学 位 論 文 の 要 旨

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主論文の題名

　Transcriptome analysis of anti-fatty liver action by Campari tomato

　using a zebrafish diet-induced obesity model

主論文の要旨

　High dietary intake of vegetable products is beneficial against obesity and its related diseases such as dyslipidemia, nonalcoholic fatty liver disease, and cancer.
Department of Molecular and Cellular Pharmacology ,Pharmacogenomics and Pharmacoinfomatics ,Mie University Graduate School of Medicine previously developed a diet-induced obesity model of zebrafish (DIO-zebrafish) that develops visceral adiposity, dyslipidemia, and liver steatosis.
Zebrafish is a polyphagous animal; thus we hypothesized that DIO-zebrafish could be used for transcriptome analysis of anti-obesity effects of vegetables.
Tomatoes ,pumpkins ,and egg plants exhibited different effects against obesity. We focused on "Campari" tomato, which suppressed increase of body weight, plasma TG, and lipid droplets in livers of DIO-zebrafish.
Campari tomato decreased *srebf1* mRNA by increase of *foxo1* gene expression, which may depend on high contents of β-carotene in this strain.
Campari tomato ameliorates diet-induced obesity, especially dyslipidemia and liver steatosis via downregulation of gene expression related to lipogenesis.
DIO-zebrafish can discriminate the anti-obesity effects of different strains of vegetables, and will become a powerful tool to assess outcomes and find novel mechanisms of anti-obesity effects of natural products.

（注）２，０００字以内にまとめて記入すること。
　　　英語２００ワード以内