

## Erratum: Opening of nucleic-acid double strands by helicases: Active versus passive opening [Phys. Rev. E **71**, 011904 (2005)]

M. D. Betterton

*Department of Applied Mathematics, University of Colorado at Boulder, 526 UCB, Boulder, Colorado 80309, USA*

Frank Jülicher

*Max-Planck Institute for the Physics of Complex Systems, Nöthnitzerstr. 38, 01187 Dresden, Germany*

(Received 23 June 2005; published 31 August 2005)

DOI: [10.1103/PhysRevE.72.029906](https://doi.org/10.1103/PhysRevE.72.029906) PACS number(s): 82.39.-k, 87.10.+e, 05.40.-a, 82.20.-w, 99.10.Cd

We would like to acknowledge experimental work which compares the rate of single-strand translocation to the rate of double-strand DNA unwinding. Single-molecule studies on UvrD helicase by Dessinges *et al.* found comparable speeds for ss translocation and unwinding [1]. Bulk studies on T7 helicase by Jeong *et al.* found the rate of ss translocation 9 times slower than the rate of duplex unwinding [2]. We learned of their work when it appeared, after submission of an earlier version of our manuscript, but neglected to add the corresponding citation in the revised version.

The equation for the normalization constant [Eq. (21)] is incorrect. It should read

$$A = \frac{\beta + k^+ - \alpha - k^-}{\alpha + k^-}. \quad (1)$$

The following equation (22) for the unwinding velocity is correct and the conclusions of the paper are unaffected.

The second line of the equation for the unwinding velocity for  $n \geq 1$  [Eq. (29)] is incorrect. It should read

$$\frac{v_n}{v_{HW}} = \frac{c^n(e^{-U_0} - c) + e^{-fU_0}(1 - c)(e^{-nU_0} - c^n)}{c^n(e^{-U_0} - c) + e^{-U_0}(1 - c)(e^{-nU_0} - c^n)}. \quad (2)$$

The preceding expression [the first line of Eq. (29)] is correct and the conclusions of the paper are unaffected.

---

[1] M. N. Dessinges, T. Lionnet, X. G. Xi, D. Bensimon, and V. Croquette, Proc. Natl. Acad. Sci. U.S.A. **101**, 6493 (2004).

[2] Y. F. Jeong, M. K. Levin, and S. S. Patel, Proc. Natl. Acad. Sci. U.S.A. **101**, 7264 (2004).