A227 Effect of herb of thyme (*Thymus vulgaris* L.) as feed additive in the rearing of piglets

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The essential oil of *Thymus vulgaris* L. is known to possess strong antimicrobial activity (1). Haemolytic pathogenic *E. coli* strains, frequently multiresistent, are often isolated from rectal swabs of weaners (2). The aim of the study was to test the antibacterial activity of thyme against *E. coli* strains. Weaners got 1% of herb of thyme (1.66% v/w essential oil with 41% *p*-cymene and 28% thymol) or flavophospholipol as feed additive or none of these substances three days before till 4 weeks after weaning. There were no significant differences concerning weight gain and feed efficacy. Rectal swabs of the weaners were collected in intervalls of 3 to 7 days. There were no significant differences of the bacteriologic findings (incidence of haemolytic *E. coli*, serotypes, antibiotic resistance). The oil of the fed thyme charge showed antibacterial activity (disk diffusion susceptibility testing, minimum inhibition and bactericidal concentration testing) against each isolated *E. coli* strain (O139, O147, O149).

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A228 Reduction of ethanol intake in alcohol-preferring AA-rats by desoxypeganine-HCl

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Considering the fact that more than 30% of the German population drinks too large amounts of alcohol regularly which causes as well somatic as psychic complaints, it would be of great prophylactic importance to find substances that reduce the voluntary alcohol intake in this endangered group.

Several years ago, it was observed by chance that comedication with the (acetyl)-cholinesterase inhibitor physostigmine during alcohol withdrawal reduced the desire for alcohol (1).

In our experiments we checked the cholinesterase inhibitor desoxypeganine-HCl (DOP), an alkaloid isolated from *Peganum harmala* L. (Zygophyllaceae) for such an activity. Effects on ethanol preference were tested in genetically alcohol preferring AA-rats (National Public Health Institute, Finland).

The female rats were tested in the two bottle choice paradigm with a 12 h/d period of free access to ethanol 10% and water. In untreated rats nearly 85% of the daily total fluid intake consisted of ethanol 10%; this effect still increased the older the rats got.

After acute oral application the drug caused a dose- dependent decrease of alcohol intake, the effect being maximal with 25% at a dose of 40 mg/kg. Because of the comparably short duration of the effect a continous application (14 d) with osmotic mini pumps was performed. During the first six days ethanol preference and ethanol intake were reduced markedly, after that no difference to the control animals was observed. This finding could be explained by an exponential decrease of DOP-release. Following subacute application of 20 mg/kg for 14 days by gavage the ethanol preference remained reduced significantly. Further studies will have to prove the efficacy of desoxypeganine-HCl in the prevention of alcohol induced diseases.

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