May 20th, 4:00 PM

Manipulating the Gut Microbiome for Human Health

Beth A. McCormick
University of Massachusetts Medical School

Et al.

MANIPULATING THE GUT MICROBIOME FOR HUMAN HEALTH

MODERATORS

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UMass-Amherst

Microbes R Us

GenomeLIFE OCTOBER 15, 2013 By Kendall Morgan

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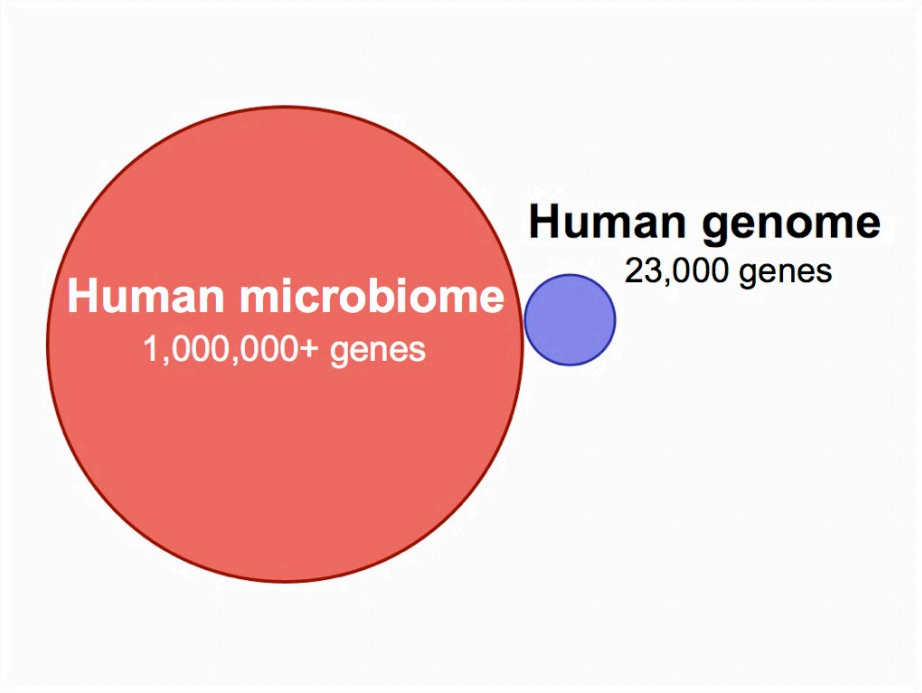
The second genome

Science and Society By Matt Crenson, December 2013



Bacterial cells outnumber your body cells 10:1 and comprise up to 4-6 lbs of your body mass

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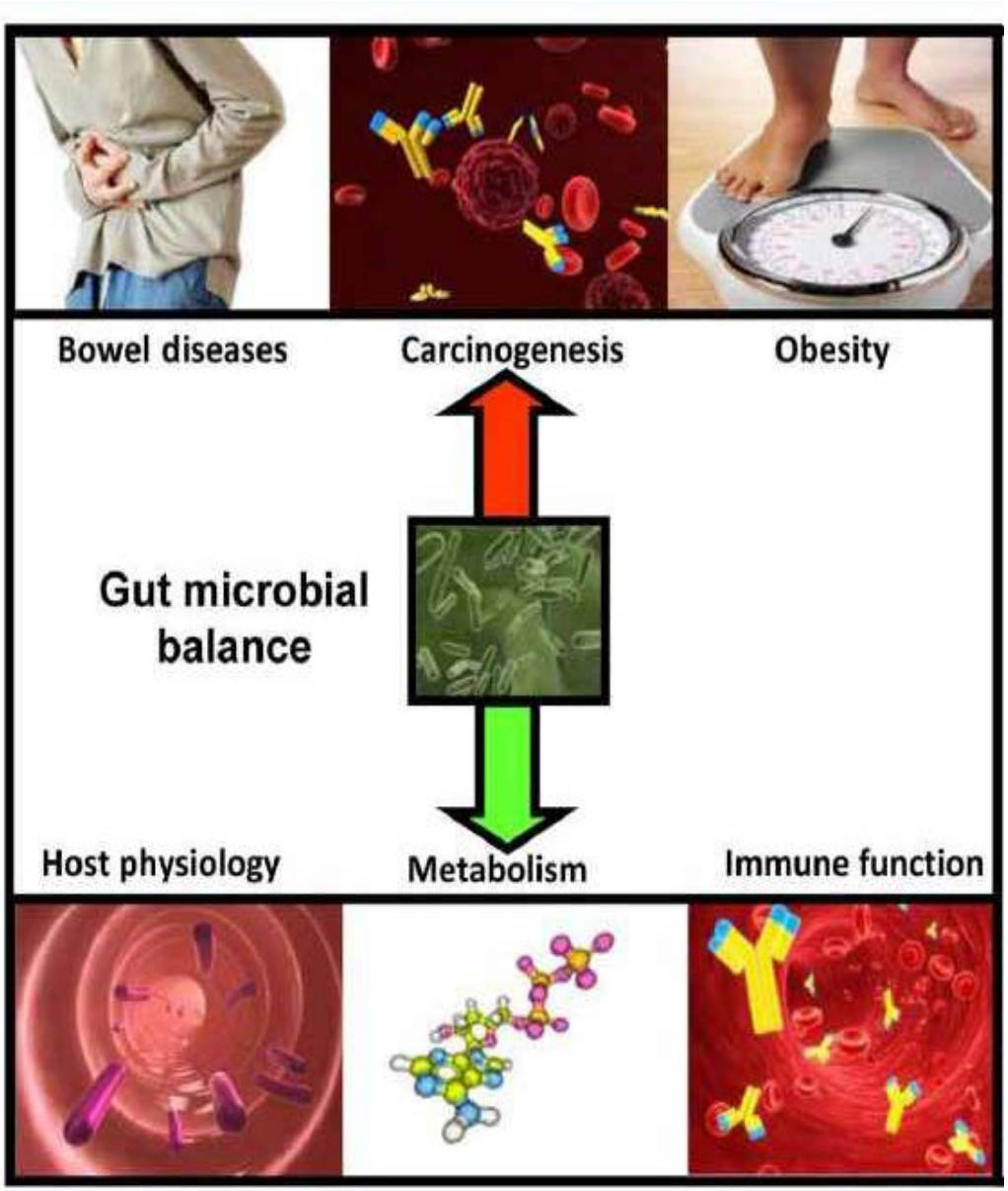
Microbiome: Role in Health and Disease



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Discovering novel microbials for disease prevention and treatment

Director: Beth A. McCormick, Ph.D. UMass-Worcester
Co-Director: Jeffrey Blanchard, Ph.D. UMass-Amherst
Co-Director: Randall Pellish, M.D. UMass-Worcester

CMR Mission

- Define the interactions between the host, the microbes, and the unique environments that drive these ecological systems
- Discovery of novel microbials for disease prevention and treatment

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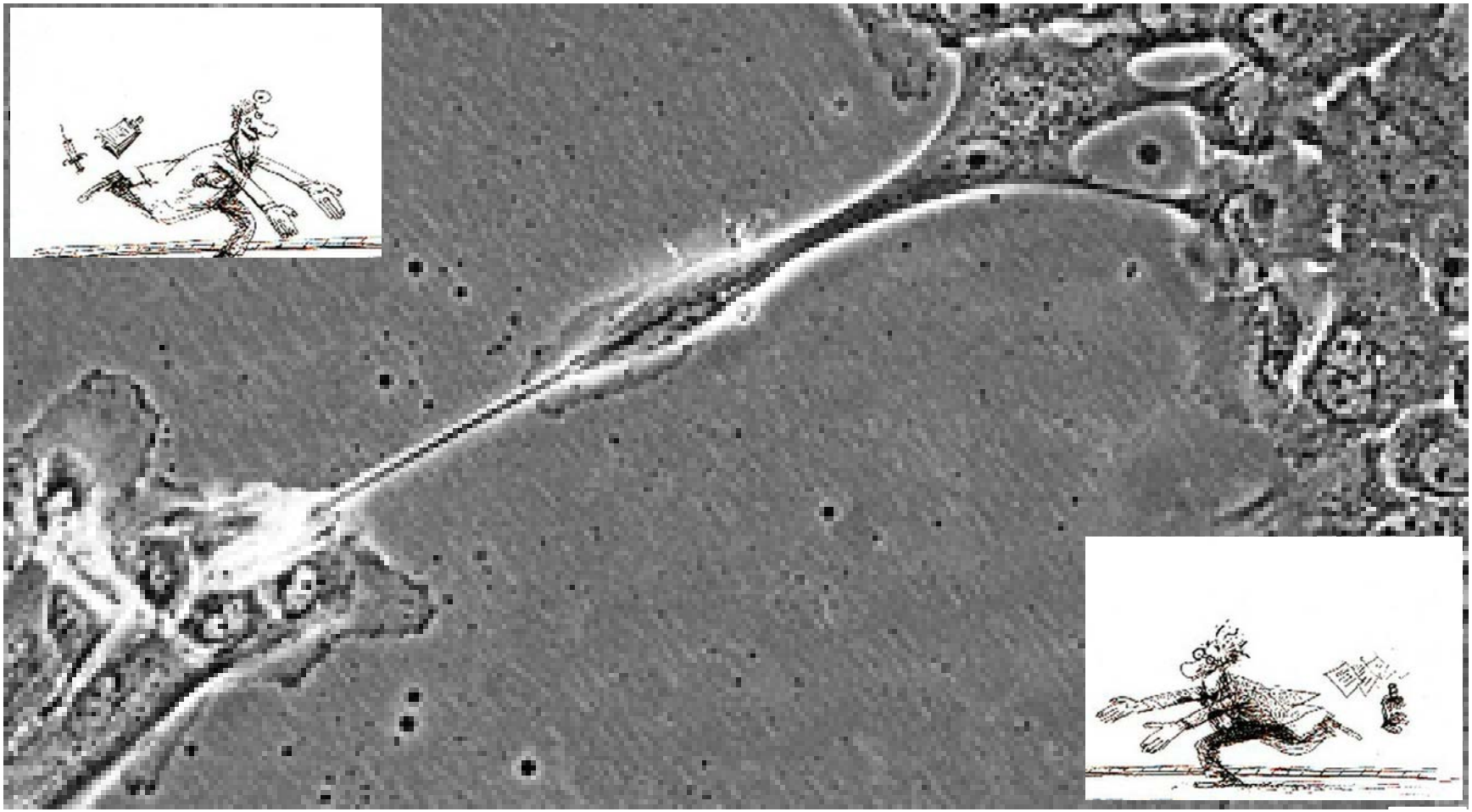
Natural synergy



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Gut microbiome and its role in health and disease

- *C. dificile* infection:
  - Clinical gut manipulation: Dr. Randy Pellish, MD
    Department of Medicine (Division of Gastroenterology), UMMS
  - Fecal Transplantation

  - Basic research approach: Dr. Vanni Bucci, Ph.D.
    Department of Biology, UMass-Dartmouth
  - Antibiotic Treatment
- Intestinal Disease:
  - Clinical gut manipulation: Barbara Olendzki, R.D., L.D.N.
    Center of Applied Nutrition, UMMS
  - Dietary Interventions

  - Basic research approach: David Sela, Ph.D
    Department of Food Science, UMass-Amherst
  - Probiotic Delivery