OSTEOME

Ακρωνύμιο: **OSTEOME**

ΔΡΑΣΗ ΕΘΝΙΚΗΣ ΕΜΒΕΛΕΙΑΣ: «ΕΡΕΥΝΩ-ΔΗΜΙΟΥΡΓΩ-ΚΑΙΝΟΤΟΜΩ – Β' Κύκλος»

Σχεδιασμός και ανάπτυξη συμπληρώματος διατροφής για την οστεοπόρωση μέσω μηχανισμών του εντερικού μικροβιώματος. Μελέτη της αποτελεσματικότητας και ανεκτικότητας στο καινοτόμο συμπλήρωμα διατροφής.

"RESEARCH CREATE-INNOVATE"

Design and development of a novel food supplement for osteoporosis based on gut microbiome mechanisms. Efficacy and tolerability assessment.

«Υλοποιήθηκε στο πλαίσιο της Δράσης ΕΡΕΥΝΩ – ΔΗΜΙΟΥΡΓΩ – ΚΑΙΝΟΤΟΜΩ συγχρηματοδοτήθηκε από το Ευρωπαϊκό Ταμείο Περιφερειακής Ανάπτυξης (ΕΤΠΑ) της Ευρωπαϊκής Ένωσης και εθνικού πόρους μέσω του Ε.Π. Ανταγωνιστικότητα, Επιχειρηματικότητα & Καινοτομία (ΕΠΑνΕΚ) (κωδικός έργου: Τ2ΕΔΚ-03847)»

ΕΘΝΙΚΟ ΙΔΡΥΜΑ ΕΡΕΥΝΩΝ 1958

European Union European Regional Development Fund

EPAnEK 2014-2020 OPERATIONAL PROGRAMME COMPETITIVENESS·ENTREPRENEURSHIP·INNOVATION

With the co-financing of Greece and European Union

ΕΣΠΑ 2014-2020 Partnership Agreement

NATIONWIDE ACTION: "RESEARCH – CREATE – INNOVATE"

Special Managing Authority of the Operational Programme Competitiveness, Entrepreneurship and Innovation (EYD EPAnEK) Special Service for the Management and Implementation of Actions in the Fields of Research, Technological Development and Innovation (EYDE ETaK)

INTERVENTION: II. Partnerships of Enterprises with Research Organizations
PRIORITY SECTOR: 5-YFA: Health and Pharmaceuticals AREA: 5.4 Utilization of Greek Biodiversity; Pharmaceutical products, functional foods
Horizon 2020: 31050537
MIS (ΟΠΣ): 5069931
T2EDK-03847
STARTING DATE: 28/07/2020
EXPIRATION DATE: 27/12/2023
BUDGET: **952.080,00 €**

Beneficiary Entities

•(Coordinator) National Hellenic Research Foundation, Institute of Chemical Biology (NHRF-ICB)
•LIFE NLB Health Products Single-Member LLC
•Butterfly Association for Skeletal Health
•National and Kapodistrian University of Athens, Laboratory for the Research of Musculoskeletal Disorders "Th. Garofalidis"

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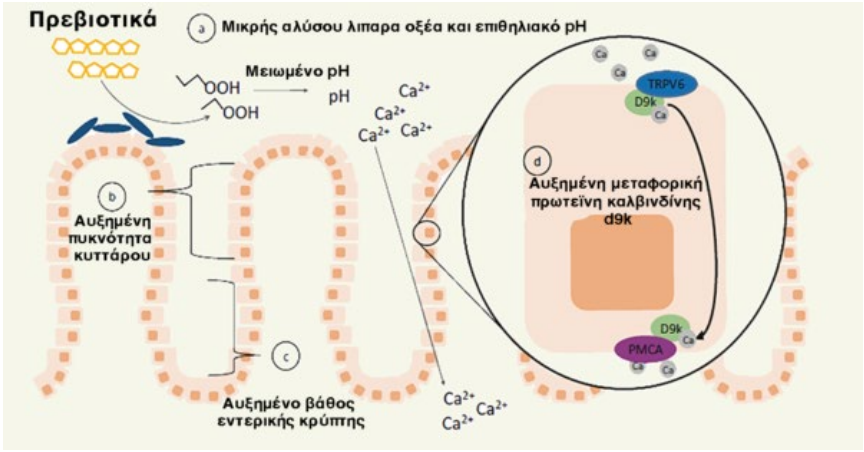
Design and development of a novel food supplement for osteoporosis based on gut microbiome mechanisms. Efficacy and tolerability assessment.

Project

Recent scientific evidence has established the crucial role of the gut microbiome in regulating bone metabolism, primarily through the absorption of calcium and other essential trace minerals. Emerging research further suggests that modulation of gut microbiota can significantly influence bone mineral density and mechanical strength, both in animal models and in humans.Concurrently, there is growing interest in the interaction between polyphenols—especially flavonoids such as catechins—and the gut microbiome. These compounds are known to be metabolized into bioactive molecules via microbial pathways, and in turn, polyphenols can actively reshape the composition and function of the intestinal microbiota.The objective of the proposed project is to design and develop an innovative dietary supplement for the prevention and management of osteoporosis, leveraging the regulatory functions of the gut microbiome. In parallel, the project will investigate relevant biomarkers of efficacy and tolerance.Flavonoid selection for the supplement will be guided by in vitro and in silico studies, with a focus on their effects on the signaling pathways involved in osteoclast and osteoblast regulation. The final product's efficacy and safety will be validated through a randomized clinical trial.



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