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## 100 words

## 100 words...on psychobiotics

## Timothy G. Dinan

That gut microbes, collectively called the microbiota, influence brain development and functioning is viewed as a new paradigm in neuroscience with implications for psychiatry. These gut microbes communicate with the brain via a number of routes including the vagus nerve and the production of molecules such as short-chain fatty acids. In major depressive disorder the gut microbiota shows a significant decrease in microbial diversity which is associated with a peripheral inflammatory phenotype. Psychobiotics are bacteria which, when ingested in appropriate amounts, have positive mental health benefits. Preliminary studies with bacteria such as *Bifidobacterium longum* indicate anxiolytic activity in healthy volunteers.

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