

To swallow or to spit? New medicines for llamas and alpacas

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Oral administration of drugs works best for llamas and alpacas. Credit: Mit freundlicher Genehmigung von news4vets

Llamas and alpacas are becoming increasingly popular in Europe and are highly appreciated as trekking animals and as sources of wool. Although they are robust, they occasionally fall ill but there are no authorized drugs for the species on the market. Researchers at the University of Veterinary Medicine Vienna (Vetmeduni Vienna) have developed an oral "paste" that can be mixed with drugs and used to treat camelids for a wide variety of diseases. A recent article in the *Journal of Veterinary Parasitology* reports a case of successful treatment.

South American camelids, especially llamas and alpacas, are very susceptible to infections caused by endoparasites. The so-called small [liver fluke](#) (*Dicrocoelium dendriticum*) is particularly problematic and infections with this parasite are frequently fatal. Moreover, camelids are prone to stress and together with their tendency to spit (especially when they do not like the taste of something) this very often results in underdosing if they are given medicine to swallow. Inadequate treatment of endoparasites leads to progression of the pathological changes and can be lethal for the [animals](#). Underdosing of antiparasitic drugs may also lead to the emergence of anthelmintic resistance.

A small volume with a high concentration

Two scientists from the Vetmeduni Vienna now report a solution. Agnes Dadak from the Institute of Pharmacology and Sonja Franz from the Clinic for Ruminants have jointly developed a palatable paste that the animals swallow willingly and that allows the administration of highly concentrated drugs in small volumes. Drugs that are already approved for use in other species but not available in a concentration appropriate for use in llamas and alpacas can be incorporated in the paste in the correct dose. To treat small liver fluke, the vets added the [drug](#) praziquantel to the paste to give a final dose of 50mg/kg body weight. This extremely high dose turns out to be exactly right for the successful treatment of the disease in camelids.

Swallowing is the best choice

Administering drugs orally to camelids has significant advantages. Topical treatment of the animals is generally ineffective because of their thick skin, which is not easily permeated by drugs. Furthermore, many active substances cannot be provided as injections due to their chemical characteristics. "Our paste seems to be extremely useful in treating the animals. We are now working on incorporating other important drugs for use against different diseases in llamas and alpacas," says Dadak.

A paste for the whole herd

Llamas and alpacas are normally kept in herds, so it makes sense to treat the entire stock if an infection with the small liver fluke is detected. "We are happy to make our experience and scientific knowledge of camelids available to people who keep these animals, as well as to veterinary surgeons. Our development provides a scientifically sound basis for ensuring the health of the animals," says Franz.

More information: Dadak, A. et al. Efficacy and safety of oral praziquantel against *Dicrocoelium dendriticum* in llamas, *Journal of Veterinary Parasitology*. [dx.doi.org/10.1016/j.vetpar.2013.06.016](https://doi.org/10.1016/j.vetpar.2013.06.016)

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