Chickens, Cows, Mice, and People; Oh my!
Virulence Subsystems In The Intestines

- Type III/IV Secretion
- Invasion/Intracellular Resistance
- Prophages
- Post Translational Modification
- OMPs
- Adhesion
- Regulation
- Detection
- Toxins/Superantigens
- Antibiotic Resistance
- Iron scavenging
- Pathogenicity islands

Legend:
- Yellow: Chicken
- Grey: Cows
- Light grey: Lean mice
- Orange: Obese mice
- Red: Adult female human
- Green: Adult male human
- Blue: Child human

Qu et al, PNAS, 2009
Microbial Virulence Genes Discriminate Hosts

Qu et al, PNAS, 2009
Terragenomics
National Ecological Observation Network

Bahador Nosrat
Differences between soil samples
Archaea in Soils
Bacteria in soils
Sampling Sites

Marine
- Near-shore water
- Off-shore water
- Near- and off-shore sediments

Freshwater
- Aquifer
- Glacial lake

Terrestrial/Soil
- NEON sites
- Urban
- Airborne

Metazoan associated
- Corals
- Fish
- Human

Extreme
- Hot springs (84°C; 78°C)
- Soda lake (pH 13)
- Solar saltern (>35% salt)
BACK!