$(CH_3)_2$), 32.01 and 29.33 (C(CH_3)$_2$), 14.57 ($OHCH_2CH_3$); IR (Nujol) 3355, 1650, 1428 (s) cm^{-1}; MS (EI) *m/e* (relative intensity) 314 (87, M^+), 299 (100, $M^+ - CH_3$). Anal. Calcd for $C_{19}H_{26}N_2O_2$: C, 72.58; H, 8.34; N, 8.91. Found: C, 72.56; H, 8.33; N 8.93.

4-(*N*-Methylamino)-6,7-(1,2,3,4-tetrahydro-1,1,4,4-tetramethylbenzo)indole (16). A solution of indole 4 (20.0 g, 0.063 mol) in dry THF (280 mL) under argon was treated over $^1/_2$ h at room temperature via syringe with $LiAlH_4$ (127 mL, 1.0 M in THF, gas evolution was noted upon addition), and the resulting light yellow suspension refluxed for $^1/_2$ h. TLC revealed the absence of indole 4 (R_f 0.4 in B) and the presence of amine 16, which had an identical R_f (0.4 in B), but which had staining characteristics different from the starting carbamate. The solution was cooled to 0 °C, and the remaining $LiAlH_4$ was destroyed with a mixture of $Na_2SO_4 \cdot 10H_2O$–Celite (1:1). The thick slurry was filtered through a Celite pad, the pad was washed with several portions of 5:1 THF–NEt_3 and EtOAc, and the filtrate was concentrated. The solid remaining was purified by chromatography using 3:1 hexane/EtOAc as eluant to yield 15.0 g (92%) of amine 16: mp 197–199 °C (dec, purple crystals/CH_2Cl_2–hexane); ^{1}H NMR δ 8.19 (s, 1 H, N*H*), 7.03 (t, J = 2.4 Hz, 1 H, NC*H*=), 6.36 (dd, J = 2.4 Hz, 1 H, ArC*H*=), 6.27 (s, 1 H, Ar*H*), 2.96 (s, 3 H, NCH_3), 1.72 (m, complex, 4 H, CH_2CH_2C(CH_3)$_2$), 1.44 (s, 6 H, C(CH_3)$_2$), 1.28 (s, 6 H, C(CH_3)$_2$); ^{13}C NMR δ 140.28 (Ar), 140.15 (Ar), 134.31 (Ar), 121.37 (Ar), 117.66 (ArNCH=C), 116.27 (ArCH=C), 98.25 (Ar), 98.11 (Ar), 37.62 and 35.68 (C(CH_3)$_2$CH_2CH_2), 34.66 and 33.24 ((CH_3)$_2$*C*), 32.19 ((CH_3)$_2$C), 28.19 (NCH_3), 29.69 ((CH_3)$_2$C); MS (EI) *m/e* (relative intensity) 256 (55, M^+), 241 (100, $M^+ - CH_3$). Anal. Calcd for $C_{17}H_{24}N_2$: C, 79.63; H, 9.44; N, 10.93. Found: C, 79.31; H, 9.43; N, 10.84.

(*S*)-4-(Methyl(1-(((Phenylmethyl)oxy)carbonyl)-2-methylpropyl)amino)-6,7-(1,2,3,4-tetrahydro-1,1,4,4-tetramethylbenzo)indole (17). A mixture of indole 16 (1.20 g, 4.68 mmol) and (*R*)-2-(((trifluoromethyl)sulfonyl)oxy)-3-methylbutanoic acid benzyl ester[7a] (1.55 g, 5.61 mmol) in $ClCH_2CH_2Cl$ (20 mL) and 2,6-lutidine (0.7 mL, 6.08 mmol) was refluxed for 12 h. TLC revealed the absence of 16 (R_f 0.4 in B) and the presence of indole 17 (R_f 0.6 in B). The solvent was evaporated, and the residue was partitioned between EtOAc and saturated aqueous $NaHCO_3$. The organic layer was dried ($MgSO_4$), filtered, and concentrated. The residue was purified by chromatography using 3:1 hexane/EtOAc as eluant to yield 1.95 g (93%) of 17: mp 138–140 °C (purple crystals/CH_2Cl_2–hexanes); ^{1}H NMR δ 8.21 (br s, 1 H, N*H*), 7.25 (m, 3 H, Ar*H*), 7.11 (d, J = 3 Hz, 1 H, ArC*H*=), 7.08 (m, 2 H, Ar*H*), 6.64 (s, 1 H, Ar*H*), 6.61 (dd, J = 2 Hz, 1 H, NC*H*=), 5.07 (q, J = 12 Hz, 2 H, ArCH_2), 4.02 (d, J = 11 Hz, 1 H, CH_3NC*H*iPr), 3.00 (s, 3 H, NCH_3), 2.39 (m, complex (9 lines), 1 H, C*H*(CH_3)$_2$), 1.75 (m, 2 H, (CH_3)$_2$CCH_2), 1.66 (m, 2 H, (CH_3)$_2$CH_2), 1.48 (s, 3 H, C(CH_3)$_2$), 1.46 (s, 3 H, C(CH_3)$_2$), 1.25 (s, 3 H, C(CH_3)$_2$), 1.23 (s, 3 H, C(CH_3)$_2$), 1.12 (d, J = 6 Hz, 3 H, CH(CH_3)$_2$), 0.93 (d, J = 6 Hz, 3 H, CH(CH_3)$_2$); ^{13}C NMR δ 171.97 (CO_2Bn), 143.47 (Ar), 139.41 (Ar), 135.87 (Ar), 135.19 (Ar), 128.33 (Ar), 127.95 (Ar), 127.88 (Ar), 121.42 (Ar), 120.98 (ArNCH=), 119.79 (Ar*C*=), 107.56 (Ar), 101.21 (Ar), 70.66 (CO_2CH_2Ar), 65.74 (CH_3N*C*(iPr)CO_2Bn), 37.67 and 35.47 ((CH_3)$_2$CCH_2), 34.51 and 34.14 ((CH_3)$_2$*C*), 33.31 (*C*H(CH_3)$_2$), 32.12, 29.58, 29.50 and 27.92 ((CH_3)$_2$C), 19.87 and 19.38 (CH(*C*H_3)$_2$); MS (EI) *m/e* (relative intensity) 446 (73, M^+), 431 (10, $M^+ - CH_3$), 403 (50, $M^+ - C_3H_7$), 311 (100, $M^+ - PhCH_2OC{=}O$). Anal. Calcd for $C_{29}H_{38}N_2O_2$: C, 77.98; H, 8.58; N, 6.28. Found: C, 78.13; H, 8.62; N, 6.24.

Ethyl (*S*)-3-(4-(Methyl(1-(((phenylmethyl)oxy)-carbonyl)-2-methylpropyl)amino)-6,7-(1,2,3,4-tetrahydro-1,1,4,4-tetramethylbenzo)-1*H*-indol-3-yl)-2-oximidopropionate (18). A suspension of 17 (10.0 g, 0.022 mol) in CH_2Cl_2 (28 mL), ethyl 3-bromo-2-oximidopropionate[23] (4.72 g, 0.022 mol), and Na_2CO_3 (1.0 g) was stirred for 12 h. TLC revealed the absence of 17 (R_f 0.45 in B) and the presence of oxime 18 (R_f 0.1 in B). The dark suspension was diluted with EtOAc, filtered, and concentrated. The oil remaining was purified by chromatography using 3:1 hexane/EtOAc and then 1:1 hexane/EtOAc as eluant to yield 6.43 g (50%) of 18 as a white solid: mp 128–131 °C (CH_2Cl_2/hexanes); ^{1}H NMR δ 9.38 (br s, 1 H, exch, NO*H*), 8.02 (br s, 1 H, no exch, ArN*H*CH=C), 7.26 (m, 3 H, CH_2Ar*H*), 7.17 (m, 2 H, CH_2Ar*H*), 6.93 (s, 1 H, Ar*H*), 6.72 (s, 1 H, ArNHC*H*=C), 5.09 (B part, AB q, J = 12 Hz, 1 H, CH_2Ar), 4.95 (A part, AB q, J = 12 Hz, 1 H, CH_2Ar), 4.45 (B part, AB q, J = 15 Hz, 1 H, CH_2C=NOH), 4.37 (A part, AB q, J = 15 Hz, 1 H, CH_2C=NOH), 4.24 (B part AB q, J = 6 Hz, 1 H, OCH_2CH$_3$), 4.22 (A part, AB q, J = 6 Hz, 1 H, OCH_2CH$_3$), 3.72 (d, J = 8.5 Hz, 1 H, NC*H*-(iPr)CO_2Bn), 2.94 (s, 3 H, NCH_3), 2.31 (m, complex, 1 H, C*H*-(CH_3)$_2$), 1.71 (m, complex, 2 H, C(CH_3)$_2$CH_2), 1.65 (m, complex, 2 H, C(CH_3)$_2$CH_2), 1.429 (s, 3 H, C(CH_3)$_2$), 1.423 (s, 3 H, C(CH_3)$_2$), 1.24 (t, J = 6 Hz, 3 H, OCH$_2$CH_3) overlapping 1.24 (s, 3 H, C(CH_3)$_2$), 1.23 (s, 3 H, C(CH_3)$_2$), 1.13 (d, J = 6.5 Hz, 3 H, CH-(CH_3)$_2$), 0.93 (d, J = 6.5 Hz, 3 H, CH(CH_3)$_2$); ^{13}C NMR δ 173.10 (*C*O_2Et), 163.72 (*C*O_2Bn), 152.75 (*C*=NOH), 144.70 (Ar), 139.28 (Ar), 135.99 (Ar), 135.74 (Ar), 128.34 (Ar), 128.29 (Ar), 128.00 (Ar), 123.74 (Ar), 120.98 (ArNHCH=), 120.09 (Ar), 112.51 (Ar), 108.73 (Ar*C*=CHN), 72.48 (OCH_2CH$_3$), 65.98 (OCH_2Bn), 61.70 (*C*H_2-C=NOH), 37.66, 35.31, 34.47, 33.38, 32.08, 29.43, 29.12, 28.80, 22.47, 20.24, 28.98, 14.03 (OCH$_2$*C*H$_3$); MS (EI) *m/e* (relative intensity) 575.2 (100, M^+), 532.2 (20, $M^+ - C_3H_7$), 440.2 (62, $M^+ - CO_2$Bn). Anal. Calcd for $C_{34}H_{45}N_3O_5$: C, 70.92; H, 7.88; N, 7.28. Found: C, 70.93; H, 7.77; N, 7.27.

(*S,R* and *S,S*)-Ethyl 3-(4-Methyl(1-(((phenylmethyl)-oxy)carbonyl)-2-methylpropyl)amino)-6,7-(1,2,3,4-tetrahydro-1,1,4,4-tetramethylbenzo)-1*H*-indol-3-yl)-2-aminopropionates (20 and 21). A solution of oxime 18 (11.0 g, 0.019 mol) in dry THF (250 mL) was treated with aluminum foil (5 g, 0.19 mol) that had been cut into small pieces and immersed successively in 2% aqueous $HgCl_2$, distilled H_2O, and THF. The dark gray suspension was stirred for 12 h at room temperature, at which time TLC revealed the absence of 18 (R_f 0.5 in A) and the presence of amino esters 20 and 21 (R_f 0.20 and 0.15 in A, respectively). The suspension was filtered and concentrated to yield 7.8 g (75%) of a mixture of the amines as a light yellow oil. Analytical samples of each of the amino esters was provided by chromatography over silica gel using 1:1 hexane/EtOAc to give the *S,R* diastereomer 20 as an oil: ^{1}H NMR δ 8.14 (s, 1 H, N*H*), 7.23 (q, J = 3 Hz, 3 H, CH_2Ar*H*), 7.05 (m, 2 H, CH_2Ar*H*), 6.96 (d, J = 3 Hz, 1 H, ArNHC*H*=), 6.90 (s, 1 H, Ar*H*), 5.00 (B part, AB q, J = 12 Hz, 1 H, ArCH_2), 4.82 (A part, AB q, J = 12 Hz, 1 H, ArCH_2), 4.11 (q, J = 6 Hz, 2 H, CH_3CH_2O), 3.81 (q, J = 3 Hz, 1 H, NC*H*(iPr)CO_2Bn), 3.68 (br s, 1 H, H_2NC*H*CO_2Et), 3.33 (AB q, J = 6, 9 Hz, 2 H, CH_2CH(NH_2)CO_2Et), 2.87 (br s, 3 H, NCH_3), 2.34 (sextet, J = 9 Hz, 1 H, (iPr)C*H*), 1.73 (m, complex, 2 H, C(CH_3)$_2$CH_2), 1.65 (m, complex, 2 H, C(CH_3)$_2$CH_2), 1.62 (br s, 2 H, exch, NH_2), 1.46 (s, 3 H, C(CH_3)$_2$), 1.45 (s, 3 H, C(CH_3)$_2$), 1.26 (s, 3 H, C(CH_3)$_2$), 1.22 (s, 3 H, C(CH_3)$_2$), 1.16 (t, J = 6 Hz, 3 H, CH_3CH_2O), 1.12 (d, J = 6 Hz, 3 H, (*C*H)$_3$CH), 0.96 (m, complex, 3 H, (CH_3)CH); ^{13}C NMR δ 175.77, 172.47, 144.74, 139.03, 135.86, 135.72, 128.28, 128.02, 127.82, 123.85, 121.45, 121.27, 112.13, 111.49, 72.44 (*C*HCO_2Bn), 65.83 (CH_3CH_2O), 60.53 (Ar*C*H_2), 56.38 (*C*H_2CH(NH_2)CO_2Et), 37.74, 35.32, 34.48, 33.38, 32.52, 32.20, 32.09, 32.05, 29.55, 28.90, 28.75, 20.35, 14.11; MS (FAB) *m/e* (relative intensity) 562.2 (100, MH^+); high-resolution MS calcd for $C_{34}H_{48}N_3O_4$ 562.3644, found 562.3690. Further elution gave the *S,S* diastereomer 21 as an oil: ^{1}H NMR δ 8.15 (s, 1 H, N*H*), 7.21 (m, 3 H, CH_2Ar*H*), 6.98 (m, 2 H, CH_2Ar*H*), overlapping 6.94 (m, 1 H, ArNHC*H*=), 6.91 (s, 1 H, Ar*H*), 5.02 (B part, AB q, J = 12 Hz, 1 H, ArCH_2), 4.74 (A part, AB q, J = 12 Hz, 1 H, ArCH_2), 4.17 (q, J = 6 Hz, 2 H, CH_3CH_2O), 3.96 (br s, 1 H), 3.66 (br s, 1 H), 3.62 (dd, J = 3 Hz, 1 H), 2.92 (m, 1 H) overlapping 2.88 (br s, 3 H, NCH_3), 2.33 (sextet, J = 6 Hz, (iPr)C*H*), 1.74 (m, complex, 2 H, C(CH_3)$_2$CH_2), 1.67 (m, complex, 2 H, C(CH_3)$_2$CH_2), 1.48 (s, 3 H, CCH_3)$_2$) overlapping 1.48 (br s, 2 H, exch, NH_2), 1.47 (s, 3 H, C(CH_3)$_2$), 1.29 (s, 3 H, C(CH_3)$_2$), 1.25 (t, J = 6 Hz, 3 H, CH_3CH_2O), 1.24 (s, 3 H, C(CH_3)$_2$), 1.15 (d, J = 9 Hz, 3 H, CH-(CH_3)$_2$), 0.90 (m, complex, 3 H, CH(CH_3)$_2$); ^{13}C NMR δ 175.44, 139.21, 136.14, 135.64, 128.22, 127.94, 127.87, 123.80, 122.05, 120.97, 110.98, 72.53 (*C*HCO_2Bn), 65.83 (CH_3CH_2O), 60.54 (BnCH_2O), 54.75 (*C*H_2C(NH_2)CO_2Et), 37.61, 35.29, 34.49, 33.39, 32.10, 31.96, 29.70, 28.92, 28.62, 20.41, 14.18; MS (FAB) *m/e* (relative intensity) 562.2 (100, MH^+); high-resolution MS calcd for $C_{34}H_{48}N_3O_4$ 562.3644, found 562.3674.

(*S,S*)- and (*S,R*)-1,3,4,5,7,8,10,11,12,13-Decahydro-4-(ethoxycarbonyl)-8,10,10,13,13-pentamethyl-7-(1-methylethyl)-6*H*-benzo[*g*][1,4]diazonino[7,6,5-*cd*]indol-6-one (23 and 24). A solution of a mixture of amines 20 and 21 (4.50 g, 8.17 mmol), 10% Pd/C (0.5 g), and camphorsulfonic acid (0.1 g) in EtOH (50 mL) was hydrogenated at 40 psi on a Parr shaker apparatus. After