Rationale for Univestin®'s Competitive Advantage

The Joint Care nutritional market has become highly competitive, with companies exploring creative ways to stand out. Over the past decade, the landscape has evolved significantly. Joint care ingredients such as Boswellia, curcumin, MSM, glucosamine, chondroitin, eggshell membrane, green-lipped mussel, and collagen have been extensively studied, either individually or in combination, in many clinical trials with supportive literature reviews and meta-analysis.

Among the many supplements indicated for symptomatic relief, a major focus in research has been on enhancing their bioavailability to achieve meaningful absorption and accelerate the onset of symptom relief. For example, turmeric extract with poor bioavailability may require up to 90 days to show efficacy, whereas advanced formulations can deliver results within a week. In other cases, combining multiple joint care ingredients has shown improved efficacy within a more reasonable time frame.

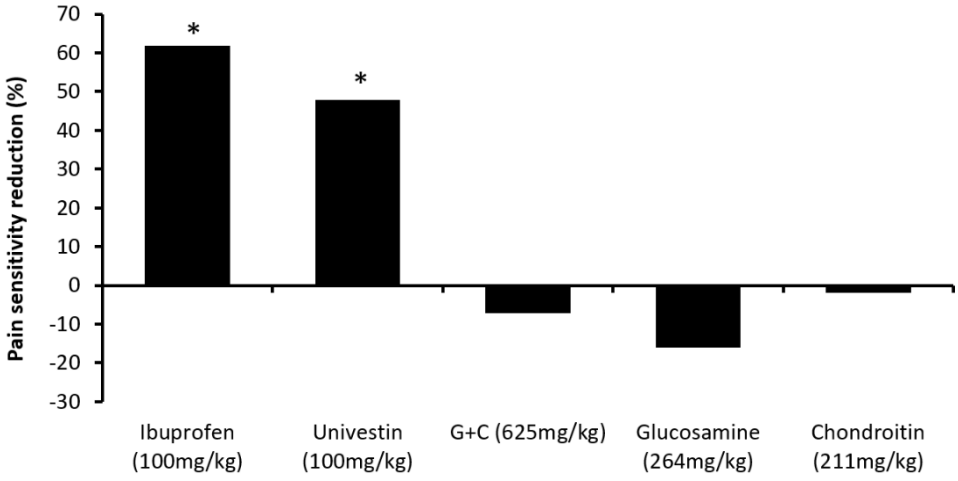
Glucosamine, chondroitin and MSM, are known to serve as building blocks for joint cartilage with moderate symptom relief function.

In this highly competitive market, product development for osteoarthritis requires careful evaluation of ingredients. Differences in methodologies, assay types, and material specifications among joint care supplements not only make direct efficacy comparisons based solely on published data difficult but can also lead to biased conclusions. These limitations can be minimized by evaluating all ingredients simultaneously within a single, standardized preclinical model.

To address this, Unigen evaluated the fast pain mitigation activity of various joint care ingredients using their recommended human daily dosages, extrapolated to preclinical-equivalent doses. The study utilized the widely accepted abdominal constriction model. Model validity was confirmed by the expected positive outcome observed with the reference control, Ibuprofen (**Figure 1**).

Figure 1

Univestin® Showed Superior Joint Relief compared to Glucosamine and Chondroitin (*P < 0.001 vs vehicle)



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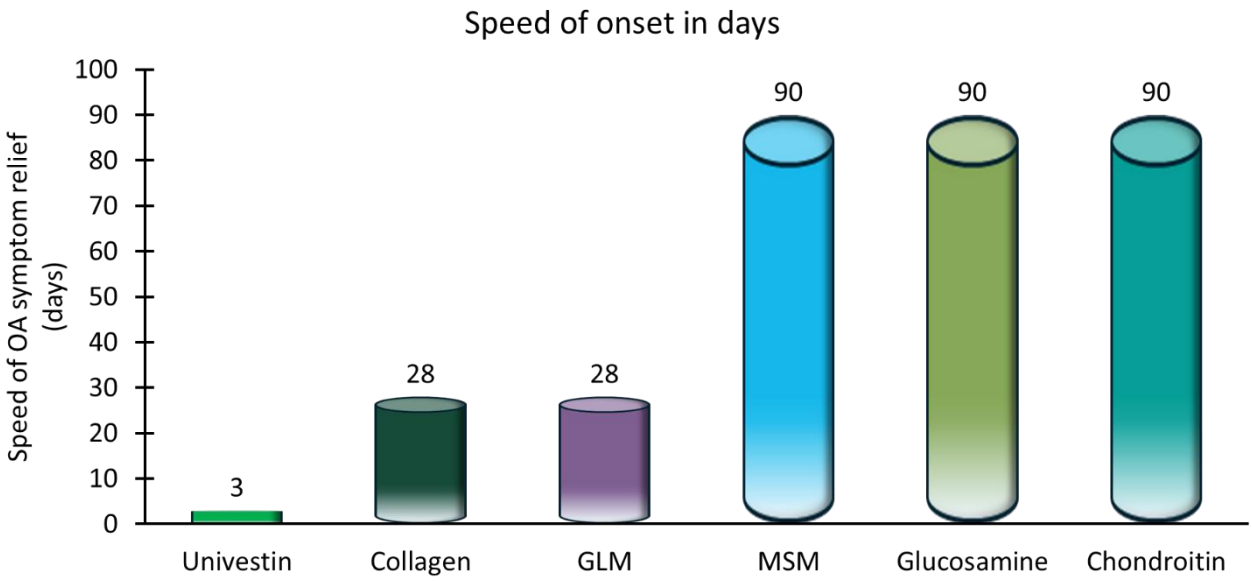
As anticipated, glucosamine, chondroitin, and their combination failed to provide any rapid symptom relief, further reinforcing the reliability of the model (**Figure 1**). Notably, data indicated that Univestin®'s pain-reducing effect was comparable to an equivalent dose of ibuprofen and superior to that of other dietary supplement ingredients commonly marketed for osteoarthritis support.

As companies increasingly prioritize clinical effectiveness, particularly rapid symptom relief, since pain is the primary clinical manifestation of OA, publicly available clinical data on joint care supplements were gathered and ranked based on speed of onset (**Figure 2**). Univestin objectively offers a competitive advantage in this evolving market, as its onset of action in 3-days is faster than that of other OA-related dietary supplements.

Figure 2

Univestin® Showed Faster OA Symptom Relieve Onset vs other Joint Care Ingredients in Clinical Studies



Conclusion:

Given the data on Univestin®'s speed of onset and novelty, incorporating it alongside joint structural modifiers such as glucosamine and chondroitin or with other actives like MSM, collagen and GLM presents a unique opportunity. This combination approach allows companies to address the complex nature of OA more holistically, offering rapid symptomatic relief from Univestin® while maintaining a more focused and differentiated product profile compared to many other complex supplement formulations on the market.

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Table 1

Clinical references used for Figure 2.

Product	Dosage (mg)	Ref.
Univestin®	250-500	J Med Food. 2014 Jun;17(6):707-13; Nutr J. 2012 Apr 5;11:21
Collagen	40	Acta Ortop Bras. 2022 Apr 15;30(2):e240572.
GLM – Green lipped Mussel	ND	Eur Ann Allergy Clin Immunol. 2003 Jun;35(6):212-6
MSM - methylsulfonylmethane	6000	Osteoarthritis Cartilage. 2006 Mar;14(3):286-94.
Glucosamine	1500	Curr Ther Res Clin Exp. 2009 Jun;70(3):185-96.
Chondroitin	1000	J Rheumatol. 2001 Jan;28(1):173-81.

(ND): no data specified