letters to the editor

To the Editor,

For the second time an article has appeared in the *Journal of Lipid Research* by Steven C. Rumsey and coworkers at Columbia University, New York, regarding a procedure to cryopreserve LDL in the presence of sucrose to protect the biologic properties of the particles as judged from the unaltered plasma clearance in monkeys as compared to native LDL ("Human plasma LDL cryopreserved with sucrose maintains in vivo kinetics indistinguishable from freshly isolated human LDL in cynomolgus monkeys." 1994. *J. Lipid Res.* **35:** 1592–1598). The first article, "Cryopreservation with sucrose maintains normal physical and biological properties of human plasma low density lipoproteins", was published in 1992 (*J. Lipid Res.* **33:** 1551–1561).

The procedure to protect LDL during freezing by the addition of sucrose has, in fact, been published several years ago and the nature as well as the biological behavior of thawn LDL particles have been thoroughly investigated in mice as well as in rabbits. In addition, the use of sucrose to protect LDL during freezing and subsequent lyophilization is patented (US patent 4,868,158 from Sept. 1, 1989).

The original description of the technique was by Masquelier et al. in 1986 (1). In this article it was demonstrated that following freezing of human LDL in the presence of sucrose and subsequent drying, the plasma clearance of redissolved LDL remained unaltered as compared to native LDL. In contrast, potato starch did not protect LDL. Furthermore, after freeze drying and even solvent extraction, the LDL particles could be reconstituted in buffer and the plasma clearance remained unaltered. This article can easily be found on Medline using search terms: "LDL, Sucrose". It will uniquely appear following search on "LDL, Sucrose, Freeze". We also want to point out that one of the authors of the second paper by Rumsey et al. received detailed personal information in 1988 from one of us about our findings on LDL-protection by sucrose and a copy of our first article.

In another study by Vitols et al. (2), the nature and in vivo fate of human LDL particles lyophilized in the presence of sucrose and reconstituted with a lipophilic alkylating agent were further investigated. EM pictures of the particles were presented, and particle size as determined by quasi-elastic light scattering was 22.5 nm for reconstituted compared to 24.4 for native LDL. The plasma clearance of the preparation was the same as for native LDL in rabbits. The procedures have also been described in review articles (3, 4).

It is thus evident that the principal as well as almost all other information provided in the two articles by Steven C. Rumsey et al. have already been published. The articles should therefore have fallen into the category of confirmatory findings.

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