

# The microbial community in our bowel – flora or fauna?

Should the term «intestinal flora» be weeded out of our linguistic garden?



**Figure 1** *The Garden of Earthly Delights*. Painting by Hieronymus Bosch (1450–1516). Wikimedia Commons

Similar to the painting *The Garden of Earthly Delights* (Figure 1) by Hieronymus Bosch (1450–1516), our digestive tract is home to a teeming diversity of life. Bacteria, viruses, fungi and parasites are all part of this complex ecosystem, which is often referred to by the collective term «the intestinal flora».

It is by no means self-evident that this microbial community belongs to the plant kingdom. Anton van Leeuwenhoek (1632–1723), who was the first to observe and describe microorganisms, in fact saw them as small animals – «animalcula» (1).

Today, microbes are classified neither as plants, nor as animals (2). Accordingly, the designation «intestinal flora» is outdated and has been replaced by neologisms such as «microbiota» or «microbiome» (3).

In many contexts, however, the concept of «intestinal flora» may still be useful. For example, there are numerous similarities between tending to garden plants and manipulating the microbes in the intestine (4): we plant seeds (probiotics), add fertiliser (prebiotics), remove weeds (antibiotics), and occasionally we need to roll out a new lawn (faeces transplantation).

«Intestinal flora» may be a linguistic offshoot, but should be left as it is.

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## References

1. Lane N. The unseen world: reflections on Leeuwenhoek (1677) 'Concerning little animals'. *Philos Trans R Soc Lond B Biol Sci* 2015; 370: 20140344.
2. Scamardella JM. Not plants or animals: a brief history of the origin of Kingdoms Protozoa, Protista and Protocista. *Int Microbiol* 1999; 2: 207–16.
3. Khanna S, Tosh PK. A clinician's primer on the role of the microbiome in human health and disease. *Mayo Clin Proc* 2014; 89: 107–14.
4. Lozupone CA, Stombaugh JI, Gordon JI et al. Diversity, stability and resilience of the human gut microbiota. *Nature* 2012; 489: 220–30.

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