



OCT 24 2003

Jonathan W. Emord, Esq.
Emord & Associates, P.C.
5282 Lyngate Court
Burke, VA 22015

Re: Health Claim Petition – Calcium and Essential Hypertension, Gestational Hypertension, and Pre-eclampsia

Dear Mr. Emord:

This letter concerns your health claim petition, received on October 9, 2003, submitted pursuant to Section 403(r)(5)(D) of the Federal Food Drug and Cosmetic Act (FFD&C Act) (21 U.S.C. § 343(r)(5)(D)) with respect to certain claims about the relationship between calcium and 1) essential hypertension, 2) gestational hypertension, and 3) pre-eclampsia. You submitted this petition on behalf of Marine Bio USA, Inc. We are not acknowledging the receipt of your health claim petition, within the meaning of 21 CFR 101.70(j)(1), because the petition is not complete.

Under 21 CFR 101.70(j)(1), FDA is to notify the petitioner by letter (the "acknowledgment letter"), within 15 days of receipt of the petition, the date that the petition was received. This acknowledgment letter is intended to inform the petitioner that the petition is undergoing agency review and that the agency will subsequently notify the petitioner of its decision to either file the petition for comprehensive review or to deny the petition. Under 21 CFR 101.70 (f), the petition is required to include, among other attachments, copies of any computer literature searches done by the petitioner, copies of articles cited in the literature searches, and all other information that the petitioner relies upon for the support of the health claim.

FDA is not able to acknowledge the receipt of your petition and begin its review of the petition because the petition is not complete. We have found the following deficiencies in your petition:

1. You have not included in your petition the references listed below (by number of reference as cited in the petition) that you cite as support for your proposed health claims:

2004Q-0098

LET 1

3. Zhuang L, Peng JB, Tou L, Takanaga H, Adam RM, Hediger MA, Freeman MR. Calcium-selective ion channel, CaT1, is apically localized in gastrointestinal tract epithelia and is aberrantly expressed in human malignancies. *Lab Invest* 2002;82:1755-1764.
41. Schroeder HA. Relation between mortality from cardiovascular disease and treated water supplies: Variations in states and 163 largest municipalities of the United States. *JAMA* 1960;172:1902-1908.
61. David-Dufilho M, Pernollet M-G, Morris M, Astarie-Dekequer C, Devynck M-A. Erythrocyte Ca^{++} handling in the spontaneously hypertensive rat. Effect of vanadate ions. *Life Sci* 1994;54:267-274.
62. Wells IC, Blotcky AJ. Coexisting independent sodium-sensitive and sodium-insensitive mechanisms of genetic hypertension in spontaneously hypertensive rats (SHR). *Can J Physiol Pharmacol* 2001;79:779-784.
65. Tisler A, Pierratos A, D'Arcy Honey J, Bull SB, Rosivall L, Logan AG. High urinary excretion of uric acid combined with high excretion of calcium links kidney stones disease to familial hypertension. *Nephrol Dial Transplant* 2002;17:253-259.
66. Resnick LM. Cellular calcium and magnesium metabolism in the pathophysiology and treatment of hypertension and related metabolic disorders. *Am J Med* 1992;93:11S-20S.
67. Perez-Castrillon JL, Justo I, Silva J, Sanz A, Igea R, Escudero P, Pueyo C, Diaz C, Hernandez G, Duenas A. Bone mass and bone modeling markers in hypertensive post menopausal women. *J Hum Hypertens* 2003;17:107-110.
70. Hatton DC, Yue Q, McCarron DA. Mechanisms of calcium's effects on blood pressure. *Semin Nephrol* 1995;15:593-602.
71. Portsi I, Makynen H. Dietary calcium intake: Effects on central blood pressure control. *Semin Nephrol* 1995;15:550-563.
72. Nuglozeh E, Roberge AG. Dietary calcium supplementation and dopamine-beta-hydroxylase in spontaneously hypertensive rats. *Biochem Pharmacol* 1997;53:1867-1871.
73. Luft FC. Putative mechanism of blood pressure reduction induced by increases in dietary calcium intake. *Am J Hypertens* 1990;3:156S-160S.
93. Evans GH, Weaver CM, Harrington DD, Babbs CF Jr. Association of magnesium deficiency with the blood pressure-lowering effects of calcium. *J Hypertens* 1990;8:327-337.
94. Hatton DC, McCarron DA. Dietary calcium and blood pressure in experimental models of hypertension. A review. *Hypertension* 1994;23:513-530.
95. Yuasa S, Sumikura T, Yura T, Takahashi N, Shoji T, Uchida K, Fujioka H, Miki S, Matsuo H, Takamitsu Y. Effect of low dietary calcium intake on blood pressure and pressure natriuresis response in rats: A possible role of the rennin-angiotensin system. *Blood Press* 1996;5:121-127.

97. Lal KJ, Dakshinamurti K. The relationship between low-calcium-induced increase in systolic blood pressure and vitamin B6. *J Hypertens* 1995;13:327-332.
101. Butler TV, Cameron H, Kirchner KA. Dietary calcium supplementation restores pressure natriuresis responses in Dahl-S rats. *Am J Hypertens* 1995;8:615-621.
102. DiPette DJ, Greilich PE, Nickols GA, Graham GA, Green A, Cooper CW, Holland OB. Effect of dietary calcium supplementation in blood pressure and calciotropic hormones in mineralocorticoid-salt hypertension. *J Hypertens* 1990;8:515-520.
103. Porsti I, Arvola P, Wuorela H, Ilkka M, Saynavalammii P, Huhtala H, Metsa-Ketela T, Vapaatalo H. Effects of a high calcium diet and deoxycorticosterone on vascular smooth muscle responses in spontaneously hypertensive rats. *J Hypertens* 1990;8:835-841.
105. Makynen H, Arvola P, Vapaatalo H, Porsti I. High calcium diet effectively opposes the development of deoxycorticosterone-salt hypertension in rats. *Am J Hypertens* 1994;7:520-528.
119. Oshima T, Matsuura H, Matsumoto K, Kido K, Kajiyama G. Role of cellular calcium in salt sensitivity of patients with essential hypertension. *Hypertension* 1998;11:703-707.
126. Borghi L, Meschi T, Guerra A, Briganti A, Schianchi T, Allegri F, Novarini A. Essential arterial hypertension and stone disease. *Kidney Int* 1999;55:2397-2406.
134. McCarron DA, Pingree PA, Rubin RJ, Gaucher SM, Molitch M, Krutzik S. Enhanced parathyroid function in essential hypertension: A homeostatic response to a urinary calcium leak. *Hypertension* 1980;2:162-168.
136. Garcia-Zozaya JL, Padilla-Viloria M, Castro A. The relationship between low plasma rennin activity, low serum ionic calcium, and elevated systolic arterial tension in the normotensive elderly. *Am J Hypertens* 1988;1:393-396.
137. Strozecki P, Adamowicz A, Nartowicz E, Odrowaz-Sypniewska G, Wlodarczyk Z, Manitius J. Parathormon, calcium, phosphorus, and left ventricular structure and function in normotensive hemodialysis patients. *Ren Fail* 2001;23:115-126.
160. Lijnen P, Petrov V. Dietary calcium, blood pressure and cell membrane cation transport systems in men. *J Hypertens* 1995;13:875-882.
190. Waal-Manning HJ, McMab M, Paulin JM, Simpson FO. Dietary interventions in treated hypertension (abstract). *New Z Med J* 1987;100:252.
206. Nichaman M, Skekelle R, Pail O. Diet, alcohol and blood pressure in the Western Electric Study (abstract). *Am J Epidemiol* 1984;120:469-470.
211. Hung J-S, Huang T-Y, Wu D, Yen M-F, Tsai S-H, Dahl, HP, Neaton J, Dahl JC. The impact of dietary sodium, potassium and calcium on blood pressure. *J Formosan Med Assoc* 1990;89:17-22.
220. Zhou B-F, Wu X-G, Tao S-Q, Yang J, Cao T-X, Zheng R-P, Tian X-Z, Lu C-Q, Miao H-Y, Ye F-M, Zhu L-G, Zhu C, Jiang J-P, He H-Q, Ma F, Du F-C, Wang

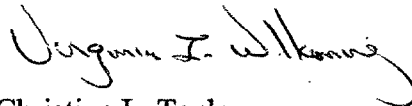
- B. Dietary patterns in 10 groups and the relationship with blood pressure. *Chin Med J* 1989;102;257-261.
240. Feinleib M, Lenfant C, Miller SA. Hypertension and calcium (letter). *Science* 1984;226:384-386.
251. Stamler J, Caggiula A, Grandits GA. Relationships of dietary variables to blood pressure (BP): Findings of the Multiple Risk Factor Intervention Trial (MRFIT) (abstract). *Circulation* 1992;85:II-6.
272. Garcia-Zozaya JL. Nutritional factors in high blood pressure. *J Hum Hypertens* 2000;14(Suppl. 1):S100-S104.
274. Kristal-Boneh E, Green MS. Dietary calcium and blood pressure – A critical review of the literature. *Public Health Rev* 1990/1991;18:267-300
276. Young EW, Bukoski RD, McCarron DA. Calcium metabolism in experimental hypertension. *Proc Soc Exp Biol Med* 1988;187:123-141.
281. Stein PP, Black HR. The role of diets in the genesis and treatment of hypertension. *Med Clin North Am* 1993;77:831-847.
290. Anonymous. The Sixth Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JCNVI). *Arch Intern Med* 1997;157:2413-2446.
291. Anonymous. The role of calcium in peri- and post menopausal women: Consensus opinion of The North American Menopause Society. *Menopause* 2001;8;84-95.
322. Montanaro D, Boscutti G, Mioni G, Driul P, Tosolini G. Calcium supplementation decreases the incidence of pregnancy-induced hypertension (PIH) and pre-eclampsia. World Congress of Hypertension in Pregnancy, Perugia, Italy, 1990, abstract 91; cited in ref. #917.
329. Villar J, Repke J, Belizan JM, Pareja G. Calcium supplementation reduces blood pressure during pregnancy: Results of a randomized controlled clinical trial. *Obstet Gynecol* 1987;70:317-322.
332. Villar J, Repke J. Calcium supplementation during pregnancy may reduce preterm delivery in high-risk populations. *Am J Obstet Gynecol* 1990;163;1124-1131.
344. Hofmeyr GJ, Atallah AN, Duley, L. Calcium supplements during pregnancy for preventing hypertensive disorders and related problems (Cochrane Review) *Cochrane Database Syst Rev* 2000;(2):CD001059.
352. Malberti F, Surian M, Poggio F, Minoia C, Salvadeo A. Efficacy and safety of long-term treatment with calcium carbonate as a phosphate binder. *Am J Kidney Dis* 1988;12:487-491.
353. Moriniere P, Hocine C, Boudailliez B, Belbrik S, Renaud H, Westeel PF, Solal MC, Fournier A. Long-term efficacy and safety of oral calcium as compared to Al(OH)₃ as phosphate binders. *Kidney Int* 1989;36(Suppl. 27):S133-S135.
354. Tsukamoto Y, Moriya R, Nagaba Y, Morishita T, Izumida I, Okubo M. Effect of administering calcium carbonate to treat secondary hyperparathyroidism in nondialyzed patients with chronic renal failure. *Am J Kidney Dis* 1995;25:879-886.

355. Nolan CR, Qunibi WY. Calcium salts in the treatment of hyperphosphatemia in hemodialysis patients. *Curr Opin Nephrol Hypertens* 2003;12:373-379.
356. Clark AGB, Oner A, Ward G, Turner C, Rigden SPA, Haycock GB, Chantler C. Safety and efficacy of calcium carbonate in children with chronic renal failure. *Nephrol Dial Transplant* 1989;4:539-544.
357. Orwoll ES. The milk-alkali syndrome: Current concepts. *Ann Intern Med* 1982;97:242-248.
360. Lagman R, Walsh D. Dangerous nutrition? Calcium, vitamin D, and shark cartilage nutritional supplements and cancer-related hypercalcemia. *Support Care Cancer* 2003;11:232-235.
361. Burtis WJ, Gay L, Insogna KL, Ellison A, Broadus AE. Dietary hypercalciuria in patients with calcium oxalate kidney stones. *Am J Clin Nutr* 1994;60:424-429.

Our decision not to review your petition at this time is based on your failure to submit copies of the information on which you rely to support your petition, as required by 21 CFR 101.70. The comments in this letter cannot be considered a substantive review of your petition or a comprehensive list of all issues that may be identified in a complete review. If you wish FDA to review your petition, please resubmit it with the information required by 21 CFR 101.70.

If you have any questions please feel free to contact Dr. Julie Schrimpf in the Division of Nutrition Programs and Labeling at 301-436-1450.

Sincerely yours,



for Christine L. Taylor
Director
Office of Nutritional Products, Labeling
and Dietary Supplements
Center for Food Safety
and Applied Nutrition