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## **Metabolix Launches Yield10 Bioscience to Develop and Commercialize Innovations in Crop Science**

### **Yield10 Working to Deploy a New R&D Paradigm to Enhance Global Food Security**

CAMBRIDGE, Mass., Sept. 17, 2015 (GLOBE NEWSWIRE) -- Metabolix, Inc. (NASDAQ:MBLX) announced today the launch of Yield10 Bioscience to develop and commercialize innovations in crop science. Yield10 is developing proprietary, breakthrough technologies to improve yield in major crops based on its "T3" transcriptome targeted metabolic engineering platform.

According to the Food and Agricultural Organization of the United Nations, the global population is projected to grow from 7 billion to 9 billion by 2050 driving the need for a 70% increase in food production. The projected rise in population, as well as growing pressure on water and land resources requires new agricultural solutions to increase yield in food, feed and energy crops worldwide.

"The launch of Yield10 Bioscience is a step in our ongoing efforts to refocus our crop science program and create a pathway for potential industry collaborators and investors to participate in the development and commercialization of these exciting technologies," said Joseph Shaulson, president and CEO of Metabolix. "Yield10 has assembled an impressive array of technologies and intellectual property, and has generated promising early data showing the potential of the platform to produce step changes in crop yield. We look forward to engaging with partners and advancing the technology in agriculturally significant crops to build value in Yield10, while providing innovative new solutions to enhance global food security."

Yield10 is leveraging the microbial diversity found in nature to increase carbon fixation and eliminate bottlenecks in plant carbon metabolism, and has developed a transcriptome targeted metabolic engineering systems approach to achieve step changes in crop yield.

Crop yield must ultimately address the twin challenges of enhancing basic carbon fixation via photosynthesis and optimizing the conversion of that fixed carbon into the food product of interest, typically the seed. From a metabolic engineering perspective this is analogous to optimizing the carbon conversion yield in microbial systems, an area where Metabolix is a world leader.

"Over the last 15 years Metabolix has secured significant government grants to develop innovative strategies to direct the flow of carbon in plant systems to produce PHA biopolymers and chemicals. Building on the core competencies and intellectual property developed through these efforts, we have shifted our focus to engineering novel gene systems in plants through a platform we refer to as 'Transcriptome Targeted Metabolic Engineering' or T3 to produce significant increases in crop yield," said Oliver Peoples, Chief Scientific Officer. "Through the development of technologies that allow us to increase the efficiency of CO<sub>2</sub> fixation through photosynthesis and its conversion into plant matter, we have shown encouraging yield improvements in camelina seed and switchgrass biomass production. We look forward to building on this research to enable step changes in seed production in critical food crops including soybean and canola."

Crops utilizing the C3 photosynthetic system such as soybean, canola, rice, wheat and potato account for more than 90% of global food production. C3 crops utilize the rubisco enzyme for CO<sub>2</sub> fixation in a system that is 50% less efficient than CO<sub>2</sub> fixation in C4 plants such as corn and sugarcane. Evolution has solved some of the limitations of the C3 system through the development of a unique cell structure in the green tissue of C4 plants. The global need for increased food production has focused resources on scientific approaches to convert C3 plants to the C4 photosynthetic system, which is extremely challenging. Metabolix recognized the critical importance of deploying metabolic engineering systems in C3 crops to leverage the enormous diversity of carbon conversion systems available from the microbial world. By combining this approach with proprietary advanced crop transcriptome network analysis, Yield10 created the T3 platform and is now working to deploy a series of proprietary gene systems to increase carbon capture and fixation in C3 plants. Early greenhouse and field trial data show a significant increase in seed yield in camelina, an industrial oil seed crop. Additional field trials are planned to confirm the initial results in camelina, and these gene systems are now being inserted into soybean, canola and rice.

Yield10 is also targeting yield improvement in crops utilizing the C4 photosynthetic system such as switchgrass, sugarcane, corn and sorghum. C4 crops are already much higher yielding and more drought tolerant than C3 crops. Yield10 has leveraged the transcriptome targeting module of its T3 platform to identify three novel global transcription factor (GTF) genes in the bioenergy crop switchgrass that result in increased photosynthesis, increased central metabolism and an overall increase in biomass yield. The Yield10 team has identified corresponding genes in both C3 and C4 food and feed crops, and is

currently testing these genes in sugarcane and exploring partnerships to advance the technology in corn.

The Yield10 technology platform has generated promising early results in camelina and switchgrass. While there is significant work ahead to transfer and validate these results and transfer the Yield10 technologies to agriculturally significant crops such as soybean, canola, corn, sugarcane, wheat, rice and others, the Yield10 team is excited about the potential for generating step changes in crop yield.

To access a slide deck providing an overview of Yield10 Bioscience, please visit <http://ir.metabolix.com/events.cfm>.

Investors should note that we announce material information to our investors using our website ([www.metabolix.com](http://www.metabolix.com)), SEC filings, press releases, public conference calls and webcasts. We use these channels, as well as social media, to communicate with our shareholders and the public about our company, our products and other matters. It is possible that the information we post on social media could be deemed to be material information. Therefore, we encourage investors, the media, and others interested in our company to review the information we post on the social media channels listed at the top of our website.

## About Metabolix

Metabolix, Inc. is an innovation-driven specialty materials company focused on delivering high- performance biopolymer solutions to customers in the plastics industry. Metabolix's Mirel<sup>®</sup> biopolymers, which are derived from renewable resources, are a family of biobased performance additives and specialty resins based on PHA (polyhydroxyalkanoates). Metabolix's proprietary biotechnology platform enables the creation of specialty biopolymers for use in a broad range of applications such as construction and packaging materials, as well as industrial, consumer and personal care products.

For more information, please visit [www.metabolix.com](http://www.metabolix.com). (MBLX-G)

## Safe Harbor for Forward-Looking Statements

This press release contains forward-looking statements which are made pursuant to the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. The forward-looking statements in this release do not constitute guarantees of future performance. Investors are cautioned that statements in this press release which are not strictly historical statements, including, without limitation, statements regarding expectations for engaging collaborators and investors, validating technical results, successfully deploying the T3 technology to achieve step changes in crop yield, transferring the technology to agriculturally significant crops, and building value in Yield10, constitute forward-looking statements. Such forward-looking statements are subject to a number of risks and uncertainties that could cause actual results to differ materially from those anticipated, including the risks and uncertainties detailed in Metabolix's filings with the Securities and Exchange Commission and risks relating to regulatory requirements applicable to the development and commercialization of genetically modified plants. Metabolix assumes no obligation to update any forward-looking information contained in this press release or with respect to the announcements described herein.

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