Biophysical Chemistry 9 (1979) 415

Erratum

O.G. Berg and C. Blomberg, Association kinetics with coupled diffusion III. Ionic-strength dependence of the lac repressor-operator association, Biophys. Chem. 8 (1978) 271.

Eq. (3.10) has lost a factor ρ^{-1} in both integrals; they should read:

$$\frac{\ldots. \int_{\rho}^{R_c} \rho^{-1} \exp \ldots.}{\ldots. \int_{b}^{R_c} \rho^{-1} \exp \ldots.} \tag{3.10}$$

Eq. (4.2), the last equality should have λ substituted by Λ giving:

$$k_a = \ldots. = \frac{1}{1 + n_0/K_c} \frac{\Lambda}{K_c} [(\Lambda L^2/D_1)^{1/2} \coth(\Lambda L^2/D_1)^{1/2} - 1]^{-1} . \tag{4.2}$$

Eq. (4.3) has lost a power -1 at the end. It should read:

$$\Lambda = \ldots. = \lambda \left\{ bk \exp[-V(b)/k_B T] \int_{b}^{R_c} \rho^{-1} \exp[V(\rho)/k_B T] \, d\rho + 1 \right\}^{-1} . \tag{4.3}$$

Moreover, some statements in the paragraph following eq. (4.4) are inaccurate: The increase in the screening length *does not* provide a more efficient reflection in the potential and thereby it *cannot* provide a more efficient channelling along the chain, in contrast to the statements made. However, it remains true that: decreasing ionic strength decrease the value of the integral in eq. (4.4). This effect increases the unspecific dissociation rate Λ, eq. (4.3), which in turn increases the specific association rate k_a, eq. (4.2).