

<b>The effectiveness of Lactobacill-based probiotic food supplement on bone metabolism and bone mineral density in early postmenopausal women</b>		
The research is being carried out in partial fulfilment of PhD under the supervision of A/Prof George Moschonis, Dr Jessica Biesiekierski, and Prof Bircan Erbas. The following researchers will be conducting the study:		
Role	Name	Organisation
Principal Investigator/Supervisor	A/Prof George Moschonis	Discipline of Dietetics & Human Nutrition, La Trobe University
Co- Investigator/Supervisor	Dr Jessica Biesiekierski	Discipline of Dietetics & Human Nutrition, La Trobe University
Co-investigator/Supervisor	Prof Bircan Erbas	School of Psychology & Public Health, La Trobe University
PhD Candidate	Stephanie Resciniti	Discipline of Dietetics & Human Nutrition, La Trobe University
Research Assistant	Katerina Sarapis	Discipline of Dietetics & Human Nutrition, La Trobe University
Honours student	Mak Reyes	Discipline of Dietetics & Human Nutrition, La Trobe University
HR-pQCT scanner operator (bone image analyst)	Ali Ghasem-Zadeh	Department of Medicine/Endocrinology, University of Melbourne
Phlebotomist	Tammy Esmaili	Life Sciences School
<b>Research funder</b>	This research has received funding from Probi AB (Sweden) while it is also supported by a PhD scholarship from La Trobe University. In addition, this research also receives in kind support from La Trobe University.	

### 1. What is the study about?

You are invited to participate in a study of osteoporosis prevention in post-menopausal women. We hope to learn whether 12 months of supplementation of probiotics can prevent bone loss in healthy early post-menopausal women who have an increased risk of osteoporosis. We will be comprehensively measuring bone mineral density using sophisticated scanners as well as investigating the effects on blood markers and the gut microbiome. This probiotic is commercially available in Australia and has previously been examined for its effectiveness in Sweden. We are investigating the effect of probiotics on bone mineral density in Australian women. There will be approximately 130 women who will be part of this study.

Your contact details were obtained from either when you expressed interest to one of our research team members about participating or from a health care professional who believes you may be eligible and has referred you onto us.

### 2. Do I have to participate?

Being part of this study is voluntary. If you want to be part of the study we ask that you read the information below carefully and ask us any questions.

If you decide you do not want to participate, this won't affect the treatment you are currently receiving, or your relationship with La Trobe University or any other listed organisation. You can read the information below and decide at the end if you want to participate.

### 3. Who is being asked to participate?

You have been asked to participate because:

- You are aged between 45-65 years
- You are post-menopausal of up to 6 years post-menopause
- 10-year major fracture risk (based on FRAX score) ranging from  $\geq 5\%$  in 45-year-old women to  $\geq 15\%$  in 65-year-old women.
- BMI  $\geq 18$  and  $\leq 30$  at screening
- QUS heel BMD T-score  $> -2.5$  standard deviation
- BMD T-score in the lumbar spine (L1-L4)  $< 0$  standard deviation and  $> -2.5$ , as measured by DXA.

- Commitment not to use any products such as additional probiotics for study duration (12 months) that may influence the study outcome
- No history of bone disease, or other disease including: irritable bowel disease, Coeliac Disease, Diabetes, Rheumatoid Arthritis, kidney or liver disease.

#### 4. What will I be asked to do?

If you want to take part in this study, we will ask you to complete questionnaires, scans and take a capsule daily. It will take approximately 2 hours per visit, 3 times over 12 months of your time to be part of this study. Other than the 3 x visits and the daily capsule, there is no other commitment.

You will be asked to participate in:

- bone density measurement
  - using a number of non-invasive scanning methods
- body composition measurement
  - height/weight/waist circumference
- blood sample collection
  - approximately 25ml blood collection per visit
- faecal sample collection
  - providing a stool sample per visit
- Questionnaires
  - A number of questionnaires are to be completed to assess your food intake, physical activity, sunlight exposure

Participants will be randomised into an intervention group and a control group. All participants will complete the same procedure.

	<b>Assessment/task</b>	<b>Visit 1 Time: 2 hours</b>	<b>Visit 2 Time: 2 hours</b>	<b>Visit 3 Time: 2 hours</b>
<b>Example procedures</b>	<b>Informed consent</b>	<b>x</b>		
	<b>FRAX assessment</b>			
	<b>Socio-Demographic information</b>			
	<b>Inclusion/Exclusion</b>	<b>x</b>		
	<b>Food frequency questionnaire</b>	<b>x</b>	<b>x</b>	<b>x</b>
	<b>Food diary and IP diary</b>	<b>x</b>	<b>x</b>	<b>x</b>
	<b>Anthropometry (incl height/weight)</b>	<b>x</b>	<b>x</b>	<b>x</b>
	<b>Physical activity &amp; sunlight exposure questionnaire</b>	<b>x</b>	<b>x</b>	<b>x</b>
	<b>Body Composition (BIA)</b>	<b>x</b>	<b>x</b>	<b>x</b>
	<b>Bone Density scans (QUS, DXA, HPqQCT)</b>	<b>x</b>	<b>x</b>	<b>x</b>
	<b>Blood Collection</b>	<b>x</b>	<b>x</b>	<b>x</b>
	<b>Faecal Sample</b>	<b>x</b>	<b>x</b>	<b>x</b>

#### 5. What are the benefits?

The benefit of you taking part in this study is that you may receive a year's worth of probiotics that may benefit your health and be able to conduct a thorough examination of your health status by experts in the field.. You will also receive results of any blood samples, faecal samples and bone density scans which you may take to your health professional for interpretation. The expected benefits to society in general are that if this probiotic reduces bone density loss, fewer women may develop osteoporosis and may result in better overall health.

## 6. What are the risks?

With any medical treatment there are (1) risks we know about, (2) risks we don't know about and (3) risks we don't expect. If you experience something that you aren't sure about, please contact us immediately so we can discuss the best way to manage your concerns.

We have listed the risks we know about below. This will help you decide if you want to be part of the study.

Side Effect	How often is it likely to occur?	How severe might it be?	How long might it last?
<b>Risk that blood sampling may induce some physical discomfort (e.g., small bruising)</b>	Low risk – blood samples will be collected by a qualified and experienced phlebotomist and the procedure will follow health, safety and hygiene guidelines	Mild	1-3 days following collection
<b>Risk that there may be some embarrassment related to faecal collection</b>	Low risk – faecal samples will be collected by you (the participant) in the comfort of your own home and you will be provided with written and visual instructions including all sample collection supplies required	Mild	Few days pre and post collection
<b>Risk that responding to the questionnaires may result in some low mood or unpleasantness when describing the impact that any of your usual symptoms have</b>	Moderate risk – the research team will provide you with a list of free support services and we encourage you to contact the research team including our clinical psychologist as any concerns arise	Moderate	At the time of completing the questionnaire, if it lasts longer than this, please let the research team know
<b>Exposure to low dose radiation (see 6.1 additional statement below)</b>	Low risk - the radiation exposure is extremely low, the equivalent of a seven-hour plane flight or one day background radiation for each exam.	Mild	10-15 minutes (the duration of the scan)

### 6.1 Additional Statement

This research study involves exposure to a very small amount of radiation. As part of everyday living, everyone is exposed to naturally occurring background radiation and receives a dose of about 2 millisievert (mSv) each year. The additional effective dose from this study is about 0.1 mSv. At this dose level, no harmful effects of radiation have been demonstrated as any effect is too small to measure. The risk is believed to be minimal.

## 7. Will I be paid to be part of this study?

It will not cost you to be part of this study. We will not pay you for your time. You will receive the results from all the tests (upon request) worth approximately \$1,200 that you may wish to provide to your primary health care provider. You will also receive 2 x \$25 Coles/Myer gift car when you attend the final visit.

## 8. What will happen to information about me?

We will **collect** information about you in ways that **will** reveal who you are.

We will **store** information about you in ways that **will** reveal who you are, however your personal details will be de-identified. Partners in the study (including funding and research partners) will have access to your personal information according to our joint controller agreements. The investigators listed at the beginning of this participant information statement will have access to your data. In instances where other researchers need to access your data for future research projects, the Human Research Ethics Committee will be advised and requested to grant permission to do so. If you do not wish to share your information you may request specifically that your information not be shared.

We will **publish** information about you in ways that **will not** be identified in any type of publication from this study. The results obtained from this study may also be used in future research projects.

We will **keep** your information for 15 years after the project is completed. After this time we will destroy all of your data.

Will we **use** any collected samples in the future?

This study will collect up to 5ml of blood and store it for future analysis. Your blood will be analysed to determine how your cells function. This means we can indicate aspects of your health status, however it is not the same as a genetic analysis (genetic testing) and cannot indicate the presence of genetic disorders, future health risks, paternity, or family-related diseases.

All collected biological samples will be collected and stored at a locked freezer located in a safe laboratory space at La Trobe University Campus. In addition, we will store important information about your blood samples such how your cells are function, your gender and age. We will not store samples that can be connected to your name and/or date of birth. No third parties (including relatives, other researchers, insurers or employers) will have access to the data.

If consent for future research use is declined, the blood samples and information will be disposed of at completion of this research study.

The storage, transfer and destruction of your data will be undertaken in accordance with the [Research Data Management Policy](https://policies.latrobe.edu.au/document/view.php?id=106/) <https://policies.latrobe.edu.au/document/view.php?id=106/>.

The personal information you provide will be handled in accordance with applicable privacy laws, any health information collected will be handled in accordance with the Health Records Act 2001 (Vic). Subject to any exceptions in relevant laws, you have the right to access and correct your personal information by contacting the research team.

#### 9. Will I hear about the results of the study?

We will let you know about the results of the study by emailing your individual results at the end of the 12 month trial. We will also give you a summary of the group results at the conclusion of the study.

#### 10. What if I change my mind?

You can choose to no longer be part of the study at any time until [four weeks] following the collection of your data.

You can let us know by:

1. Completing the 'Withdrawal of Consent Form' (provided at the end of this document);
2. Calling us; or
3. Emailing us

Your decision to withdraw at any point will **not** affect your relationship with La Trobe University or any other organisation listed.

#### 11. What happens if the study needs to be stopped?

The study may be stopped if we find out:

- The risks from side effects outweigh any benefits to you;
- The treatment you are receiving doesn't give you any benefits

#### 12. What happens if I suffer an injury or complications because being part of this study?

If you suffer an injury or have any concerns, please contact us immediately so we can help you.

In the event of an injury, we have the following compensation arrangements in place:

- If you suffer any injuries or complications as a result of this research project, you should contact the study team as soon as possible and you will be assisted with arranging appropriate medical treatment. If you are eligible for Medicare, you can receive any medical treatment required to treat the injury or complication, free of charge, as a public patient in any Australian public hospital.

**13. What happens when the study ends?**

When the study ends you will have access to your blood test results, faecal sample results and bone density scans without interpretation.

**14. What happens if you find out new information about the study?**

To ensure your safety we will make sure we look at the information we collect about this study. This may mean that we find out new information that you should know about. If this happens we will contact you and discuss what it means for you. New information may mean that we recommend you withdraw from the study, or that you may choose to withdraw.

**15. Who can I contact for questions or want more information?**

If you would like to speak to us, please use the contact details below:

Name/Organisation	Position	Telephone	Email
Stephanie Resciniti, La Trobe University	PhD Candidate	0456 701 341	s.resciniti@latrobe.edu.au
A/Prof George Moschonis, La Trobe University	Associate Professor, Principal Investigator	03 9479 3482	g.moschonis@latrobe.edu.au

**16. What if I have a complaint?**

If you have a complaint about any part of this study, please contact:

Ethics Reference Number	Position	Telephone	Email
HEC21038	Senior Research Ethics Officer	+61 3 9479 1443	<a href="mailto:humanethics@latrobe.edu.au">humanethics@latrobe.edu.au</a>

**Consent Form – Declaration by Participant**

I (the participant) have read (or, where appropriate, have had read to me) and understood the participant information statement, and any questions have been answered to my satisfaction. I agree to participate in the study, I know I can withdraw at any time until [four weeks] following the collection of my data. I agree information provided by me or with my permission during the project may be included in a thesis, presentation and published in journals on the condition that I cannot be identified.

I give permission for my doctors, health professionals, hospitals and/or laboratories to release information concerning my health and treatment for the purposes of this study. I understand this information will remain confidential.

I would like my information collected for this research study to be:

- Used for this specific study;

Consent for future research

- I consent to my blood sample to be used for future related studies (such as used in metabolomics or genotype analysis).
- I do not need to be informed when this occurs.

I understand: that:

- I will receive \$1,200 worth of medical reports at the conclusion of the study
- Only DXA results are available at baseline and are available upon request only (in person or via email)
- I personally will receive the results. They will be without interpretation.
- If I want interpretation of the results, I need to see my preferred medical practitioner

Opt In:

- I wish to be informed if my data is used in future metabolomics or genotype research.

**Participant Signature**

I have received a signed copy of the Participant Information Statement to keep

Participant's printed name	
Participant's signature	
Date	

**Declaration by Researcher**

I have given a verbal explanation of the study, what it involves, and the risks and I believe the participant has understood; I am a person qualified to explain the study, the risks and answer questions

Researcher's printed name	
Researcher's signature	
Date	

\* All parties must sign and date their own signature

**Withdrawal of Consent**

I wish to withdraw my consent to participate in this study. I understand withdrawal will not affect my relationship with La Trobe University or any other organisation or professionals listed in the Participant Information Statement. I understand the researchers cannot withdraw my information once it has been analysed.

I understand my information will be withdrawn as outlined below:

- ✓ Any identifiable information about me will be withdrawn from the study
- ✓ The researchers will withdraw my contact details so I cannot be contacted by them in the future.

*\*\*if you have consented for your contact details to be included in a participant registry you will need to contact the registry staff directly to withdraw your details.*

I would like my already collected and unanalysed data

- Destroyed and not used for any analysis
- Used for analysis

**Participant Signature**

Participant's printed name	
Participant's signature	
Date	

**Please forward this form to:**

CI Name	A/Prof George Moschonis
Email	<a href="mailto:g.moschonis@latrobe.edu.au">g.moschonis@latrobe.edu.au</a>
Phone	+61 3 9479 3482
Postal Address	Level 4, Building HS3, Dietetics & Human Nutrition, School of Allied Health, Human Services & Sport La Trobe University, Bundoora, Victoria 3086, Australia