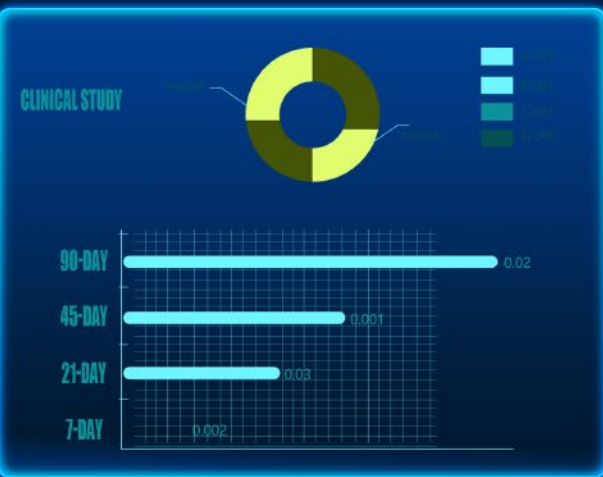


# Facing the Billion Dollar Bone & Joint Supplement Market: 2 Clinical Discoveries to Lead the Future



# INTRODUCTION

As the population ages, more and more consumers are facing a plethora of bone and joint problems along with medical diseases such as bone fracture, arthritis, osteoporosis, and rheumatism. These debilitating conditions increase the popularity of the bone and joint supplement market- and not only is the aging population the only consumer group showing a growing interest in bone and joint supplements, sports enthusiasts and postmenopausal women have created a surge in demand for bone and joint products.

According to the market data released by *Reportlinker*, the global market size of bone and joint supplements is expected to reach US \$9.9 billion in 2020 and US \$14.7 billion in 2027, with an average annual growth rate of 5.8% from 2020 to 2027. The trend of sports population and aging population in the domestic market is constantly strengthening, and these factors are promoting the development of bone and joint health market.

## Scientificity is more important than ever

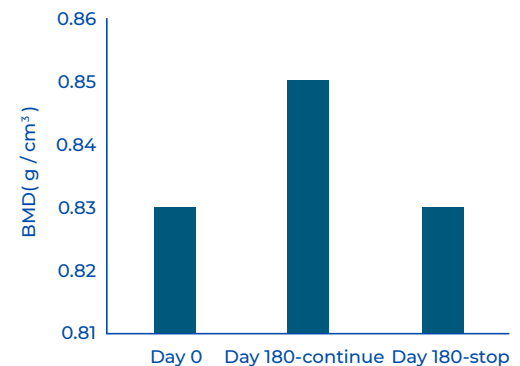
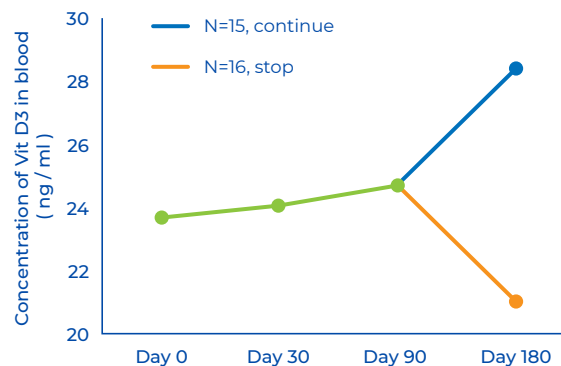
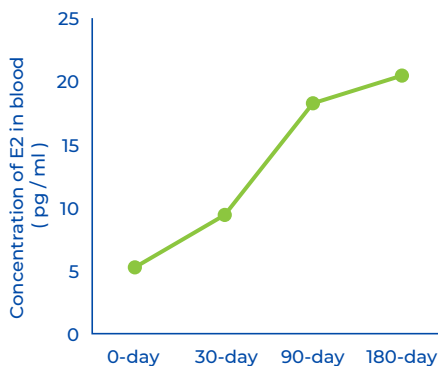
As consumers pursue a more active and healthier lifestyle, the number of products with "vitality and health" claims have increased significantly. However, evidence shows that consumers are increasingly suspicious of health claims, and lower consumer trust can lead to disbelief about key ingredient benefits. Therefore, Chenland insists on pursuing the transparency of our products from the source, and verifies the all-natural brand ingredients of bones and joints and the scientific clinical basis behind them in order to protect the rights and interests of consumers. Today, EuBone® and JointAlive® developed by Chenland have been listed on a global scale.



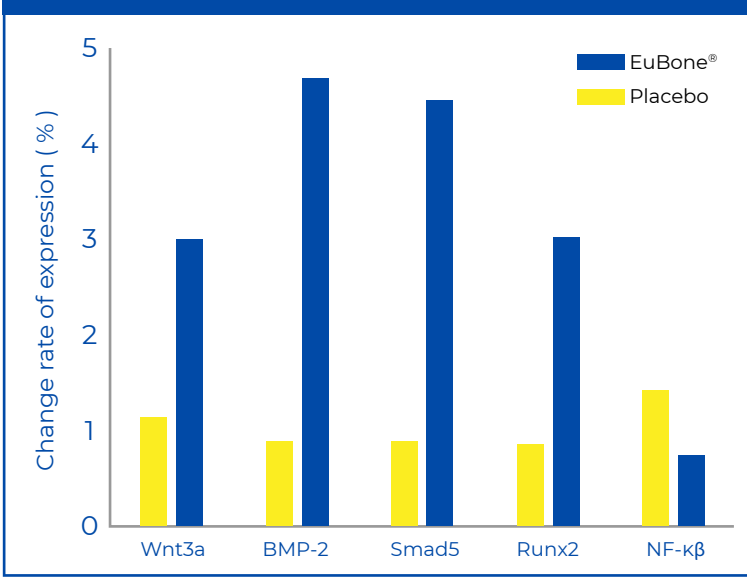
# 1 Innovation and evolution of women's bone health solutions

EuBone® is a unique bone health solution to regulate female estrogen while enhancing bone health. Clinically backed EuBone® can balance estrogen secretion to relieve osteoporosis-and the overall effective rate is 100%.

A 180-day, single-center, open-label human clinical study was conducted to prove the efficacy and safety of EuBone®. The subjects aged between 50 and 80 years old with mild to moderate osteoporosis were enrolled. The results showed that EuBone® formulation can significantly increase the estradiol level in postmenopausal women by 2.9 times, and further promote their bone health by rising Bone Mineral Content (BMC) and Bone Mineral Density (BMD) by 2.4%. Hematology, urine, blood pressure, and electrocardiogram results showed no significant differences before and after the treatment, indicating the safety of EuBone®.



### Expression quantity of genes related to osteoporosis



In two separate preclinical trials, EuBone® was found to improve bone health by regulating bone metabolism.

In the first study, 0.5 g and 1 g of EuBone® was administered in OVX rats for eight weeks. Compared to the placebo, treated rats had an increase in bone strength, density, bone volume / tissue volume and trabecular number by 36%, 32%, 29% and 26%, respectively, and a decrease in trabecular separation by 31%. The data also indicated that EuBone® can significantly increase the expression of genes related to bone formation and reduce the expression of genes related to bone formation resorption.

In the second study, glucocorticoid-induced osteoporosis (GIO) female rats received 1 g, 1.5 g and 2 g of EuBone® for eight weeks. All markers studied indicated EuBone® can boost BMD consistently. Calcium and phosphorus concentrations increased in the blood serum by 20% and 19%, respectively, decreased in urine by 19% and 23%, respectively in comparison to the placebo group.

Group	BMD(g/cm <sup>3</sup> )	Bone maximum load(N)	Bone elastic load(N)	micro-CT Image
Non-GIO	0.22	113.84	27.70	
GIO + Placebo	0.10	53.41	9.61	
GIO + EuBone®	0.16	77.26	19.70	
GIO + EuBone® Formulation	0.17	83.90	21.64	

### Upcoming Trade Shows

**SupplySide EAST**

Aug 24-25, 2021 Secaucus, NJ, USA  
Booth #335

**Natural Products EXPO EAST**

Sept 23-25, 2021 Philadelphia, USA  
Booth #3805+3807

**Vitafoods Europe**

Oct 5-7, 2021 Geneva, Switzerland  
Booth #E299

**SupplySide WEST**

Oct 25-28, 2021 Las Vegas, NV, USA  
Booth #5681

**中国国际进口博览会 CHINA INTERNATIONAL IMPORT EXPO**

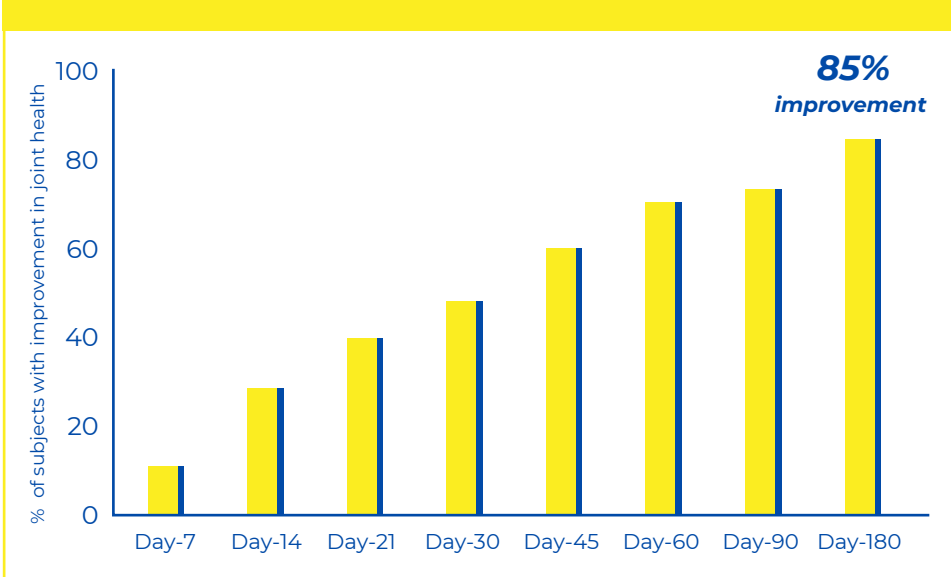
Nov 5-10, 2021 Shanghai, China  
Booth #TBA

## 2 TCM formulation: Potential supplement in the joint care market

JointAlive® is the premier joint support solution with a successful NDI notification (NDIN 1172) that can effectively provide long-term relief from joint discomfort. Clinical study shows JointAlive® can quickly relieve joint discomfort with long-lasting effects and is more than 80% effective.

A 180-day, multi-center, open-label human clinical study was conducted to prove the efficacy and safety of JointAlive®. The subjects aged between 60 and 75 years old with arthritis were enrolled. The results showed JointAlive® can relieve joint discomfort as quick as 2 days and with long lasting effects. The feedback suggested that JointAlive® could also improve their waist, shoulder, neck health. Hematology,

### Number of subjects whose WOMAC scores were reduced by more than 20%



urine, blood pressure and electrocardiogram results showed no significant differences before and after the treatment, indicating the safety of JointAlive®.

During the 180-day follow up, there were reductions in all 11 osteoarthritis symptoms. 32% of participants felt discomfort relief as quick as 7 days. At the end of study, the effective rate goes up to 85%, showing a significant reduction of WOMAC scores. The data indicated that JointAlive® had a fast and long-lasting effect on osteoarthritis relief.



www.chenland.com (949) 308-2270  
 (949) 308-2276 info@chenland.com  
 3 Park Plaza, Suite 0410 Irvine, CA 92614, USA



Enriching Quality of Life

Chenland Nutritionals, Inc.

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.