

vehicle, $p < 0.001$) was recovered by HM15912 and efpeglenatide (73 and 79% of normal vehicle), but not by rat anti-TNF- α mAb (68% of normal vehicle). Of note, small intestine length was fully recovered at normal condition (94% of normal vehicle) by triple combination of HM15912, efpeglenatide, and rat anti-TNF- α mAb. In line with this, ulcer area in small intestine was also drastically alleviated by the triple combination (0.3% vs 7.5% of indometacin vehicle, $p < 0.001$). In DSS-induced ulcerative colitis model mice, cumulative DAI score was significantly reduced by HM15912 ($p < 0.01$) or efpeglenatide ($p < 0.05$), and further reduced by their COMBO (17.2 vs 27.7 in DSS vehicle, $p < 0.001$), while showing non-significant effect in cyclosporine A treated group (23.7). In line with the result of the DAI score, histological colitis score was also significantly reduced by combination of HM15912 with efpeglenatide (7.3 vs 9.3 in DSS vehicle, $p < 0.001$), whereas cyclosporine A was not significantly effective (9.0).

Conclusion: A novel combination of long-acting GLP-2, HM15912, and GLP-1RA (efpeglenatide) were additively mitigate inflammation in bowels and recover intestinal atrophy compared to individual treatments, rationally supporting that its combination may be alternative treatment option for IBD based on their synergism in intestinotrophic and anti-inflammatory effects.

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PURSuing THE GOLDILOCK ZONE: OPTIMISED OSMOLALITY IN ORAL SUPPLEMENTS. A QUASI-RANDOMIZED CROSSOVER STUDY

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Rationale: Patients with an ileostomy often have impaired quality-of-life, sodium depletion, secondary hyperaldosteronism, and other organ-specific pathologies. The osmolality of oral supplements vastly influences ileostomy output and sodium loss. Treatment strategies that use the osmolality of oral supplements to increase fluid and sodium absorption in patients with an ileostomy are sparse. This study aims to quantify the association between osmolality in liquid oral supplements and ileostomy output to identify the optimal treatment interval, the Goldilock zone.

Methods: In total, 12 patients with an ileostomy will be included in a quasi-randomized, crossover intervention study. Each patient will randomly ingest between 3-18 different supplements during separate 6-hours intervention periods. Ileostomy output and urine volume will be collected. Outcome measures include faecal wet-weight, urine volume, electrolytes, osmolality, and body composition measured with bioelectrical impedance analysis.

Results: Preliminary results include 11 adults with ileostomy (median age 69 years (range 55)). Statistically significant changes in ileostomy output were detected following the intake of fluids (ranged osmolality 5-1250 mmol/kg) forecasting a S-curve. In a mixed-effect model with the patients as a random effect, we found an association between osmolality of oral supplement (range osmolality 250-600 gr./mmol) and ileostomy output increases 0,66 gr./mmol/d ($P < 0,0002$).

Conclusion: This study aids our real-life understanding of fluid and sodium absorption in the small bowel and sheds light on fluid and sodium losses in patients with an ileostomy. Preliminary data indicate that patients with an ileostomy may benefit from increasing their ingestion of hypo- or iso-osmolar fluids. The study can help identify the optimal osmolality range, a Goldilocks zone.

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RHUBARB EXTRACT IMPROVES THE GUT TRANSIT AND MODULATES GUT MICROBIOTA COMPOSITION IN MIDDLE-AGED ADULTS.

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Rationale: Intestinal transit disorders, that increase with age and nutritional disorders, largely compromise wellbeing and health. We tested the hypothesis that rhubarb extracts can improve gut transit by targeting the gut microbiota.

Methods: A randomized, double-blind, placebo-controlled, monocentric study conducted in CEN Experimental (Clinical Investigation Center) was performed in forty-two middle-age adults (average: 58 yo, Approval Number: 2016-A00932-49). The cohort was composed by three arms (14 per group) in order to study the effect of rhubarb (tablets, two doses tested: D = 227 mg/d and DD = 454 mg/d) versus placebo tablets containing excipients (PL) for 30 days. Gut transit was evaluated as primary endpoint with stools frequency evolution. Bristol Stool Form Scale, questionnaire for intestinal discomfort, mental and physical wellbeing (Short-Form 12-item), the gut microbiota composition (16S rRNA gene sequencing) and short chain fatty acid levels (SPME-GC-MS) were analyzed as secondary outcomes.

Results: Subjects in DD group exhibit improvement in stools consistency and frequency (8,6 versus 3,8 times per week in PL after 30 days, $p = 0.013$). 70% of the subjects in DD group reported an improved perception of change about intestinal transit, with a general improvement of mental wellbeing, that remained non-significant. The alpha-diversity was similar. The Bray-Curtis dissimilarity index revealed compositional differences between groups. Rhubarb interventions increased the abundance of butyrate-producing bacteria (e.g. *Agathobacter*, *Roseburia*) and fecal butyrate (only in D group). Fecal butyrate positively correlated with stools frequency ($p = 0.018$).

Conclusion: Our study supports a functional role of the gut microbiota in the improvement of chronic constipation by rhubarb extracts. Based on those data, new prebiotics could be developed to help improving wellbeing associated with constipation, which is very frequent in elderly subjects.

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CLINICAL DIETICIAN AS A PART OF THE INTERDISCIPLINARY TEAM AT A HOSPITAL WARD

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Rationale: During pronounced shortage of nurses a clinical dietician was responsible for executing nutritional care related assignments. The aim of this study was to assess the effects hereof on nutrition care.

Methods: A clinical dietician was part of the interdisciplinary team at the gastroenterological ward to effectuate weight measuring, nutritional risk screening (NRS), diet registration (DR), providing in-between meals,