## The stress-strain relation of the plasma membrane of isolated plant protoplasts

## Joe Wolfe and Peter L. Steponkus

Department of Agronomy, Cornell University, Ithaca, NY 14853, U.S.A.
Received 18 November 1980. Available online 30 January 2003.

Over periods of up to a few seconds the plasma membrane of isolated rye protoplasts behaves elastically with an area modulus of $230 \mathrm{mN}^{-1}$. Over longer periods, the area increases with time under large tension and decreases under sufficiently small tension, suggesting that material is incorporated into or depleted from the plane of the membrane.

Author Keywords: Plasma membrane; Membrane tension; Elasticity; Lysis; (Rye leaf protoplast)

Wolfe, J. and Steponkus, P.L. (1981). "The stress-strain relation of isolated plant protoplasts". Biochim. Biophys. Acta., 643, 663-668.
doi:10.1016/0005-2736(81)90363-1
Copyright $\neg$ © 1981 Published by Elsevier Science B.V.

