

Does it protect us from disease?  
Or does it cause it?



If doctors detect *Blastocystis* they will often assume it's a parasite and treat with antibiotics. But what if this practice does more harm than good? No current treatment can consistently eradicate *Blastocystis*. Antibiotics can introduce anti-microbial resistance and intestinal microbial dysbiosis, which can cause further health problems.

*Blastocystis* is more common in individuals who do not experience gastrointestinal symptoms, and in lean and normal-weight individuals.

If you are interested in joining our networking project, or have any questions, please contact our Action chair:

Dr. Anastasios Tsaousis, A.Tsaousis@kent.ac.uk



<https://blastocystis-cost.com/>

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COST (European Cooperation in Science and Technology) is a funding agency for research and innovation networks. Our Actions help connect research initiatives across Europe and enable scientists to grow their ideas by sharing them with their peers. This boosts their research, career and innovation

# *Blastocystis*

under One Health

Recruiting experts  
to find answers



*Blastocystis* is found in the gut of at least **one billion people** worldwide. The host spectrum is vast, including primates, other mammals, birds, reptiles, amphibians, and even insects. However, it is only rarely found in strict carnivores.

Pathogenicity of *Blastocystis* is extremely controversial, as the organism has been found routinely in people with and without gastro-intestinal symptoms.

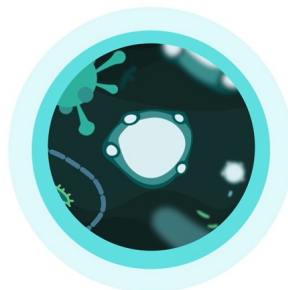


Transmission typically occurs via the fecal-oral route. The organism has also been found in water bodies worldwide hinting at environmental transmission potential.

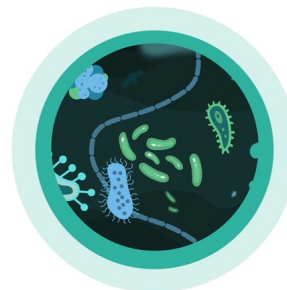
### We still have many questions to answer ...

*Blastocystis* comprises at least 40 confirmed subtypes found in mammals and birds. 13 of these subtypes have been identified in humans. What if some of them are linked to developing illness, but others are not?

What if *Blastocystis*, or at least some of its subtypes, is not a pathogen but a key to understanding the composition and ecological ramifications of a healthy gut microbiome?



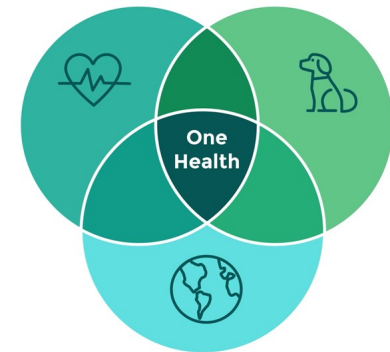
With *Blastocystis*



Without *Blastocystis*

*Blastocystis* is associated with specific bacterial profiles, suggesting that the organism is a potential "ecosystem engineer". Further research could herald a major shift in paradigm and prompt a variety of innovative research avenues leading to intentional use of *Blastocystis* to manipulate the gut flora.

We are now using a One Health approach to study *Blastocystis*, combining new advances in medical, veterinary, public, and environmental health.



There are many open questions and challenges in *Blastocystis* research, but, we are hoping that by working together, we can better understand the role of *Blastocystis* in health and disease.

