



Author Correction: Optimized protein-water interactions and torsional refinements yield balanced atomistic protein force fields

Correction to: *Nature Communications*
<https://doi.org/10.1038/s41467-025-65603-4>,
published online 26 November 2025

<https://doi.org/10.1038/s41467-026-72306-x>

Published online: 24 April 2026



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We identified a typographical error in Equation (1) in Methods. In the published version, the squared deviation term was inadvertently omitted. The correct expression for the chi-squared metric is:

$$\chi^2 = \frac{1}{N} \sum_{i=1}^N \frac{(J_{\text{expt},i} - J_{\text{calc},i})^2}{\sigma_i^2}$$

We confirm that all χ^2 values reported in the manuscript and Supplementary Information were computed using the correct expression, including the squared deviation term. Therefore, this correction does not affect any numerical results, comparisons, or conclusions.

In addition, we have made a minor terminology clarification in the Ala₅ section by replacing “Ala₅³J couplings” with “Ala₅ scalar couplings” to reflect that the χ^2 values include a combination of ¹J, ²J, and ³J couplings (as detailed in Supplementary Table 6). This wording change is for consistency and clarity only and does not affect the interpretation of the data. The changes have been made in the HTML and PDF versions of the article.

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