Corrections

Identification and Characterization of a Catalytic Base in Bacterial Luciferase by Chemical Rescue of a Dark Mutant, by Shouqin Huang and Shiao-Chun Tu*, Volume 36, Number 48, December 2, 1997, pages 14609−14615.

Page 14614. The two sentences immediately preceding the last sentence in the Discussion should be replaced by the following: It has been reported that the ligand binding properties of histidine-mutated azurin (*49*, *50*) and myoglobin (*51*−*53*) can be modulated by the addition of imidazole or its derivatives. It is also known that exogenous imidazole or its derivatives can enhance the catalytic activities of carbonic anhydrases (*54*−*58*), cytochrome *c* peroxidase (*59*), and horseradish peroxidase (*60*, *61*) with each missing a catalytic histidine residue. Hexose-1-phosphate uridylyltransferase can be inactivated by the mutation of the catalytic His166 residue to glycine; interestingly, this engineered enzyme exhibits a new UDP-hexose synthase activity when the missing imidazole is covalently attached to UMP as a substrate (*62*, *63*). The present study demonstrated that the activity of histidine-mutated luciferase could be rescued by exogenously added imidazole. While a number of imidazole derivatives are effective in rescuing the activities of other histidine-mutated proteins (*50*, *52*−*55*, *60*), 1-methylimidazole and 2-methylimidazole have only marginal effects on H44A luciferase activity. However, using H44A luciferase, ammonia and (derivatized) alkylamines, known for their rescue effects on lysine-mutated enzymes, were shown for the first time to be effective rescue agents for a histidine-mutated enzyme.

Page 14615. Accordingly, the following citations should be added to the References.

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