Narrative 7: Mammals as microbe farmers

While it is textbook knowledge that vertebrates use a gut microbiome for digestion (in particular, of plant cell walls aka 'fibre'), it is much less emphasized that these microbes serve as food, or prey, for mammals. In particular, there is a discrepancy between agricultural science (where microbial biomass contributions to the nutrition of ruminants are factored into diet evaluation regimes) and mammalogy, where this is hardly recognized.
Based on our work on digesta separation mechanisms (see narrative 3 'Digesta kinetics and separation mechanisms'), I emphasized this point mainly in lectures.

The relevance of these mechanism for microbial harvest in the digestive tract were summarized in

an invited review paper for Philosophical Transactions of the Royal Society B

Clauss et al. (**2023**) Teeth and the gastrointestinal tract in mammals: when 1 + 1 = 3. ***Phil Trans R Soc B*** 378:20220544

and also led to its prominent role as a so-far-overlooked feature in

an invited review paper for the Journal of Equine Veterinary Science

Clauss et al. (**2023**) Equid nutritional physiology and behavior: an evolutionary perspective. ***J Equ Vet Sci*** 124: 104265

or

an invited plenary at the International Symposium of Herbivore Nutrition 2023

As this concept is new, I am discussing with collaborators how this concept could be further assessed beyond the demonstration of coprophagy as a digestive strategy.