Correction

EVOLUTION

Correction for "Conserved rates and patterns of transcription errors across bacterial growth states and lifestyles," by Charles C. Traverse and Howard Ochman, which appeared in issue 12, March 22, 2016, of *Proc Natl Acad Sci USA* (113:3311–3316; first published February 16, 2016; 10.1073/pnas.1525329113).

The authors note wish to note the following: "While compiling our transcription error rate data for distribution, we discovered that a fraction of errors went unreported. After including these data, all estimates of error rates remain within the same order of magnitude, but each rate estimate is augmented. We now report average transcription error rates of $8.23 \pm 0.55 \times 10^{-5}$ for *Escherichia coli*, $4.67 \pm 1.53 \times 10^{-5}$ for *Buchnera aphidicola* mRNA, $3.28 \pm 0.56 \times 10^{-5}$ for *Buchnera aphidicola* rRNA, and 5.09×10^{-5} for *Carsonella ruddii*. We repeated all statistical analyses, and the only changes are as follows: The transcription error rates of *Buchnera aphidicola* mRNA and rRNA are significantly lower than *Escherichia coli* mRNA (two-tailed *t* test, t(9) > 2.28, *p* < 0.04); and C→U and C→A errors are no longer significantly higher than G→U and A→U errors, respectively. The updated results showing the original and revised values for each type of base substitution are reported in the accompanying Table 1.

"In our original report, we were testing the hypothesis that the bacterial endosymbionts *Buchnera* and *Carsonella*, which have higher DNA substitution rates than *E. coli*, also have increased rates of transcription errors. We originally reported that the transcription error rate of *Buchnera* was slightly, but not significantly, lower than that of *E. coli*. Inclusion of these new data indicates that the transcription error rate of *Buchnera* is, in fact, significantly lower than that of *E. coli*. That *Buchnera* and *E. coli* exhibited similar error rates was among the most unanticipated results of our original study. However, it is all the more remarkable that transcription error rates in *Buchnera* are significantly lower that than that of *E. coli*." Table 1 appears below.

CORRECTION

Table 1. Revised transcription error rates of *E. coli*

Sample	A→C	A→G	A→U	C→A	C→G	C→U	G→A	G→C	G→U	U→A	U→C	U→G	Overall error rate
Minimal media; midlog phase 1	3.66×10^{-6} (2.42×10^{-6})	3.81×10^{-6} (2.49×10^{-6})	2.34×10^{-6} (1.87×10^{-6})	4.49×10^{-6} (2.60×10^{-6})	1.63×10^{-6} (1.14×10^{-6})	3.50×10^{-5} (2.17×10^{-5})	4.81×10^{-6} (2.72×10^{-6})	2.86×10^{-6} (1.52×10^{-6})	5.39×10^{-6} (3.17×10^{-6})	2.97×10^{-6} (2.00×10^{-6})	3.41×10^{-6} (1.62×10^{-6})	2.75×10^{-6} (1.85×10^{-6})	7.31×10^{-5} (4.51×10^{-5})
Minimal media; midlog phase 2	5.20×10^{-6} (3.27×10^{-6})	7.04×10^{-6} (2.08×10^{-6})	5.20×10^{-6} (2.38×10^{-6})	5.32×10^{-6} (3.38×10^{-6})	1.86×10^{-6} (8.45×10^{-7})	1.76×10^{-5} (1.01×10^{-5})	4.01×10^{-6} (5.07×10^{-7})	5.88×10^{-6} (3.80×10^{-6})	3.37×10^{-5} (1.60×10^{-5})	5.55×10^{-6} (3.17×10^{-6})	5.85×10^{-6} (2.85×10^{-6})	5.85×10^{-6} (3.80×10^{-6})	1.03×10^{-4} (5.22×10^{-5})
Minimal media; stationary phase 1	1.52×10^{-6} (5.85×10^{-7})	3.5×10^{-6} (2.5×10^{-6})	2.13×10^{-6} (1.17×10^{-6})	4.83×10^{-6} (3.59×10^{-6})	2.41×10^{-6} (1.38×10^{-6})	6.01×10^{-5} (3.48×10^{-5})	9.80×10^{-6} (4.38×10^{-6})	2.12×10^{-6} (5.16×10^{-7})	9.01×10^{-6} (6.45×10^{-6})	4.03×10^{-6} (1.62×10^{-6})	8.36×10^{-6} (5.82×10^{-6})	3.41×10^{-6} (2.59×10^{-6})	1.11×10^{-4} (6.49×10^{-5})
Minimal media; stationary phase 2	2.96×10^{-6} (1.56×10^{-6})	6.90×10^{-6} (2.67×10^{-6})	3.28×10^{-6} (2.90×10^{-6})	6.72×10^{-6} (3.58×10^{-6})	3.80×10^{-6} (1.90×10^{-6})	1.08×10^{-5} (4.21×10^{-6})	7.19×10^{-6} (5.11×10^{-6})	5.47×10^{-6} (2.27×10^{-6})	6.04×10^{-6} (3.97×10^{-6})	5.43×10^{-6} (3.56×10^{-6})	6.78×10^{-6} (2.61×10^{-6})	4.41×10^{-6} (2.61×10^{-6})	6.98×10^{-5} (3.70×10^{-5})
Complex media; midlog phase 1	3.01×10^{-6} (1.53×10^{-6})	2.59×10^{-6} (1.45×10^{-6})	2.26×10^{-6} (1.37×10^{-6})	3.61×10^{-6} (2.25×10^{-6})	1.40×10^{-6} (6.01×10^{-7})	$4.71 \times 10^{-5} \times$ (3.5×10^{-5})	5.15×10^{-6} (2.82×10^{-6})	2.72×10^{-6} (1.66×10^{-6})	6.33×10^{-6} (3.90×10^{-6})	3.17×10^{-6} (2.23×10^{-6})	2.40×10^{-6} (1.61×10^{-6})	3.17×10^{-6} (2.14×10^{-6})	8.29×10^{-5} (5.21×10^{-5})
Complex media; midlog phase 2	6.55×10^{-6} (3.40×10^{-6})	5.53×10^{-6} (3.00×10^{-6})	4.91×10^{-6} (2.40×10^{-6})	7.66×10^{-6} (4.83×10^{-6})	6.02×10^{-6} (2.71×10^{-6})	1.39×10^{-5} (7.73×10^{-6})	5.88×10^{-6} (2.08×10^{-6})	5.51×10^{-6} (2.95×10^{-6})	8.26×10^{-6} (4.17×10^{-6})	4.77×10^{-6} (2.33×10^{-6})	5.81×10^{-6} (2.97×10^{-6})	8.92×10^{-6} (4.67×10^{-6})	8.37×10^{-5} (4.33×10^{-5})
Complex media; stationary phase 1	3.48×10^{-6} (1.78×10^{-6})	2.32×10^{-6} (9.59×10^{-7})	2.03×10^{-6} (8.22×10^{-7})	3.79×10^{-6} (2.69×10^{-6})	1.57×10^{-6} (1.7×10^{-6})	3.49×10^{-5} (2.11×10^{-5})	6.18×10^{-6} (2.88×10^{-6})	2.57×10^{-6} (1.75×10^{-6})	4.25×10^{-6} (2.01×10^{-6})	2.17×10^{-6} (1.81×10^{-6})	3.56×10^{-6} (2.47×10^{-6})	2.48×10^{-6} (1.48×10^{-6})	6.93×10^{-5} (4.08×10^{-5})
Complex media; stationary phase 2	4.25×10^{-6} (2.10×10^{-6})	4.49×10^{-6} (3.03×10^{-6})	4.01×10^{-6} (9.32×10^{-7})	7.60×10^{-6} (3.85×10^{-6})	1.95×10^{-6} (9.7×10^{-7})	1.22×10^{-5} (7.94×10^{-6})	4.6×10^{-6} (2.26×10^{-6})	3.63×10^{-6} (2.67×10^{-6})	8.33×10^{-6} (2.46×10^{-6})	4.45×10^{-6} (2.76×10^{-6})	5.20×10^{-6} (3.51×10^{-6})	5.44×10^{-6} (3.26×10^{-6})	6.56×10^{-5} (3.57×10^{-5})
Mean error rate	3.83×10^{-6} (2.08×10^{-6})	4.46×10^{-6} (2.22×10^{-6})	3.27×10^{-6} (1.73×10^{-6})	5.50×10^{-6} (3.35×10^{-6})	2.58×10^{-6} (1.32×10^{-6})	2.89×10^{-5} (1.73×10^{-5})	5.88×10^{-6} (2.85×10^{-6})	3.85×10^{-6} (2.14×10^{-6})	1.02×10^{-5} (5.26×10^{-6})	4.07×10^{-6} (2.44×10^{-6})	5.17×10^{-6} (2.93×10^{-6})	4.55×10^{-6} (2.80×10^{-6})	8.23×10^{-5} (4.63×10^{-5})

Error rates in parentheses indicate the originally reported error rate.