

The Microbiome and Intestinal Physiology in Undernourished Mice

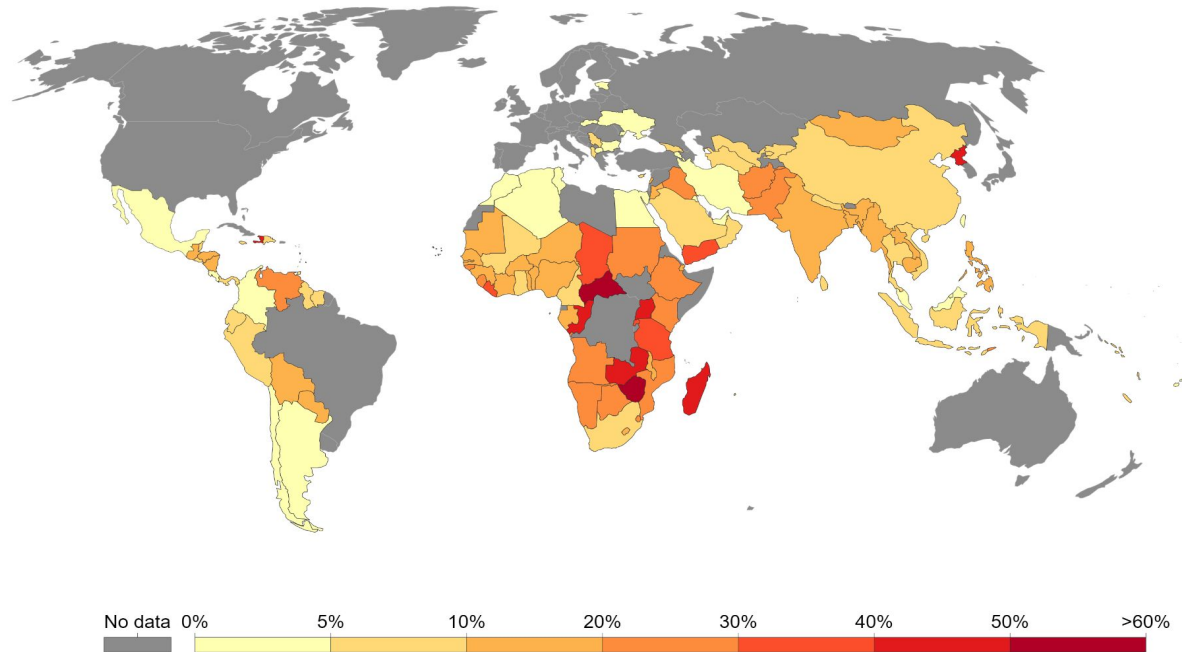
Grace Ratley

Severe undernutrition prevalence

Share of the population that are undernourished, 2017

Share of individuals who have a habitual energy intake lower than their requirements.

Our World
in Data

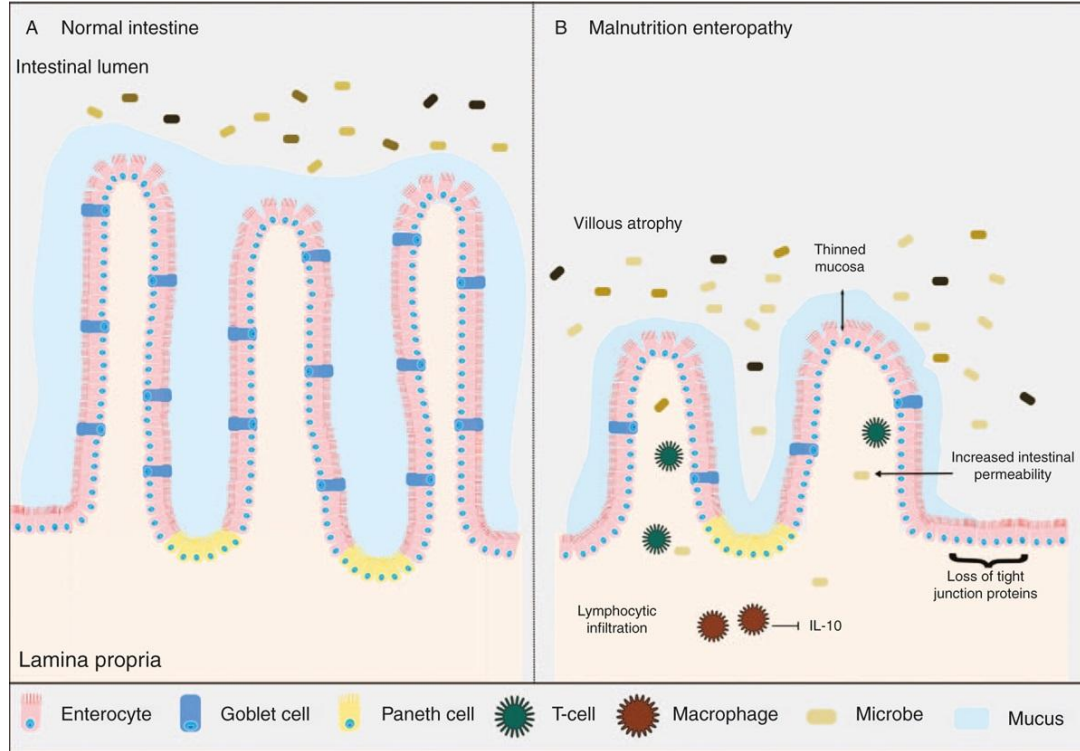


Source: UN Food and Agriculture Organization (FAO)

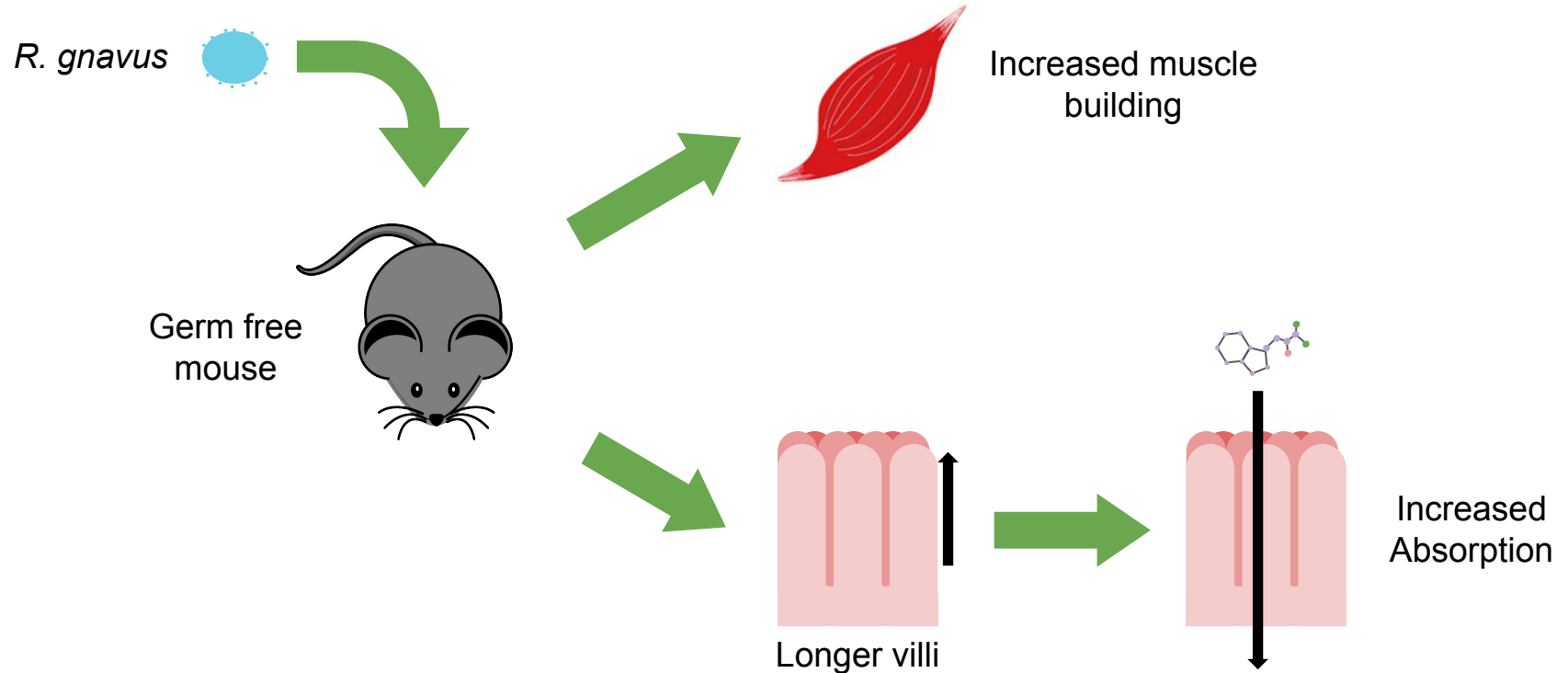
Note: Undernourishment is defined as having food energy intake which is lower than an individual's requirements, taking into account their age, gender, height, weight and activity levels.

OurWorldInData.org/hunger-and-undernourishment • CC BY

Changes in intestinal physiology

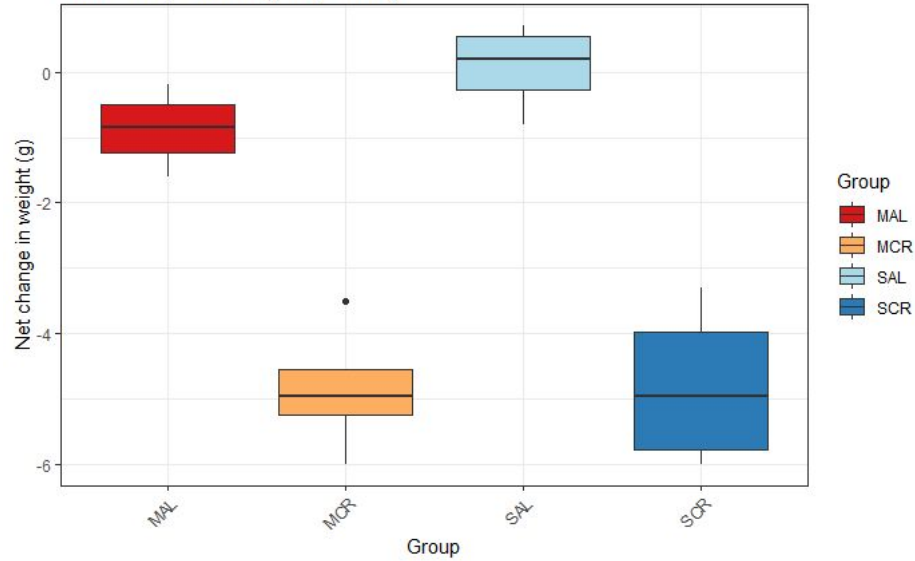


Hypothesis



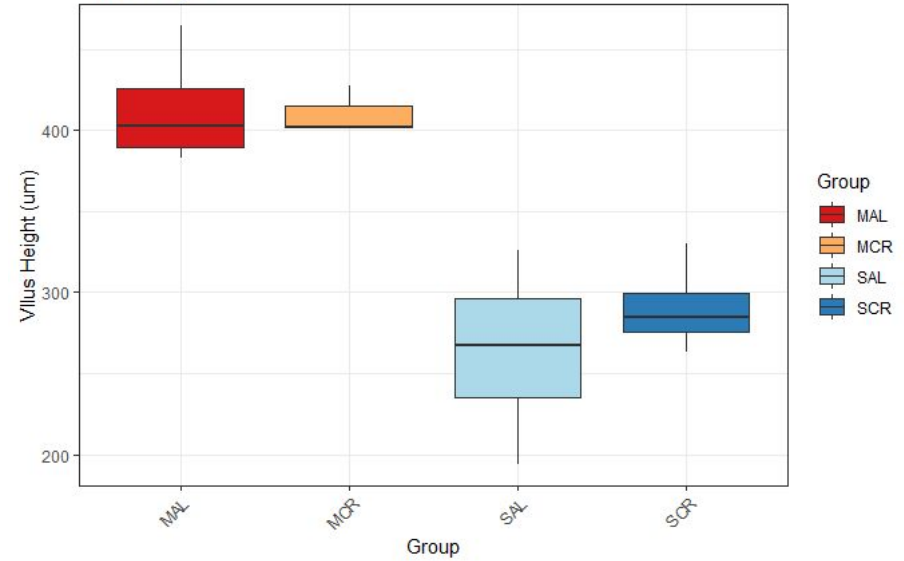
Results

Net Change in Weight by Group



No change in weight

Villus Height



Longer villi, but no changes in absorption

Future directions

- Further understanding *R. gnavus* biology
 - Host gene expression
 - Stem cell proliferation
- Mechanism of poor calorie absorption
- Other microorganisms