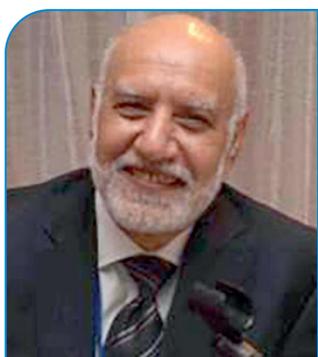


FAECAL MICROBIOTA TRANSPLANTATION WITH FAECAL ANALYSIS USING GA-MAP® DYSBIOSIS TEST

Case study from a professor of gastroenterology and hepatology

Irritable bowel syndrome (IBS) is a common gastrointestinal disorder that considerably lowers the quality of life of sufferers. This torturous condition has a pathophysiology that is not well understood, and currently no effective treatment options exist. Research has revealed that the gut microbiota of IBS patients differs from that of healthy subjects, and it is believed that this dysbiosis – disruption to the microbiome – may be a factor that contributes to the development of the condition. Faecal microbiota transplantation (FMT) has been under investigation for several years as a potential treatment option, but its long-term efficacy in treating IBS patients remains unknown.



Magdy El-Salhy, Professor of Gastroenterology and Hepatology at the School of Medicine, University of Bergen, and consultant gastroenterologist at Stord Hospital, Norway.

Magdy El-Salhy is a Professor of Gastroenterology and Hepatology at the University of Bergen, with a particular interest in establishing the therapeutic potential of FMT for IBS sufferers. His research team set out to resolve contradictory findings of several recent studies by running a clinical trial to determine the efficacy of FMT for IBS patients. Throughout the study, the faecal samples of the donor and patients were analysed using the GA-map® Dysbiosis Test (GA-map® Test), a DNA analysis tool for gut microbiota designed to identify and characterise dysbiosis. The results of this clinical study determined that FMT is an effective therapy for IBS, with up to 89.1 % of patients who received FMT responding to treatment. Additionally, around half of the patients experienced clinical improvements in abdominal symptoms, fatigue and quality of life.

A carefully constructed study protocol

“Our trial had exceptional results, with almost 90 % of patients responding to FMT in one treatment group. It is important to get the protocol right to achieve good results like this, and ours had five key aspects: careful selection of a ‘superdonor’ in terms of clinical criteria; ensuring that the donor had a stable microbiome by frequent faecal analysis of his samples; freezing of the fresh donor faeces; manual mixing prior to administration of the sample; and transplantation directly into the small intestine of the patient guided by gastroscopy.”

“ *The GA-map® Test was fundamental for this analysis, as well as to evaluate the intestinal bacterial profiles of patients following transplantation. We wanted to use a validated and standardised test, as our protocol involved repeated sampling and measurements of the donor.* ”

BIOHIT HealthCare

Innovating for Health

BIOHIT HealthCare Ltd, Pioneer House, Pioneer Business Park,
North Road, Ellesmere Port, Cheshire, CH65 1AD, United Kingdom
Tel: +44 151 550 4 550, Fax: +44 151 550 4 551
E-mail: cs@biohithealthcare.co.uk
www.biohithealthcare.co.uk



The GA-map® Test has been certainly critical in the development and success of our study.



Factors that ensured success

“We performed faecal analysis of the superdonor at the start of the study, to ensure that he had normal gut microbiota, and then at every third month throughout the year to confirm that his microbiome was stable. The GA-map® Test was fundamental for this analysis, as well as to evaluate the intestinal bacterial profiles of patients following transplantation. We wanted to use a validated and standardised test, as our protocol involved repeated sampling and measurements of the donor. Analyses using the GA-map® Test allowed us to compare the results from different time periods and, unlike if we sent samples to a third-party sequencing laboratory, we could study the differences.”

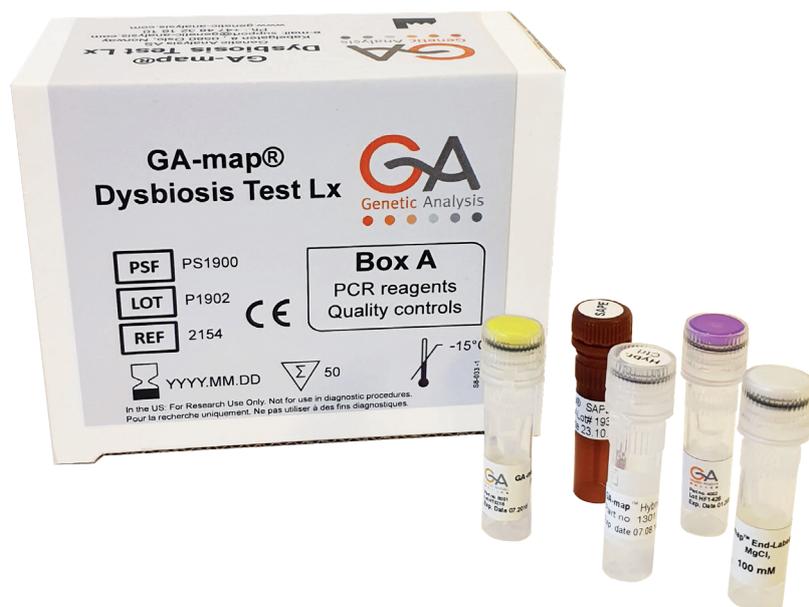
Advancing research with the GA-map® Test

“The collaboration with Genetic Analysis AS (GA) was a crucial factor for the success of the trial; the team

were easy to work with and adapted to our needs. One of our study requirements was that the faecal samples had to be frozen and, as we had patients in different geographical locations, this was a challenge. The GA team made this easy by offering the flexibility to come directly to us. When they received the samples, the GA-map® Test was used to analyse them very quickly, and we were provided tabulated results in a format that was easy to work with. This saved us from having to spend time dealing with complex outputs ourselves, making the analysis process less demanding. The GA-map® Test has been certainly critical in the development and success of our study.”

The future

“Now that we have established an effective protocol, we are applying for different grants to instigate trials for other conditions, including inflammatory bowel disease and neurological diseases. We will use the same study design, and will use the GA-map® Test for analysis throughout, which will help us to understand the body-wide symptom improvements that were reported in our trial. There is still so much to learn about the efficacy of FMT in many conditions, and we need more research to prove the benefits of this potential treatment. Faecal sample analysis using the GA-map® Test will be key to driving this research forward.”



BIOHIT HealthCare

Innovating for Health

BIOHIT HealthCare Ltd, Pioneer House, Pioneer Business Park,
North Road, Ellesmere Port, Cheshire, CH65 1AD, United Kingdom
Tel: +44 151 550 4 550, Fax: +44 151 550 4 551
E-mail: cs@biohithealthcare.co.uk
www.biohithealthcare.co.uk