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### COLLECTION OF WOUND FLUIDS FROM HORSES USING MICRODIALYSIS

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**Aim:** To develop a microdialysis method for collection of fluid from horse wounds.

**Background:** Collection of sample material for wound healing research in experimental animals is commonly obtained through biopsies. Though, biopsy collection is an invasive procedure and consequently triggers an inflammatory response. Therefore, wounds should only be biopsied once to display the undisturbed, natural healing process. This necessitates the creation of a wound for every required collection time-point. To limit the number of wounds created on each experimental animal, a new method that allows repeated collection from wounds was sought.

**Methods:** Microdialysis is a minimally invasive method for sampling of compounds from the extracellular fluid, where a small probe is inserted into the target tissue and flux of solutes into the probe occurs by simple diffusion. The recovered dialysate reflects changes in the composition of the extracellular water phase. Sample collection can be continued for several hours.

**Results:** Microdialysis was well tolerated by the experimental animal subjects with no signs of discomfort related to the microdialysis procedure. Collection of sample material lasted three hours and was carried out with 11 samplings during a 28 day period. It was safely performed with reliable yield when collecting from vertically positioned experimental wounds in a standing, sedated horse.

**Conclusions:** Microdialysis allowed the collection of wound fluid samples for research purposes in a less invasive way than biopsies. This method also allowed repeated sampling from every wound and the obtained sample material was sufficient in amount for metabolite and protein analysis.