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01

お客様の研究紹介 「うつ病における脳腸関連の役割」

Ingestion of *Lactobacillus intestinalis* and *Lactobacillus reuteri* causes depression- and anhedonia-like phenotypes in antibiotic-treated mice via the vagus nerve

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Abstract

Background

The brain-gut-microbiota axis plays a role in the pathogenesis of stress-related disorders such as depression. In this study, we examined the effects of fecal microbiota transplantation (FMT) in mice with antibiotic-treated microbiota depletion.

Methods

The fecal microbiota was obtained from mice subjected to chronic social defeat stress (CSDS) and control (no CSDS) mice. FMT from these two groups was performed to antibiotic-treated mice. 16S rRNA analysis was performed to examine the composition of gut microbiota. Furthermore, the effects of subdiaphragmatic vagotomy in depression-like phenotypes after ingestion of microbes were examined.

Results

The ingestion of fecal microbiota from CSDS-susceptible mice resulted in an anhedonia-like phenotype, higher plasma levels of interleukin-6 (IL-6), and decreased expression of synaptic proteins in the prefrontal cortex (PFC) in antibiotic-treated mice but not in water-treated mice. 16S rRNA analysis suggested that two microbes (*Lactobacillus intestinalis* and *Lactobacillus reuteri*) may be responsible for the anhedonia-like phenotype in antibiotic-treated mice after FMT. Ingestion of these two microbes for 14 days led to depression- and anhedonia-like phenotypes, higher plasma IL-6 levels, and decreased expression of synaptic proteins in the PFC of antibiotic-treated mice. Interestingly, subdiaphragmatic vagotomy significantly blocked the development of behavioral abnormalities, elevation of plasma IL-6 levels, and downregulation of synaptic proteins in the PFC after ingestion of these two microbes.

02

EiCOM フリームービングセット構成が新しくなりました

品名	コード	型式	単価	ELB-10	ELB-15
				ラット用セット	マウス用セット
バラランサー	600111	TLB-30	43,000	1	1
シーベル	800302	TCS2-23S	39,000	2	2
フック付チューブ	800130	WT-20T	8,000	1	
フックなしチューブ	800132	WT-20M	7,500		1
ジョイント付チューブ	809210	JT-10	2,500	2	2
首輪付きフック	800140	NF-10	5,000	1	
			合計	¥139,000	¥133,500

その他、ケージ&架台

ケージ: FC-30(ラット用アクリルケージ)
FC-25(マウス用アクリルケージ)
またはブラインドケージ
(BCシリーズ 複数種類あり)

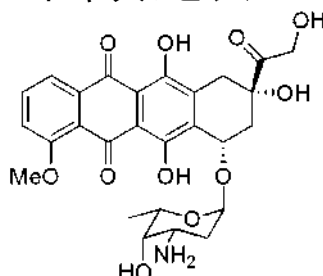
架台: K-50

03

ちょこっと出し情報

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- ・+650 mV vs Ag/AgCl