



# Newsletter

APRIL 2025

Dear MISTRAL colleagues,

Since our last update in October 2024, we're pleased to share that we've seen a steady increase in participants completing their second visit. Thank you all for your continued dedication and hard work — your efforts are truly appreciated.

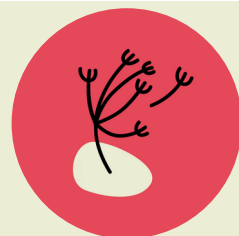
In this sixth MISTRAL Study Newsletter, you'll find updates on Visit 2, ongoing analyses, site reminders, and a spotlight on recent research related to the gut microbiome.

As always, we welcome your feedback, insights, or any good ideas you'd like to share — just reach out, and we'll be happy to include them in future updates to benefit the wider network.

Warm regards,

The MISTRAL Team at CHIP

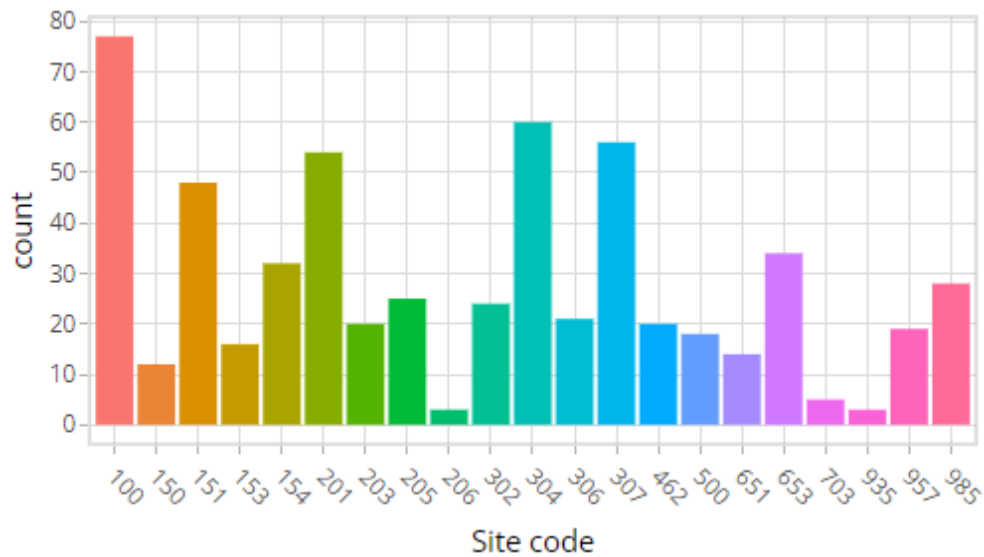
## Study updates



### Visit 2

As of 24th April 2025, 569 participants have returned to their clinic and completed their second visit.

Please remember to plan the second study visit keeping in mind that the follow-up sample should be collected within 10-24 months after the first MISTRAL study visit.



Status of visit 2 per clinical site

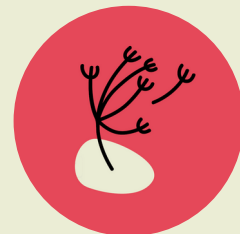
## Analysis

As part of the MISTRAL project, we have applied shotgun metagenomic sequencing to stool DNA from 991 participants at their first visit (with 8 repeat samples from visit 2). Bioinformatic analysis has been completed for the first 500 metagenomic libraries, with the remaining 500 expected in April. Data quality from the first batch has been confirmed to be high, enabling robust downstream analyses. A detailed analysis plan was constructed, focusing on three categories: microbiome associations with (i) inflammation, (ii) cardiovascular disease risk scores, and (iii) cholesterol levels. Preliminary analyses based on the first 500 individuals suggest consistent patterns linking gut microbiome variation with clinical, behavioural, and demographic factors—particularly sex, HIV transmission mode, sexual practices, and levels of inflammatory biomarkers. In parallel, we cleaned the baseline questionnaire data and we are currently generating integrated analysis datasets that combine clinical, lifestyle, and laboratory data to support further investigation into microbiome–host associations in people living with HIV.

## Data catalogue

We're currently developing a data catalogue to give researchers a clearer overview of the types of data being collected within the MISTRAL study. This resource will support external researchers in preparing and submitting study proposals. The catalogue will be available on our website very soon.

# Reminders



## Reimbursement of REDCap forms

Forms that have a completed and locked status, i.e., questionnaire and samples (remaining visit 1 and 2), event forms and CoDe forms, prior to 1st May 2025 will be reimbursed in the Autumn. MISTRAL Follow-up 2 forms will also be reimbursed later in the Autumn. Do not hesitate to ask if this raises any questions on your end.

## 20th European AIDS Conference (EACS), Paris, France. 15-18 October 2025

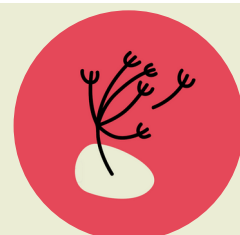
In connection with the EACS Conference in Paris this October, we will be hosting a joint EuroSIDA and MISTRAL update meeting. The exact date and venue will be confirmed closer to the time. We look forward to seeing many of you there!

## MISTRAL study closing in December 2025

As a reminder, the MISTRAL study is scheduled to conclude in December 2025, when our funding from the European Commission also comes to an end. As we enter this final phase, your continued engagement is key to ensuring we complete the study successfully. We will continue annual clinical follow-up until 2030.

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## The MISTRAL consortium



MISTRAL is a large international consortium funded by EU. Research groups from all over Europe are engaged in the work, which has been split into several work packages each with their own aim. Information about all the work packages included in MISTRAL can be found at [www.mistral-hiv.eu](http://www.mistral-hiv.eu).

The primary objective of the work led by CHIP is to strengthen and evaluate the understanding of the association between the gut microbiome composition and the risk of developing serious AIDS and non-AIDS events (SNAEs), including cardiovascular events.

# MISTRAL cohort characteristics

Twenty-two sites from countries in Europe are part of our MISTRAL work package. A total of 991 participants completed their first visit, of which 334 were already part of EuroSIDA.

The group consists predominantly of white men who have sex with men (MSM). Their diet is mainly omnivorous, and the stool samples collected have mostly been of Type 4 of the Bristol Stool Chart.

We have a richly characterised cohort in relation to factors that may influence the microbiome and the risk of serious non-AIDS events. Preliminary assessments also highlight the need to treat these variables carefully given the observed correlations and small numbers of certain subgroups (e.g., women and non-white ethnicities).



Countries in Europe and Israel part of the MISTRAL cohort

## Interesting research on the gut microbiome



**MacCann et al., "Associations Between the Gut Microbiome, Inflammation, and Cardiovascular Profiles in People With Human Immunodeficiency Virus", *The Journal of Infectious Diseases* (2025)**

A small cross-sectional case-control (people with vs. without HIV) study has recently found that gut microbiome changes (measured by 16S rRNA sequencing) was associated with diet, systemic inflammation, and coronary plaque burden in people with HIV. The findings are relevant for MISTRAL since both studies collect data on diet and inflammatory biomarkers.

The article is available here: <https://doi.org/10.1093/infdis/jiaf043>

# Learn more about MISTRAL

Previous MISTRAL newsletters can be found at:

<https://chip.dk/Research/Studies/MISTRAL/MISTRAL-Newsletters>

You can find all the study documents related to the MISTRAL project at

<https://chip.dk/Research/Studies/MISTRAL/Study-documents>

General information about MISTRAL can be found on this website

<https://chip.dk/Research/Studies/MISTRAL>

Information about all the work packages included in MISTRAL can be found at

[www.mistral-hiv.eu](http://www.mistral-hiv.eu)

Finally, you can follow the MISTRAL consortium on X: <https://x.com/mistralhiv>

This was all we had for now. We look forward to sharing more updates with you in half a year.

Sincerely,

*The MISTRAL staff at CHIP*



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