

## Contamination of DNA samples by microbes confounds

You've got a group of people with a mysterious disease, and you suspect that some microbe might be responsible. You collect blood and tissue samples, you extract the DNA from them using a commonly used kit of chemicals, and you sequence the lot. Eureka! You find that every patient has the same microbe—let's say *Bradyrhizobium*, or Brady for short. Congratulations, you have discovered the cause of Disease X.

Don't celebrate yet.

You run the exact same procedure on nothing more than a tube of sterile water and... you find Brady. The microbe wasn't in your patients. It was in the chemical reagents you used in your experiments. It's not the cause of Disease X; it's a contaminant.

Versions of this story could be playing out in dozens of labs around the world. A team of scientists led by [Susannah Salter](#) and [Alan Walker](#) at the Wellcome Trust Sanger Institute has shown that DNA extraction kits, and other lab reagents commonly used in microbe studies, are almost always contaminated by low levels of microbial DNA.

*Bradyrhizobium* is a common culprit, but the team have identified a list of around 100 microbes whose DNA regularly turn up when sequencing supposedly "blank" tubes of water. Most of them live in soil and water. Some come from human skin. This cabal of contaminants, which I'm going to call "the Brady Bunch", poses a problem for studies of microbe communities, or microbiomes. It raises the haunting possibility that many published results in the field are just wrong.

**Read full, original article:** [Contaminomics: Why Some Microbiome Studies May Be Wrong](#)