PARTICIPANT INFORMATION SHEET

STUDY TITLE: DEM-BIOTA. Dementia and microbiota composition: the microbiota in dementia, is it possible to reverse dementia symptoms by reversing the microbiota composition?

PRINCIPAL INVESTIGATOR: Dr. Margarita Torrente Torné, Department of Psychology, 977558176, margarita.torrente@urv.cat

CENTRE: Department of Psychology, Faculty of Educational Sciences and Psychology, Rovira i Virgili University, Tarragona.

INTRODUCTION:
We would like to provide you with information about a research study that you are invited to participate in. This study has been approved by the Ethics Committee for Research with Medicines at our center (although in this study, you will not be asked to consume any medication).

Our intention is simply to provide you with accurate and sufficient information so that you can evaluate and judge whether or not you want to participate in this study. Therefore, please read this information sheet carefully and we will clarify any doubts you may have after the explanation. Additionally, you may consult with anyone you consider appropriate.

VOLUNTARY PARTICIPATION:
You should know that your participation in this study is voluntary and that you can decide not to participate or change your decision and withdraw consent at any time. Whether you decide to participate or not, your relationship with your doctor will not be affected, and there will be no harm to your treatment.

GENERAL DESCRIPTION OF THE STUDY:
The main objective of this DEM-BIOTA study is to investigate the ability of a probiotic compound to reverse or improve neurocognitive, neuropsychiatric, and functional symptoms in patients. Specifically, we will analyze whether a probiotic mixture that has shown promising results in other countries can improve symptoms of dementia, specifically Alzheimer's disease, and study in depth the changes in the composition of the microbiota in relation to those possible changes. The microbiota describes the set of different microorganisms that live in our body. In this study, we will only analyze your gut microbiota, through a stool sample. The first kit for the collection of the sample will be provided by your doctor at the time you sign the consent to participate. The use of this stool analysis kit poses no risk to your health. If you sign the informed consent after reading this document, you agree that your doctor will provide your contact information and relevant medical history to the research team so that a team member can contact you later to arrange a visit either at your usual hospital or at your home, where a complete neurocognitive, neuropsychiatric, and functional evaluation will be performed. This evaluation will specifically include:

- Patient identification, gender, age, education level, years of schooling, weight, height, and diagnosis (other sociodemographic data) and review of inclusion/exclusion criteria.
- Medications, diseases (diabetes, cholesterol, hypertension, etc.).
- Tests/scales:
    - MEDLIFE (Mediterranean lifestyle index interview), (Sotos-Prieto et al, 2015), which provides information on how the patient follows the Mediterranean diet and habits.
    - CSV (Adapted Life Events Questionnaire from the Predimed-Plus study), (Soldevila-Domenech et al, 2021), which provides information on successfully overcome stressful events that could affect and modify the main variables under study.
    - Cognitive screening tests/scales: MMSE, GDS-FAST, CDR, MMSE (Folstein et al, 1975), GDS-FAST (Reisberg, 1982, 1988), CDR (Clinical Dementia Rating) (Hughes, 1982). o Cognitive Reserve Scale (León-Estrada et al, 2017).
    - Activities of Daily Living (Barcelona-2 Test), (Peña-Casanova, 2019).

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- Anxiety and Depression Scale (Goldberg et al, 1988).
- Neuropsychiatric Symptomatology (Barcelona-2 Test), (Peña-Casanova, 2019).
- Abbreviated Barcelona-2 Test (Peña-Casanova, 2009).

These tests will be performed before, during, and after the patient's consumption period of either the probiotics or the placebo. The assignment to either group will be random, and neither the evaluator nor the patient will know which of the two possible treatments is being ingested by the patient. The period of probiotic or placebo ingestion will be 24 weeks. The evaluation will be performed before starting the intake, at 12 weeks (during the intake period), and at 24 weeks (after the end of the intake). The researcher will meet with the volunteer for evaluation, collect samples, and give them the treatment to be taken from the day after the interview, along with a new stool collection kit. After the first 12 weeks, a new interview will be scheduled for evaluation, collection of new samples, and the researcher will give the volunteer the treatment for the last 12 weeks and a new stool collection kit, with final samples being collected at 24 weeks from the start of the study.

Patients will be asked not to change their usual physical activity and not to take any nutritional supplements during the 24 weeks of the trial.

The exact composition of the probiotic blend is provided below so that you can consult it without any concerns: Probiotic capsules - *Lactobacillus acidophilus*, *Lactobacillus casei*, *Bifidobacterium bifidum*, and *Lactobacillus fermentum* at $2x10^9$ cfu/g each.

Furthermore, we would like to inform you that a placebo is a substance that lacks pharmacological activity but may have a therapeutic (beneficial) effect when the patient who takes it believes that it is an effective medication.

BENEFITS AND RISKS
You may not receive any health benefits from participating in this study. The results of this study will undoubtedly benefit society as they will serve to advance knowledge of dementia and its possible treatments.

There is no risk to your health from participating in this study.

ALTERNATIVE TREATMENTS:
In this study, no specific clinical treatment or intervention is used beyond the ingestion of probiotics or placebo. The treatments that the patient is receiving or that their doctor suggests they should take will remain available and at their discretion.

I have received this Information Sheet:

CONFIDENTIALITY AND DATA PROTECTION

In accordance with the current legislation on data protection applicable to the Rovira i Virgili University (URV) and published in the "Applicable Legislation" section of the "Personal Data Protection" space of the Electronic Headquarters (https://seuelectronica.urv.cat/rgpd/), the following information is made available to interested parties:

a) Who is responsible for the processing of your data?

Identification	Rovira i Virgili University CIF: Q9350003A
Postal Address	Calle Escorxador, s/n 43003 Tarragona
Contact details of the Data Protection Officers	Data Protection Officers of URV Email: dpd@urv.cat

b) What personal data do we process and for what purpose?

The personal data provided (informative, personal characteristics, and special category data) are processed in order to participate in the DEM-BIOTA study "Dementia and microbiota composition: microbiota in dementia, is it possible to reverse dementia symptoms by reversing microbiota composition?"

c) Who will your data be communicated to?

In the context of the aforementioned processing, your data will not be disclosed to third parties unless there is a legal obligation.

d) What is the legitimacy for the processing of your data?

The legitimacy of this processing is based on the consent expressed by the interested party by completing and signing the informed consent document.

e) What security measures do we apply in the processing of your data?

The University is responsible for applying the security measures and the rest of the obligations derived from the personal data protection legislation in accordance with the National Security Scheme, Royal Decree 3/2010. In this regard, the Rovira i Virgili University has been provided with a Security Policy that can be consulted in the "Legislation and Regulations" section of the University's website, within "Own Regulations" and "Other Regulations", http://www.urv.cat/ca/universitat/normatives/altresnormes/. Specifically, the data collected for the study will be treated in a pseudonymized manner, that is, they will be identified with a code that will be recorded in the informed consent form, which will be properly safeguarded so that only authorized personnel can know the identity of the person to whom the data belongs. Additionally, specific security measures that will be taken into account during the study are specified in the participant information sheet.

f) What are the rights of the interested parties?

The interested party will have the right to access their personal data, to request the rectification of inaccurate data, to request cancellation and deletion, to object to processing, including profiling, to limit the processing of their data until a certain date and to portability of their data in electronic format. You may exercise your rights of access, rectification, cancellation, opposition, limitation, and portability by means of a written communication, detailing the motivation of the request, addressed to the General Registry (C/Escorxador, s/n, 43003 Tarragona) or by submitting it to the General Registry of the University, in person or electronically, as indicated in https://seuelectronica.urv.cat/registre.html. Likewise, we inform you that you have the right to lodge a complaint with the Catalan Data Protection Authority through the mechanism established. You can consult more information at https://apdcat.gencat.cat/ca/inici. Finally, we inform you that you may request information related to the protection of personal data via email to our data protection delegates at dpd@urv.cat.

g) How long will we keep your data?

The University will process the personal data provided until the consent is revoked or will delete them after 6 years.

SAMPLING.

As part of this project approved by the Ethics Committee for Research with Medicines, you will be asked to provide a stool sample for research purposes, in order to increase knowledge about

the pathology or process under study and develop new strategies and therapies applicable to patients.

STOOL: Collecting the stool sample spontaneously poses no risk to you.

The samples obtained will be stored at the Faculty of Medicine and Health Sciences (FMCS) of the URV, and the person responsible for them will be Dr. Margarita Torrente Torné, belonging to the Department of Psychology and the TecnaTox Research Center.

The samples will be stored at -80ºC in the FMCS until they are analyzed by an external specialized laboratory with the objective of responding to the study's objectives.

Once the research is completed, if there are any remaining samples, they will be destroyed.

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Date:
Name:
Signature:

INFORMED CONSENT

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CENTRE: Department of Psychology, Faculty of Educational Sciences and Psychology, Rovira i Virgili University, Tarragona.

Me (name and surname)
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- ✓ I have read the information sheet of which I have been given a copy. I have received information about the characteristics of the study, I understand the risks and benefits involved, that my participation is voluntary, and that I can withdraw or ask for the withdrawal of my data and/or samples whenever I wish, without having to give explanations and without this affecting my medical care.
  YES ☐ NO ☐
- ✓ I understand my participation according to the information sheet.
  YES ☐ NO ☐
- ✓ I have been able to ask questions about the study.
  YES ☐ NO ☐
- ✓ I freely agree to participate in the study.
  YES ☐ NO ☐
- ✓ I consent to the access and use of my data under the conditions detailed in the information sheet.
  YES ☐ NO ☐

	Name and Surname	Date	Signature
Patient			
Legal representative			
Relationship with the patient:			
Inform			

PERSONAL DATA PROTECTION INFORMATION	
Responsible	The responsible for the treatment of your personal data is the Rovira i Virgili University with CIF Q9350003A and with fiscal address at Carrer del Escorxador, s/n, 43003 Tarragona.
Purpose	Participate in the DEM-BIOTA study "Dementia and microbiota composition: the microbiota in dementia, is it possible to reverse dementia symptoms by reversing the microbiota composition?".
Rights	You may exercise your rights of access, rectification, deletion, portability, limitation or opposition to processing by writing to the General Registry of the URV at the same address as your tax domicile or by presenting them at the General Registry of the University, in person or online, as indicated at http://seuelectronica.urv.cat/registre.html.
Additional information	You can consult additional information about this processing of personal data called DEM-BIOTA study and your rights in the Register of Processing Activities of the URV published in http://seuelectronica.urv.cat/rgpd where you can also consult the Privacy Policy of the URV. Additionally, you can direct any queries about personal data protection to our data protection delegates at the e-mail address dpd@urv.cat.