - Nuisance periphytic algae growth;
  - Conditions that support the growth and proliferation of blooms of *Microcystis*, which can, and have, shut down drinking water facilities in the Great Lakes area;
  - Recent Type E botulism outbreaks affecting migratory waterfowl populations.
- | One of the most significant and immediate effects of dreissenid invasion has been the decimation of native unionid mussel populations, particularly in the Great Lakes region (Ricciardi et al. 1996), placing many on the brink of extinction.

#### **Facts About Zequanox**

- | Zequanox is composed of dead cells from a naturally occurring strain of the bacteria *Pseudomonas fluorescens*. Zebra and quagga mussels perceive Zequanox as a non-threatening food source and consume it readily, along with

- their normal diet. Once ingested, Zequanox causes their digestive lining to deteriorate, resulting in death.
- | Mussel mortality begins within a couple of days after treatment and continues for several weeks following exposure to the product.
  - | *Pseudomonas fluorescens* (Pf) as a species have a long history of use in the production of food and pharmaceuticals. It is a species commonly used in the production of fermented food products, such as yogurt.
  - | The particular pf strain used to make Zequanox was isolated from river mud in New York on a body of water that had notably lower Zebra and quagga mussel populations when compared to surrounding bodies of water.
  - | Extensive research, both in the laboratory and the field, have demonstrated Zequanox's efficacy against invasive mussels, little risk to non-target species—including native unionid mussels and important game fish—and no lasting impacts to water quality.
  - | These studies have been completed by a number of institutions including the U.S. Geological Survey, the New York State Museum, the U.S. Bureau of Reclamation, Missouri State University, Southern Illinois University, as well as a variety of independent laboratories, among others.

To see additional video, photos of the project and media materials from the Information Fair, go to <https://www.dropbox.com/sh/poyfvm0j8zhr34c/AAClgqmzXHB0m27OR4O0n4yRa?dl=0>.

### **About the Information Fair**

The Information Fair was held on August 2, 2017 in Petosky, Michigan and featured speakers from organizations responsible for the Round Lake Native Mussel Restoration Research Project:

- | Dr. Peter Olson, Vice President of Academic Affairs and Student Success, North Central Michigan College
- | The Honorable Larry Romanelli, Ogema (Chairman), Little River Band of Ottawa Indians
- | Stella Kay, Vice Chairman, Little Traverse Bay Band of Odawa Indians
- | Mr. Jon W. Allan, Director, Office of the Great Lakes, Michigan Department of Environmental Quality
- | Dr. Seth Herbst, Aquatic Invasive Species Coordinator, Michigan Department of Natural Resources
- | Erika Jensen, Great Lakes Commission
- | Matt Clautcherty, Tip of the Mitt Watershed Council
- | Dr. Cindy Kolar, U.S. Geological Survey
- | Dr. Pamela Marrone, Founder and CEO of Marrone Bio Innovations

In addition to the speakers, participating organizations provided information tables to educate the public about their work to preserve the Great Lakes and surrounding natural resources.

### **About Marrone Bio Innovations**

#### ***Smart. Natural. Solutions.***

Marrone Bio Innovations, Inc. (NASDAQ:MBII) strives to lead the movement to a more sustainable world through the discovery, development and promotion of biological products for pest management and plant health. MBI's effective and environmentally responsible pest management solutions help customers operate more sustainably while uniquely improving plant health and increasing crop yields. MBI currently has six commercially available products (Regalia<sup>®</sup>, Grandevo<sup>®</sup>, Venerate<sup>®</sup>, Majestene<sup>®</sup>, Haven<sup>™</sup> and Zequanox<sup>®</sup>) as well as eight product candidates in various stages of the company's rapid development pipeline. MBI also distributes Bio-tam 2.0<sup>®</sup> for Isagro USA in the western U.S. and Jet-Ag<sup>®</sup> for Jet Harvest in most regions of the U.S.

Marrone Bio Innovations is dedicated to pioneering smart biopesticide solutions that support a better tomorrow for both farmers and consumers around the globe. For more information, please visit [www.marronebio.com](http://www.marronebio.com).

### **Marrone Bio Innovations Forward Looking Statements**

This press release contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, included in this press release regarding strategy, future operations and plans, including assumptions underlying such statements, are forward-looking statements, and should not be relied upon as representing MBI's views as of any subsequent date. Examples of such statements include statements regarding sales of the Company's products, the potential benefits of the Company's products, such as Zequanox and MBI's efforts with respect to product expansion. Such forward-looking statements are based on information available to the Company as of the date of this release and involve a number of risks and uncertainties, some beyond the Company's control, that could cause actual results to differ materially from those anticipated by these forward-looking statements, including consumer, regulatory and other factors affecting demand for the Company's products, any difficulty in marketing MBI's products in global markets, competition in the market for pest management products, lack of understanding of bio-based pest management products by customers and growers, and adverse decisions by regulatory agencies and other relevant third parties. Additional information that could lead to material changes in MBI's performance is contained in its filings with the SEC. MBI is under no obligation to, and expressly disclaims any responsibility to, update or alter forward-looking statements contained in this release, whether as a result of new information, future events or otherwise.

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