
From: [REDACTED]
Sent: Monday, June 19, 2017 10:35 PM
To: Jeffrey Epstein
Subject: is rhizosphere the (gut) microbiome for plants

The rhizosphere is the narrow region of soil [that is directly influenced by root secretions and associated soil microorganisms](https://en.wikipedia.org/wiki/Soil) [\[2\]](https://en.wikipedia.org/wiki/Microorganism) The rhizosphere contains many Bacteria [and microorganisms that feed on sloughed-off plant cells, termed rhizodeposition,](https://en.wikipedia.org/wiki/Bacteria)[\[3\]](https://en.wikipedia.org/wiki/Rhizosphere#cite_note-3) and the proteins and sugars released by roots. This symbiosis leads to more complex interactions, influencing plant growth and competition for resources. Much of the nutrient cycling [and disease suppression](https://en.wikipedia.org/wiki/Nutrient_cycle) needed by plants occurs immediately adjacent to roots due to root exudants and communities of microorganisms.[\[4\]](https://en.wikipedia.org/wiki/Rhizosphere#cite_note-4) The rhizosphere also provides space to produce allelochemicals to control neighbors and relatives. [\[5\]](https://en.wikipedia.org/wiki/Allelopathy) [The plant-soil feedback loop and other physical factors are important selective pressures for the communities and growth in the rhizosphere.](https://en.wikipedia.org/wiki/Rhizosphere#cite_note-5)

<https://en.wikipedia.org/wiki/Rhizosphere> <https://en.wikipedia.org/wiki/Rhizosphere>