



## Yield10 Bioscience Researcher Dr. Frank Skraly to Present at the Plant Biology 2018 Conference

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WOBURN, Mass., July 17, 2018 (GLOBE NEWSWIRE) -- Yield10 Bioscience, Inc. (Nasdaq:YTEN), a Company developing new technologies to create step-change improvements in crop yield to enhance global food security, announced that Frank Skraly, Ph.D., Senior Director of Metabolic Engineering, is presenting today at the Plant Biology 2018 Conference, the annual meeting of the American Society of Plant Biologists (ASPB). In Dr. Skraly's presentation, titled "Transporter manipulation in food crops for increased yield," he will discuss key aspects of Yield10's technology platform highlighting two case studies describing the use of modeling carbon metabolism in crops to project crop yield gene targets and outcomes. The [Plant Biology 2018 Conference](#) is being held July 14-18 in Montreal, Canada.

Dr. Skraly will describe the use of advanced metabolic modeling techniques as a means to model plant metabolism to identify and evaluate potential yield targets. During his presentation, Dr. Skraly will discuss two case studies. The first case models the mechanism of action for the novel yield trait C3003. The second case models the yield effect of a complex multi-gene pathway based on a synthetic carbon fixation pathway. Research suggests that the models can be used to project the range of yield improvement that can be attained with a crop yield gene target and compares the modeling results with experimental data from greenhouse or field studies using Yield10's Camelina platform.

CCP1 is a gene found in certain algal species and is induced under low CO<sub>2</sub> conditions. Yield10's C3003 novel yield trait gene is based on CCP1. Yield10 has previously reported that expression of C3003 in Camelina has increased seed yield in a range from 7% to 23% under field conditions. The modeling outlined in the presentation explains why CCP1 may increase the efficiency of carbon fixation and result in yield improvements of approximately 20%. The modeling also suggests that CCP1 may benefit seed metabolism and identifies additional gene targets with the potential to further improve the yield impact of C3003. Yield10 is currently optimizing the deployment of C3003 and testing the trait in field tests of Camelina, canola and soybean.

Yield10 researchers engineered a complex multi-gene pathway into Camelina seeds to create an additional carbon fixation pathway. Modeling projects that the engineered pathway should increase the maximum theoretical seed yield in the engineered Camelina plants by 212%. Greenhouse results obtained for the pathway deployed in the best performing Camelina plants included increases in seed yield of 173%, 216% and 228%. These results were published in [Plant Cell Reports](#) in June 2018.

"Our modeling of new yield traits has been well correlated to the experimental results obtained under greenhouse conditions or in the field using our Camelina platform," said Dr. Skraly. "The modeling is providing us with insights for deploying new seed yield traits and trait combinations that may boost seed yield by a significant margin over seed available commercially today."

"Frank's presentation highlights our metabolic engineering approach and the unique perspective it can provide to develop new ways to tackle the challenge of crop yield," said Kristi Snell, Ph.D., Chief Science Officer of Yield10 Bioscience. "This research is extremely valuable in many respects, most importantly with identifying new gene targets that may increase seed yield in commercial row crops. This approach has produced a rich pipeline of targets for Yield10 and we look forward to identifying additional targets to boost crop yield."

A copy of [Dr. Skraly's slide deck](#) is available on the Yield10 Bioscience website.

### About Yield10 Bioscience

Yield10 Bioscience, Inc. is focused on developing new technologies to achieve step-change improvements in crop yield to enhance global food security. Yield10 has an extensive track record of innovation based around optimizing the flow of carbon in living systems. Yield10 is leveraging its technology platforms and unique knowledge base to design precise alterations to gene activity and the flow of carbon in plants to produce higher yields with lower inputs of land, water or fertilizer. Yield10 is advancing several yield traits it has developed in crops such as Camelina, canola, soybean and rice. Yield10 is headquartered in Woburn, MA and has an Oilseeds Center of Excellence in Saskatoon, Canada.

For more information about the company, please visit [www.yield10bio.com](http://www.yield10bio.com).

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### 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, including, without limitation, the use of technology, including metabolic modeling techniques, to successfully identify targets and develop systems to increase crop yield, the amounts by which crop yield may be increased, if at all, the predictability of modeling outcomes for yield traits, the results of field tests of C3003 with Camelina, canola and soybean and the predictive value of the Camelina platform, 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 Yield10 Bioscience's filings with the Securities and Exchange Commission. Yield10 assumes no obligation to update any forward-looking information contained in this press release or with respect to the matters described herein.

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