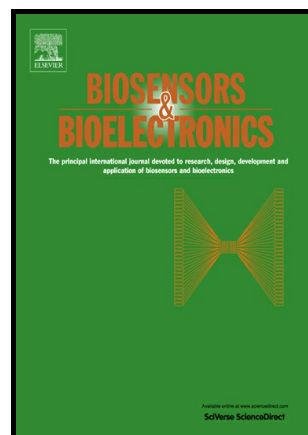


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Monitoring in vivo Metabolic Flux with a Designed Whole-cell Metabolite Biosensor of Shikimic Acid

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ABSTRACT

Knowledge of intracellular metabolite levels is important for the understanding of metabolic flux distributions. Whole-cell biosensors of key metabolites are ideal for the monitoring of carbon flow in important metabolic pathways, thus guiding metabolic engineering for microbial improvement. However, lack of biosensors for metabolites of interests has limited their applications. In this study, a genetically encoded whole-cell biosensor specifically responding to shikimic acid has been developed by screening a site-saturation mutagenesis library of the

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