The ability of riboflavin-overproducing *Lactiplantibacillus plantarum* strains to survive under gastrointestinal conditions

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**Supplementary Figure S1. Riboflavin calibration curve.** Correlation of riboflavin concentration and fluorescence. Serial dilutions of a riboflavin solution in CDM medium lacking riboflavin at 10 mg mL\(^{-1}\) were used to determine its fluorescence emission at a wavelength of 520 nm after excitation at a wavelength of 440 nm.

The equation for the line of best fit is:

\[
y = 15.191x + 0.6392
\]

with an R\(^2\) value of 0.9996.
Supplementary Figure S2. Calibration curves of *L. plantarum M5MA1-B2[pRCR12]* and *M9MG6-B2[pRCR12]* strains. Correlation of bacterium concentration and fluorescence due to mCherry protein were determined. Serial dilutions of a bacterial suspension at an initial concentration of $2 \times 10^8$ cfu mL$^{-1}$ in saline solution were employed to determine the corresponding fluorescence emission at a wavelength of 610 nm upon excitation at 587 nm. The mean values of three independent determinations and their standard deviations are depicted.
Supplementary Figure S3. Analysis of the *L. plantarum* M5MA1-B2 and M9MG6-B2 strains carrying or lacking pRCR12 plasmid. (A) Colony phenotypes of the strains is depicted. (B) Micrographs of bacterial preparations with 100 X magnification, analyzed with a Leica DM1000 model microscope and with a light source EL6000 and the filter system TX2 ET for detection of the mCherry fluorescence.
**Supplementary Table S1.** Commercial INCAPARINA composition, produced by Central de Alimentos, S.A. (Guatemala City, Guatemala).

|                      | % of RV* |
|----------------------|----------|
| **Energy**           | 125 kcal |
| Energy from fat      | 25 kcal  |
| **Total fat**        | 3 g      |
| Saturated fat        | 1.5 g    |
| **Cholesterol**      | 10 mg    |
| **Sodium**           | 40 mg    |
| **Potassium**        | 200 mg   |
| **Total carbohydrates** | 20 g    |
| Sugars               | 12g      |
| Dietary fibers       | 1g       |
| **Proteins**         | 4g       |
| **Vitamins and ions**|          |
| Vitamin A            | 80 μg    |
| Vitamin B1           | 0.144 mg |
| Vitamin B2           | 0.216 mg |
| Vitamin B12          | 2.4 μg   |
| Vitamin D            | 1.5 μg   |
| Folic acid           | 60 μg    |
| Niacin               | 1.5 mg   |
| Iron                 | 1.68 mg  |
| Zinc                 | 1.8 mg   |
| Calcium              | 200 mg   |

Quantities per package of Incaparina (resuspension in 200 mL).
*Reference Values (RV) according to the FAO/WHO Codex Alimentarius.