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## **Engaging Consumers In The Microbiome**

by

uBiome combines crowdsourcing, citizen science, and the latest in robotics and sequencing to generate microbiome-related Big Data for organizations, as well as raise money, and interest, via its consumer kits.

Founded by <u>University of California, San Francisco</u> scientists and <u>Stanford University</u> and <u>University</u> of <u>Cambridge</u> technologists, uBiome Inc. combines crowdsourcing, citizen science, and the latest in robotics and sequencing to generate microbiome-related Big Data for organizations, as well as raises money, and interest, via its consumer kits. It's about "equipping individuals to learn about the unique balance of bacteria in their bodies," the company's web site declares. Individuals receive a swab kit, take a sample (e.g. from the mouth or nose), fill in a questionnaire, and send it all off. They can then compare their microbiomes with those of, say, vegetarians, endurance athletes, or people taking antibiotics. It's another angle on the "quantified self" movement driving funding for hundreds of health-related wearables, typically consumed by health and fitness enthusiasts. uBiome also has a social mission, it says, including to promote microbiome research in developing countries. The company raised \$4.5 million in angel funding in August 2014, after bringing in \$1.5 million in seed money from Andreessen Horowitz in June 2014.

Launched in 2012, OpenBiome, a non-profit stool bank, treats patients with infected guts even though neither its samples nor its procedures are FDA approved. The agency is using "enforcement discretion" to allow the process to continue – given the strong evidence of effectiveness and lack of alternatives – though this may change in the future. OpenBiome carefully selects its (paid) donors who must undergo in-depth clinical checks and have a BMI of less than 30. Samples are screened, filtered, and frozen. The company claims its treatment has an 89% success rate and is expanding the service. Its mission is to facilitate universal access to fecal microbiota transplantation.