

Unravelling the disposition of the *Alternaria* mycotoxin tenuazonic acid: a toxicokinetic study in piglets

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Alternaria fungi can contaminate wheat, sorghum, barley and several fruits and vegetables. *Alternaria* fungi do not only contaminate crops in the field, but also cause spoilage during refrigerated transport and storage. *Alternaria* species can produce several mycotoxins, such as alternariol (AOH), alternariol monomethyl ether (AME) and tenuazonic acid (TeA). These secondary metabolites can be found in food and feed samples. Toxicokinetic studies are necessary to understand the disposition of these mycotoxins in humans and animals.

Firstly, a LC-MS/MS method was developed to quantitate AOH, AME and TeA in pig plasma. In short, sample clean-up consisted of a deproteinization step, followed by evaporation of the supernatant and resuspension of the dry residue in water/MeOH (80/20, v/v). A C18 column (Eclipse plus, Agilent) was used to separate the different mycotoxins. The mobile phases were MeOH and 0.1mM ammonium bicarbonate in water/MeOH (95/5, v/v). The limit of quantification was 5 ng/ml plasma for TeA and 2 ng/ml for AOH and AME. The limit of detection was 11.0, 10.7 and 33.7 pg/ml for TeA, AOH and AME, respectively.

Secondly, a toxicokinetic study was performed in 8 piglets. The piglets received 0.05 mg TeA/kg body weight via an oral bolus and an IV injection in a cross-over design. A wash-out period of one day was respected between the two administrations. The toxicokinetic parameters and absolute oral bioavailability will be presented at the Mytox happening.