## **Supplementary Data**

 $L^4$ 

mp 143-5°C (Lit. 146-8°C)

 $^{1}$ H NMR (CDCl<sub>3</sub>) gave 1 at 1.06 and 1.05 ppm (2 s, 12 H), 3 at 1.38 ppm (m, 4 H), 4 at 2.80 ppm (m, 2 H), 5 at 0.98 ppm (d, J = 6.0 Hz, 6 H), 6 at 3.2 ppm (br s, 4H), 7 at 2.80 ppm (m, 2 H) and 2.26 ppm (d of t, J = 2.2 Hz and 11 Hz, 2 H), and 8 at 2.80 ppm (m, 2 H) and 2.52 ppm(d of t, J = 2.6 Hz and 12 Hz).

<sup>13</sup>C NMR gave (CDCl<sub>3</sub>) 1a at 24.4 ppm, 1b at 29.1 ppm, 2 at 53.3 ppm, 3 at 52.0 ppm, 4 at 51.4 ppm, 5 at 21.6 ppm, 7 at 48.3 ppm, 8 at 42.4 ppm.

IR spectrum (KBr) showed peaks at 3403 cm<sup>-1</sup> (N-H), 1177 cm<sup>-1</sup> (C-C-N), 1156 cm<sup>-1</sup> (C-N), 753.6 cm<sup>-1</sup> (N-H), and 511.1 cm<sup>-1</sup> (C-N-C).

mp 95-97°C (Lit 97-105°C)

<sup>1</sup>H NMR (CDCl<sub>3</sub>) gave 1a at 1.31 (s, 3H), 1b at 1.35 ppm (s, 3H), 3 at 1.76 ppm (d, J = 6 Hz, 2H), 4 at 3.74 (d, J = 18 Hz, 1H,), 5 at 1.18 ppm (d, J = 6.0 Hz, 3H), 7 at 3.23 ppm, (m, 1H) and 2.64 (m, 1H), 8 at 3.23 ppm (m, 1H) and 2.81 (m, 2H), 9 at 3.10 ppm (br s, 1H), 11a at 1.31 (s, 3H), 11b at 1.42 ppm (s, 3H), 12 at 1.94 ppm (t, J = 14 Hz, 1H) and 1.67 ppm (t, J = 15 Hz, 1H), 13 at 3.23 ppm, (m, 1H), 14 at 1.02 ppm (d, J = 6.6 Hz, 1H), 15 at 3.10 ppm (br s, 1H), 16 at 3.04 ppm (m, 2H), 17 at 3.04 ppm (m, 2H), 18 at 3.10 ppm (br s, 1H), 19 at 3.04 ppm (m, 2H).

The <sup>13</sup>C APT NMR (CDCl<sub>3</sub>) gave 1a at 24.4 ppm, 1b at 25.1 ppm, 2 at 59.6 ppm, 3 at 47.8 ppm, 4 at 49.5 ppm, 5 at 19.9 ppm, 7 at 42.3 ppm, 8 at 38.8 ppm, 10 at 59.0 ppm, 11a at 20.4 ppm, 11b at 21.4 ppm, 12 at 43.6 ppm, 13 at 49.6 ppm, 14 at 12.8 ppm, 16 at 49.5 ppm, 17 at 42.1 ppm, 19 at 55.3 ppm, and 20 at 177.5 ppm.

IR spectrum (KBr) showed peaks at 3226 cm<sup>-1</sup> (N-H), 1178 cm<sup>-1</sup> (C-C-N), 1156 cm<sup>-1</sup> (CN), and 730 cm<sup>-1</sup> (N-H).

mp 228 °C - 232 °C (Lit. 235-237 °C (decomp.).

 $^{1}$ H NMR (CDCl<sub>3</sub>) gave 1 and 11 at 1.40 ppm (s, 3H), 1.33 ppm (s, 3H), and 1.29 ppm (s, 6H), 3 and 12 between 1.63-1.99 ppm (m, 4H), 4 at 3.21 ppm (d, J = 14 Hz, 1H), 5 at 1.16 ppm (d J = 6.3 Hz, 3H), 7, 8, 16, 17, 19, 22 between 2.60-3.21 ppm (m, 12H), 13 at 3.74 ppm (d, J = 18 Hz, 1H), and 14 at 1.00 ppm (d J = 6.6 Hz, 3H).

<sup>13</sup>C APT NMR (CDCl<sub>3</sub>) gave 1a at 24.4 ppm, 1b at 25.1 ppm, 2 at 59.6 ppm, 3 at 47.8 ppm, 4 at 49.6 ppm, 5 at 19.9 ppm, 7 at 42.3 ppm, 8 at 38.8 ppm, 10 at 59.0 ppm, 11a at 20.4 ppm, 11b at 21.4 ppm, 12 at 43.6 ppm, 13 at 57.7 ppm, 14 at 12.8 ppm, 16 at 49.5 ppm, 17 at 42.1 ppm, 19 at 55.7 ppm, and 20 at 177.5 ppm.

IR spectrum (KBr) showed peaks at 3406 cm<sup>-1</sup> (NH), 3342 cm<sup>-1</sup>, 3203 cm<sup>-1</sup> (NH), 1731 cm<sup>-1</sup> (C=O), 1602 cm<sup>-1</sup> (COO<sup>-</sup>), 1200 cm<sup>-1</sup> (C-C-N), 1145 cm<sup>-1</sup> (C-N), 948.7 cm<sup>-1</sup> (C-OH), and 672.7 cm<sup>-1</sup> (O-C=O).

mp 248-251 °C (decomp.). (Lit. 258-260 °C (decomp.)).

<sup>1</sup>H NMR (D<sub>2</sub>O) gave 1a at 1.36 ppm (s, 6H), 1b at 1.34 ppm (s, 6H), 3 at 1.96 ppm (t, J = 14 Hz, 2H) and 1.60 (d, J = 16 Hz, 2H), 4 at 3.38 ppm (m, 2H), 5 at 1.06 ppm (d, J = 6.6 Hz, 6H), 7 at 3.79 ppm (d, J = 18 Hz, 2H) and 2.97 ppm (m 2H), 8 at 3.24 ppm (d, J = 13 Hz, 2H), and 19 at 3.08 (s, 2H) ppm.

<sup>13</sup>C APT NMR (D<sub>2</sub>O) gave 1a at 25.0 ppm, 1b at 20.8 ppm, 2 at 59.3 ppm, 3 at 44.5 ppm, 4 at 56.1 ppm, 5 at 13.1 ppm, 7 at 49.0 ppm, 8 at 39.4 ppm, 19 at 53.3 ppm, and 20 at 179.8 ppm.

IR spectrum (KBr) showed peaks at 1730 cm<sup>-1</sup> (C=O), 1617 cm<sup>-1</sup> (COO<sup>-</sup>), 1383 cm<sup>-1</sup> (COO<sup>-</sup>), 1194 cm<sup>-1</sup> (C-C-N), 1116 cm<sup>-1</sup> (CN), and 667.8 cm<sup>-1</sup> (C-C=O).

mp 240 - 245°C

 $^{1}$ H NMR (CDCl<sub>3</sub>) gave 1a and 11a at 1.44 ppm (s, 6H), 1b at 1.28 ppm (s, 3H), 3 and 12 at 2.16 ppm (m, 2H) and 1.64 (m, 2H), 4 and 13 at 3.17 ppm (m, 2H), 5 at 1.23 ppm (d, J = 5.4 Hz, 3H), 7 and 16 at 4.22 ppm (m, 2H) and 3.38 ppm (m, 2H), 8 and 17 at 3.38 ppm (m, 2H) and 3.00 ppm (m, 2H), 11b at 1.41 ppm (s, 3H), 14 at 1.05 ppm (d, J = 5.4 Hz, 3H), 19 and 22 at 3.17 ppm (m, 4H).

<sup>13</sup>C APT NMR (CDCl<sub>3</sub>) gave 1a at 24.6 ppm, 1b at 21.1 ppm, 2 and 10 at 66.8 ppm, 3 at 42.5 ppm, 4 at 51.7 ppm, 5 at 18.4 ppm, 7 at 59.0 ppm, 8 at 39.2 ppm, 11a at 20.5 ppm, 11b at 20.9 ppm, 12 at 42.1 ppm, 13 at 55.6 ppm, 14 at 13.0 ppm, 16 at 56.4 ppm, 17 at 43.8 ppm, 19 at 53.6 ppm, 20 at 179.1 ppm, 22 at 51.6 ppm, and 23 at 173.9 ppm.

IR spectrum (KBr) showed peaks at 3236 cm<sup>-1</sup> (NH), 1723 cm<sup>-1</sup> (C=O), 1637 and 1616 cm<sup>-1</sup> (COO<sup>-</sup>), 1399 cm<sup>-1</sup> (OH), 1383 cm<sup>-1</sup> (COO<sup>-</sup>), 1168 cm<sup>-1</sup> (C-C-N), 1121 cm<sup>-1</sup> (CN), 624.2 (C-C=O), and 476.1 cm<sup>-1</sup> (C-N-C).