

# Intestinal Microbleed Detector

Presented by NWU-CHINA-A 2022



## Background

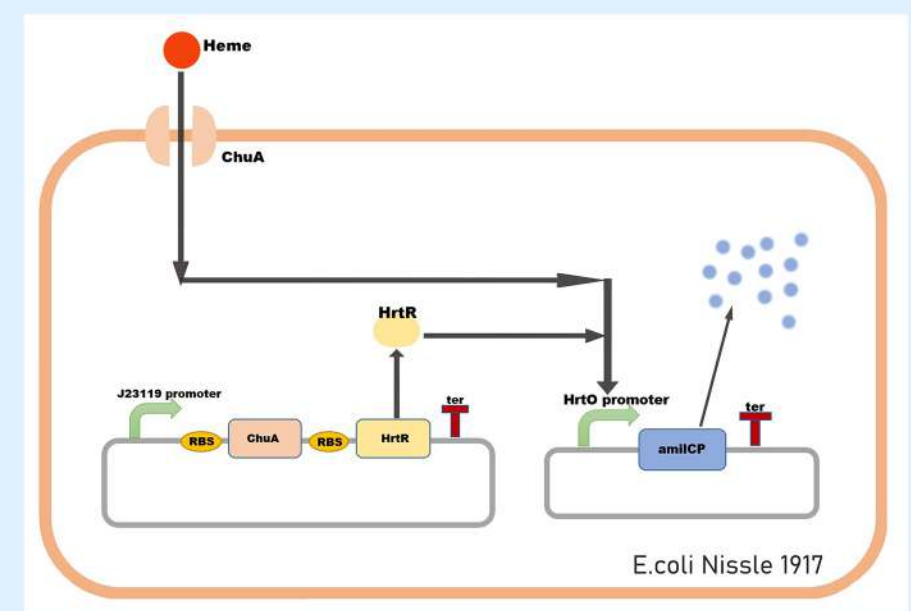
The current method for detecting intestinal bleeding is colonoscopy, which brings great discomfort to patients. We plan to characterize intestinal microbleeds with a probiotic.

## Project Goals

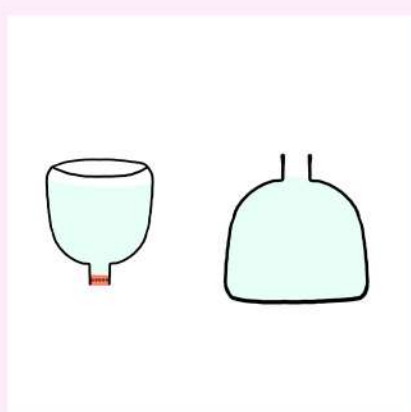
- The two designed plasmids were transferred into E. coli Nissle 1917.
- To design a portable home device for detecting intestinal microbleeds.

## Design

1. ChuA protein transports heme into cells.
2. HrtR protein and heme binding activate HrtO promoter transcription.
3. Expression of amilCP blue pigment.



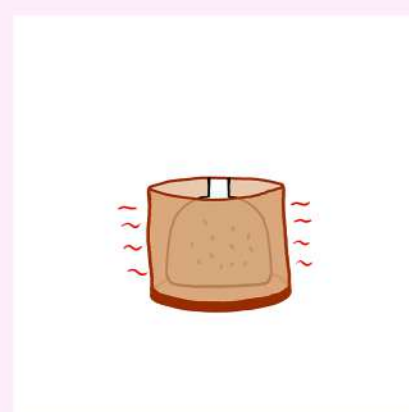
## Hardware



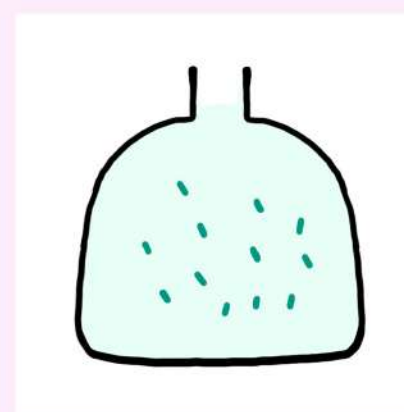
① Empty device



② Add feces to filter



③ Use insulation to underlayer

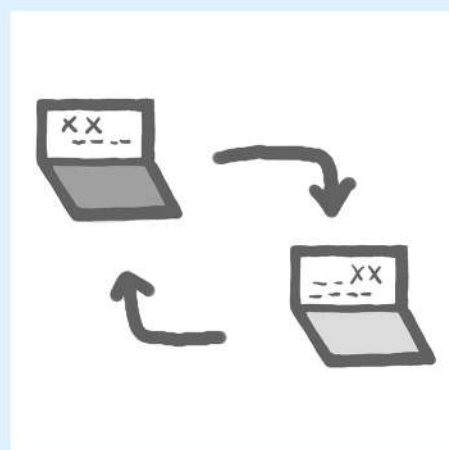


If there is bleeding in the intestines, a blue coloration will be observed.

## HP



Interview



Meetup

## Team



## Acknowledgement

