6-(Morpholin-4-yl)-9-(β-D-ribofuranosyl)purine (2a). A sample of **1a** (101 mg, 0.256 mmol) was added to a stirred solution of morpholine (100 μL, 100 mg, 1.15 mmol), PPh_3 (256 mg, 0.976 mmol), I_2 (235 mg, 0.926 mmol), and $EtN(i\text{-}Pr)_2$ (260 μL, 193 mg, 1.49 mmol) in freshly distilled CH_2Cl_2 (5 mL). Stirring was continued at ambient temperature for 50 min [TLC ($MeOH/CH_2Cl_2$, 4:96) showed complete reaction of **1a**], and volatiles were evaporated. EtOAc (2 mL) was added, the mixture was filtered, and volatiles were evaporated. MeOH (5 mL) and NaOMe (100 mg, 1.85 mmol) were added to the residue, the solution was stirred for 10 h, and 5% HCl/H_2O was added (to neutrality). The mixture was filtered, volatiles were evaporated, and the residue was chromatographed [Dowex 1 × 2 (OH^-); $H_2O/MeOH$ (40:60), MeOH] to give **2a** (81 mg, 94%) as a white solid. Recrystallization (MeOH) gave **2a** with mp 179.5–180.5 °C: UV (MeOH) max 279, 218 nm (ε 21 900, 16 700), min 236 nm (ε 2200); ^1H NMR (300 MHz, DMSO-d_6) δ 8.43, 8.26 (2 × s, 2 × 1H), 5.93 (d, J = 5.9 Hz, 1H), 5.47 (d, J = 5.9 Hz, 1H), 5.32 (dd, J = 4.6, 6.6 Hz, 1H), 5.20 (d, J = 4.9 Hz, 1H), 4.57 ("dd", J = 5.6, 11.0 Hz, 1H), 4.31–4.11 (m, 5H), 4.00–3.92 (m, 1H), 3.78–3.50 (m, 6H); ^{13}C NMR (75 MHz, DMSO-d_6) δ 153.3, 151.8, 150.3, 139.0, 119.7, 87.8, 85.8, 73.6, 70.5, 66.2, 61.5; MS (FAB) m/z 338.1461 (MH^+ [$C_{14}H_{20}N_5O_5$] = 338.1464).

9-(2-Deoxy-β-D-*erythro*-pentofuranosyl)-6-(morpholin-4-yl)purine (2b). A sample of **1b** (54.9 mg, 0.163 mmol) was added to a stirred solution of morpholine (50 μL, 50 mg, 0.57 mmol), PPh_3 (183 mg, 0.700 mmol), I_2 (195 mg, 0.768 mmol), and $EtN(i\text{-}Pr)_2$ (250 μL, 185 mg, 1.43 mmol) in freshly distilled CH_2Cl_2 (5 mL). Stirring was continued at ambient temperature for 50 min [TLC ($MeOH/CH_2Cl_2$, 4:96) showed complete reaction of **1b**], and volatiles were evaporated. The residue was chromatographed ($MeOH/CH_2Cl_2$, 1:99), and fractions containing the acetylated product and Ph_3PO were evaporated and dried. MeOH (2 mL) and NaOMe (76.7 mg, 1.42 mmol) were added, and the solution was stirred overnight and neutralized (HOAc). Volatiles were evaporated and the residue was chromatographed (1 → 3% $MeOH/CH_2Cl_2$) to give **2b** (49.7 mg, 95%) as a solid glass. An analytical sample was obtained by recrystallization ($EtOAc/CH_3CN$) to give **2b** with mp 167–169 °C: UV (MeOH) max 279, 218

nm (ε 21 700, 16 300), min 236 nm (ε 2000); ^{1}H NMR (300 MHz, DMSO-d_6) δ 8.40, 8.26 (2 × s, 2 × 1H), 6.38 (dd, J = 6.2, 7.4 Hz, 1H), 5.32 (d, J = 4.2 H, 1H), 5.15 (dd, J = 5.1, 6.1 Hz, 1H), 4.46–4.36 (m, 1H), 4.20 (br s, 4H), 3.92–3.83 (m, 1H), 3.79–3.45 (m, 6H), 2.75–2.63 (m, 1H), 2.27 (ddd, J = 3.1, 6.2, 13.1 Hz, 1H); ^{13}C NMR (75 MHz, DMSO-d_6) δ 153.2, 151.7, 150.1, 138.7, 119.6, 88.0, 83.7, 70.8, 66.2, 61.7, 45.3, 39.4; MS (FAB) *m/z* 322.1511 (MH^+ [$C_{14}H_{20}N_5O_5$] = 322.1515). Anal. Calcd. for $C_{14}H_{19}N_5O_4$: C, 52.33; H, 5.96; N, 21.79. Found: C, 52.11; H, 6.19; N, 21.62.

6-(Piperidin-1-yl)-9-(β-D-ribofuranosyl)purine (3a). Method A. A sample of **1a** (161 mg, 0.409 mmol) was added to a stirred solution of piperidine (140 μL, 121 mg, 1.4 mmol), PPh_3 (339 mg, 1.29 mmol), I_2 (328 mg, 1.29 mmol), and EtN(i-Pr)$_2$ (300 μL, 223 mg, 1.72 mmol) in freshly distilled CH_2Cl_2 (5 mL). Stirring was continued at ambient temperature for 1 h [TLC (MeOH/CH_2Cl_2, 4:96) showed complete reaction of **1a**], and volatiles were evaporated. EtOAc (2 mL) was added, the mixture was filtered, and volatiles were evaporated. MeOH (5 mL) and NaOMe (160 mg, 2.96 mmol) were added, the solution was stirred overnight, and 5% HCl/H_2O was added (to neutrality). The mixture was filtered, volatiles were evaporated, and the residue was chromatographed [Dowex (1 × 2 (OH^-), H_2O/MeOH (40:60), MeOH] to give **3a** as a white solid (131 mg, 96%). Recrystallization (H_2O) gave **3a** with mp 179–180 °C: UV (MeOH) max 280, 217 nm (ε 21 000, 14 700), min 236 nm (ε 500); ^{1}H NMR (300 MHz, DMSO-d_6) δ 8.38, 8.21 (2 × s, 2 × 1H), 5.91 (d, J = 5.9 Hz, 1H), 5.46 (d, J = 4.2 Hz, 1H), 5.38 (dd, J = 4.5, 6.7 Hz, 1H), 5.19 (d, J = 3.7 Hz, 1H), 4.64–4.54 (m, 1H), 4.36–4.03 (m, 5H), 4.02–3.92 (m, 1H), 3.73–3.49 (m, 2H), 1.78–1.41 (m, 6H); ^{13}C NMR (75 MHz, DMSO-d_6) δ 153.2, 151.8, 150.2, 138.5, 119.5, 87.8, 85.8, 73.5, 70.5, 61.6, 45.7, 25.7, 24.3; MS (FAB) *m/z* 336.1675 (MH^+ [$C_{15}H_{22}N_5O_4$] = 336.1671). Method B. A solution of **4a** (48.7 mg, 0.153 mmol) in piperidine (3 mL) was stirred at 60 °C for 4 days. Volatiles were evaporated, and the residue was chromatographed [Dowex 1 × 2 (OH^-), H_2O, H_2O/MeOH (1:1), MeoH] to give **3a** (46 mg, 90%) as a white solid whose mp and spectral data were identical to those determined in Method A.

9-(2-Deoxy-β-D-*erythro*-pentofuranosyl)-6-(piperidin-1-yl)purine (3b). A sample of **1b** (52.3 mg, 0.156 mmol) was added to a stirred solution of piperidine (50 μL, 43 mg, 0.50 mmol), PPh_3 (162 mg, 0.618 mmol), I_2 (158 mg, 0.622 mmol), and $EtN(i\text{-}Pr)_2$ (270 μL, 200 mg, 1.55 mmol) in freshly distilled CH_2Cl_2 (5 mL). Stirring was continued at ambient temperature for 50 min [TLC ($MeOH/CH_2Cl_2$, 4:96) showed complete reaction of **1b**], and volatiles were evaporated. EtOAc was added, the mixture was filtered, and volatiles were evaporated. The residue was dissolved (CH_2Cl_2), chromatographed ($MeOH/CH_2Cl_2$, 1:99), and fractions containing the acetylated product and Ph_3PO were evaporated and dried. MeOH (2 mL) and NaOMe (60 mg, 1.1 mmol) were added, and the solution was stirred overnight and neutralized (HOAc). Volatiles were evaporated, and the residue was chromatographed (1 → 2% $MeOH/CH_2Cl_2$) to give **3b** as a solid foam (49 mg, 99%): UV (MeOH) max 218, 280 nm (ε 14 500, 20 500), min 236 nm (ε 1300); ^{1}H NMR (300 MHz, $CDCl_3$) δ 8.25, 7.76 (2 × s, 2 × 1H), 6.31 (dd, J = 5.5, 9.6 Hz, 1H), 4.77 ("d", J = 5.0 Hz, 1H), 4.40–4.09 (m, 5H), 3.98 (dd, J = 1.6, 12.8 Hz, 1H), 3.80 (dd, J = 1.8, 12.8 Hz, 1H), 3.13 (ddd, J = 5.0, 9.6, 13.4 Hz, 1H), 2.26 (ddd, J = 0.4, 5.5, 13.4 Hz, 1H), 1.80–1.59 (m, 6H); ^{13}C NMR (75 MHz, $CDCl_3$) δ 154.2, 151.7, 149.3, 138.0, 121.6, 89.9, 88.0, 73.8, 63.8, 46.7, 40.7, 26.4, 24.9; MS (FAB) *m/z* 342.1530 (MNa^+ [$C_{15}H_{21}N_5O_3Na$] = 342.1542). Anal. Calcd. for $C_{15}H_{21}N_5O_3$: C, 56.41; H, 6.63; N, 21.93. Found: C, 56.21; H, 6.52; N, 21.90.

6-(Imidazol-1-yl)-9-(β-D-ribofuranosyl)purine (4a). A sample of **1a** (202 mg, 0.512 mmol) was added to a stirred suspension of imidazole (123 mg, 1.81 mmol), PPh_3 (323 mg, 1.23 mmol), I_2 (269 mg, 1.06 mmol), and $EtN(i\text{-}Pr)_2$ (0.45 mL, 334 mg, 2.58 mmol) in freshly distilled toluene (10 mL). Stirring was continued at 95 °C for 50 min [TLC ($MeOH/CH_2Cl_2$, 4:96) showed complete reaction of **1a**], and volatiles were evaporated. EtOAc was added, the mixture was filtered, and the filtrate was concentrated (~2 mL). Dowex 1 × 2 (OH^-) resin (1 mL, suspended in H_2O) was added, and the mixture was stirred for 5 min. The supernatent aqueous phase was separated from the organic phase and extracted (EtOAc, 3 ×). The combined organic phase was dried (Na_2SO_4) and evaporated to dryness. The residue was

chromatographed (silica, 1 → 2% MeOH/CH_2Cl_2) to give a solid foam (contaminated with a trace of Ph_3PO). This material was dissolved in NH_3/MeOH (15 mL), stirred at 0 °C for 2 h, and the resulting suspension was stored at –18 °C for 12 h. Volatiles were evaporated, and the residue was recrystallized from MeOH. The supernatent was decanted, and hot CH_3CN was added and evaporated several times to give **4a** (141 mg, 87%) as a white solid with mp 183–184 °C; UV (MeOH) max 281 nm (ε 16 800), min 236 nm (ε 3600), shoulders 264, 273, 291 nm (ε 10 300, 13 900, 13 100); ^{1}H NMR (300 MHz, DMSO-d_6) δ 9.05–9.07 (m, 1H), 8.98, 8.87 (2 × s, 2 × 1H), 8.41–8.37, 7.27–7.24 (2 × m, 2 × 1H), 6.10 (d, J = 5.4 Hz, 1H), 5.61 (d, J = 5.9 Hz, 1H), 5.29 (d, J = 5.1 Hz, 1H), 5.15 ("t", J = 5.5 Hz, 1H), 4.63 ("dd", J = 5.4, 10.6 Hz, 1H), 4.22 ("dd", J = 4.8, 9.3 Hz, 1H), 4.06–3.98 (m, 1H), 3.79–3.54 (m, 2H); ^{13}C NMR (75 MHz, DMSO-d_6) δ 153.3, 152.0, 145.2, 144.7, 136.9, 130.5, 122.2, 117.4, 88.0, 85.7, 73.9, 70.1, 61.0; MS (FAB) *m/z* 319.1169 (MH^+ [$C_{13}H_{15}N_6O_4$] = 319.1154). Anal. Calcd. for $C_{13}H_{14}N_6O_4$: C, 49.06; H, 4.43; N, 26.40. Found: C, 48.89; H, 4.54; N, 26.21.

9-(2-Deoxy-β-D-*erythro*-pentofuranosyl)-6-(imidazol-1-yl)purine (4b). A sample of **1b** (305 mg, 0.908 mmol) was added to a stirred suspension of imidazole (193 mg, 2.83 mmol), PPh_3 (578 mg, 2.20 mmol), I_2 (569 mg, 2.24 mmol), and EtN(*i*-Pr)$_2$ (0.80 mL, 59 mg, 4.6 mmol) in freshly distilled toluene (15 mL). Stirring was continued at 95 °C for 50 min [TLC (MeOH/CH_2Cl_2, 4:96) showed complete reaction of **1b**], and volatiles were evaporated. EtOAc was added, the mixture was filtered, and the filtrate was concentrated (~3 mL). Dowex 1 × 2 (OH^-) (3 mL, suspended in H_2O) was added, and the mixture was shaken for 1 min. The supernatent aqueous phase was separated and extracted (EtOAc, 3 ×). The combined organic phase was dried (Na_2SO_4) and evaporated. The residue was chromatographed (1 → 2% MeOH/CH_2Cl_2) to give the acetylated product (contaminated with a trace of Ph_3PO) as a solid foam. A solution of this material in NH_3/MeOH (15 mL) was stirred at 0 °C for 2 h, and then was stored at –18 °C for 12 h. Volatiles were evaporated, and the residue was recrystallized from CH_3CN to give **4b** (258 mg, 94%) as a white solid with mp 164–165 °C: UV (MeOH) max 281 nm (ε 16 900), min 235 nm (ε 3600), shoulders 264, 273, 290 nm (ε 10 400, 13 900, 13 300); ^{1}H

NMR (300 MHz, DMSO-d_6) δ 9.07–9.05 (m, 1H), 8.94, 8.87 (2 × s, 2 × 1H), 8.42–8.39, 7.27–7.25 (2 × m, 2 × 1H), 6.52 (dd, J = 6.3, 6.8 Hz, 1H), 5.40 (d, J = 4.3 Hz, 1H), 5.02 ("t", J = 5.5 Hz, 1H), 4.51–4.42, 3.95–3.88 (2 × m, 2 × 1H), 3.70–3.50 (m, 2H), 2.86–2.71, 2.47–2.30 (2 × m, 2 × 1H); ^{13}C NMR (75 MHz, DMSO-d_6) δ 153.0, 151.9, 145.1, 144.6, 136.9, 130.5, 122.2, 117.4, 88.1, 84.0, 70.5, 61.4, 39.5; MS (FAB) *m/z* 303.1193 (MH^+ [$C_{13}H_{15}N_6O_3$] = 313.1206). Anal. Calcd. for $C_{13}H_{14}N_6O_3$: C, 51.65; H, 4.67; N, 27.80. Found: C, 51.49, H, 4.66; N, 27.62.

6-*N*-(Benzyl)adenosine (5a). A solution of **4a** (100 mg, 0.314 mmol) in benzylamine (1.5 mL) was stirred at 75 °C for 24 h. Volatiles were evaporated, and the residue was dissolved (5% DME/H_2O) and chromatographed [Dowex 1 × 2 (OH^-), MeOH/H_2O (20:80), MeOH/H_2O (80:20), MeOH] to give **5a** (quantitative) as a white solid. Recrystallization (MeOH) gave **5a** with mp 167–168.5 °C: UV (MeOH) max 270 nm (ε 20 000), min 232 nm (ε 2500); ^{1}H NMR (300 MHz, DMSO-d_6) δ 8.47 (br s, 1H), 8.39, 8.21 (2 × s, 2 × 1H), 7.37–7.16 (m, 5H), 5.90 (d, J = 6.1 Hz, 1H), 5.46 (d, J = 6.3 Hz, 1H), 5.40 (dd, J = 4.6, 7.1 Hz, 1H), 5.20 (d, J = 4.6 Hz, 1H), 4.72 (br s, 2H), 4.62 ("dd", J = 6.1, 11.2 Hz, 1H), 4.15, ("dd",J = 4.9, 7.8 Hz, 1H), 3.97 ("dd", J = 3.4, 6.6 Hz, 1H), 3.73–3.63, 3.61–3.50 (2 × m, 2 × 1H); ^{13}C NMR (75 MHz, DMSO-d_6) δ 154.5, 152.4, 148.4, 140.0, 128.2, 127.1, 126.6, 119.8, 88.0, 85.9, 73.5, 70.7, 61.7, 42.9; MS (FAB) *m/z* 358.1527 (MH^+ [$C_{17}H_{20}N_5O_{21}$] = 358.1515).

6-*N*-(Benzyl)-2'-deoxyadenosine (5b). A solution of **4b** (69.7 mg, 0.231 mmol) in benzylamine (1.5 mL) was stirred at 80 °C for 2 days, and volatiles were evaporated. The residue was dissolved (MeOH), absorbed on silica gel, and chromatographed (1 → 3% MeOH/CH_2Cl_2). Recrystallization of the residue (Et_2O/EtOH) gave **5b** (64.2 mg, 82%) as white needles with mp 171–173 °C: UV (MeOH) max 270 nm (ε 19 900), min 234 nm (ε 3100); ^{1}H NMR (300 MHz, DMSO-d_6) δ 8.44 (br s, 1H), 8.36, 8.19 (2 × s, 2 × 1H), 7.45–7.15 (m, 5H), 6.35 (dd, J = 6.1, 7.6 Hz, 1H), 5.31 (d, J = 4.2 Hz, 1H), 5.22 (dd, J = 5.0, 6.5 Hz, 1H), 4.71 (br s, 2H), 4.47–4.34, 3.94–3.84 (2 × m, 2 × 1H), 3.70–3.44 (m, 2H), 2.83–2.65 (m, 1H), 2.26 (ddd, J = 2.8, 6.1, 13.1 Hz, 1H); ^{13}C NMR (75 MHz, DMSO-d_6) δ 154.4, 152.3, 148.3,

140.0, 139.6, 128.2, 127.1, 126.6, 119,7, 88.0, 84.0, 71.0, 61.9, 42.8, 39.4; MS (FAB) *m/z* 342.1567 (MH^+ [$C_{17}H_{20}N_5O_3$] = 342.1566).

6-(Benzylthio)-9-(β-D-ribofuranosyl)purine (6a). Benzylthiol (1.8 mL, 1.9 g, 0.015 mol) was added to a stirred suspension of NaH (375 mg, 9.38 mmol, 60% in mineral oil) in DMF (10 mL). After 5 min, a solution of **4a** (509 mg, 1.60 mmol) in DMF (4 mL) was added dropwise. The yellow solution was stirred at ambient temperature for 40 h, and volatiles were evaporated. MeOH/CH_2Cl_2 was added, the mixture was filtered (Celite bed), and the filtrate was concentrated and chromatographed (MeOH/CH_2Cl_2, 4:96) to give **6a** (550 mg, 92%) as a solid. Recrystallization (MeOH) gave **6a** as needles with mp 128–130 °C: UV (MeOH) max 291 nm (ε 21 300), min 247 nm (ε 3400), shoulder 285 nm (ε 20 900); ^{1}H NMR (300 MHz, DMSO-d_6) δ 8.79, 8.72 (2 × s, 2 × 1H), 7.52–7.20 (m, 5H), 5.99 (d, J = 5.6 Hz, 1H), 5.54 (d, J = 5.9 Hz, 1H), 5.24 (d, J = 4.9 Hz, 1H), 5.12 (dd, J = 5.5, 5.7 Hz, 1H), 4.67 (s, 2H), 4.59 ("dd", J = 5.4, 10.8 Hz, 1H), 4.17 ("dd", J = 4.7, 9.0 Hz, 1H), 4.09–3.93 (m, 1H), 3.76–3.50 (m, 2H); ^{13}C NMR (75 MHz, DMSO-d_6) δ 159.2, 151.5, 148.3, 143.4, 137.8, 131.0, 129.0, 128.5, 127.2, 87.8, 85.7, 73.8, 70.3, 16.2, 13.6; MS (FAB) *m/z* 375.1118 (MH^+ [$C_{17}H_{19}N_4O_4S$] = 375.1127).

6-(Benzylthio)-9-(2-deoxy-β-D-*erythro*-pentofuranosyl)purine (6b). Freshly distilled benzylthiol (0.80 mL, 0.85 g, 6.8 mmol) was added to a stirred suspension of NaH (242 mg, 6.05 mmol, 60% dispersion in mineral oil) in DMF (10 mL). The resulting solution was deoxygenated (Ar, 20 min) and added to a solution of **4b** (86.7 mg, 0.287 mmol) in DMF (2 mL). This yellow solution was stirred at ambient temperature for 20 h, neutralized (NH_4Cl, 394 mg, 7.36 mmol), and evaporated. The residue was stirred with MeOH (10 mL) for 1 h and filtered (Celite bed). The filtrate was concentrated (~4 mL), absorbed on silica gel, and chromatographed (1 → 3% MeOH/CH_2Cl_2) to give **6b** (82 mg, 80%) as a glass. This material was recrystallized (EtOAc) to give **6b** with mp 120–121 °C: UV (MeOH) max 291 nm (ε 21 700), min 247 nm (ε 3000), shoulder 285 nm (ε 21 400); ^{1}H NMR (300 MHz, DMSO-d_6) δ 8.78, 8.67 (2 × s, 2 × 1H), 7.52–7.42 (m, 2H), 7.38–7.18 (m, 3H), 6.43 (dd, J = 6.3, 6.9 Hz, 1H), 5.35 (d, J = 4.2

Hz, 1H), 4.99 (dd, J = 5.4, 5.6 Hz, 1H), 4.66 (s, 2H), 4.48–4.39, 3.93–3.83 (2 × m, 2 × 1H), 3.62 (ddd, J = 4.6, 5.4, 11.8 Hz, 1H), 3.52 (ddd, J = 4.7, 5.6, 11.8 Hz, 1H), 2.76 (ddd, J = 5.8, 6.9, 11.2 Hz, 1H), 2.33 (ddd, J = 3.5, 6.3, 13.2 Hz, 1H); ^{13}C NMR (75 MHz, DMSO-d_6) δ 159.0, 151.4, 148.0, 143.3, 137.8, 130.9, 129.0, 128.5, 127.2, 88.0, 83.9, 70.6, 61.5, 39.3; MS (FAB) m/z 359.1165 (MH^+ [$C_{17}H_{19}N_4O_3S$] = 359.1178). Anal. Calcd. for $C_{17}H_{18}N_4O_3S$: C, 56.97; H, 5.06; N, 15.63. Found: C, 57.02; H, 4.98; N, 15.71.

6-*N*-(Phenyl)adenosine (8a). Aniline (1 mL, stirred with and then distilled from KOH under reduced pressure) was added to **7a** (97.6 mg, 0.183 mmol), and the solution was stirred at ambient temperature for 3 h [TLC (EtOAc/hexanes, 1:1) showed reaction of **7a** to give a more rapidly migrating product]. Stirring was continued for 24 h, volatiles were evaporated, and the residue was chromatographed (EtOAc/hexanes, 30:70). The resulting glass (quantitative) was dissolved in MeOH (2 mL), NaOMe (75 mg, 0.14 mmol) was added, and the mixture was stirred at ambient temperature overnight. HOAc (~3 drops) was added, volatiles were evaporated, and the residue was chromatographed [Dowex 1 × 2 (OH^-); H_2O, H_2O/MeOH (1:1), MeOH] to give **8a** (59 mg, 94%) as white powder. A sample of this material was recrystallized (EtOH) to give **8a** with mp 196–198 °C: UV (H_2O) max 288 nm (ε 20 800), min 243 nm (ε 3200); ^{1}H NMR (300 MHz, DMSO-d_6) δ 9.96, 8.55, 8.41 (3 × s, 3 × 1H), 7.95–7.91, 7.34–7.30 (2 × m, 2 × 2H), 7.10–7.06 (m, 1H), 5.96 (d, J = 6.1 Hz, 1H), 5.50 (d, J = 6.3 Hz, 1H), 5.29 (dd, J = 4.8, 6.7 Hz, 1H), 5.22 (d, J = 4.6 Hz, 1H), 4.65 ("dd", J = 5.8, 11.2 Hz, 1H), 4.22–4.15 (m, 1H), 3.99 ("dd", J = 3.5, 6.8 Hz, 1H), 3.78–3.52 (m, 2H); ^{13}C NMR (75 MHz, DMSO-d_6) δ 152.2, 151.9, 149.3, 140.7, 139.5, 128.4, 122.7, 120.9, 120.4, 87.9, 85.9, 73.6, 70.6, 61.6; MS (FAB) m/z 344.1350 (MH^+ [$C_{16}H_{18}N_5O_4$] = 344.1359).

2'-Deoxy-6-*N*-(phenyl)adenosine (8b). A solution of **7b** (67.3 mg, 0.172 mmol) in aniline (1.5 mL, stirred with and then distilled from KOH under reduced pressure) was stirred at ambient temperature for 6 h. Volatiles were evaporated, and the residue was chromatographed (1 → 3% MeOH/CH_2Cl_2) to give a yellow glass. This material was recrystallized (CH_2Cl_2) to give **8b** (36 mg, 64%) as a TLC-homogenous powder. A sample was recrystallized ($CHCl_3$) to give

8b with mp 181–183 °C; UV (H_2O) max 288 nm (ε 20 800), min 243 nm (ε 3200); ^{1}H NMR (300 MHz, DMSO-d_6) δ 9.92, 8.52, 8.40 (3 × s, 3 × 1H), 7.99–7.90, 7.39–7.27 (2 × m, 2 × 2H), 7.08–7.01 (m, 1H), 6.42 (dd, J = 6.2, 7.6 Hz, 1H), 5.35 (d, J = 3.9 Hz, 1H), 5.15 (dd, J = 5.3, 6.0 Hz, 1H), 4.49–4.40, 3.94–3.87 (2 × m, 2 × 1H), 3.70–3.48 (m, 2H), 2.77 (ddd, J = 5.9, 7.6, 13.2 Hz, 1H), 2.31 (ddd, J = 3.1, 6.2, 13.2 Hz, 1H); ^{13}C NMR (75 MHz, DMSO-d_6) δ 152.1, 151.9, 149.1, 140.4, 139.6, 128.4, 122.7, 120.9, 120.3, 88.0, 82.9, 70.9, 61.8, 39.4; MS (FAB) *m/z* 328.1411 (MH^+ [$C_{16}H_{18}N_5O_3$] = 328.1410). Anal. Calcd. for $C_{16}H_{17}N_5O_3$: C, 58.71; H, 5.23; N, 21.39. Found: C, 58.59; H, 5.21; N, 21.38.