MICROB-PREDICT

MICROBiome-based biomarkers to PREDICT decompensation of liver cirrhosis and treatment response

D9.10 - Video explaining new knowledge on the role of the human microbiome on liver disease, AD and ACLF

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Abbreviations

AD	Acute decompensation
ACLF	Acute-on-chronic liver failure
ALB	Albumin
AMR	Antimicrobial resistance
CEA	Commissariat à l'Energie Atomique et aux Energies Alternatives
concentris	concentris research management GmbH
EASL	European Association for the Study of the Liver
EF CLIF	European Foundation for the Study of Chronic Liver Failure
ELPA	European Liver Patients Association
FCRB	Fundacio Clinic Per A La Recerca Biomedica
GA	General Assembly
IgA	Immunoglobulin A
KCL	King's College London
KUL	Katholieke Universiteit Leuven
LUMC	Leiden University Medical Center
MD	Doctor of Medicine
MPI	Max-Planck Institute
OUH	Odense University Hospital
PhD	Doctor of Philosophy
POC	Point-of-care
SC	Steering Committee
TLR4	Toll-like receptor 4
UCL	University College London
UCPH	University of Copenhagen
UNIDEB	University of Debrecen

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1. Executive Summary

An important objective of the MICROB-PREDICT project has been to communicate its scientific findings on the role of the human microbiome in chronic liver disease, particularly acute decompensation (AD) and acute-on-chronic liver failure (ACLF), to both the scientific community as well as patients and the general public.

Deliverable D9.10, "Video explaining new knowledge on the role of the human microbiome on liver disease, AD and ACLF", was initially planned as a single video. However, given the breadth of the project's scientific results, the consortium developed **18 shorter, topic-specific videos** for two key audiences: **scientists**, particularly hepatologists and microbiome experts (Videos 1–9), and **patients and the general public** (Videos 10–18). The videos were recorded during the 6th MICROB-PREDICT General Assembly in Ljubljana, Slovenia, in March 2024.

The videos cover a **broad range of MICROB-PREDICT research results** that either uncover underlying mechanisms contributing to the development of AD and ACLF or investigate improved patient stratification or treatment approaches, including

- multi-omics biomarker discovery in blood plasma, urine, and stool samples
- integrative metabolomics, metagenomics, and metaproteomics data
- the role of the gut virome (including bacteriophages)
- gut barrier dysfunction as an important organ failure leading to ACLF, particularly
  - the role of serum villin-1
  - the role of secretory immunoglobulin A (secretory IgA)
- treatment with human albumin (ALB) in the ALB-Trial
- how albumin infusions reduce endotoxin sensitivity and inflammation in an animal model
- the dangers of antimicrobial resistance (AMR).

The scientific videos feature **short expert presentations supported by graphical abstracts**, while the patient-oriented videos use a **more accessible interview format** involving Marko Korenjak, President of the European Liver Patients Association (ELPA).

Following approval and, where applicable, publication of the underlying scientific results, the videos were progressively published on the **concentris YouTube channel** and embedded on the **MICROB-PREDICT website** in dedicated "Results Videos" and "Easy Results Videos" sections. Their dissemination and reach was further supported through **newsletters** and social media posts on **LinkedIn** and **BlueSky**, with project partners and relevant stakeholder organisations encouraged to amplify their reach.

By 31 July 2026, the 18 videos had generated **896 views** and **23,915 impressions**. Further promotion will occur after submission of this deliverable, and the videos will remain publicly accessible beyond the end of the project. Overall, the video series provides an effective and sustainable means of increasing the **visibility, accessibility, and longer-term impact** of MICROB-PREDICT's scientific results among diverse audiences.

2. Deliverable Report

An important aspect of the MICROB-PREDICT project has been to communicate the project's scientific background, our goal to improve the treatment of chronic liver disease (cirrhosis) – especially AD and ACLF, and to explain the newest scientific outputs openly and transparently to all stakeholders, including the scientific community and liver patients.

For this **Deliverable D9.10**, we originally planned only one video to explain new knowledge on the role of the human microbiome in liver disease, AD, and ACLF. However, given the diversity of major results from this project, the consortium decided to produce **several shorter, target group-specific videos** instead of one general video. This approach enables a more in-depth topic-specificity as well as better-tailored communication towards the following two primary audiences - thereby enhancing clarity, accessibility, and overall impact of the disseminated results:

- **Scientists**, especially hepatologists and microbiome experts (**9 videos**; No. 1-9)
- **Patients and the general public** (**9 videos**; No. 10-18)

All videos were recorded during the **6th MICROB-PREDICT General Assembly (GA) Meeting in Ljubljana, Slovenia** (20-22 of March 2024), a time when the majority of relevant data and results had either already been collected or could already be anticipated and described in a meaningful way.

While the scientist-targeted videos were recorded as **monologues** by the respective **early-career scientist** (ECS) – supported by an accompanying **graphical abstract**, the patient-targeted videos were chosen to be recorded using a more personable **interview-style** – with **Marko Korenjak** (ELPA president) as the interviewer and the respective ECS as the interviewee.

2.1. Videos for Scientists, including Hepatologists and Microbiome Experts

MICROB-PREDICT - Multi-omics biomarkers for early identification of Pre-ALCF (Camila Alvarez-Silva) – Video 1

Video description on YouTube:

MICROB-PREDICT project website: https://microb-predict.eu/

With focus on the human microbiome to fight cirrhosis, 22 European institutions join forces in MICROB-PREDICT to improve the prevention and treatment of chronic liver disease. The project aims to identify microbiome-based biomarkers and mechanisms that predict in advance when the body can no longer compensate for the dysfunctional liver (decompensated #cirrhosis), when such decompensated cirrhosis will progress to acute-on-chronic liver failure (#ACLF), and a patient's individual treatment response. Based on such biomarkers, effective diagnostic tools are planned to be developed for earlier and better patient stratification and personalised treatment.

In this results video, Camila Alvarez-Silva (PhD), a postdoctoral researcher in the group of Mani Arumugam at the University of Copenhagen (UCPH), Denmark, presents the approach and first results of a multi-#omics study to identify #biomarkers for early identification of #PreALCF patients. The video was recorded during the 6th MICROB-PREDICT General Assembly (GA) Meeting in Ljubljana, Slovenia, and includes the graphical abstract of the study.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 825694. This video reflects only the consortium's view and the European Commission is not responsible for any use that may be made of the information it contains.

Video URL (URL = uniform resource locator)

- concentris channel: https://youtu.be/fSGujwbYGxI
- Date of publication: **23 July 2024**

Number of video views: **61**

Number of impressions (by 31.07.26): **727**

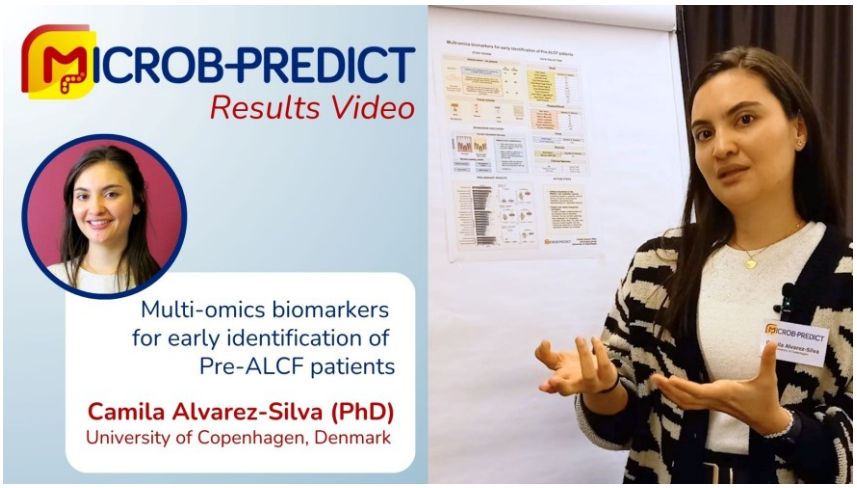


Figure 1. *Thumbnail of video 1.*

MICROB-PREDICT - Metagenomics-Metaproteomics Pipeline for Biomarker Discovery in ACLF (Peter Treit) – Video 2

Video description on YouTube:

MICROB-PREDICT project website: https://microb-predict.eu/

With focus on the human microbiome to fight cirrhosis, 22 European institutions join forces in MICROB-PREDICT to improve the prevention and treatment of chronic liver disease. The project aims to identify microbiome-based biomarkers and mechanisms that predict in advance when the body can no longer compensate for the dysfunctional liver (decompensated #cirrhosis), when such decompensated cirrhosis will progress to acute-on-chronic liver failure (#ACLF), and a patient's individual treatment response. Based on such biomarkers, effective diagnostic tools are planned to be developed for earlier and better patient stratification and personalised treatment.

In this results video, Peter Treit, a PhD Candidate in Matthias Mann's group at the Max-Planck Institute (MPI) of Biochemistry in Munich, Germany, describes the collaborative pan-European data pipeline of the MICROB-PREDICT consortium from bio-sampling to sample analysis (including #metagenomics, #transcriptomics, and #metaproteomics) to assemble a multi-omics #biomarker panel for ACLF and to build reliable #PredictiveModels for optimal #PatientStratification and treatment selection. In March 2024, the consortium discussed relevant model parameters at the 6th General Assembly (GA) in Ljubljana, Slovenia, models that will (of course) be thoroughly tested, benchmarked, and validated before their application in clinical practice.

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Video URL (URL = uniform resource locator)

- concentris channel: **https://youtu.be/0LHVANYGwWU**
- Date of publication: **23 July 2024**

Number of video views: **76**

Number of impressions (by 31.07.26): **886**



Figure 2. *Thumbnail of video 2.*

MICROB-PREDICT - Blood-biomarker to stratify cirrhosis patients in the ALB-Trial (Nikolaj Torp) – Video 3

Video description on YouTube:

MICROB-PREDICT project website: https://microb-predict.eu/

With focus on the human microbiome to fight cirrhosis, 22 European institutions join forces in MICROB-PREDICT to improve the prevention and treatment of chronic liver disease. The project aims to identify microbiome-based biomarkers and mechanisms that predict in advance when the body can no longer compensate for the dysfunctional liver (#decompensated #cirrhosis), when such decompensated cirrhosis will progress to acute-on-chronic liver failure (#ACLF), and a patient's individual treatment response. Based on such biomarkers, effective diagnostic tools are planned to be developed for earlier and better patient stratification and personalised treatment.

In this results video, recorded during the 6th MICROB-PREDICT General Assemble (GA) Meeting in Ljubljana, Slovenia, Nikolaj Torp (MD), PhD student in the group of Prof. Aleksander Krag at Odense University Hospital (OUH) in Denmark, describes the number of patients, participating countries, study duration and #biomarker-based stratification process that cirrhosis patients will undergo after being included in MICROB-PREDICT's #albumin trail (#ALB-Trial). Link to the publication about the ALB-trial protocol: https://bmjopen.bmj.com/content/14/2/e079309.abstract.

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Video URL (URL = uniform resource locator)

- concentris channel: https://youtu.be/pgrQVn8mPbk
- Date of publication: **22 August 2024**

Number of video views: **65**

Number of impressions (by 31.07.26): **1,242 (1.2 K)**

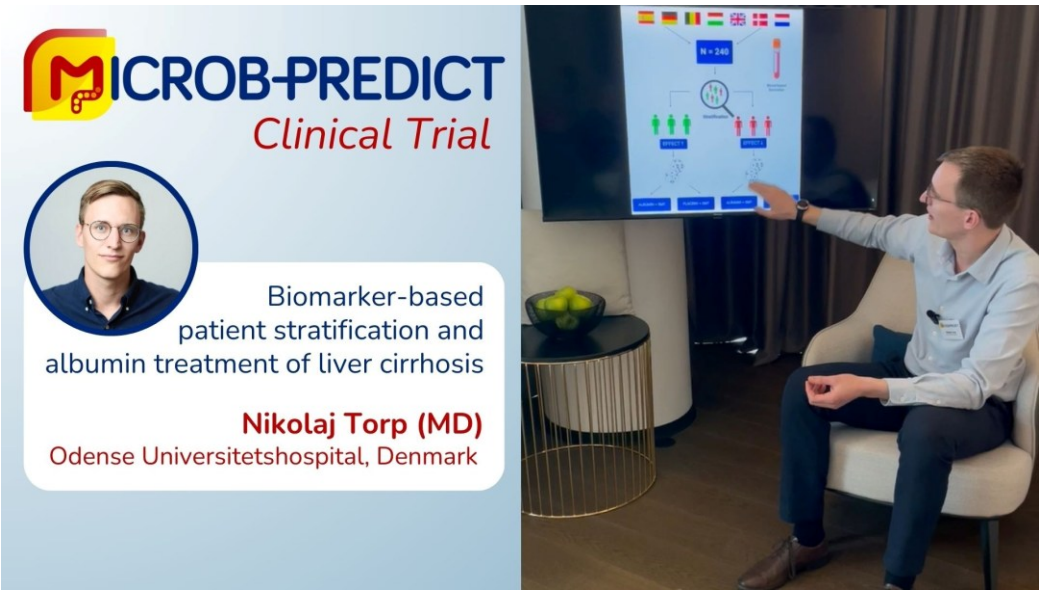


Figure 3. *Thumbnail of video 3.*

MICROB-PREDICT - The gut virome and bacteriophages in decompensated liver cirrhosis (Lore Van Espen) – Video 4

Video description on YouTube:

MICROB-PREDICT project website: https://microb-predict.eu/

With focus on the human microbiome to fight cirrhosis, 22 European institutions join forces in MICROB-PREDICT to improve the prevention and treatment of chronic liver disease. The project aims to identify microbiome-based biomarkers and mechanisms that predict in advance when the body can no longer compensate for the dysfunctional liver (#decompensated #cirrhosis), when such decompensated cirrhosis will progress to acute-on-chronic liver failure (#ACLF), and a patient's individual treatment response. Based on such biomarkers, effective diagnostic tools are planned to be developed for earlier and better patient stratification and personalised treatment.

In this results video, recorded during the 6th MICROB-PREDICT General Assembly (GA) Meeting in Ljubljana, Slovenia, Lore Van Espen, PhD candidate in the group of Prof. Jelle Matthijnssens at Katholieke Universiteit Leuven (KUL) in Belgium, presents her recent data on the #gut #virome, particularly on #phages (bacteria-infecting viruses) in the gut of patients with decompensated liver cirrhosis.

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Video URL (URL = uniform resource locator)

- concentris channel: https://youtu.be/0YF6qToBQUM
- Date of publication: **11 September 2024**

Number of video views: **134**

Number of impressions (by 31.07.26): **4,752 (4.8 K)**



Figure 4. *Thumbnail of video 4.*

MICROB-PREDICT - The predictive role of immunoglobulins in gut barrier dysfunction (Dávid Tornai) – Video 5

Video description on YouTube:

MICROB-PREDICT project website: https://microb-predict.eu/

With focus on the human microbiome to fight cirrhosis, 22 European institutions join forces in MICROB-PREDICT to improve the prevention and treatment of chronic liver disease. The project aims to identify microbiome-based biomarkers and mechanisms that predict in advance when the body can no longer compensate for the dysfunctional liver (decompensated #cirrhosis), when such decompensated cirrhosis will progress to acute-on-chronic liver failure (#ACLF), and a patient's individual treatment response. Based on such biomarkers, effective diagnostic tools are planned to be developed for earlier and better patient stratification and personalised treatment.

In this results video, recorded during the 6th MICROB-PREDICT General Assembly (GA) Meeting in Ljubljana, Slovenia, Dávid Tornai (MD, PhD) from the University of Debrecen (UNIDEB) presents his recent data on the predictive role of immunoglobulins, especially secretory IgA, indicative of gut barrier dysfunction in a prospective patient cohort with cirrhosis and acute #decompensation in front of the study's graphical abstract.

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Video URL (URL = uniform resource locator)

- concentris channel: **https://youtu.be/KapUqG7AFFk**
- Date of publication: **23 September 2025**

Number of video views: **44**

Number of impressions (by 31.07.26): **426**



Figure 5. *Thumbnail of video 5.*

MICROB-PREDICT - Serum villin-1, a tell-tale sign of gut-barrier failure in cirrhosis (Dávid Tornai) – Video 6

Video description on YouTube:

MICROB-PREDICT project website: https://microb-predict.eu/

With focus on the human microbiome to fight cirrhosis, 22 European institutions join forces in MICROB-PREDICT to improve the prevention and treatment of chronic liver disease. The project aims to identify microbiome-based biomarkers and mechanisms that predict in advance when the body can no longer compensate for the dysfunctional liver (decompensated #cirrhosis), when such decompensated cirrhosis will progress to acute-on-chronic liver failure (#ACLF), and a patient's individual treatment response. Based on such biomarkers, effective diagnostic tools are planned to be developed for earlier and better patient stratification and personalised treatment.

In this results video, recorded during the 6th MICROB-PREDICT General Assembly (GA) Meeting in Ljubljana, Slovenia, Dávid Tornai (MD, PhD) from the University of Debrecen (UNIDEB) presents his recent data on serum villin-1 level, a tell-tale sign of gut barrier failure in cirrhotic patients with acute decompensation via a graphical abstract.

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Video URL (URL = uniform resource locator)

- concentris channel: **https://youtu.be/URerer6AxxY**
- Date of publication: **08 December 2025**

Number of video views: **34**

Number of impressions (by 31.07.26): **449**



Figure 6. *Thumbnail of video 6.*

MICROB-PREDICT - Albumin reduces inflammation & protects against multi-organ injury (Alex Phillips) – Video 7

Video description on YouTube:

MICROB-PREDICT project website: https://microb-predict.eu/

With focus on the human microbiome to fight cirrhosis, 22 European institutions join forces in MICROB-PREDICT to improve the prevention and treatment of chronic liver disease. The project aims to identify microbiome-based biomarkers and mechanisms that predict in advance when the body can no longer compensate for the dysfunctional liver (decompensated #cirrhosis), when such decompensated cirrhosis will progress to acute-on-chronic liver failure (#ACLF), and a patient's individual treatment response. Based on such biomarkers, effective diagnostic tools are planned to be developed for earlier and better patient stratification and personalised treatment.

In this results video, Alexandra Phillips, a PhD candidate in the group of Rajiv Jalan at University College London (UCL) in the United Kingdom presents her pre-clinical and translational research in animal models of #LiverFailure and #ACLF, particularly how #albumin infusions reduce #endotoxin sensitivity by modulating toll-like receptor 4 (#TLR4)-related #inflammation, and how albumin protects against multi-organ injury in these animals. Research in these animal models is absolutely crucial to identify biological targets and to develop much-needed treatment options for humans suffering from advanced cirrhosis or ACLF, many of whom unfortunately still die if they do not receive a liver transplant because there are still no effective treatments available.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 825694. This video reflects only the consortium's view and the European Commission is not responsible for any use that may be made of the information it contains.

Video URL (URL = uniform resource locator)

- concentris channel: https://youtu.be/SIi906R9DZI
- Date of publication: **10 March 2026**

Number of video views: **35**

Number of impressions (by 31.07.26): **550**

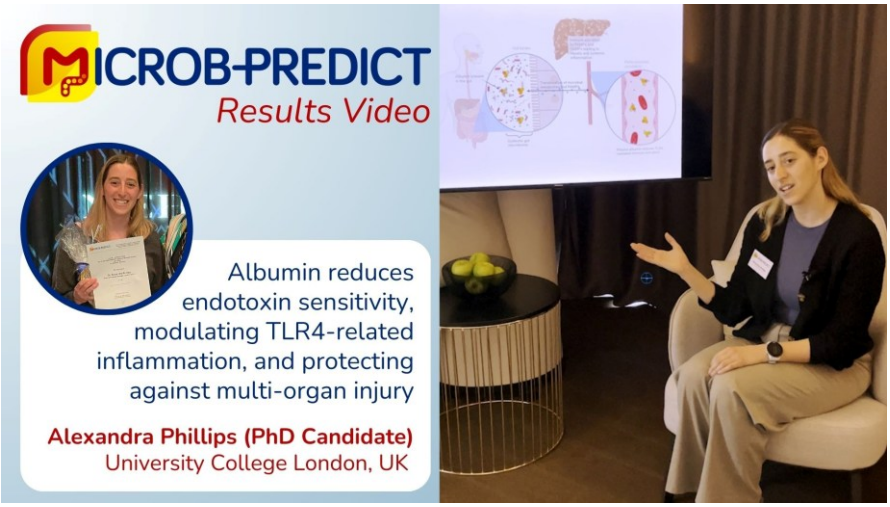


Figure 7. *Thumbnail of video 7.*

MICROB-PREDICT - Leukotoxin 9,10-DiHOME drives immunosuppression in ACLF (C. López, B. Contreras) – Video 8

Video description on YouTube:

MICROB-PREDICT project website: https://microb-predict.eu/

With focus on the human microbiome to fight cirrhosis, 22 European institutions join forces in MICROB-PREDICT to improve the prevention and treatment of chronic liver disease. The project aims to identify microbiome-based biomarkers and mechanisms that predict in advance when the body can no longer compensate for the dysfunctional liver (#decompensated #cirrhosis), when such decompensated cirrhosis will progress to acute-on-chronic liver failure (#ACLF), and a patient's individual treatment response. Based on such biomarkers, effective diagnostic tools are planned to be developed for earlier and better patient stratification and personalised treatment.

In this results video, recorded during the 6th MICROB-PREDICT General Assembly (GA) Meeting in Ljubljana, Slovenia, Cristina López Vicario and Bryan Contreras Herrera, a senior postdoc and her PhD student in the "Inflammation and Liver Disease" group of Prof. Joan Clària at IDIBAPS in Barcelona, Spain, describe their molecular biology results about the immunosuppressive actions of the linoleic acid derivate 9,10-DiHOME (9,10-dihydroxy-12Z-octadecenoic acid), a leukotoxin that appears to drive inflammation and a cirrhotic patient's susceptibility to bacterial infection during late-stage liver cirrhosis.

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Video URL (URL = uniform resource locator)

- concentris channel: https://youtu.be/9fIUZM7Df1E
- Date of publication: **10 March 2026**

Number of video views: **28**

Number of impressions (by 31.07.26): **326**

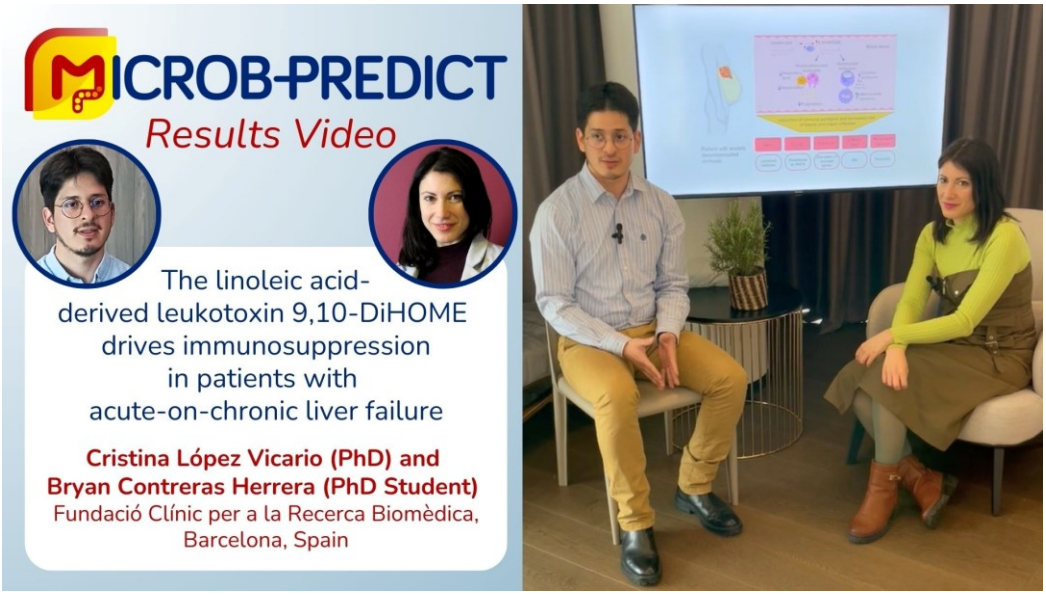


Figure 8. *Thumbnail of video 8.*

MICROB-PREDICT - Multi-compartment metabolomics to stratify cirrhotic patients (Christophe Junot) – Video 9

Video description on YouTube:

MICROB-PREDICT project website: https://microb-predict.eu/

With a focus on the human microbiome to fight cirrhosis, 22 European institutions join forces in MICROB-PREDICT to improve the prevention and treatment of chronic liver disease. The project aims to identify microbiome-based biomarkers and mechanisms that predict in advance when the body can no longer compensate for the dysfunctional liver (decompensated #cirrhosis), when such decompensated cirrhosis progresses to acute-on-chronic liver failure (ACLF), and a patient's individual treatment response. Based on such biomarkers, effective diagnostic tools are planned to be developed for earlier and better patient stratification and personalised treatment.

In this results video, Christoph Junot, head of the Drug Metabolism Research Laboratory at Commissariat à l'Energie Atomique et aux Energies Alternatives (CEA) in France describes the multi-compartment #metabolomics approach used by his research team to discover novel biomarkers for #decompensated cirrhosis and #ACLF in blood plasma, urine, and stool samples. The video was recorded at the 6th MICROB-PREDICT General Assembly (GA) Meeting in Ljubljana, Slovenia.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 825694. This video reflects only the consortium's view and the European Commission is not responsible for any use that may be made of the information it contains.

Video URL (URL = uniform resource locator)

- concentris channel: https://youtu.be/TYObOSu_r2w
- Date of publication: **10 March 2026**

Number of video views: **26**

Number of impressions (by 31.07.26): **280**

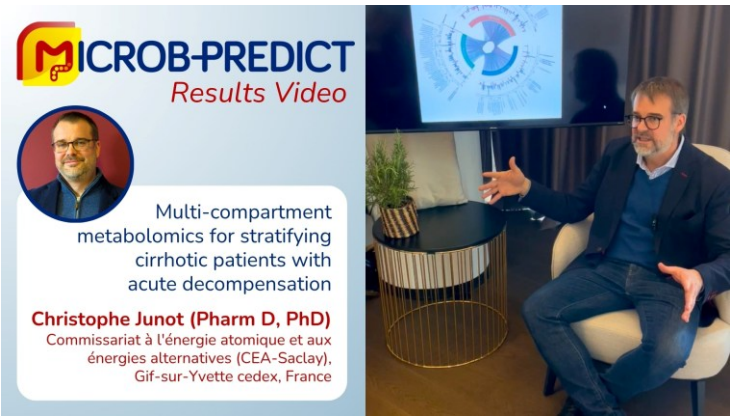


Figure 9. *Thumbnail of video 9.*

2.2. Videos for Patients and the General Public

MICROB-PREDICT - Alexandra Phillips (University College London) on rodent models of cirrhosis & ACLF – Video 10

Video description on YouTube:

MICROB-PREDICT project website: https://microb-predict.eu/

Albumin reduces #endotoxin sensitivity, modulating toll-like receptor 4 (#TLR4)-related #inflammation and protecting against multi-organ injury.

With focus on the human microbiome to fight cirrhosis, 22 European institutions join forces in MICROB-PREDICT to improve the prevention and treatment of chronic liver disease. The project aims to identify microbiome-based biomarkers and mechanisms that predict in advance when the body can no longer compensate for the dysfunctional liver (decompensated #cirrhosis), when such decompensated cirrhosis will progress to acute-on-chronic liver failure (#ACLF), and a patient's individual treatment response. Based on such biomarkers, effective diagnostic tools are planned to be developed for earlier and better patient stratification and personalised treatment.

In this video, PhD student Alexandra Phillips from University College London (UCL) explains her research on #albumin infusions in rodent models of cirrhosis and ACLF. Albumin, the most abundant protein in the human body, is produced by the liver and has been found to reduce multi-organ injury in cirrhosis patients when administered as an infusion. The next step is to investigate the deeper mechanisms behind albumin's beneficial effects. The video was recorded during the 6th General Assembly (GA) in Ljubljana, Slovenia, from 20-22 March 2024.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 825694. This video reflects only the speakers' view, and the European Commission is not responsible for any use that may be made of the information it contains.

Video URL (URL = uniform resource locator)

- concentris channel: https://youtu.be/cI6rqSvw6EA
- Date of publication: **10 March 2026**

Number of video views: **37**

Number of impressions (by 31.07.26): **3,064 (3.1 K)**



Figure 10. *Thumbnail of video 10.*

MICROB-PREDICT - Lore van Espen (Katholieke Universiteit Leuven) on the gut virome in liver disease – Video 11

Video description on YouTube:

MICROB-PREDICT project website: https://microb-predict.eu/

Gut virome in decompensated liver cirrhosis.

With focus on the human microbiome to fight cirrhosis, 22 European institutions join forces in MICROB-PREDICT to improve the prevention and treatment of chronic liver disease. The project aims to identify microbiome-based biomarkers and mechanisms that predict in advance when the body can no longer compensate for the dysfunctional liver (decompensated #cirrhosis), when such decompensated cirrhosis will progress to acute-on-chronic liver failure (#ACLF), and a patient's individual treatment response. Based on such biomarkers, effective diagnostic tools are planned to be developed for earlier and better patient stratification and personalised treatment.

In this video, PhD researcher Lore Van Espen from Katholieke Universiteit Leuven (KUL) in Belgium presents her research on the gut virome – the viral component of the gut #microbiome – in chronic liver disease patients. By comparing ACLF patients to patients with decompensated cirrhosis, she found alterations in gut viruses, including higher viral diversity and specific phages associated with ACLF development, bacterial infection, and increased mortality. The ultimate goal is to improve understanding of these alterations and develop clinical applications to prevent disease progression and reduce mortality. The video was recorded during the 6th General Assembly (GA) in Ljubljana, Slovenia, from 20-22 March 2024.

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Video URL (URL = uniform resource locator)

- concentris channel: https://youtu.be/K9MIlhK4K5g
- Date of publication: **10 March 2026**

Number of video views: **42**

Number of impressions (by 31.07.26): **861**



Figure 11. *Thumbnail of video 11.*

MICROB-PREDICT - Camila Alvarez-Silva (University of Copenhagen) on metabolite biomarkers of ACLF – Video 12

Video description on YouTube:

MICROB-PREDICT project website: https://microb-predict.eu/

Multi-omics #biomarkers for early identification of pre-ACLF patients.

With focus on the human microbiome to fight cirrhosis, 22 European institutions join forces in MICROB-PREDICT to improve the prevention and treatment of chronic liver disease. The project aims to identify microbiome-based biomarkers and mechanisms that predict in advance when the body can no longer compensate for the dysfunctional liver (decompensated #cirrhosis), when such decompensated cirrhosis will progress to acute-on-chronic liver failure (#ACLF), and a patient's individual treatment response. Based on such biomarkers, effective diagnostic tools are planned to be developed for earlier and better patient stratification and personalised treatment.

In this results video, Dr. Camila Alvarez-Silva from the University of Copenhagen (UCPH), Denmark, explains her research on the early detection of ACLF. Patients with liver disease have very different outlooks depending on their condition: While stable patients can have a life expectancy of around 12 years, those who develop acute decompensation may only have two years. Camila's work focuses on analysing different biological samples – including stool, urine, plasma and mucosa – to identify metabolite markers that can predict which patients will develop ACLF before they do, allowing clinicians to intervene earlier. Next steps include validating these markers in external cohorts and further studying the biological mechanisms behind disease development. The video was recorded during the 6th General Assembly (GA) in Ljubljana, Slovenia, from 20-22 March 2024.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 825694. This video reflects only the speakers' view, and the European Commission is not responsible for any use that may be made of the information it contains.

Video URL (URL = uniform resource locator)

- concentris channel: **https://youtu.be/1s6Rp2If_-o**
- Date of publication: **10 March 2026**

Number of video views: **30**

Number of impressions (by 31.07.26): **299**



Figure 12. *Thumbnail of video 12.*

MICROB-PREDICT - Antimicrobial Resistance: Lindsey Edwards (KCL) speaks with Marko Korenjak (ELPA) – Video 13

Video description on YouTube:

MICROB-PREDICT project website: https://microb-predict.eu/

Antimicrobial resistance - The silent pandemic

With focus on the human microbiome to fight cirrhosis, 22 European institutions join forces in MICROB-PREDICT to improve the prevention and treatment of chronic liver disease. The project aims to identify microbiome-based biomarkers and mechanisms that predict in advance when the body can no longer compensate for the dysfunctional liver (decompensated #cirrhosis), when such decompensated cirrhosis will progress to acute-on-chronic liver failure (#ACLF), and a patient's individual treatment response. Based on such biomarkers, effective diagnostic tools are planned to be developed for earlier and better patient stratification and personalised treatment.

Marko Korenjak, President of the European Liver Patient Association (ELPA), interviews Dr. Lindsey Edwards from King's College London (KCL) about #AntimicrobialResistance (AMR) and its impact on liver patients. Dr. Edwards explains why liver patients are particularly vulnerable to infections and antibiotic resistance, why it is important to complete antibiotic courses, and what the future of the so-called "silent plague" might look like. She also talks about her work in the EU-funded MICROB-PREDICT project and the R-Biome consortium, both aimed at modifying the microbiome to improve health outcomes. Additionally, Dr. Edwards shares her belief in co-creating science with patients and society. The video was recorded during the 6th General Assembly (GA) in Ljubljana, Slovenia, from 20-22 March 2024.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 825694. This video reflects only the speakers' view, and the European Commission is not responsible for any use that may be made of the information it contains.

Video URL (URL = uniform resource locator)

- concentris channel: **https://youtu.be/pPcFoWD4iIU**
- Date of publication: **10 March 2026**

Number of video views: **22**

Number of impressions (by 31.07.26): **185**



Figure 13. *Thumbnail of video 13.*

MICROB-PREDICT - Cristina López Vicario & Bryan Contreras Herrera (FCRB) on lipid mediators in ACLF – Video 14

Video description on YouTube:

MICROB-PREDICT project website: https://microb-predict.eu/

The linoleic acid-derived #leukotoxin 9,10-DiHOME drives #immunosuppression in patients with acute-on-chronic liver failure (ACLF).

With focus on the human microbiome to fight cirrhosis, 22 European institutions join forces in MICROB-PREDICT to improve the prevention and treatment of chronic liver disease. The project aims to identify microbiome-based biomarkers and mechanisms that predict in advance when the body can no longer compensate for the dysfunctional liver (decompensated #cirrhosis), when such decompensated cirrhosis will progress to acute-on-chronic liver failure (#ACLF), and a patient's individual treatment response. Based on such biomarkers, effective diagnostic tools are planned to be developed for earlier and better patient stratification and personalised treatment.

In this video, researchers Bryan Contreras Herrera and Cristina López Vicario from the Hospital Clinic of Barcelona (FCRB) discuss their latest research on lipid mediators in patients with advanced cirrhosis and ACLF. By analysing 100 lipids in blood samples, their team identified elevated levels of the pro-inflammatory lipid leukotoxin, which may contribute to bacterial infections and organ failure in these patients. The video was recorded during the 6th General Assembly (GA) in Ljubljana, Slovenia, from 20-22 March 2024.

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Video URL (URL = uniform resource locator)

- concentris channel: https://youtu.be/cx8gn3O-kjI
- Date of publication: **10 March 2026**

Number of video views: **20**

Number of impressions (by 31.07.26): **608**



Figure 14. *Thumbnail of video 14.*

MICROB-PREDICT - Biomarkers in cirrhosis: Christophe Junot (CEA) speaks with Marko Korenjak (ELPA) – Video 15

Video description on YouTube:

MICROB-PREDICT project website: https://microb-predict.eu/

Multi-compartment #metabolomics for stratifying patients with #AcuteDecompensation

With focus on the human microbiome to fight cirrhosis, 22 European institutions join forces in MICROB-PREDICT to improve the prevention and treatment of chronic liver disease. The project aims to identify microbiome-based biomarkers and mechanisms that predict in advance when the body can no longer compensate for the dysfunctional liver (decompensated #cirrhosis), when such decompensated cirrhosis will progress to acute-on-chronic liver failure (#ACLF), and a patient's individual treatment response. Based on such biomarkers, effective diagnostic tools are planned to be developed for earlier and better patient stratification and personalised treatment.

In this video, Dr. Christophe Junot, group leader at Commissariat à l'Energie Atomique et aux Energies Alternatives (CEA, France), presents his research on small metabolite-based #biomarkers in liver disease patients. By analysing blood, urine and stool samples, his team has identified molecules that differ between stable and decompensated cirrhosis patients, with the goal of predicting disease progression and treatment response. The next challenge is transferring this knowledge from academic research laboratories to clinical settings and point-of-care (POC) tests, ultimately enabling personalised medicine for liver patients. The video was recorded during the 6th General Assembly (GA) in Ljubljana, Slovenia, from 20-22 March 2024.

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Video URL (URL = uniform resource locator)

- concentris channel: https://youtu.be/W_59KvseYxA
- Date of publication: **10 March 2026**

Number of video views: **59**

Number of impressions (by 31.07.26): **2,621 (2.6 K)**



Figure 15. *Thumbnail of video 15.*

MICROB-PREDICT - Peter Treit (Max Planck Institute of Biochemistry) on biomarkers in liver disease – Video 16

Video description on YouTube:

MICROB-PREDICT project website: https://microb-predict.eu/

Blood plasma #proteomics uncovering progression markers of acute-on-chronic liver failure (ACLF)

With focus on the human microbiome to fight cirrhosis, 22 European institutions join forces in MICROB-PREDICT to improve the prevention and treatment of chronic liver disease. The project aims to identify microbiome-based biomarkers and mechanisms that predict in advance when the body can no longer compensate for the dysfunctional liver (decompensated #cirrhosis), when such decompensated cirrhosis will progress to acute-on-chronic liver failure (#ACLF), and a patient's individual treatment response. Based on such biomarkers, effective diagnostic tools are planned to be developed for earlier and better patient stratification and personalised treatment.

In this video, mass-spectrometrist and metaproteomicist Peter Treit from the Max Planck Institute for Biochemistry in Munich presents his research on bacterial protein-based #biomarkers found in the stool of late-stage liver disease patients. By comparing different patient groups – stable cirrhotic, unstable, and ACLF patients – at different time points, his work aims to give doctors the opportunity to better stratify patients, for example, for transplant listing, and to uncover the mechanisms behind disease progression. The video was recorded during the 6th General Assembly (GA) in Ljubljana, Slovenia, from 20-22 March 2024.

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Video URL (URL = uniform resource locator)

- concentris channel: https://youtu.be/I3Y7klkh1pc
- Date of publication: **10 March 2026**

Number of video views: **67**

Number of impressions (by 31.07.26): **789**



Figure 16. *Thumbnail of video 16.*

MICROB-PREDICT - Nikolaj Torp (Odense Universitetshospital): Albumin treatment in cirrhosis & ACLF – Video 17

Video description on YouTube:

MICROB-PREDICT project website: https://microb-predict.eu/

Prognosis of the success of #albumin treatment in liver cirrhosis patients.

With focus on the human microbiome to fight cirrhosis, 22 European institutions join forces in MICROB-PREDICT to improve the prevention and treatment of chronic liver disease. The project aims to identify microbiome-based biomarkers and mechanisms that predict in advance when the body can no longer compensate for the dysfunctional liver (decompensated #cirrhosis), when such decompensated cirrhosis will progress to acute-on-chronic liver failure (#ACLF), and a patient's individual treatment response. Based on such biomarkers, effective diagnostic tools are planned to be developed for earlier and better patient stratification and personalised treatment.

In this video, medical doctor and PhD student Nikolaj Torp from Odense University Hospital in Denmark presents a clinical validation trial investigating a biomarker to predict which cirrhosis patients will respond to human albumin infusion therapy. The goal is to enable precision medicine – treating only those patients who will actually benefit. The double-blind, placebo-controlled trial runs for 180 days per patient with weekly infusions. The video was recorded during the 6th General Assembly (GA) in Ljubljana, Slovenia, from 20-22 March 2024.

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Video URL (URL = uniform resource locator)

- concentris channel: https://youtu.be/_VvrSJIR2WY
- Date of publication: **10 March 2026**

Number of video views: **88**

Number of impressions (by 31.07.26): **5,228 (5.2 K)**



Figure 17. *Thumbnail of video 17.*

MICROB-PREDICT - Dávid Tornai (University of Debrecen) on secretory IgA in gut barrier dysfunction – Video 18

Video description on YouTube:

MICROB-PREDICT project website: https://microb-predict.eu/

The predictive role of #immunoglobulins indicative of #GutBarrier dysfunction in a prospective patient cohort with cirrhosis and acute decompensation.

With focus on the human microbiome to fight cirrhosis, 22 European institutions join forces in MICROB-PREDICT to improve the prevention and treatment of chronic liver disease. The project aims to identify microbiome-based biomarkers and mechanisms that predict in advance when the body can no longer compensate for the dysfunctional liver (decompensated #cirrhosis), when such decompensated cirrhosis will progress to acute-on-chronic liver failure (#ACLF), and a patient's individual treatment response. Based on such biomarkers, effective diagnostic tools are planned to be developed for earlier and better patient stratification and personalised treatment.

In this video, Dávid Tornai from the University of Debrecen (UNIDEB), Hungary, presents his research on the role of immunoglobulins – in particular secretory IgA – as indicators of gut barrier dysfunction in cirrhosis patients with acute decompensation. By measuring immunoglobulin concentrations in serum samples and correlating them with disease severity and mortality, his team found that secretory IgA shows a strong association with mortality in ACLF patients. The goal is to better stratify high-risk patients so they can receive the best available care in time, and to open roads to improved treatments. The video was recorded during the 6th General Assembly (GA) in Ljubljana, Slovenia, from 20-22 March 2024.

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Video URL (URL = uniform resource locator)

- concentris channel: https://youtu.be/aBoAzoIJVjw
- Date of publication: **10 March 2026**

Number of video views: **28**

Number of impressions (by 31.07.26): **622**



Figure 18. *Thumbnail of video 18.*

3. Dissemination and Impact

Depending on the confidentiality level of the presented and discussed data and approval from the respective scientist, the videos were published on the concentris YouTube channel in the MICROB-PREDICT Playlist and embedded on the MICROB-PREDICT website ("Results Videos" for scientists and "Easy Results Videos" for patients and the general public) between **July 2024 and March 2026**. The large timespan was mainly due to the Steering Committee (SC) decision that only published data was to be shared on YouTube. In practical terms, this meant that several videos remained **"unlisted"** on YouTube before their settings were changed to **"public"** once the related scientific publication was available in a scientific journal.

Active promotion of the videos on social media was scheduled to take place on LinkedIn an BlueSky - staring in March 2026 and ending in September 2026. Each video was scheduled to be promoted with **an individual post** on both social media accounts. All partners, but especially **ELPA**, the European Foundation for the Study of Chronic Liver Failure (**EF CLIF**), the European Association for the Study of the Liver (**EASL**), were asked to actively support the broad promotion and dissemination of the results videos by sharing MICROB-PREDICT's posts on their own **social media channels** and including articles about the videos in **newsletters** to their subscriber base. For example, the video series was featured in the concentris summer newsletter (**3,843 recipients** at that time) and in the ALB-Trial newsletter (**153 recipients** from the MICROB-PREDICT consortium at that time) – both distributed by concentris in July 2026.

Across all videos, the promotion of the video series had resulted in **896 views** and **23,915 (24K) impressions** by 31 July 2026. It is to be noted that several posts will occur after submission of this deliverable report. Also, experience from other Horizon 2020- and Horizon Europe-funded projects shows that the number of views and impressions will naturally continue to increase over time.

In comparison, the entire **MICROB-PREDICT Playlist contains 28 videos** in total (including the 18 results videos described in this report), which received **12,3K views** and **266.569 (267K) impressions** between 26.05.2020 and 31.07.2026 (see Figure 19). More than half (51.6%) of the impact can be attributed to a very popular Masterclass video **"The human gut microbiome in health and disease"** (published in October 2020) **by Peer Bork** from the European Molecular Biology Laboratory (EMBL) who sadly passed away in January 2026 (**6.3K views** and **159K impressions**). The peak number of views of this particular video occurred not immediately after publication or post mortem, but between September 2021 and March 2022.

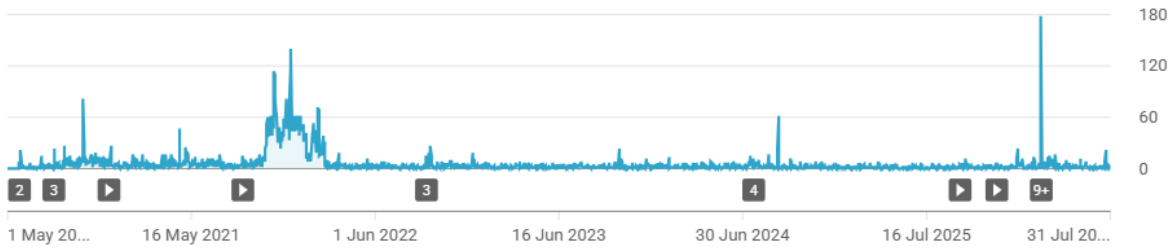


Figure 19. Total number of views of all 28 MICROB-PREDICT videos that haven been published on YouTube (and shared via the MICROB-PREDICT Playlist) between 01 May 2020 and 31 July 2026. This includes the recently added 18 results videos that are described in this deliverable report.

4. Conclusion

The 18 videos produced under Deliverable D9.10 successfully support the dissemination of MICROB-PREDICT's key scientific results on the role of the human microbiome in liver disease, AD and ACLF. The decision to develop dedicated content for scientific audiences as well as patients and the general public has enabled the project's findings to be communicated in a targeted, accessible and audience-appropriate manner.

The videos have achieved encouraging initial visibility, reaching 896 views and 23,915 impressions by 31 July 2026, with further dissemination activities still ongoing. Overall, the video series represents an effective and sustainable dissemination measure that enhances the accessibility and visibility of MICROB-PREDICT's results beyond the scientific community and contributes to their long-term uptake and impact.

5. Acknowledgement and Disclaimer



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