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Authors' reply

Reply to the correction from Wolfe et al. to ‘‘Is vitrification involved in depression of the phase transition temperature in dry phospholipids?’’ [Biochim. Biophys. Acta 1280 (1996) 187–196]¹

John H. Crowe *

Section of Molecular and Cellular Biology, University of California, Davis, CA 95616, USA

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Dear Editor,

After lengthy discussion with Dr. Wolfe (see Wolfe et al. [1]), I agree that in our article [2] we misinterpreted the predictions of the elegant, but complex, Bryant and Wolfe model [3] with regard to effects of glucose on close approach of bilayers.

The paper by Pincet et al. [4] indeed does not use the phrase ‘‘interbilayer surface pressures’’; we misquoted the authors' language. However, it does deal with intermembrane forces, as the title – Do trehalose and dimethyl sulfoxide affect intermembrane forces? – clearly states.

Pincet et al. [4] take no position as to the implications of their findings for the water replacement hypothesis, but the fact that they could detect only minor effects of the solutes tested is being interpreted informally in the scientific community as evidence against this hypothesis.

I wish to stress that extrapolation of experiments done in the presence of excess water to the dry state is inappropriate.

Finally, these errors in interpretation in no way affect the central thesis of the paper, that vitrification of the stabilizing solute is not likely to be responsible for depression of the transition temperature in dry phospholipids.

Sincerely,

John H. Crowe

References

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- [2] J.H. Crowe, F.A. Hoekstra, K.H.N. Nguyen, L.M. Crowe, Biochim. Biophys. Acta 1280 (1996) 187–196.
- [3] G. Bryant, J. Wolfe, Cryo-letters 13 (1992) 23–36.
- [4] F. Pincet, E. Perez, J. Wolfe, Cryobiology 31 (1994) 531–539.

* Corresponding author. Fax: +1 (916) 7522910. E-mail: jhcrowe@ucdavis.edu

¹ SSDI of the original article: 0005-2736(95)00287.