Erratum: Torque correlation length and stochastic twist dynamics of DNA **[Phys. Rev. E **89**, 062706 (2014)]**

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There is an erroneous factor of 2 in Eq. (2). The analysis and conclusions of the paper are unaltered, but the factor alters the following equations.

Equation (2) should read

$$\zeta \dot{\theta}(s) = -\frac{\delta E}{\delta \theta} + f(s, t) = \frac{1}{\beta} (c_1 \partial_s^2 \theta - c_2 \partial_s^4 \theta) + f(s, t). \quad (2)$$

Equations (3), (4), (7), (11), and (12) are corrected simply by replacing factors of β with $\beta/2$. For example, Eqs. (3) should read

$$\begin{aligned} \theta|_{s=0} &= \omega_0 t, \\ c_2 \partial_s^2 \theta|_{s=0} &= c_2 \partial_s^2 \theta|_{s=L} = 0, \\ \zeta_B \dot{\theta}|_{s=L} &= -\frac{1}{\beta} [c_1 \partial_s \theta - c_2 \partial_s^3 \theta]|_{s=L}. \end{aligned} \quad (3)$$

Next, Eq. (14) should read

$$\beta \zeta \partial_t \theta = c_1 \partial_s^2 \theta - c_2 \partial_s^4 \theta + f(t). \quad (14)$$

Equation (15) should read

$$\begin{aligned} \beta \zeta_{\perp} \partial_t R &= i [(c_2 \partial_s^4 \theta - c_1 \partial_s^2 \theta) \partial_s^2 R + (c_2 \partial_s^3 \theta - c_1 \partial_s \theta) \partial_s^3 R] \\ &\quad - A \partial_s^4 R + \beta F \partial_s^2 R + g_x(t) + i g_y(t). \end{aligned} \quad (15)$$

Equation (16) should read

$$R_q(\omega) = \begin{cases} \frac{g_q(\omega)}{Aq^4 + \tau q^3 + \beta F q^2 - i\beta \zeta_{\perp} \omega} & \text{for equilibrium experiments [Fig. 1(a)]} \\ \frac{g_q(\omega)}{Aq^4 + \beta [\zeta_B + \zeta(L - s_0)] \omega_0 q^3 + \beta (F - i\zeta \omega_0) q^2 - i\beta \zeta_{\perp} \omega} & \text{for nonequilibrium experiments [Fig. 1(b)].} \end{cases} \quad (16)$$

Similarly, the relaxation times T_k given on page 2 are $T_k = \frac{\beta \zeta}{\lambda_k}$ for all k . This correction also applies to the relaxation and crossover times in the second column of page 3.

In the Appendixes, the following equations are corrected. Equation (C1) should read

$$\begin{aligned} C_{\tau}(s, s, t) &= \frac{2}{L} \int_0^{\infty} \frac{\exp \left\{ \frac{-(\frac{k\pi}{L})^2 (c_1 + (\frac{k\pi}{L})^2 c_2) t}{\beta \zeta} \right\}}{c_1 + c_2 (\frac{k\pi}{L})^2} dk \\ &\approx \frac{2}{L} \left(\int_0^{L/\xi\pi} \frac{\exp \left(\frac{-c_1 \pi^2 k^2 t}{\beta \zeta L^2} \right)}{c_1} dk + \int_{L/\xi\pi}^{\infty} \frac{\exp \left(\frac{-c_2 \pi^4 k^4 t}{\beta \zeta L^4} \right)}{c_2 (\frac{k\pi}{L})^2} dk \right). \end{aligned} \quad (C1)$$

The corresponding relaxation times mentioned in Appendix C are corrected as above.

Equation (D1) should read

$$\beta \partial_t \Omega = \frac{1}{\zeta} (c_1 \partial_s^2 \Omega - c_2 \partial_s^4 \Omega) + \frac{1}{\zeta_{\perp}} (\partial_s \vec{r} \times \partial_s^2 \vec{r}) \partial_s \partial_t \vec{r} + f(t). \quad (D1)$$

Equation (D2) should read

$$\begin{aligned} \beta [\zeta_{\parallel} \hat{t} \hat{t} + \zeta_{\perp} (\mathbf{I} - \hat{t} \hat{t})] \partial_t \vec{r} &= \partial_s [(c_1 \Omega - c_2 \partial_s^2 \Omega) (\partial_s \vec{r}) \times \partial_s^2 \vec{r}] \\ &\quad - A \partial_s^4 \vec{r} + \beta \partial_s (\Lambda(s) \partial_s \vec{r}) + \vec{g}(t). \end{aligned} \quad (D2)$$

Equation (D3) should read

$$\begin{aligned} \zeta_{\perp} \partial_t R = & (F - i\zeta\omega_0) \partial_s^2 R + i[\zeta_B + \zeta(L - s_0)] \omega_0 \partial_s^3 R \\ & - \frac{A}{\beta} \partial_s^4 R + g(t) - i\zeta\omega_0 \Delta s \partial_s^3 R. \end{aligned} \quad (\text{D3})$$

Equations (D4) and (D5) are corrected by changing factors of ζ , ζ_B , and $\zeta_{\perp}$ into factors of $\zeta/2$, $\zeta_B/2$, and $\zeta_{\perp}/2$, respectively.

Finally, the locally determined torque given at the bottom of the first column of page 6 should read $\tau(s_0) = \beta[\zeta_B + \zeta(L - s_0)]\omega_0$.