Corrigendum

Highly selective direct aldol reaction organocatalyzed by (S)-BINAM-L-prolinamide and benzoic acid using \(\alpha\)-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:

<table>
<thead>
<tr>
<th>Ent.</th>
<th>Regio. (2/3)</th>
<th>dr (anti/syn)</th>
<th>ee(%)d</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>2.4:1</td>
<td>4:1</td>
<td>88</td>
</tr>
<tr>
<td>16</td>
<td>7.3:1</td>
<td>9:1</td>
<td>85</td>
</tr>
</tbody>
</table>

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 \(\alpha\)-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 \(\alpha\)-benzyloxyacetone afforded mainly the \(anti\)-2c product (dr up to 9:1).”

In the experimental section the following corrections should be made:

\textbf{iso-1-Benzylloxy-4-hydroxy-4-(4’-nitrophenyl)-2-butanone (3c).} Yellow oil; \(R_f=0.43\) (Hexane/Ethyl acetate 3:2); IR (neat): \(\nu=3396\) br, 2295, 1730, 1706, 1527, 1347, 1099, 1017 cm\(^{-1}\). \(^1\)H NMR (400 MHz, CDCl\(_3\)): \(\delta=2.92\) (t, 2H, \(J=2.7\) Hz, \(CH_2CHOH\)), 4.07 (s, 2H, \(CH_2OCHO\)), 4.53 (s, 2H, \(OCH\_2\)), 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$_3$): $\delta$ = 25.3 (CH$_3$), 29.7 (CH$_2$), 64.4 (HCOCH$_2$Ph), 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 (M$^+$ – H$_2$O): 297.1001; found: 297.0974; HPLC (Chiralpak AD; 1.2 mL/min; 97:3 Hex/IPA); $t_{R_{maj}}$ = 190.9, $t_{R_{min}}$ = 205.1.

**anti-3-Benzylx-4-hydroxy-4-(4'-nitrophenyl)-2-butanone (anti-2c).** Pale yellow oil; $R_f$ = 0.55 (Hexane/Ethyl acetate 3:2); IR (neat): $\nu$ = 3435br, 2924, 1715, 1605, 1522, 1347, 1216, 1110 cm$^{-1}$. $^1$H NMR (400 MHz, CDCl$_3$): $\delta$ = 2.16 (s, 3H, CH$_3$), 3.13 (br s, 1H, OH), 3.90 (d, 1H, $J$ = 6.4 Hz, HCOCH$_2$Ph), 4.30 (d, 1H, $J$ = 11.5 Hz, OCH$_2$Ph), 4.51 (d, 1H, $J$ = 11.5 Hz, OCH$_2$Ph), 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$_3$): $\delta$ = 27.6 (CH$_3$), 29.7 (CH$_2$), 73.5 (HCOCH$_2$Ph), 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 (M – H$_2$O): 297.1001; found: 297.1022; HPLC (Chiral OD-H; 1 mL/min; 93:7 Hex/IPA); $t_{R_{min}}$ = 27.0, $t_{R_{maj}}$ = 34.2.

**syn-3-Benzylx-4-hydroxy-4-(4'-nitrophenyl)-2-butanone (syn-2c).** Pale yellow oil; $R_f$ = 0.52 (hexane/ethyl acetate 3:2); IR (neat): $\nu$ = 3418br, 2918, 1727, 1596, 1516, 1361, 1250, 1105 cm$^{-1}$. $^1$H NMR (400 MHz, CDCl$_3$): $\delta$ = 2.17 (s, 3H, CH$_3$), 3.39 (br s, 1H, OH), 3.98 (d, 1H, $J$ = 5 Hz, HCOCH$_2$Ph), 4.07 (s, 1H, OCH$_2$Ph), 4.60 (s, 1H, OCH$_2$Ph), 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$_3$): $\delta$ = 47.5 (CH$_2$CHOH), 68.8 (CHOH), 73.6 (CH$_2$Ph), 75.2 (OCH$_2$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 (M – C$_7$H$_7$): 225.0637; found: 225.0663; HPLC (Chiral OD-H; 1 mL/min; 93:7 Hex/IPA); $t_{R_{maj}}$ = 29.9, $t_{R_{min}}$ = 31.9.

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