Corrigendum

Corrigendum to “All-Atom Four-Body Knowledge-Based Statistical Potentials to Distinguish Native Protein Structures from Nonnative Folds”

Majid Masso

School of Systems Biology, George Mason University, 10900 University Blvd. MS 5B3, Manassas, VA 20110, USA

Correspondence should be addressed to Majid Masso; mmasso@gmu.edu

Received 7 December 2017; Accepted 12 December 2017; Published 8 January 2018

Copyright © 2018 Majid Masso. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

In the article titled “All-Atom Four-Body Knowledge-Based Statistical Potentials to Distinguish Native Protein Structures from Nonnative Folds” [1], there were errors in the energy values in the last column of Table 8. The corrected table is shown below.

Table 8: All-atom four-body statistical potential derived using a 6-letter alphabet and a 12 Å cutoff.

| Quad   | Count  | $f_{ijkl}$ | $p_{ijkl}$ | $s_{ijkl}$ |
|--------|--------|------------|------------|------------|
| CCCC   | 4107297| 0.112818   | 0.160748   | 0.15377    |
| CCCM   | 1924   | 5.28E-05   | 0.00045    | 0.93026    |
| CCNN   | 4142684| 0.11379    | 0.172495   | 0.18067    |
| CCCO   | 6462239| 0.177503   | 0.193701   | 0.03793    |
| CCCS   | 297980 | 0.008185   | 0.005072   | -0.207795  |
| CCCX   | 2996   | 8.23E-05   | 0.000765   | 0.96834    |
| CCMM   | 157    | 4.31E-06   | 4.73E-07   | -0.96026   |
| CCMN   | 3758   | 0.000103   | 0.000362   | 0.5452     |
| CCMO   | 651    | 0.000179   | 0.000407   | 0.35687    |
| CCMS   | 2320   | 6.37E-05   | 1.07E-05   | -0.776892  |
| CCMX   | 15     | 4.12E-07   | 1.61E-06   | 0.591      |
| CCNN   | 1871781| 0.051413   | 0.069412   | 0.13036    |
| CCNO   | 8544461| 0.234696   | 0.155892   | -0.177683  |
| CCNS   | 128008 | 0.003516   | 0.004082   | 0.06485    |
| CCNX   | 2159   | 5.93E-05   | 0.000616   | 1.01632    |
| CCCO   | 3686844| 0.101269   | 0.087528   | -0.063328  |
| CCOS   | 205846 | 0.005654   | 0.004584   | -0.09103   |
| CCOX   | 4995   | 0.000137   | 0.000691   | 0.7024     |
| CCSX   | 15467  | 0.000425   | 6.00E-05   | -0.849914  |
| CCSX   | 148    | 4.07E-06   | 1.81E-05   | 0.64875    |
Table 8: Continued.

| Quad   | Count | $f_{ijkl}$ | $p_{ijkl}$ | $s_{ijkl}$ |
|--------|-------|------------|------------|------------|
| CCXX   | 161   | 4.42E-06   | 1.37E-06   | -0.510349 |
| CMMO   | 29    | 7.97E-07   | 2.21E-10   | -3.557768 |
| CMMN   | 164   | 4.50E-06   | 2.54E-07   | -1.249604 |
| CMNO   | 293   | 8.05E-06   | 2.85E-07   | -1.451272 |
| CNMS   | 665   | 1.83E-05   | 7.46E-09   | -3.389144 |
| CMMX   | 1     | 2.75E-08   | 1.12E-09   | -1.38783 |
| CMNN   | 2643  | 7.26E-05   | 9.72E-05   | 0.12663 |
| CMNO   | 7243  | 0.000199   | 0.000218   | 0.0402 |
| CMNS   | 2610  | 7.17E-05   | 5.72E-06   | -1.098444 |
| CMNX   | 30    | 8.24E-07   | 8.62E-07   | 0.01957 |
| CNMO   | 9551  | 0.000262   | 0.000123   | -0.33061 |
| CNOS   | 1041  | 2.86E-05   | 6.42E-06   | -0.648899 |
| CMOX   | 77    | 2.12E-06   | 9.68E-07   | -0.339447 |
| CMSS   | 2052  | 5.64E-05   | 8.40E-08   | -2.826573 |
| CMSX   | 13    | 3.57E-07   | 2.53E-08   | -1.148817 |
| CMXX   | 6     | 1.65E-07   | 1.91E-09   | -1.953563 |
| CNNN   | 122810| 0.003373   | 0.012414   | 0.56586 |
| CNNO   | 211781| 0.058171   | 0.041821   | -0.143351 |
| CNNS   | 16884 | 0.000464   | 0.000195   | 0.37318 |
| CNNX   | 631   | 1.73E-05   | 1.00E+05   | 0.97912 |
| CNOO   | 2981894| 0.081906   | 0.046962   | -0.241565 |
| COOS   | 38976 | 0.001071   | 0.001381   | 0.11057 |
| COOX   | 24064 | 0.000661   | 0.000208   | -0.50151 |
| COSS   | 4524  | 6.59E-05   | 3.62E-05   | -0.536074 |
| COSX   | 42    | 1.76E-06   | 1.09E-05   | 0.79279 |
| COXX   | 84    | 2.31E-06   | 8.23E-07   | -0.447847 |
| CSSS   | 320   | 8.79E-06   | 3.16E-07   | -1.44474 |
| CSSX   | 5     | 1.37E-07   | 1.43E-07   | 0.01705 |
| CSXX   | 4     | 1.10E-07   | 2.15E-08   | -0.707545 |
| CXXX   | 12    | 3.30E-07   | 1.08E-09   | -2.483295 |
| MMMN   | 83    | 2.28E-06   | 3.86E-14   | -7.771426 |
| MMNO   | 42    | 1.15E-06   | 5.92E-11   | -4.290048 |
| MMNS   | 31    | 8.51E-07   | 6.64E-11   | -4.107805 |
| MMMO   | 379   | 1.04E-05   | 1.74E-12   | -6.777 |
| MMNX   | 0     | 2.62E-13   | --         | -- |
| MMNN   | 85    | 2.33E-06   | 3.40E-08   | -1.836638 |
| MMNO   | 113   | 3.10E-06   | 7.64E-08   | -1.608913 |
| MMNS   | 364   | 1.00E-05   | 2.00E-09   | -3.698853 |
| MMNX   | 0     | 3.02E-10   | --         | -- |
| MMOO   | 320   | 8.79E-06   | 4.29E-08   | -2.311659 |
| MMOS   | 104   | 2.86E-06   | 2.25E-09   | -3.104429 |
| MNOX   | 3     | 8.24E-08   | 3.39E-10   | -3.286025 |
| MSX    | 254   | 6.98E-06   | 2.94E-11   | -5.375177 |
| MXX    | 2     | 5.49E-08   | 8.87E-12   | -3.791851 |
| MNX    | 0     | 6.69E-13   | --         | -- |
| MNNN   | 1048  | 2.88E-05   | 8.69E-06   | -0.520184 |
| Quad   | Count | \( f_{ijkl} \) | \( P_{ijkl} \) | \( z_{ijkl} \) |
|--------|-------|----------------|----------------|----------------|
| MNNO   | 1323  | 3.63E - 05     | 2.93E - 05     | -0.093906      |
| MNNS   | 562   | 1.54E - 05     | 7.67E - 07     | -1.303999      |
| MNX    | 6     | 1.65E - 07     | 1.16E - 07     | -0.153922      |
| MNOO   | 4193  | 0.000115       | 3.29E - 05     | -0.544515      |
| MNOS   | 352   | 9.67E - 06     | 1.72E - 06     | -0.74942       |
| MNOX   | 31    | 8.51E - 07     | 2.60E - 07     | -0.351747      |
| MNSS   | 793   | 2.18E - 05     | 2.25E - 08     | -2.985908      |
| MNSX   | 5     | 1.37E - 07     | 6.80E - 09     | -1.305273      |
| MNXX   | 9     | 2.47E - 07     | 5.13E - 10     | -2.683083      |
| MOOO   | 5790  | 0.000159       | 1.23E - 05     | -1.114135      |
| MOOS   | 167   | 4.59E - 06     | 9.67E - 07     | -0.676269      |
| MOOX   | 171   | 4.70E - 06     | 1.46E - 07     | -1.508056      |
| MOSS   | 211   | 5.80E - 06     | 2.53E - 08     | -2.359752      |
| MOSX   | 4     | 1.10E - 07     | 7.64E - 09     | -1.158007      |
| MOXX   | 55    | 1.51E - 06     | 5.76E - 10     | -3.418488      |
| MSSS   | 62    | 1.70E - 06     | 2.21E - 10     | -3.8869       |
| MSSX   | 2     | 5.49E - 08     | 1.00E - 10     | -2.739925      |
| MSX    | 0     | 1.51E - 11     | --             | --             |
| MXXX   | 16    | 4.39E - 07     | 7.58E - 13     | -5.763152      |
| NNNN   | 5639  | 0.000155       | 0.000833       | 0.7304         |
| NNOO   | 60175 | 0.001653       | 0.00374        | 0.35461        |
| NNNS   | 538   | 1.48E - 05     | 9.79E - 05     | 0.82132        |
| NNNX   | 39    | 1.07E - 06     | 1.48E - 05     | 1.13953        |
| NNOO   | 384854| 0.010571       | 0.006299       | -0.224828      |
| NNOS   | 6209  | 0.000171       | 0.00033        | 0.28656        |
| NNOX   | 354   | 9.72E - 06     | 4.98E - 05     | 0.70907        |
| NNX    | 319   | 8.76E - 06     | 4.32E - 06     | -0.307157      |
| NNXX   | 6     | 1.65E - 07     | 1.30E - 06     | 0.898          |
| NXXX   | 7     | 1.92E - 07     | 9.83E - 08     | -0.29148       |
| NOOO   | 227156| 0.006239       | 0.004716       | -0.121592      |
| NOOS   | 11871 | 0.003236       | 0.00037        | 0.05545        |
| NOOX   | 3214  | 8.83E - 05     | 5.59E - 05     | -0.198618      |
| NOSS   | 951   | 2.61E - 05     | 9.70E - 06     | -0.430162      |
| NOX    | 13    | 3.57E - 07     | 2.93E - 06     | 0.9136         |
| NOXX   | 66    | 1.81E - 06     | 2.21E - 07     | -0.914541      |
| NSSS   | 35    | 9.61E - 07     | 8.47E - 08     | -1.055088      |
| NSX    | 0     | 0              | 3.83E - 08     | --             |
| NSXX   | 0     | 0              | 5.78E - 09     | --             |
| NXXX   | 3     | 8.24E - 08     | 2.91E - 10     | -2.452665      |
| OOOO   | 61473 | 0.001689       | 0.001324       | -0.105657      |
| OOOO   | 5019  | 0.000138       | 0.000139       | 0.00255        |
| OOOX   | 9614  | 0.000264       | 2.09E - 05     | -1.101242      |
| OSSS   | 331   | 9.09E - 06     | 5.45E - 06     | -0.222484      |
| OSSX   | 45    | 1.24E - 06     | 1.64E - 06     | 0.12365        |
| OSS   | 144   | 3.96E - 06     | 1.24E - 07     | -1.504034      |
| OSSX   | 38    | 1.04E - 06     | 9.51E - 08     | -1.040448      |
| OSSX   | 3     | 8.24E - 08     | 4.30E - 08     | -0.282172      |
| OSSX   | 0     | 0              | 6.49E - 09     | --             |
| OXXX   | 5     | 1.37E - 07     | 3.26E - 10     | -2.624158      |
| SSSS   | 11    | 3.02E - 07     | 6.23E - 10     | -2.686034      |
| SSSX   | 0     | 0              | 3.76E - 10     | --             |
| SXX    | 0     | 0              | 8.50E - 11     | --             |
| XXXX   | 0     | 0              | 8.55E - 12     | --             |
| XXXX   | 0     | 0              | 3.22E - 13     | --             |
References

[1] M. Masso, “All-atom four-body knowledge-based statistical potentials to distinguish native protein structures from non-native folds,” BioMed Research International, vol. 2017, Article ID 5760612, 17 pages, 2017.