Dear Ms Amutova,

It is our pleasure to inform you that your presentation entitled 'Transfer of persistent organic pollutants in camel milk ' with abstract number 31086, that you have submitted for EAAP Annual Meeting 2019, Ghent, Belgium has been accepted by the Scientific Committee.

You are scheduled for session 64 "Camelids as emerging food producing species in our changing climate" that will be held on 29 August 2019 from 14:00 - 18:00. Your presentation is scheduled as a Poster presentation.

OASES - Abstract

Abstract # 31086

Transfer of persistent organic pollutants in camel milk

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Camels as well as other mammalians can transfer environmental pollutants to milk when they live in contaminated areas. Nevertheless, these animals run through large areas and can so ingest feed or water contaminated at very different levels by environmental contaminants as persistent organic pollutants (POPs). As camel milk consumption corresponds to approximately 7% of total milk (FAO, 2013), this pathway can become a real risk for human exposure. The aim of present work was to summarize existing knowledge about POP concentrations in milk of camels. The work is focused on Kazakhstan as all available data came from this country. Monitoring field studies on pooled individual milks showed concentrations of PCDD/Fs up to 1.36 and 1.33 pg TEQ g^{-1} fat respectively from 4 regions in 2011 and Mangistau region in 2015-2016. These studies reported maximal concentrations of DL-PCB of respectively 4,7 and 47 and concentrations of NDL-PCBs were reported at 6,3 and 44,6 ng g^{-1} fat. These maximal concentrations respected the European regulation (1259/2011/UE) for PCDD/Fs but can overpass thresholds for PCBs (DL and NDL). Huge variations between sampling points, even within the same region, were reported but no differences between Dromedaries and Bactrians. Analyses revealed also presence of pesticides (up to: 3,6 HCB, 20,4 HCH and 2,4 DDT ng g^{-1} fat) as well as PAHs (718 ng g^{-1} fat). By the way, a study in controlled conditions using a daily exposure of 1.3 µg of Aroclor 1254 PCBs kg^{-1} BW during 56 days reported that a subsequent 60-day depuration which decreased PCBs differently: congeners 101 (-10%), 138 (-47%), 153(-57%) and 180 (-68%). Existing data showed the POP transfer to camel milk resulting in quantifiable but tolerable levels of PCDD/Fs or OCPs. Nevertheless, PCB concentrations are sometimes elevated. Thereby consumption of polluted camel milk or products may pose health risks. Further research is needed to investigate the transfer rates and depuration of POPs in camels.