

# LSRO Report: Monosodium Glutamate

Dear Dr. Visek:

The FASEB report on the safety of monosodium glutamate (MSG) in food (Raiten et al. 1995) has grossly misrepresented the facts of the safety/toxicity of MSG, ignoring data that prove that MSG causes brain damage, learning disorders, obesity, stunted growth, infertility and other endocrine problems in laboratory animals (Nemeroff 1981), and minimizing the number of people affected by MSG and the severity of their reactions.

To consider the relevance of that report to the safety of MSG in a constructive manner, the following points should be considered.

The FDA asked FASEB to answer 18 specific questions, and FASEB responded with narrow, direct responses only. Those 18 questions appear to have been designed by the FDA to guarantee that the report would conclude that MSG is safe, or that more data were needed before FASEB could draw a conclusion.

When responses were not adequately controlled or restricted through question selection, data were included in the body of the 375-page FASEB report, but were not mentioned in the 20-page Executive Summary. For example, studies that demonstrated that MSG causes brain lesions and neuroendocrine disorders in laboratory animals were done in the 1960s and 1970s. By the 1980s, the toxic effects of MSG were so well understood that MSG was being used by researchers as a tool to kill brain cells in laboratory animals being studied for other purposes (Olney and Price 1978). Instead of asking FASEB, "Are there any animal studies that provide insight concerning the capacity of MSG to cause brain damage (lesions)?" the FDA asked, "Are there any studies conducted in vivo during the 1980s or 1990s that provide additional insight concerning the capacity of orally-administered MSG to mediate acute damage (lesion) of the arcuate nucleus of the anterior hypothalamus or of other circumventricular structures in the CNS of nonhuman primates?"

The MSG studies of the 1980s and 1990s were parenteral (not oral feeding) studies, often in vitro (not in vivo) studies; they demonstrated damage done in other

areas of the central nervous system (CNS) and the heart, for example (not the arcuate nucleus of the anterior hypothalamus or other circumventricular structures in the CNS); their subjects were animals other than primates (not nonhuman primates). Answers to the questions not asked by the FDA would have demonstrated that MSG was toxic.

It was decreed by FASEB that there exists an "MSG Symptom Complex." According to the FASEB report, the "MSG Symptom Complex" is made up of some, but not all, reactions to MSG and no "serious (life-threatening)" reactions. The symptoms named in the "complex" do not necessarily occur together as reactions to ingestion of MSG. Some are found to occur in combination with other reactions (which may or may not be included in FASEB's "complex"); but the symptoms do not necessarily form a structure, network or system.

The "serious (life-threatening)" MSG-induced reactions were discussed briefly in response to Question 2 of the report and were then ignored. From that point on, reference was made to the "MSG Symptom Complex" as though it comprised all of the legitimate reactions to MSG. Articulation of this "symptom complex" is deceptive and misleading.

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### LITERATURE CITED

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- Raiten, D. J., Talbot, J. M. & Fisher, K. D. (1995) Executive Summary from the Report: Analysis of Adverse Reactions to Monosodium Glutamate (MSG). *J. Nutr.* 125: 2892S-2906S.