

oxygen would be inconsistent with our results.

The experiment described has also shed light on the nature of the A-ring precursor. We had previously suggested<sup>3</sup> 4-aminoanthranilic acid (**5a**) for this role in the biosynthesis of **1** and **2**, as well as of nybomycin (**6**).<sup>10</sup> With the apparent lack of <sup>18</sup>O incorporation at C-8, it would appear that this oxygen was retained from the prearomatic precursor erythrose 4-phosphate (**7**),<sup>11</sup> such that 4-amino-3-hydroxyanthranilic acid (**5b**) may be the actual intermediate. This is currently under investigation.

**Acknowledgment.** Strains of *S. flocculus* were originally obtained from Dr. John DeZeeuw of Pfizer and Co., Inc., Groton,

(1) Career Development Awardee of the National Cancer Institute (CA00880), 1979–1984.

(2) Gould, S. J.; Chang, C. C.; Darling, D. S.; Roberts, J. D.; Squillacote, M. *J. Am. Chem. Soc.* **1980**, *102*, 1707. Gould, S. J.; Chang, C. C. *Ibid.* **1978**, *100*, 1624.

(3) Doyle, T. W.; Balitz, D. M.; Grulich, R. E.; Nettleton, D. E.; Gould, S. J.; Tann, C.; Moews, A. E. *Tetrahedron Lett.* **1981**, *22*, 4595.

(4) Herit, A. J.; Rickards, R. W.; Wu, J.-P. *J. Antibiot.* **1985**, *38*, 516.

CT. This work was supported by Public Health Service Grant GM31715 to S.J.G. The multinuclear Bruker AM 400 NMR spectrometer was purchased in part through grants from the National Science Foundation (CHE-8216190) and from the M.J. Murdock Charitable Trust to Oregon State University.

(5) Previous <sup>1</sup>H NMR assignments for H-11' and H-12' of streptonigrin have been equivocal. We have found that in TFA-*d*<sub>1</sub>, the upfield doublet ( $\delta$  7.02) of the AB quartet slowly exchanges and the downfield doublet ( $\delta$  7.07) collapses to a singlet. Thus, the upfield resonance is due to H-11' and the downfield resonance is due to H-12'. This is presumably the relationship in streptonigrone, as well.

(6) Albert, A. *Adv. Heterocycl. Chem.* **1976**, *20*, 117.

(7) Gould, S. J.; Chang, C. C. *J. Am. Chem. Soc.* **1980**, *102*, 1702.

(8) For the first 24 h of the fermentation the burette was charged with <sup>16</sup>O<sub>2</sub> and 0.5 L was consumed. The burette was then filled with the enriched <sup>18</sup>O<sub>2</sub> and over the next 56 h 4.5 L were consumed. For the last 12 h <sup>16</sup>O<sub>2</sub> was again utilized and 1.0 L was taken up.

(9) Gould, S. J.; Cane, D. E. *J. Am. Chem. Soc.* **1982**, *104*, 343.

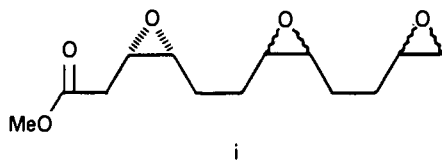
(10) Nazdan, A. M.; Rinehart, K. L., Jr. *J. Am. Chem. Soc.* **1976**, *98*, 5012.

(11) Gerwick, W. J.; Gould, S. J.; Fonouni, H. *Tetrahedron Lett.* **1983**, *24*, 5445.

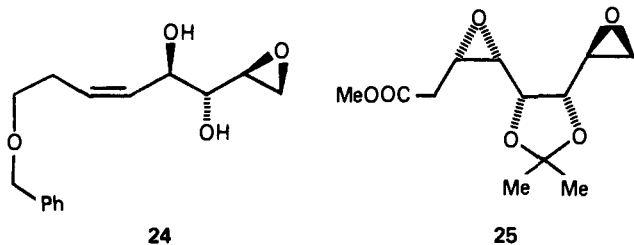
## Additions and Corrections

**Total Synthesis of Elfamycins: Aurodox and Efrotomycin. 1. Strategy and Construction of Key Intermediates** [*J. Am. Chem. Soc.* **1985**, *107*, 1691–1694]. R. E. DOLLE and K. C. NICOLAOU\*

Page 1692: Formula i should read



Page 1693: Formulae **24** and **25** should be read



**Molecular Structure of 1,4,5,8-Tetramethylnaphthalene and In-Plane Molecular Rotation of Some Methyl-Substituted Naphthalenes in Solids** [*J. Am. Chem. Soc.* **1985**, *107*, 2341–2346]. FUMIO IMASHIRO,\* KIYONORI TAKEGOSHI, A. SAIKA,\* ZENEI TAIRA, and YUTAKA ASAHI

Reference to related study on the crystal structure of 1,4,5,8-tetramethylnaphthalene was inadvertently omitted. See: Shiner, C. S.; Noordik, J.; Fisher, A. M.; Eckley, D. M.; Bodenhamer, J.; Haltiwanger, R. C. *Acta Crystallogr.* **1984**, *C40*, 540–542.

Page 2344, column 1, line 7: 0.08 should be 0.008.

**Stable Simple Enols. 11. Equilibrium Constants for the 1-Alkyl-2,2-dimesitylethenol/1-Alkyl-2,2-dimesitylethanone Systems in Hexane. The Predominance of Steric Effects on  $K_{\text{enol}}$  Values** [*J. Am. Chem. Soc.* **1985**, *107*, 3669–3676]. DAVID A. NUGIEL and ZVI RAPPOPORT

Page 3672: Compound **19** should be compound **18a**.

Pages 3673 and 3674: Figure 2 and 3 (but not their captions) should be exchanged.

**Organoboron Compounds in Organic Synthesis. 1. Asymmetric Hydroboration** [*J. Am. Chem. Soc.* **1985**, *107*, 4549–4551]. S. MASAMUNE,\* B. KIM, J. S. PETERSEN, T. SATO, S. J. VEENSTRA, and T. IMAI

Page 4549: In the 12th line of the first paragraph “**1a** and **1b** of C<sub>2</sub> symmetry” should read “**1a** and **1b** of D<sub>2</sub> symmetry”.