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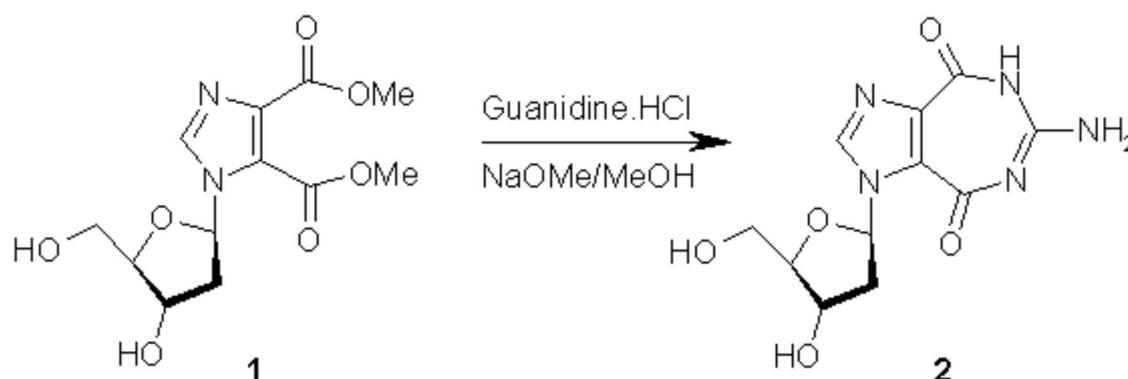
6-Amino-1-(2'-deoxy-b-D-ribofuranosyl)-4,5-dihydro-8H-imidazo[4,5-e][1,3]diazepine-4,8-dione

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The starting methyl 1-(2'-deoxy-b-D-ribofuranosyl)imidazole-4,5-dicarboxylate (**1**) was prepared by deoxygenation of the corresponding riboside, employing the literature procedure [1]. To a solution of **1** (150 mg, 0.5 mmol) and guanidine hydrochloride (240 mg, 2.5 mmol) in 30 mL of absolute methanol was added 1 mL of 25% (w/v) sodium methoxide solution in methanol. The reaction mixture was stirred for 24 h at room temperature, then 1 g of silica gel was added. The resulting mixture was evaporated to dryness and the product was isolated by silica gel flash chromatography. The column was successively eluted with chloroform/methanol (10:1) and methanol. The proper fraction was collected and evaporated to afford title product **2** as a colorless solid. Yield 110 mg (74.5%).

M.p. >250 °C.

¹H NMR (DMSO-*d*₆): δ 10.65 (brs, 1H, NH, exchangeable with D₂O), 8.47 (s, 1H, imidazole), 7.62 (brs, 1H, NH, exchangeable with D₂O), 6.65 (t, 1H, *J*=5.7 Hz, 1H), 6.54 (brs, 1H, NH, exchangeable with D₂O), 5.27 (d, 1H, *J*=4.5 Hz, OH, exchangeable with D₂O), 5.09 (t, 1H, *J*=4.8 Hz, OH, exchangeable with D₂O), 4.24 (m, 1H, 4H), 3.84 (m, 1H, 3H), 3.60 (m, 2H, 5H), 2.18 (dt, 1H, *J*=13.5 and 5.7 Hz, 2H), 2.02 (d, 1H, *J*=13.5 Hz, 2H).

HRMS (FAB): C₁₁H₁₄N₅O₅ (MH⁺): Calcd., 296.0995; Found, 296.0994.

Anal. Calcd. For C₁₁H₁₃N₅O₅·0.25 H₂O: C, 44.09; H, 4.51; N, 23.37. Found: C, 44.08; H, 4.54; N, 23.36.

Reference

1. Chen, H. -M.; Hosmane, R. S. *Molecules* **2000**, *5*, 1187-1193.

Sample Availability: Available from the authors and from MDPI.

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