

## *Erratum*

# Contribution of the Nernst potential to stiffness constants: the asymmetrical case

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The contribution of active membranes — described by a Nernst potential — to bending elastic modulus and to spontaneous curvature is determined and provided by equations (19) to (25) of reference [1]. A typing error (third term of the right member) appears in the first one, equation (19), that corresponds to the symmetrical case, the same Debye lengths inside and outside the vesicle.

$$\kappa^{eff} = \kappa + \frac{\left[\frac{k_B T}{e} \ln\left(\frac{n_{10}}{n_{1\infty}}\right)\right]^2}{1 + 2\epsilon_m/\epsilon d\chi} \left( \frac{\epsilon_m d}{12} + \frac{\epsilon_m^2}{12\epsilon d^2 \chi^3} \frac{9 + 12d\chi + 4d^2 \chi^2}{1 + 2\epsilon_m/\epsilon d\chi} \right).$$

The numerical and graphical results are not affected by this error. The equations (20) to (25) are correct.

## References

1. S. Chatkaew, M. Leonetti, Eur. Phys. J. E **17**, 203 (2005)

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