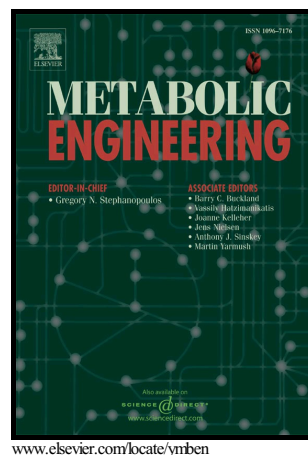


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An engineered combinatorial module of transcription factors boosts production of monoterpenoid indole alkaloids in *Catharanthus roseus*

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Author contributions: F.S., M.C., J.P. and A.G. designed experiments and analyses; F.S., M.C., J.P., A.V.M., R.V.B., R.D.C. and A.G. performed experiments and analyzed the results; and F.S., M.C., J.P. and A.G. wrote the manuscript.

ABSTRACT

To fend off microbial pathogens and herbivores, plants have evolved a wide range of defense strategies such as physical barriers, or the production of anti-digestive proteins or bioactive specialized metabolites. Accumulation of the latter compounds is often regulated by transcriptional activation of the biosynthesis pathway genes by the phytohormone jasmonate-isoleucine. Here, we used our recently developed flower petal transformation method in the medicinal plant *Catharanthus roseus* to shed light on the complex regulatory mechanisms steering the jasmonate-modulated biosynthesis of monoterpenoid indole alkaloids (MIAs), to

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