

# Unique fermented turmeric extract promotes weight loss and glucose metabolism by promoting GLP-1 production in overweight individuals

<b>Submission date</b> 28/10/2025	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered
<b>Registration date</b> 13/11/2025	<b>Overall study status</b> Completed	<input type="checkbox"/> Protocol
<b>Last Edited</b> 13/11/2025	<b>Condition category</b> Nutritional, Metabolic, Endocrine	<input type="checkbox"/> Statistical analysis plan
		<input type="checkbox"/> Results
		<input type="checkbox"/> Individual participant data
		<input checked="" type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

This study was designed to evaluate the effectiveness of a unique Fermented Turmeric Extract (FTE). This extract is made using a unique fermentation process that produces over 300 beneficial compounds not found in regular turmeric supplements. Unlike standard turmeric products that mainly focus on curcumin, this fermented version provides a wider range of natural, microbe-made compounds that may help the body by supporting the connection between the gut, hormones, and metabolism. Researchers believed that FTE could help the body release hormones that promote fullness and better blood sugar control by improving the balance of gut bacteria. These changes are expected to enhance insulin sensitivity, stabilize glucose levels, control appetite, and support weight loss.

### Who can participate?

Non-smoker adult subjects aged between 25 to 60 years (inclusive) old who have a BMI between 28 and 35 kg/m<sup>2</sup>

### What does the study involve?

Participants will be randomly assigned to a once-daily Fermented Turmeric Extract supplement or a commercially available turmeric extract supplement for 4 weeks.

### What are the possible benefits and risks of participating:

Possible benefits are a reduction in weight and the modulation of blood sugar. No risk is expected.

### Where is the study run from?

INNOVATION LABO Sciences Co., Ltd (Japan)

### When is the study starting and how long is it expected to run for?

June 2024 to January 2025

Who is funding the study?  
INNOVATION LABO Sciences Co., Ltd (Japan)

Who is the main contact?  
Dr Yuki Ikeda, development@innovationlabo.com

## Contact information

### Type(s)

Public, Scientific, Principal investigator

### Contact name

Dr Yuki Ikeda

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### Type(s)

Principal investigator

### Contact name

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## Additional identifiers

### Protocol serial number

FTE-WL-IL

## Study information

## Scientific Title

A prospective, randomized, double-blind, two-arm, parallel, clinical study to evaluate the efficacy of fermented turmeric extract supplementation on weight loss and glucose metabolism in healthy overweight participants

## Study objectives

Fermented Turmeric Extract is more efficient than a commercially available turmeric extract in promoting weight loss and improving glucose metabolism

## Ethics approval required

Ethics approval required

## Ethics approval(s)

approved 30/06/2024, Japanese Society of Anti-Aging Nutrition Ethics Review Committee (Ginza, Tokyo 6-6-1, Chuo-ku, 104-0061, Japan; +81 (0)3 3552 5277; coordinator@jaan.jp), ref: JAAN/IR 12-017

## Study design

Interventional double-blind two-arm single-center randomized clinical trial

## Primary study design

Interventional

## Study type(s)

Quality of life

## Health condition(s) or problem(s) studied

Improvement of glucose metabolism in overweight participants

## Interventions

This study investigates 8 weeks of daily supplementation with Fermented Turmeric Extract (300 mg/day, one capsule) or a commercially available Turmeric Extract (300 mg/day, one capsule) taken orally at breakfast. Block randomization was used to allocate participants to each group.

Block randomization is used to divide potential patients into  $m$  blocks of size  $n$ , randomize each block such that  $n$  patients are allocated to A and  $n$  to B then choose the blocks randomly. This method ensures equal treatment allocation within each block if the complete block is used.

## Intervention Type

Supplement

## Primary outcome(s)

1. Weight measured using a calibrated digital weighing scale at day 0 and day 56
2. Fat mass, lean mass, BMI measured using a bioelectrical impedance analysis at day 0 and day 56
3. Waist circumference, hip circumference, thigh circumference measured at day 0 and day 56

## Key secondary outcome(s)

1. GLP-1 levels measured using an enzyme-linked immunosorbent assay at day 0 and day 56
2. PYY levels measured using an enzyme-linked immunosorbent assay at day 0 and day 56
3. Ghrelin leptin and adiponectin levels measured using an enzyme-linked immunosorbent assay

at day 0 and day 56

4. Blood glucose measured using a hexokinase enzymatic method at day 0 and day 56

5. Insulin level measured using a chemiluminescent immunoassay at day 0 and day 56

6. Fecal microbiome composition measured using quantitative PCR at day 0 and day 56

### **Completion date**

30/01/2025

## **Eligibility**

### **Key inclusion criteria**

1. BMI between 28 and 35 kg/m<sup>2</sup>

2. Commitment to maintaining their usual dietary habits and physical activity levels throughout the study period.

### **Participant type(s)**

Population

### **Healthy volunteers allowed**

No

### **Age group**

Adult

### **Lower age limit**

25 years

### **Upper age limit**

60 years

### **Sex**

All

### **Total final enrolment**

44

### **Key exclusion criteria**

1. Pregnancy

2. Lactation

3. History of serious medical conditions such as cancer

4. Known allergies to turmeric or any component of the test product

5. Use of medications or dietary supplements that could impact body weight or metabolic function

### **Date of first enrolment**

01/10/2024

### **Date of final enrolment**

01/11/2024

# Locations

## Countries of recruitment

Japan

## Study participating centre

### Medica Tokyo Laboratories

14-5 Kusunokichō, Nishi-ku

Yokohama-shi

Kanagawa-ken

Yokohama

Japan

220-0003

# Sponsor information

## Organisation

INNOVATION LABO SCIENCES Co., Ltd

# Funder(s)

## Funder type

Not defined

## Funder Name

INNOVATION LABO Sciences Co., Ltd

# Results and Publications

## Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study are/will be available upon request from Dr Yuki Ikeda (development@innovationlabo.com). Anonymised IPD will be available upon publication of results and for a period of 2 years. Consent from participants was required and obtained.

## IPD sharing plan summary

Available on request