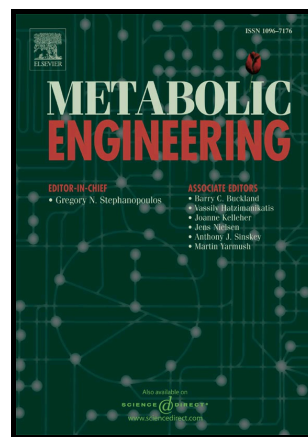


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An engineered oilseed crop produces oil enriched in two very long chain polyunsaturated fatty acids with potential health-promoting properties

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ABSTRACT

Very long chain polyunsaturated fatty acids (VLCPUFAs) are well recognized for their health benefits in humans and animals. Here we report that identification and characterization of a gene (*EhELO1*) encoding the first functional ELO type elongase (3-ketoacyl-CoA synthase) in higher plants that is involved in the biosynthesis of two VLCPUFAs docosadienoic acid (DDA, 22:2n-6) and docosatrienoic acid (DTA, 22:3n-3) that possess potential health-promoting properties. Functional analysis of the gene in yeast indicated that this novel enzyme could elongate a wide

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