Researchers develop novel nontargeted screening method for animal-derived food safety

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Animal-derived food is a major food type. Nontargeted screening of both veterinary drugs and their metabolites is important for comprehensive safety evaluation of animal-derived food.

Recently, a research group led by Prof. XU Guowang from the Dalian Institute of Chemical Physics (DICP) of the Chinese Academy of Sciences (CAS) developed a novel nontargeted screening method for risk substances in food.

Their study was published in *Food Chemistry* on August 21.

The researchers constructed an in-house mass spectra database containing 3,710 veterinary drugs and their metabolites, and summarized the fragmentation characteristics of parent drugs and drug metabolites. Then, they developed nontargeted screening method to discover known and unknown veterinary drugs and their metabolites in complex food matrices.

Moreover, they determined and identified four veterinary drugs and three drug metabolites in the egg samples with this novel nontargeted screening method, which demonstrated its potential in risk substance screening for food safety.

"This study provides an important method for the discovery of food risk

substances," said Prof. XU.

More information: Wenying Liang et al, Nontargeted screening method for veterinary drugs and their metabolites based on fragmentation characteristics from ultrahigh-performance liquid chromatography-high-resolution mass spectrometry, *Food Chemistry* (2021). DOI: 10.1016/j.foodchem.2021.130928