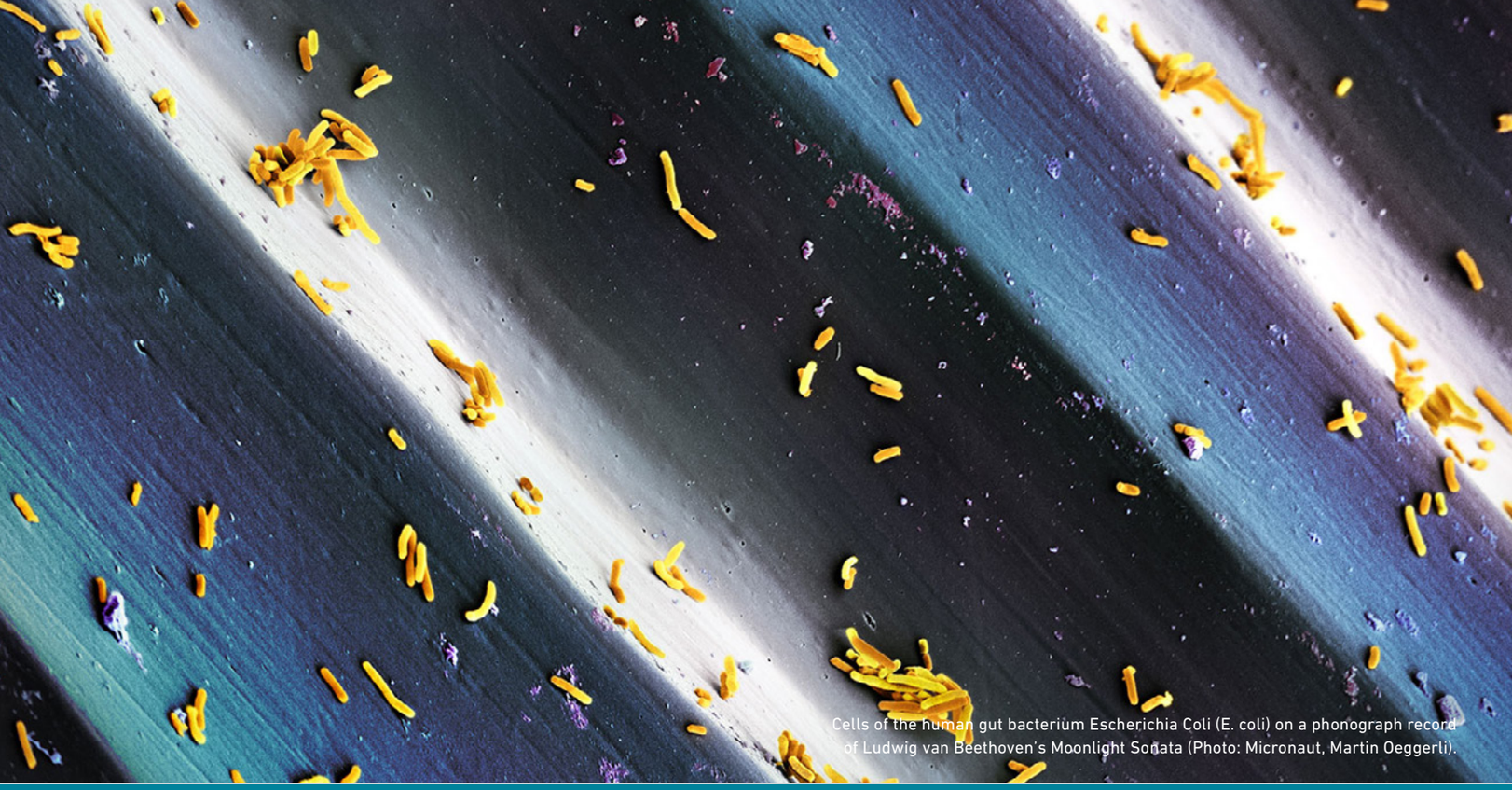

Cells of the human gut bacterium Escherichia Coli (E. coli) on a phonograph record of Ludwig van Beethoven's Moonlight Sonata (Photo: Micronaut, Martin Oeggerli).

BIOLOGICAL ENGINEERING

Characterizing how nutritional interventions affect probiotic bacteria in the gut to develop improved synbiotics.

Research Areas

- Gene editing;
- Microbial engineering;
- Living microbial diagnostics and therapeutics;
- Synthetic biology;
- Functional genomics.

Regions

Switzerland.

Partners

Nestlé.

Contact

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Contribution to the WFSC

The immense potential of the gut microbiome to modulate multiple aspects of health and disease has fueled an expanding global market for novel probiotics. However, the exact mechanisms by which probiotic microorganisms and prebiotic dietary compounds act to benefit host physiology remain widely unknown. With the support of the Future Food Initiative and the WFSC, the Laboratory of Biological Engineering is now working on characterizing mechanisms by which nutritional interventions influence the establishment and functional ability of probiotic bacteria in the gut with the long-term goal of engineering better synbiotics.

Prof. Randall Platt