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Authors: Thomas Spranghers, Joris Michiels, Joachim Vrancx, Anneke Owyn, Mia Eeckhout, Patrick De Clercq, Stefaan De Smet



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Gut antimicrobial effects and nutritional value of black soldier fly (*Hermetia illucens* L.) prepupae for weaned piglets

Thomas Spranghers^{a,b}, Joris Michiels^c, Joachim Vrancx^a, Anneke Obyn^c, Mia Eeckhout^c, Patrick De Clercq^b, Stefaan De Smet^{a*}

¹ Department of Animal Production, Ghent University, Coupure links 653, B-9000 Gent, Belgium

² Department of Crop Protection, Ghent University, Coupure links 653, B-9000 Gent, Belgium

³ Department of Applied Biosciences, Ghent University, Valentin Vaerwyckweg 1, B-9000 Gent, Belgium

*Corresponding author. Tel.: +32 92649003, Fax: +32 926490999, E-mail address: Stefaan.DeSmet@ugent.be

Abstract

Prepupae of the black soldier fly (BSF) are a potential source of high value protein that could be incorporated in feed for monogastric farm animals. These prepupae are also rich in fat, with lauric acid (C12:0) as the predominant fatty acid, known for its antimicrobial effects on Gram positive bacteria. First, the effects of BSF fat on the porcine gut microbiota were assessed *in vitro* by simulating digestion in the upper small intestine of piglets. Different amounts of BSF fat were added to an incubation medium, which contained a synthetic diet, a phosphate buffer (pH 5) and a microbial inoculum from one donor piglet. The medium was incubated at 37 °C for 4 h. Using selective media, coliforms, D-streptococci, lactobacilli and

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