

Corrigendum

Highly selective direct aldol reaction organocatalyzed by (*S*)-BINAM-L-prolinamide and benzoic acid using α -chalcogen-substituted ketones as donors

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The authors apologize for the following errors in the above paper.

On **Table 1**, the following data concerning to compounds **2c** should be changed:

Ent.	Isomer ratio ^c		ee(%) ^d		
	Regio. (2/3)	dr (anti/syn)	anti-2	syn-2	iso-3
15	2.4:1	4:1	88	19	60
16	7.3:1	9:1	85	35	63

Therefore, the text on page 264 concerning Table 1 entries 15 and 16, should be revised as follows:

“In our previous studies we found that using α -benzyloxyacetone in DMF at 0 °C after 5 d, the major isomer was the regioisomer *anti*-**2c**.¹² (Table 1, entry 15). When the reaction was performed in the presence of benzoic acid, better regio- and diastereoselectivity was achieved, the major isomer *anti*-**2c** being obtained in 39 h with a 9:1 dr and 85% ee (Table 1, entry 16).”

On the text, the conclusion paragraph should be corrected as:

“Whereas α -benzyloxyacetone afforded mainly the *anti*-**2c** product (dr up to 9:1).”

In the experimental section the following corrections should be made:

iso-1-Benzyl-4-hydroxy-4-(4'-nitrophenyl)-2-butanone (3c). Yellow oil; R_f = 0.43 (Hexane/Ethyl acetate 3:2); IR (neat): ν = 3396 br, 2295, 1730, 1706, 1527, 1347, 1099, 1017 cm⁻¹. ¹H NMR (400 MHz, CDCl₃): ¹H NMR (400 MHz, CDCl₃): δ = 2.92 (t, 2H, J = 2.7 Hz, CH₂CHOH), 4.07 (s, 2H, CH₂OCH₂Ph), 4.53 (s, 2H, OCH₂Ph), 4.61 (d, 1H, J = 11.5 Hz,

HCOH), 5.28 (t, 1H, *J* = 5.2 Hz, *HCOH*), 7.11 (m, 1H, ArH), 7.25 (m, 4H, ArH), 7.55 (d, 2H, *J* = 8.7 Hz, ArH), 8.18 (d, 2H, *J* = 8.7 Hz, ArH). ^{13}C NMR (75 MHz, CDCl_3): δ = 25.3 (CH_3), 29.7 (CH_2), 64.4 (HCOCH_2Ph), 68.8 (CHOH), 73.6 (CHOH), 123.5, 123.8, 126.4, 127.0, 127.9, 128.2, 128.3, 128.55, 128.6 (ArC), 149.9 (C=O). HRMS(DIP) (m/z): Calcd for ($\text{M}^+ - \text{H}_2\text{O}$): 297.1001; found: 297.0974; HPLC (Chiralpak AD; 1.2 mL/min; 97:3 Hex/IPA); $t_{R\text{maj}} = 190.9$, $t_{R\text{min}} = 205.1$.

anti-3-Benzylxy-4-hydroxy-4-(4'-nitrophenyl)-2-butanone (anti-2c). Pale yellow oil; $R_f = 0.55$ (Hexane/Ethyl acetate 3:2); IR (neat): ν = 3435br, 2924, 1715, 1605, 1522, 1347, 1216, 1110 cm^{-1} . ^1H NMR (400 MHz, CDCl_3): δ = 2.16 (s, 3H, CH_3), 3.13 (br s, 1H, OH), 3.90 (d, 1H, *J* = 6.4 Hz, HCOCH_2Ph), 4.30 (d, 1H, *J* = 11.5 Hz, OCH_2Ph), 4.51 (d, 1H, *J* = 11.5 Hz, OCH_2Ph), 5.03 (d, 1H, *J* = 8 Hz, *HCOH*), 7.15 (m, 1H, ArH), 7.31 (m, 4H, ArH), 7.54 (d, 2H, *J* = 8.7 Hz, ArH), 8.19 (d, 2H, *J* = 8.7 Hz, ArH). ^{13}C NMR (75 MHz, CDCl_3): δ = 27.6 (CH_3), 29.7 (CH_2), 73.5 (HCOCH_2Ph), 83.9 (CHOH), 123.4, 123.8, 126.4, 127.0, 127.7, 128.1, 128.4, 128.6, 136.2 (ArC), 146.8 (C=O). HRMS(DIP) (m/z): Calcd for ($\text{M} - \text{H}_2\text{O}$): 297.1001; found: 297.1022; HPLC (Chiracel OD-H; 1 mL/min; 93:7 Hex/IPA); $t_{R\text{min}} = 27.0$, $t_{R\text{maj}} = 34.2$.

syn-3-Benzylxy-4-hydroxy-4-(4'-nitrophenyl)-2-butanone (syn-2c). Pale yellow oil; $R_f = 0.52$ (hexane/ethyl acetate 3:2); IR (neat): ν = 3418br, 2918, 1727, 1596, 1516, 1361, 1250, 1105 cm^{-1} . ^1H NMR (400 MHz, CDCl_3): ^1H NMR (400 MHz, CDCl_3): δ = 2.17 (s, 3H, CH_3), 3.39 (br s, 1H, OH), 3.98 (d, 1H, *J* = 5 Hz, HCOCH_2Ph), 4.07 (s, 1H, OCH_2Ph), 4.60 (s, 1H, OCH_2Ph), 5.08 (m, 1H, *HCOH*), 7.13 (m, 1H, ArH), 7.27 (m, 4H, ArH), 7.54 (d, 2H, *J* = 8.7 Hz, ArH), 8.17 (d, 2H, *J* = 8.7 Hz, ArH). ^{13}C NMR (75 MHz, CDCl_3): δ = 47.5 (CH_2CHOH), 68.8 (CHOH), 73.6 (CH_2Ph), 75.2 ($\text{OCH}_2\text{C=O}$), 123.8, 126.4, 128.0, 128.3, 128.4, 128.6, 135.9 (ArC), 150.0 (C=O). HRMS(DIP) (m/z): Calcd for ($\text{M} - \text{C}_7\text{H}_7$): 225.0637; found: 225.0663; HPLC (Chiracel OD-H; 1 mL/min; 93:7 Hex./IPA); $t_{R\text{maj}} = 29.9$, $t_{R\text{min}} = 31.9$.

It should be noted that we are making this correction in other related publication: Tetrahedron: Asymmetry **2006**, 17, 1027–1031.