

## Speaker Profile and Abstract

**Title:** [The Human Microbiome in Health and Disease](#)

**Abstract:** The gut microbiome has been shown to be an important factor in human health, but little is known about the mechanisms of interaction between host and microbe, or how to engineer the microbiome to improve health. In this talk, [Prof. Eric Alm will discuss his ongoing research efforts using microbiome-based interventions in a clinical setting.](#)

**Biography:** *Eric Alm* is a Professor in the Biological Engineering Department at MIT, where he co-directs the Center for Microbiome Informatics and Therapeutics. His research is focused on understanding the role of microbes on human health, and translating basic science discoveries into the clinic.

In 2013, his lab spun out the non-profit organization OpenBiome, which provides fecal transplants for thousands of *Clostridium difficile* patients each month. He is also a co-founder of Finch Therapeutics, a pharmaceutical company that aims to develop microbial therapeutics for a variety of diseases, and Biobot, a company that mines sewage for public health information, and is currently partnering with cities to fight the opioid epidemic. He is a PI in the SMART AMR IRG, and will be in residence at CREATE throughout August.

### **Bio Summary:**

*Professor*

Biological Engineering, MIT

Civil and Environmental Engineering, MIT

*Associate Member*

Broad Institute

### **Education**

- Postdoc, 2005, University of California, Berkeley/Lawrence Berkeley National Lab
- Ph.D., 2001, University of Washington, Seattle
- M.S., 1997, University of California, Riverside
- B.S., 1995, University of Illinois, Urbana

### **Research Interests**

The human microbiome plays a key role in human health and disease. Research in my group includes both computational/theoretical and experimental approaches to understanding and engineering the human microbiome. Our research is focused on translating basic science discoveries rapidly into the clinic, where they can contribute to better outcomes for patients.

Some areas of special interest include:

- Developing therapeutics based on synthetic microbial communities
- Personalized medicine
- Monitoring human activities through Smart Sewers
- Smart Toilets that track human health
- Discovering low-cost non-invasive biomarkers

### **Teaching Interests**

I am passionate about maximizing personal interaction in the classroom. I am especially interested in professional development, and working on communication skills with undergraduate and graduate students.

You can find more information about the speaker and his work here;  
<http://almlab.mit.edu/index.html>