CORRIGENDUM

doi:10.1038/nature10087

Diphthamide biosynthesis requires an organic radical generated by an iron–sulphur enzyme

Yang Zhang, Xuling Zhu, Andrew T. Torelli, Michael Lee, Boris Dzikovski, Rachel M. Koralewski, Eileen Wang, Jack Freed, Carsten Krebs, Steven E. Ealick & Hening Lin

Nature **465,** 891–896 (2010)

In this Article, the following studies, which led to the identification of diphthamide structure and its biosynthetic genes, should have been cited[1–5]. Reference 1 reports the presence of an unusual amino acid at the ADP-ribosylation site of elongation factor 2 (EF2); ref. 2 reports the properties of the modified residue in EF2 and proposed the name diphthamide; ref. 3 reports the structure of diphthamide; ref. 4 describes work to suggest that the 3-amino-3-carboxypropyl group of diphthamide come from *S*-adenosyl methionine; and ref. 5 reports the identification of yeast mutants that are defective in diphthamide biosynthesis and proposes the biosynthetic pathway.

1. Robinson, E. A., Henriksen, O. & Maxwell, E. S. Elongation factor 2. Amino acid sequence at the site of adenosine diphosphate ribosylation. *J. Biol. Chem.* **249,** 5088–5093 (1974).
2. Van Ness, B. G., Howard, J. B. & Bodley, J. W. ADP-ribosylation of elongation factor by diphtheria toxin: isolation and properties of the novel ribosyl-amino acid and its hydrolysis products. *J. Biol. Chem.* **255,** 10717–10720 (1980).
3. Van Ness, B. G., Howard, J. B. & Bodley, J. W. ADP-ribosylation of elongation factor 2 by diphtheria toxin: NMR spectra and proposed structures of ribosyl-diphthamide and its hydrolysis products. *J. Biol. Chem.* **255,** 10710–10716 (1980).
4. Dunlop, P. C. & Bodley, J. W. Biosynthetic labelling of diphthamide in *Saccharomyces cerevisiae*. *J. Biol. Chem.* **258,** 4754–4758 (1983).
5. Chen, J. Y., Bodley, J. W. & Livingston, D. M. Diphtheria toxin-resistant mutants of *Saccharomyces cerevisiae*. *Mol. Cell. Biol.* **5,** 3357–3360 (1985).