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Corrigendum

Corrigendum to 'Regio- and stereoselective hydroxylation of *N*-substituted piperidin-2-ones with *Sphingomonas* sp. HXN-200' [Tetrahedron: *Asymmetry* 13 (2002) 2141]☆

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1. The CD spectra in Figure 2 were incorrect. The corrected CD spectra are shown as follows:

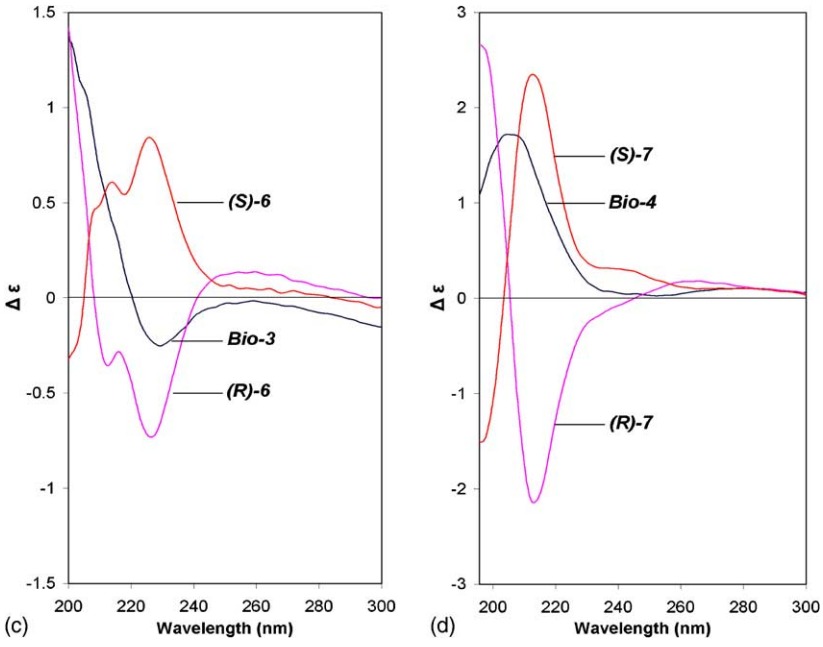

Figure 2. (c) CD spectra of bioproduct (−)-**3** and (*R*)- and (*S*)-*N*-benzyl-4-hydroxy-pyrrolidin-2-one **6**. (d) CD spectra of bioproduct (+)-**4** and (*R*)- and (*S*)-*N*-*tert*-butoxycarbonyl-4-hydroxy-pyrrolidin-2-one **7**.

2. The absolute configuration of bio-(−)-**3** was incorrect. The corrected configuration is established as (−)-(*R*)-**3** by chemical correlation.

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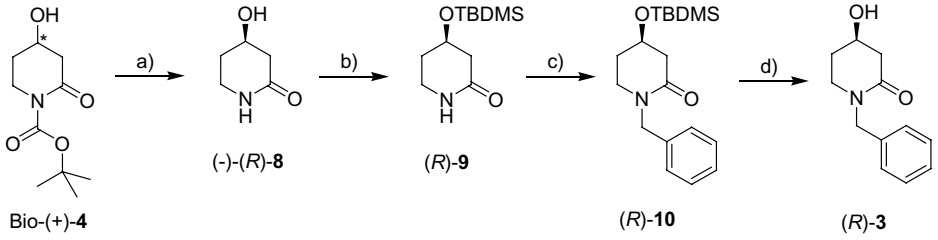
As shown in Scheme 3, deprotection of bio-(+)-**4** in 68% ee afforded 84% of (−)-**8** with an $[\alpha]_D^{25} = -1.8$ (*c* 2.24, MeOH) and 99% purity (HPLC). Since the $[\alpha]_D^{25}$ of (+)-(*S*)-**8** in 96% ee is +2.4 (*c* 2.0, MeOH),[†] the absolute configuration of bio-(+)-**4** can be deduced as (+)-(*R*)-**4**. The prepared (−)-(*R*)-**8** was then transformed into (*R*)-**3** by protection, benzylation, and deprotection. The resulting (*R*)-**3** has an ee of 68% and the same MS and retention time in HPLC and GC as those of the bio-(−)-**3**. Comparison of the chiral HPLC chromatograms of the synthetic (*R*)-**3** and bio-(−)-**3**, shown in Figure 3, established the absolute configuration of bio-(−)-**3** as (−)-(*R*)-**3**.



Scheme 3. Reagents and conditions: (a) TFA, $CHCl_2$, 84% yield; (b) TBDMSCI, DMF, imidazole, 47% yield; (c) NAH, THF, BnBr, TBAI, 12% yield; (d) Bu_4NF, THF, 29% yield.

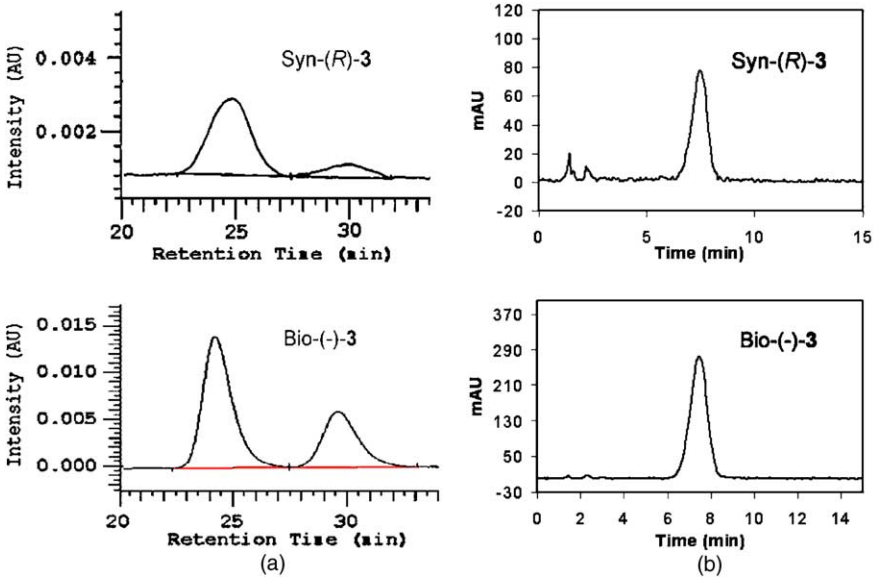


Figure 3. (a) HPLC analysis of synthetic (*R*)-**3** and bio-(−)-**3** with a chiralpak AS column (250×4.6 mm) and *n*-hexane/isopropanol (75/25) as eluent at a flow rate of 0.5 ml/min. (b) HPLC analysis of synthetic (*R*)-**3** and bio-(−)-**3** with a Hypersil BDS-C18 column (5 μm, 125 mm×4 mm) and 10 mM ammonium acetate buffer (pH 7.0)/acetonitrile (80/20) as eluent at a flow rate of 0.5 ml/min.

[†] The preparation and absolute configuration of (+)-(*S*)-**8** were described in the following reference: Vink, M. K. S.; Schortinghuis, Ch. A.; Luten, J.; van Maarseveen, J. H.; Schoemaker, H. E.; Hiemstra, H.; Rutjes, F. P. J. T. *J. Org. Chem.* **2002**, *67*, 7869–7871. We thank Prof. Floris Rutjes at University of Amsterdam for providing us with the $[\alpha]_D^{25}$ value of (+)-(*S*)-**8**.