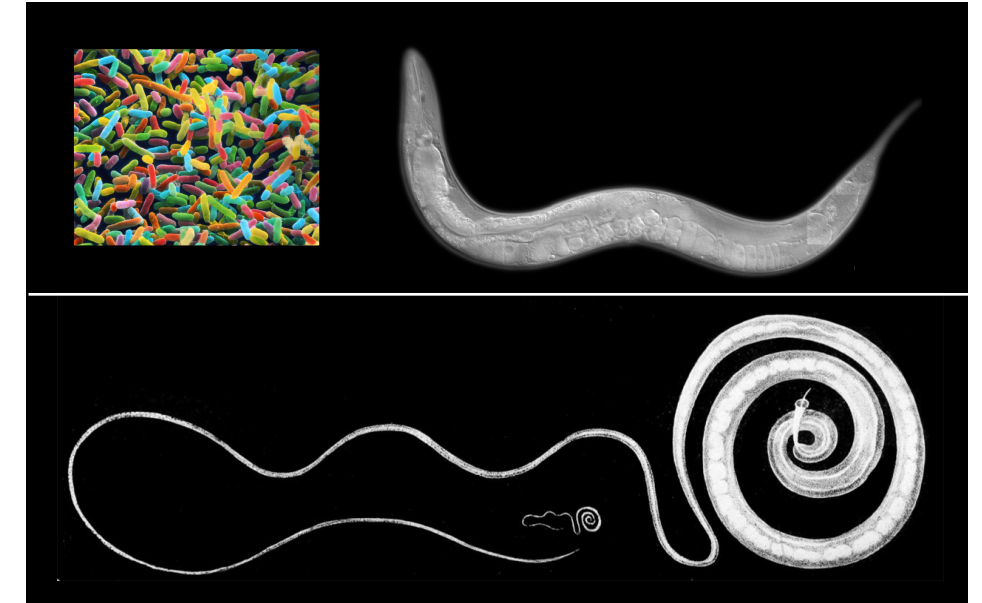


A multi-organism genetic model for microbiota-driven parasite burden

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- ⇒ Intestinal microbes exert a wide range of effects in mammals, and they interact with pathogens including parasitic nematodes.
- ⇒ *Trichuris* is a parasitic nematode that infects >500 million people world-wide. It is spread by fecal-oral transmission of nematode embryos.
- ⇒ Rates of community reinfection are high due to the high fecundity of *Trichuris* (estimated at 20,000 eggs/day), and persistence of worms in host for years.
- ⇒ *Trichuris* embryos requires interaction with bacteria to hatch and grow in the mammalian host.



- ⇒ We are using *E. coli* and *C. elegans* to investigate mechanisms of interaction between the mammalian host microbiome and the parasitic nematode *Trichuris*.
- ⇒ We screened for *E. coli* mutants that interfere with timely *C. elegans* fertility.
- ⇒ We identified a bacterial pathway that influences *Trichuris* hatching and growth in mouse.

