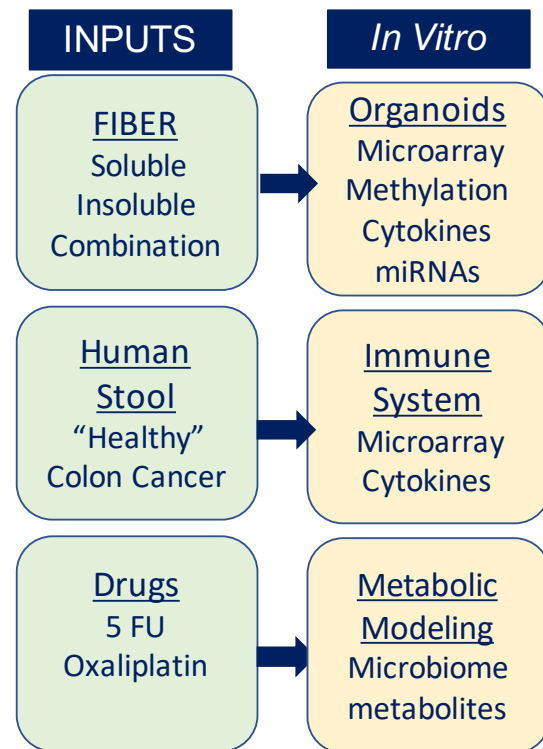


## PHASE I

### Fiber-Microbiome Modeling

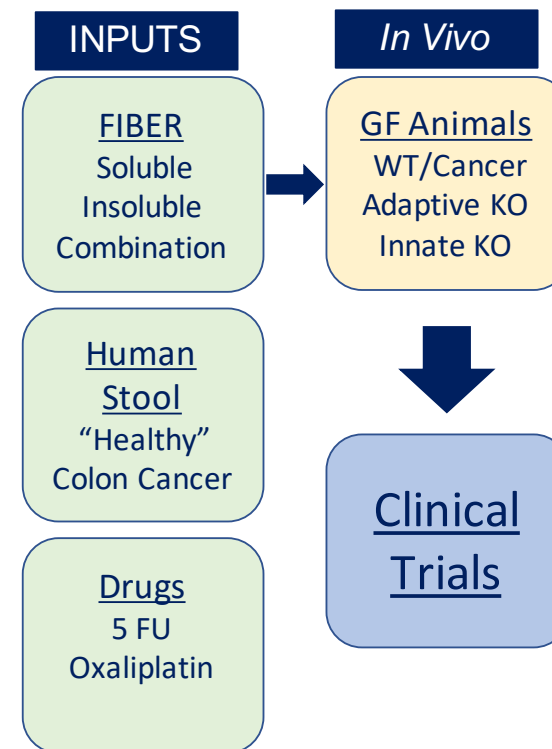
- Microbial community response to dietary prebiotic fibers
  - Resistance to ETBF or *C. difficile* infection
  - Model nutrient-metabolite interactions
- Q: Which dietary fibers prevent pathogen invasion?**



## PHASE II

### Fiber Conditioned Microbiome Response

- "Healthy" vs colon cancer stool community response to fibers
  - Fiber conditioned microbiome response to immune system
- Q: Which dietary fibers promote a favorable immune response in healthy/cancer stool communities?**



## PHASE III

### Candidate Fiber Testing

- Germ free mice humanized with fiber-conditioned microbiome
  - Fiber conditioned community effect on host tumor response
  - Fiber conditioned microbiome response to cancer therapy
- Q: Does the fiber conditioned microbiome improve response to cancer therapy?**