Introducing the Thanatomicrobiome

submitted by panoble on August 15, 2014
Share this page:

5

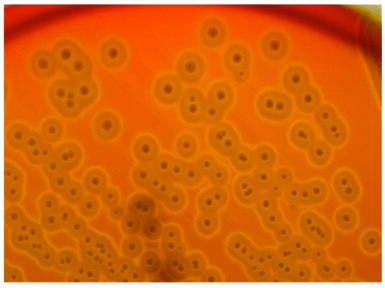
Tags: death , DNA sequencing , human , microbiome , thanatomicrobiome
Source: authors.elsevier.com

In a healthy adult human body, most internal organs such as the brain, spleen, liver, and heart are devoid of microorganisms because the immune system keeps them in check. After human host death, however, the immune system falters and microorganisms proliferate throughout the body beginning in the ileocecal area, spreading to the liver and spleen, and continuing to the heart and brain. We refer to these microorganisms as the thanatomicrobiome (thanatos-, Greek defn. death), which is defined as the microbiome existing in or on an animal host after it dies. Because little is known about the thanatomicrobiome, we examined the composition and abundance of microorganisms in blood and internal organ tissue samples of cadavers. To our surprise, we found that the thanatomicrobiome was highly similar among organ tissues from the same cadaver but very different among cadavers possibly due to differences in the elapsed time since death and/or environmental factors. The importance of this study is two-fold: it provides proof of principle that the

MICROBES AFTER HOURS

Click for more "Microbes After Hours" videos

FEATURED IMAGE



FEATURED VIDEO

thanatomicrobiome may be an efficient biomarker to study postmortem transformations of cadavers; and it opens up a new field of research that completes the human life cycle. It is well known that microorganisms have co-evolved with living humans because they dominant in terms of number of cells in our bodies and play important physiological roles in health and disease. We argue that since microorganisms have co-evolved with us in life, why wouldn't they co-evolve with us in death? Clearly, basic research in the thanatomicrobiome is needed in order to reveal the gray areas in the co-evolution of microorganisms and humans – both in life and death.
The article describing this research was published in Journal of Microbiological Methods on August 15, 2014.

Flag article as inappropriate

COMMENTS (1)

Jenn makes this comment
Fri Aug 15 21:08:18 2014

Simply Brilliant! Dr. Peter Noble has done it again! This will make a significant and profound difference in Forensic Medicine and push forward Microbiological Research! Dr. S. Geez

Please **login/join** to leave a comment

COLLECTIONS (0)

back to top

SUPPORTERS

Reproduction

Microbial Mutations

Now You See It...

Yeast on the Rise

Handwashing Videos

Handwashing Quiz

Handwashing Experiment

American Society for Microbiology
2012 1752 N Street, N.W. • Washington, DC 20036-2904 • (202) 737-3600