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Letter to the Editor for "Management of Osteoarthritis with Avocado/Soybean Unsaponifiables"

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To the Editor,

It is with importance that I make you aware of inaccurate facts about our Nutramax Laboratories Family of Companies' products as well as general errors as discussed in the article by Christiansen *et al*. Management of Osteoarthritis with Avocado/Soybean Unsaponifiables. *Cartilage*. 2015;6(1):30-44. I was quite surprised to uncover several wrong statements that could have been easily and properly fact checked with a mere online review. This article came across more as a competitor's marketing piece with crafted messages and misused references instead of a well-constructed scientific article.

Inaccurate Facts about Our Nutramax Laboratories Family of Companies' Products

On page 37, paragraph 2, it is stated "Avoca ASU, a combination of ASU and glucosamine sulfate, has been shown to suppress TNF-α, IL-1β, COX2, iNOS, PGE2, NF-κB activation and nitrite production in articular chondrocytes and monocytes/macrophages, reducing pain and inflammation in OA patients.[115,116,124]" Although correct that Avoca ASU® and the NMX1000® ASU contained in Avoca ASU® have been shown in published articles to suppress many mediators of inflammation, even more than the authors listed, Avoca ASU® contains a combination of non-shellfish glucosamine hydrochloride, methylsulfonylmethane (MSM), and NMX1000® ASU with epigallocatechin gallate (EGCG), not ASU and glucosamine sulfate.

On page 37, paragraph 3, it is stated: "Avoca ASU that contains glucosamine can induce allergic reaction in people with shellfish allergy." As stated above, Avoca ASU® contains non-shellfish, non-animal–derived glucosamine HCl. Additionally, with regard to glucosamine of shellfish origin, the American Academy of Allergy, Asthma & Immunology has stated that it is a misconception that shellfish-allergic patients cannot take shellfish-derived glucosamine products.[1]

On page 37, "Avoca ASU (ASU-NMX1000, Nutramax Laboratories Inc., Edgewood, MD, USA)" should be changed to Avoca ASU® (ASU-OptiMSM-glucosamine HCl), Nutramax Laboratories Consumer Care, Inc., Edgewood, MD, USA.

On page 38, the correct Avoca ASU® information for Table 3 should include, "Non-shellfish glucosamine 1500 mg."

On page 39, paragraph 1, the authors referenced a letter to the editor "The analyses revealed content of products were significantly different from those indicated on the Nutramax labels—with no citrostadienol, and brassicasterol present in ASU Expanscience." First, the authors falsely concluded that the products were mislabeled, as the labels do not describe all the components of ASU. They also failed to reference the published rebuttal to that letter from Dr. C. Frondoza, which showed the conclusions were false and the analysis not scientifically valid.[2] Additionally, they failed to acknowledge that the biological activity of the NMX1000® ASU used in Dasuquin® with MSM, Dasuquin®, and Avoca ASU® has been demonstrated in numerous published studies in peer-reviewed journals.[3,4]

General Errors

On page 33, column 2, it is stated "Glucosamine may interact with various pharmaceuticals, such as . . . diabetes medications, dangerously modifying their efficacy." However, research now shows that glucosamine probably does not increase blood sugar in people with diabetes or interfere with diabetes medications. This is also supported by a study measuring hemoglobin A1c in controlled type 2 diabetic patients receiving 1500 mg glucosamine HCl/1200 mg sodium chondroitin sulfate daily, finding no significant clinical effect.[5]

On page 33, in the Dietary Supplements section, it is stated "Similarly, chondroitin sulfate appears not to provide meaningful benefit for patients with OA, and their combination has not proven effective for either pain management or functional improvement." On page 35, in a contradictory statement just two paragraphs above their comment regarding chondroitin sulfate, the authors reported the findings of the Glucosamine/Chondroitin Arthritis Intervention Trial (Clegg *et al*., reference 61 in the Christiansen *et al*'s article) and noted, ". . . patients with moderate-to-severe pain given both glucosamine and chondroitin sulfate did show improvement (79% experienced pain reduction vs. 54% for

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placebo).” Furthermore, the reported benefit of the combination of glucosamine HCl and chondroitin sulfate has most recently been confirmed in a randomized, double-blinded, comparator trial of 606 patients with Kellgren and Lawrence grades 2-3 knee OA and moderate-to-severe knee pain by Hochberg *et al*.[6] The authors of the study concluded: “Chondroitin sulfate (CS) + glucosamine HCl (GH) has comparable efficacy to celecoxib in reducing pain, stiffness, functional limitation and joint swelling/effusion after 6 months in patients with painful knee osteoarthritis, with a good safety profile.”[6]

On page 37, column 2, it is stated “Many studies have demonstrated substantial variation between the content listed on the labels of these products and the actual content.” This is an incorrect statement and even lacks references to support it. We are not aware of any studies or reports that looked at ASU products and label claim.

References

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6. Hochberg MC, Martel-Pelletier J, Monfort J, Möller I, Castillo JR, Arden N, *et al*. Combined chondroitin sulfate and glucosamine for painful knee osteoarthritis: a multicentre, randomised, double-blind, non-inferiority trial versus celecoxib. Ann Rheum Dis. Epub 2015 Jan 14. doi:10.1136/annrheumdis-2014-206792.