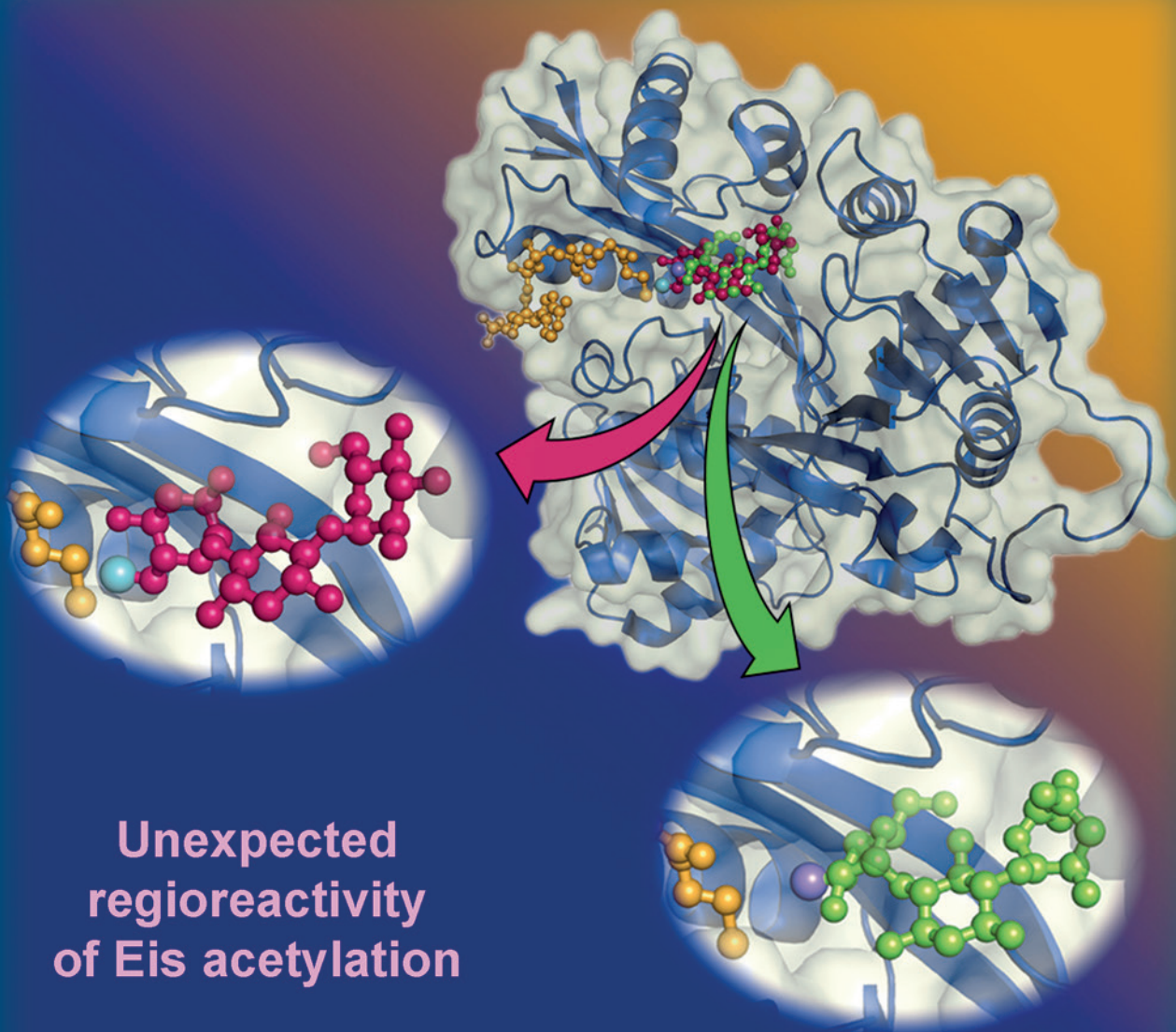


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Unexpected  
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of Eis acetylation

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## Cover Picture

Jacob L. Houghton, Tapan Biswas, Wenjing Chen,  
Oleg V. Tsodikov\*, and Sylvie Garneau-Tsodikova\*

The cover picture shows how the Eis enzyme from *Mycobacterium tuberculosis* binds its substrate, aminoglycoside tobramycin, for acetylation. Acetylation of aminoglycosides by Eis causes resistance to these drugs in tuberculosis. On p. 2127 ff., O. V. Tsodikov, S. Garneau-Tsodikova et al. reveal two new acetylation positions for this enzyme on aminoglycoside scaffolds: the 3''-amine of tobramycin, kanamycin, and amikacin as well as the  $\gamma$ -amine of the 4-amino-2-hydroxybutyryl group of amikacin. A cartoon of the crystal structure of the ternary complex of Eis, CoA, and tobramycin demonstrates that this aminoglycoside can bind Eis in two distinct conformations, one for acetylation of the 6'-position (tobramycin in pink with the acetylation position in turquoise) and one for acetylation at the 3''-position (tobramycin in green with the acetylation position in lilac).

