Involvement at MIT: Work and Community

**Aspiration of oral microbes alters lung microbiome of aspirating children**
- Throat, stomach, and lung microbiomes are connected
- Lung microbiomes of aspirators are more similar to throat than stomach
- How is gastroesophageal reflux involved?

**Universal patterns of disease-associated gut microbiome shifts**
- Meta-analysis within and across diseases
- Consistent and specific disease-associated shifts
- Core microbial responses to disease

**Trait annotation tool to interpret microbiome studies**
- Studies yield lists of significant bacteria
- Methods to interpret results and generate hypotheses are disconnected
- Build a tool to consolidate existing and incorporate new knowledge

**Guiding questions**
- **"What's the goal?"**
  Why are you doing what you’re doing?
  Use your time and energy thoughtfully

- **"What does that look like?"**
  Providing solutions is powerful

- **"What would happen if...?"**
  There are no rules in grad school