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 Author: [ADVANCED](#) | Volume Page
 Keyword: |

[TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

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Inhibition of Lipid Accumulation in *Lipomyces* Yeast by 2(E),4(E)-Decadienoic Acid from Pepper

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Inhibitors of lipid accumulation in *Lipomyces starkeyi* were screened from various kinds of foods from the point of anti-obesity. An extract of black pepper showed inhibition of lipid accumulation with apparently weak repression of its growth. An active component was isolated from black pepper and was identified as 2(E),4(E)-decadienoic acid by instrumental analyses. Pepper contains about 20 mg/100 g of 2(E),4(E)-decadienoic acid. The minimum inhibitory concentrations of 2(E),4(E)-decadienoic acid against microbial growth ranged from 60 to 1000 µg/ml. The acid inhibited the growth of *L. starkeyi* at 100 µg/ml and the lipid accumulation at 12-50 µg/ml. The repression of lipid accumulation in *L. starkeyi* by 2(E),4(E)-decadienoic acid seemed to be due to the inhibition of glycerol-3-phosphate dehydrogenase and growth.

Keywords: [Lipomyces starkeyi](#), [lipid accumulation](#), [decadienoic acid](#), [glycerol-3-phosphate dehydrogenase](#)

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