

# EUBONE

LATEST DEVELOPMENT  
IN BONE HEALTH:

# EUBONE™ LEADS THE WAY WITH A NEW APPROACH



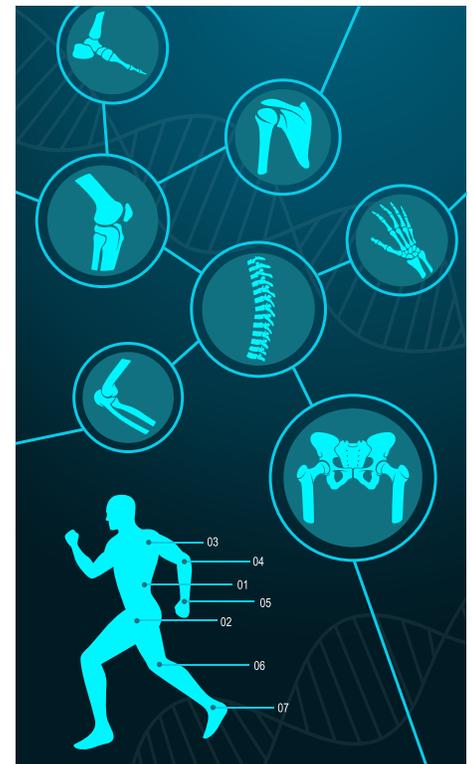
As we age, the elderly and those over 40 years of age are more likely to face the problem of bone loss.<sup>[1]</sup> As a key topic in the field of human health, bone health has been attracting attention both inside and outside of the industry. To tackle the topic head on we want to prepare the necessary requirements to provide a qualified bone health support solution.

### Bypass the Treatment Misunderstanding

Nowadays, there are still misunderstandings in treating bone health. For example, many believe that osteoporosis can be treated by taking calcium supplements-as osteoporosis is caused by abnormal bone metabolism. However, current evidence shows that calcium supplements only reduce bone breakdown by 20%.<sup>[2]</sup> A more comprehensive treatment is needed to decrease the effects of bone metabolism. Additionally, current traditional bone health supplements use calcium, magnesium, vitamin D3, vitamin K2, etc. with very few innovative products breaking the traditional blueprint in the current market.

Compared to the possible disadvantages from traditional nutrition methods, natural dietary supplements have become the hot market commodity with more and more consumers in favor of the natural health solution. These ingredients play an important role in pivoting the direction for scientific research surrounding the food and nutritional industry. With countless companies looking for health solutions that stem from natural ingredients, many questions arise on what ingredients can provide the alternative solution to help boost bone health.

At Chenland, our R&D team has found a solution with the natural, clinically proven EuBone™.



**Vitafoods Europe**   
Sept 1-3, 2020 Switzerland  
Booth #E299

**Natural Products EXPO EAST\***  
Sept 24-26, 2020 Philadelphia, USA  
Booth #3805,3807

**Vitafoods Asia**   
Sept 25-26, 2020 Singapore  
Booth #G51

**CPhI south east asia**  
E-mec | Inno | ICSE LAB | FDF  
Nov 4-6, 2020 Bangkok, Thailand  
Booth #W01

**Hi Health ingredients China** 健康天然源  
Nov 25-27, 2020 Shanghai, China  
Booth #52E59

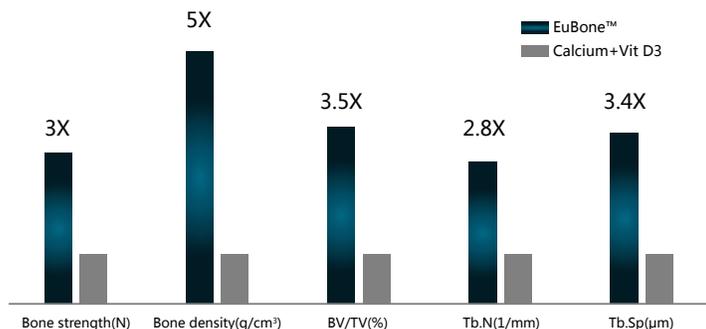
## Efficacy Comparison Study

EuBone™ is a specifically formulated blend with 3 herbs: *Eucommia ulmoides*, *Drynaria fortune*, and *Cuscuta chinensis* under the guidance of TCM applications that is based on preclinical data from several in-vivo studies.

To explore the difference between innovative herbal solution (EuBone™) and traditional bone treatment solutions (Calcium + Vit. D3), Chenland R&D team conducted a series of pre-clinical studies. To study the prevention of Osteoporosis 1 g of EuBone™ and the traditional bone treatment solution (Calcium and Vit. D3) were given to bilateral ovariectomized (OVX) rat models. Measurements of bone strength, bone density, BV/TV, Tb.N, and Tb.Sp were used as indicators for Osteoporosis improvement.

Results showed that OVX rats treated with EuBone™ had significant increases in femur strength, bone density, increased trabecular bone density (the main type of skeletal bone mass that is lost in early Osteoporosis<sup>[3]</sup>), and reduced trabecular bone density. In comparison, the absorption rate of the traditional vitamin group (Calcium + Vit. D3) was low with no significant difference in improvement effects between the (Calcium + Vit. D3) group and the placebo group. Further results show that the traditional vitamin group cannot be absorbed into the blood as well with limited bone transport when compared to the EuBone™ treatment group. Micro CT and pathological section result also indicate that EuBone™ can slow down bone mass loss and delay the occurrence of osteoporosis compared to the placebo.

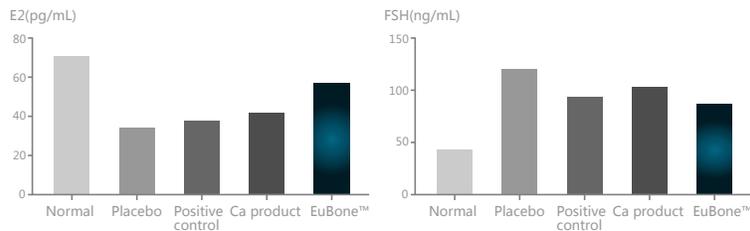
Comparison of improvement effects



## Mechanism Study

Chenland's R&D team has conducted a mechanism study to clarify a novel mechanism regulating estrogen deficiency-induced bone loss. We found that EuBone™ can increase the expression of E2 (Estradiol) and reduce the

expression of FSH compared to placebo group in rat's serum. A possible link to the mechanism of EuBone™ in preventing Osteoporosis may be related to the regulation of estrogen levels in OVX rats.



A study proved that estrogen deficiency down-regulates BMI-1 overexpression in lymphocytes and increases ROS, T-cell activation, and RANKL production in T cells, thus enhancing osteoclastogenesis and accelerating bone loss.[4]

## Adhere to the Concept of Innovation

As a premier bone health support solution, EuBone™ has exceeded results in the improvement of Osteoporosis as the former scientific data has provided. EuBone™ can successfully increase bone density and effectively alleviate the symptoms of osteoarthritis and osteoporosis all while providing the natural, plant-based choice to traditional bone health supplements. Our devotion to innovation, effectiveness, and safety ensures that EuBone™ provides these benefits and is also suitable for a wide demographic without any side effects.

As an international brand manufacturer of nutritional dietary supplements, Chenland combines traditional Chinese medicine and advanced innovative scientific research to create the most effective and high-quality product to help support bone health. We aim to implement the concept of alternative medicine and transform classic TCM formulas into modern innovative solutions, hoping to bring consumers a novel, scientifically backed, and natural health experience.

## References

- [1] National Institute on Aging. 2020. *Osteoporosis*. [online] Available at: <<https://www.nia.nih.gov/health/osteoporosis>>.
- [2] Reid IR, Mason B, Horne A, et al. Randomized controlled trial of calcium in healthy older women. *Am J Med*. 2006; 119:777–785. [PubMed] [Google Scholar]
- [3] Carter DR, Hayes WC. Compact bone fatigue damage: a microscopic examination. *Clin Orthop Relat Res*. 1977:265–74. [PubMed] [Google Scholar]
- [4] Li, J., et al., BMI-1 Mediates Estrogen-Deficiency-Induced Bone Loss by Inhibiting Reactive Oxygen Species Accumulation and T Cell Activation. *Journal of Bone and Mineral Research*, 2017. 32(5): p. 962-973.



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Enriching Quality of Life

Chenland Nutritionals, Inc. is a leading supplier of natural branded ingredients. Our global headquarter is in Irvine, California. We select only globally certified GAP herbs and marine organisms to ensure our ingredients promote safety, quality, and sustainability. We specialize in TCM-based brand ingredients scientifically backed through in-vitro and in-vivo testing, alongside preclinical and clinical trials. We are committed to providing our customers with innovative solutions to health problems and meeting the world's growing natural nutritional needs.