



Functional food with double effect on osteoporosis and cardiovascular diseases



VNIVERSITAT
DE VALÈNCIA

R&D RESULT

Patent

Knowledge Area

- Health. Pharmacology
- Functional Food
- Preventive Medicine

Collaboration

- Technology available for licensing
- Other collaborations

Ref. OTRI

201211R-Barbera, R.

Composition with effect on bone and cardiovascular health

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Background: Both osteoporosis and cardiovascular disease (coronary heart disease, cerebrovascular disease, high blood pressure or hypertension, peripheral vascular disease, heart failure, etc.) have common development causes, such as tobacco use, physical inactivity and an unhealthy diet, in addition to low production of estrogen and other hormones in the case of postmenopausal women. Osteoporosis and cardiovascular diseases significantly increase mortality and reduce quality of life. There are in the market, dairy products with added plant sterols developed to reduce cardiovascular risk factors. Besides, current epidemiological studies relate carotenoid-rich diets to good bone health. However, there are no products that improve and prevent osteoporosis and cardiovascular disease simultaneously.

The invention: Researchers from Universitat de València, Fundación para la Investigación Biomédica del Hospital Universitario Puerta del Hierro and Hero have developed a **composition or edible product** that has a confirmed **synergistic effect on osteoporosis and cardiovascular disease**. The product has shown its efficacy in postmenopausal women, that is a high risk group for developing bone and cardiovascular disease. This composition is rich in two components simultaneously, one with a known positive effect on osteoporosis and the other one on cardiovascular diseases. Regular consumption of the developed composition causes a significant decrease (5-7%) of serum total cholesterol levels compared with an equivalent composition with only the component with positive effect on cardiovascular diseases. In addition, regular consumption of the developed composition reduces bone remodeling biomarkers compared with an equivalent composition with only the component with positive effect on osteoporosis.

Thus, the developed composition has shown a beneficial effect on cardiovascular risk and bone remodeling by reducing cholesterol levels and both formation and resorption markers, that implies a lower rate of bone turnover and slowdown of bone remodeling. Since osteoporosis is characterized by increased bone remodeling, this composition has a dual beneficial effect on cardiovascular disease and osteoporosis.

Applications: The developed composition has application in the field of health, as **food, nutritional supplement or medicament** for the treatment and/or prevention of cardiovascular diseases and osteoporosis.

Advantages: The main advantages provided by the invention are:

- Double functional effect in a single composition.
- Synergistic effect of the composition on osteoporosis and cardiovascular diseases.
- Effect supported by clinical trial in post-menopausal women.



OTRI oficina de transferència
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