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The abstracts from XXXVIII Annual Meeting have been revised and evaluated for the cientific committee.

57

Chemical stability of veterinary drugs residues in feces: adverse environmental impact?

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The macrocyclic lactones (ML) are broad-spectrum antiparasitic drugs excreted in large concentrations as unchanged parent drugs in feces. The current work evaluated the comparative chemical stability of different ML drugs in feces from treated sheep and cattle exposed to environmental field conditions. Fecal depositions from sheep and cattle subcutaneously treated with different ML were kept in the field during different time periods (between 6 and 180 days). Drug fecal concentrations were measured by HPLC. The ML drugs showed a sustained chemical stability. Long persistence of fecal drug residues were observed in the feces exposed to field conditions. Although a rapid decrease in ML fecal concentrations were observed over the first 14 days (cattle) and 32 days (sheep) post-deposition, a slow chemical degradation accounting for the long persistence of the active parent molecules in the environment was registered. Doramectin was the ML compound recovered at the highest residual concentration in feces from both animal species. Even after 100 days of field exposure, doramectin concentrations were 308 (sheep) and 425 (cattle) ng/g dry faeces. The potential adverse effects of the fecal residual concentrations against non-target organisms are under evaluation in an Argentina-Slovenia bi-national collaborative project.