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# Evaluation of a mix of plant-derived extracellular vesicles for skin ageing in healthy women aged 45–65 years

**Submission date**
16/07/2026

**Recruitment status**
No longer recruiting

**Registration date**
07/08/2026

**Overall study status**
Ongoing

**Last Edited**
07/08/2026

**Condition category**
Skin and Connective Tissue Diseases

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[_] Results
[_] Individual participant data
[X] Record updated in last year

## Plain English summary of protocol

Background and study aims
Skin ageing is a natural process that becomes more evident with age due to changes in skin structure and function. Reduced collagen production, loss of elasticity, decreased skin hydration, and increased oxidative stress contribute to the appearance of wrinkles, dull skin, and other visible signs of ageing. Plant-derived extracellular vesicles are naturally occurring nanoparticles isolated from fruits and vegetables that contain antioxidants and other bioactive compounds which may support skin health. This study aims to evaluate whether daily supplementation with a food supplement containing a mix of plant-derived extracellular vesicles (ExoComplex® Longevity) can improve skin ageing parameters in healthy women aged 45–65 years compared with placebo.

Who can participate?
Healthy women aged 45–65 years with visible signs of skin ageing, including dull and tired-looking skin, who are willing to provide written informed consent and comply with the study procedures will be eligible to participate.

What does the study involve?
Participants will be randomly assigned to receive either ExoComplex® Longevity or a matching placebo in a double-blind study. The intervention will last for approximately three months. Skin assessments will be performed before treatment and during follow-up visits using non-invasive instrumental techniques. The main parameters evaluated will include skin hydration, transepidermal water loss, skin elasticity, collagen index, skin brightness, and overall skin appearance. Safety and tolerability will also be monitored throughout the study.

What are the possible benefits and risks of participating?
Participants may benefit from improvements in skin hydration, elasticity, and overall skin appearance, although these benefits cannot be guaranteed. The food supplement contains naturally derived ingredients and is expected to be well tolerated. Any adverse events or unexpected reactions occurring during the study will be carefully monitored and recorded.

Where is the study run from?
The study will be conducted at the Department of Pharmacy, University of Naples Federico II, Naples, Italy.

When is the study starting and how long is it expected to run for?
July 2026 to November 2026

Who is funding the study?
ExoLab Italia S.r.l. (Italy)

Who is the main contact?
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# Contact information

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Public

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# Additional identifiers

# Study information

## Scientific Title
Evaluation of a food supplement containing a mix of plant-derived extracellular vesicles compared with placebo on skin ageing parameters in healthy women aged 45–65 years: a randomized, placebo-controlled, double-blind clinical trial

## Acronym
EXOSKIN

## Study objectives
1. To evaluate the efficacy of a food supplement containing a mix of plant-derived extracellular vesicles (ExoComplex® Longevity) in improving skin ageing parameters in healthy women aged 45–65 years compared with placebo
2. To assess the effects of the intervention on skin hydration, transepidermal water loss, skin elasticity, collagen index, skin brightness and overall skin appearance using validated non-invasive instrumental techniques
3. To evaluate the safety and tolerability of daily supplementation with ExoComplex® Longevity throughout the study period by monitoring adverse events and participant compliance

## Ethics approval required
Ethics approval required

## Ethics approval(s)
Approved 24/02/2026, Institutional Review Board Dipartimento di Farmacia Università degli Studi di Napoli Federico II (Via Domenico Montesano 49, Napoli, 80131, Italy; + 39 81678650; sonia.laneri@unina.it), ref: RIF. 026-F01

## Primary study design
Interventional

## Allocation
Randomized controlled trial

## Masking
Blinded (masking used)

## Control
Placebo

## Assignment
Parallel

## Purpose
Prevention, Supportive care

## Study type(s)

## Health condition(s) or problem(s) studied
Age-related skin ageing in healthy women aged 45–65 years

## Interventions

Participants will be randomly assigned to either the ExoComplex® Longevity group or the placebo group in a parallel-group, double-blind study. Randomisation will be performed using a computer-generated random sequence by an investigator not involved in the clinical trial, who will also be responsible for allocation concealment. The study product and placebo will be identified by colour-coded labels according to the randomisation list and accessible only to the independent investigator responsible for randomisation and allocation. The allocation code will remain concealed until completion of the study, data collection and statistical analysis.

The study product will be administered orally as one capsule daily for three months. Participants in both groups will undergo the same schedule of study visits and non-invasive skin assessments at baseline and during follow-up. Skin hydration, transepidermal water loss, collagen index, skin elasticity, skin brightness and overall skin appearance will be evaluated using validated instrumental methods. Safety and tolerability will be assessed throughout the study by monitoring adverse events and participant compliance.

### Intervention Type
Supplement

### Primary outcome(s)
1. Skin hydration measured using corneometry using the Corneometer® CM 825 (C+K electronic GmbH) at baseline, 1 month, 2 months and 3 months

### Key secondary outcome(s)
1. Transepidermal water loss measured using the Tewameter® TM Hex (C+K electronic GmbH) at baseline, 1 month, 2 months and 3 months

2. Skin elasticity measured using the Cutometer® MPA 580 (C+K electronic GmbH) at baseline, 1 month, 2 months and 3 months

3. Skin collagen index measured using DermaScan Cortex Technology at baseline, 1 month, 2 months and 3 months

4. Skin brightness measured using the Skin-colorimeter® CL 400 (C+K electronic GmbH) at baseline, 1 month, 2 months and 3 months

5. Skin fatigue measured using clinical and instrumental evaluation according to the study protocol at baseline, 1 month, 2 months and 3 months

### Completion date
15/11/2026

## Eligibility

### Key inclusion criteria
1. Healthy female volunteers
2. Age between 45 and 65 years
3. Presence of visible signs of skin ageing, including dull and tired-looking skin
4. Ability and willingness to provide written informed consent and comply with all study procedures

### Healthy volunteers allowed

Yes

### Age group
Mixed

### Lower age limit
45 Years

### Upper age limit
65 Years

### Sex
Female

### Total final enrolment
0

### Key exclusion criteria
1. Pregnancy or breastfeeding
2. Known allergy or hypersensitivity to any component of the study product
3. Current dermatological disorders affecting the face
4. Use of systemic or topical treatments that may interfere with the study outcomes within the protocol-defined washout period
5. Participation in another clinical study within the previous 30 days
6. Any medical condition that, in the investigator's opinion, could interfere with study participation or interpretation of the results

### Date of first enrolment
20/07/2026

### Date of final enrolment
27/07/2026

## Locations

### Countries of recruitment
Italy

## Sponsor information

### Organisation
Exolab Italia S.r.l.

## Funder(s)

### Funder type

**Funder Name**
Investigator initiated and funded

# Results and Publications

### Individual participant data (IPD) sharing plan

**IPD sharing plan summary**
Not expected to be made available