A good set of bowels is worth more to a man than any quantity of brains

Josh Billings

Who are we?

- Human
  - 1 species
  - $10^3$ cells
  - 23,000 genes

- Gut Flora
  - 1,000 species
  - $10^4$ cells
  - 3.3 MILLION genes

Qin et al. Nature 2010

The Gut as a Barrier

Increasing world-wide incidence of Crohn’s and of UC (Phavichitr 2006, Schildkraut 2011)

What Causes Crohn’s and UC?

Genes and the Immune system

Barrier Function

Bowel Flora

Microbes and Genetics in paediatric Crohn’s disease

• Dr Josef Wagner

• Are there specific pathogens?
• Genetic variation in mucosal defence
Over 30 genomic regions account for 50% risk of Crohn’s disease
Crohn’s disease – diagnosis and ongoing assessment

• Dr Jeremy Rosenbaum

No cure yet, but Treatment – from shotguns to the smart bomb

• A/Prof Don Cameron

27 July 2011 Dr Tony Catto-Smith
www.rch.org.au/kidsconnect/