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In recent years, nearly 20% of Americans over the age of 45 are suffering from Osteoarthritis (OA) and related joint diseases, with rates continuing to rise due to age-related comorbidities. To gain insight into the etiology of osteoarthritis, studies trace long-term trends associated with OA by using skeletal samples collected from the earliest records of OA to the present. Studies have shown that osteoarthritis has existed at low frequencies but, since the mid-20th century, the disease has doubled in prevalence. [1]

As worsening Osteoarthritis trends continually threaten to negatively affect joint health for many generations, individuals directly impacted create a considerable market demand for a joint health solution. As consumers become increasingly health-conscious, many seek to increase overall health by taking various supplements including bone and joint—as a preventative measure and to boost holistic health. Growth projections for the Global Bone and Joint Health Supplements Market are at a CAGR of 6.6% during the forecasted period (2019-2024), with North America holding a dominating share followed by Europe. The U.S. also has the maximum number of consumers who prefer joint supplements as preventive for OA. [2]

Traditionally, Over-the-counter relief such as Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) are often introduced to pain relief. However, while NSAIDS are effective in reducing pain, chronic usage is often associated with risks such as heartburn, nausea, and constipation. [3]

To meet the unmet need of a natural solution to joint afflictions, Chenland has created JointAlive® as a natural joint defender that provides fast-acting and long-lasting joint pain relief at a relatively small dose. Chenland has also officially launched a 60-day open-label study for JointAlive®, to provide clinical results and reach scientific breakthroughs. Our goal is to continue to innovate, develop, and advance to discover the most safe, natural, and effective nutritional solutions that benefit overall health by using breakthrough scientific research and clinically proven formulations.

References:

[1] Wallace, I., Worthington, S., Felson, D., Jurmain, R., Wren, K., Maijanen, H., Lieberman, D. (2017, August 29). Knee osteoarthritis has doubled in prevalence since the mid-20th century. from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5584421/

[2] Global Bone and Joint Health Supplements Market: Growth: Trends: Forecast. (n.d.). from https://www.mordorintelligence.com/industry-reports/global-bone-and-joint-health-supplements-market

[3] Poulton, G. (2020, February 13). Watch Out for Side Effects of Osteoarthritis Medication. from https://www.healthgrades.com/right-care/arthritis/watch-out-for-side-effects-of-osteoarthritis-medication

Upcoming Trade Shows

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
Nov 4-6, 2020 Bangkok,Thailand
Booth #W01

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

Efficacy and safety of JointAlive® in alleviating joint discomfort:

A 60-day, multi-center, open-label study

JointAlive® is a specially formulated botanical blend with three traditional Chinese herbs: ***Epimedium brevicornum Maxim, Discorea nipponica Makino*** and ***Salvia miltiorrhiza Bunge***. It is a safe solution for joint health, relieving joint pain and stiffness, in addition to increasing walking endurance to increase overall walking distance.

We conducted a 60-day, multi-center, open-label clinical study to prove the efficacy and safety of JointAlive® from March to July, 2020. The subjects aged between 60 and 75 years old with arthritis were enrolled. The knee arthritis was determined via X-ray scans with outcomes assessed by Western Ontario McMaster Universities Osteoarthritis Index (WOMAC) pain and stiffness scores at 7, 14, 21, 28, 45 and 60 days. Hematology, urine, blood pressure, and electrocardiogram measurements were collected before the study and at 30th day. The subjects took 600 mg JointAlive® daily for 60 days. During the study, 100 patients were enrolled and 98 patients finished the study.

The results showed JointAlive® can relieve joint discomfort quickly and with long lasting effects. 11% of patients felt less pain and stiffness within 7 days, whereas 48% experienced relief within 30 days (scores reduced more than 20%). 60% and 69% of patients reported joint comfort at days 45 and 60 respectively. (scores reduced more than 20%). The pain scores reduced from 6.71±2.43 at baseline to 4.14±2.04 on the 60th day ($P < 0.01$). Stiffness scores reduced from 5.39±2.763 at baseline to 3.32±2.03 ($P < 0.01$). Feedback suggested that JointAlive ® could also improve their waist, shoulder, and neck health.

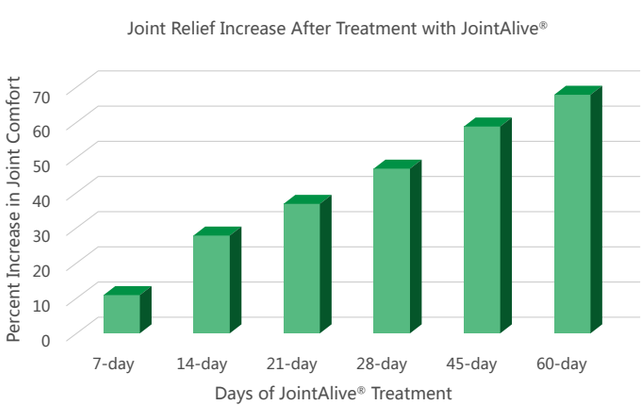


Fig 1 Patients number whose WOMAC scores reduced more than 20% in different visit day

Table 1 Score changes before and after treatment

	Pain scores	Stiffness scores
Baseline	6.71±2.43	5.39±2.763
60th day	4.14±2.04**	3.32±2.03**

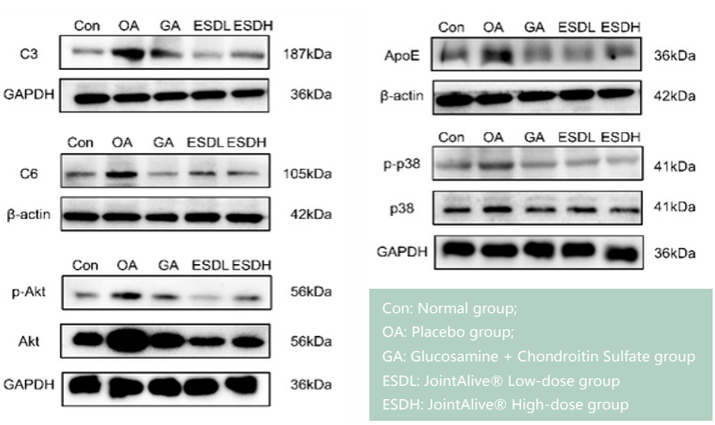
Compared to baseline data, $^{**}P < 0.01$

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

Mechanism study

Chenland Nutritionals worked directly with the Pathology and Laboratory Medicine Department at Weill Cornell Medical College and found evidence that JointAlive® alleviates osteoarthritis through the modulation of protein expression. In-vivo preclinical studies showed that JointAlive® relieved symptoms from OA cartilage degradation, increased the threshold of the arthritis pain and reduced pain sensitivity, improved joint stiffness and increased joint flexibility, in addition to reducing the concentration of proinflammatory molecules in the serum of arthritic rats. Using proteomics and bioinformatics analysis, we found that the protective mechanism for JointAlive® is linked to depressing the abnormally activated complement system and increasing leukocyte mediated immunity.

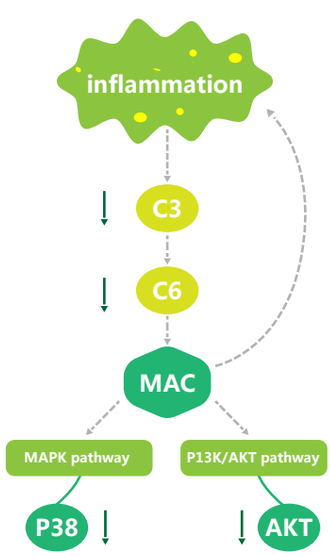
We found that the complement C3 and C6 of OA group were significantly upregulated in both gene and protein levels. The levels of C3 and C6 in GA and ESD groups decreased to close to normal level. ApoE gene and protein level in the OA group increased significantly. Apolipoprotein ApoE level in GA and ESD group decreased to near normal level. Akt pathway related proteins Akt and p38 were upregulated in OA group in both gene and protein levels. Akt and p-p38 levels in GA and ESD groups were decreased to close to normal levels.



Con: Normal group;
OA: Placebo group;
GA: Glucosamine + Chondroitin Sulfate group
ESDL: JointAlive® Low-dose group
ESDH: JointAlive® High-dose group

Fig 2 PCR and WB verified the change proteins. The higher the protein expression, the more obvious it was on the electrophoretic diagram, indicating better treat effect on joint discomfort.

These overall findings provide evidence that JointAlive® activates the humoral immune response, by further activating MAPK, PI3K / AKT signaling pathways. It can down-regulate core protein factors, inhibit the response caused by inflammatory factors, and reduce joint pain inflammation to improve overall joint health.



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