Chemical Shift of Identified Alkaloids:

Sanguinarine [**1**]: ^{1}H NMR (DMSO-d6, 500 MHz) δ 7.86 (1H, d, J=8.8 Hz, H-11), 7.58 (1H, d, J= 9.6 Hz, H-12), 7.56 (1H, s, H-4), 7.53 (1-H, d, J= 8.1Hz, H-10) 7.34 (1H, s, H-1), 7.07 (1H, d, J=7.8 Hz, H-9), 6.13-6.18 (OCH_2O, 2 and 7), 5.52 (1H, s, H-6), 2.57 (3H, s, N-CH_3)Dihydrosangunarine [**2**], identified from MS results.

Chelerythrine [**3**], (Spectrum Supplemental Figure 1) 1H NMR (DMSO_d6, 500 MHz) δ 7.85 (1H, d, J=), 7.69 (1H, d, J=), 7.53 (1H, d, J=), 7.53 (1H, s), 7.31 (1H, s), 7.14 (1H, d,) 6.12-6.15 (2H, OCH20), 5.76 (1H, s, H-6), 3.87 (3H, s, O-CH3), 3.83 (3H, s, O-CH3), 2.56 (3H, s, N-CH3)

Chelirubine [**4**]: ^{1}H NMR (DMSO-d6, 500 MHz) δ 8.34 (1H, d, J=8.8 Hz, H-11), 7.63 (1H, s, H-4), 7.5 (1H, d, J=9.1Hz, H-12), 7.3 (1H, s, H-1), 6.98 (1H, s, H-9), 6.12-6.16 (OCH_2O, 2 and 7), 5.28 (1H, s, H-6), 3.89 (3H, s, O-CH_3), 2.67 (3H, s, N-CH_3)

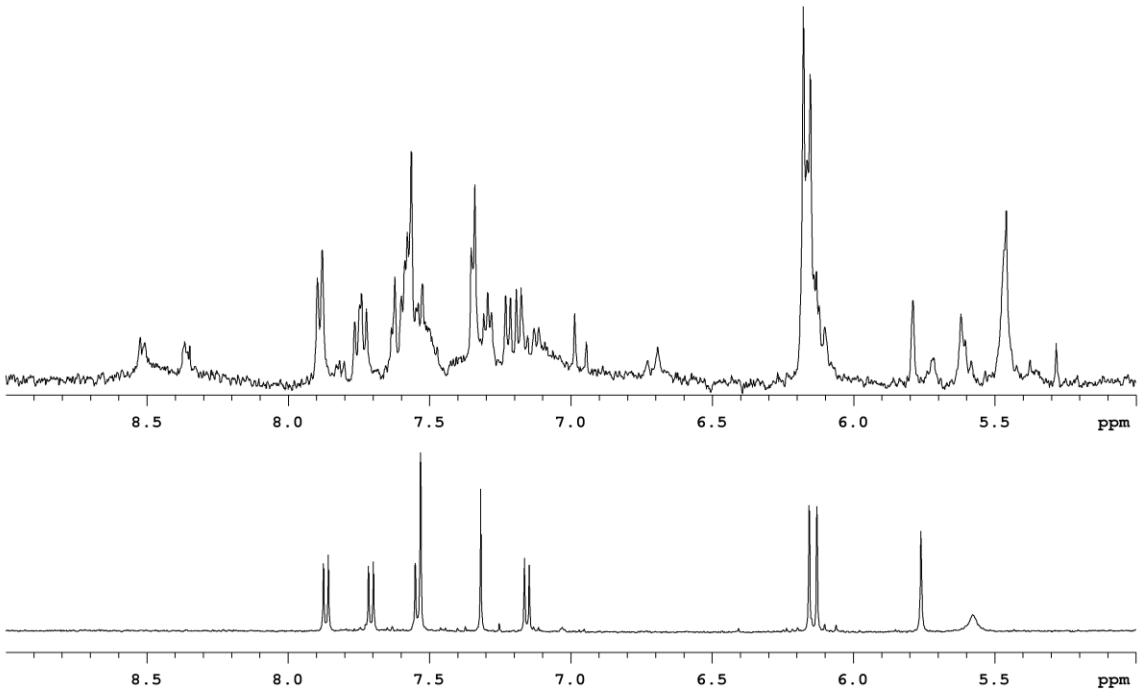
Marcapine [**5**]: ^{1}H NMR (DMSO-d6, 500 MHz) δ 7.93 (1H, s, H-11), 7.58 (1H,s, H-4), 7.41 (1H, s, H-1), 6.94 (1H, s, H-9),6.09-6.16 (OCH_2O, 2 and 7), 5.54 (1H, s, H-6), 3.96 (3H,s, O-CH_3), 3.91 (3H, s, O-CH_3). The N-CH3 resonance was masked by the residual DMSO-d6 resonance.

Dihydrochelerythrine [**6**]: ^{1}H NMR (DMSO-d6, 500 MHz) δ7.8 (1H, d, J=8.7Hz, H-11), 7.63 (1H, d, J=8.8 Hz, H-12), 7.57 (1H, J=8.4Hz, H-10), 7.57 (1H, s, H-4), 7.34 (1H,s, H-1), 7.09 (1H, d, J= 8.7Hz, H-9), 6.16 (2H, s, OCH_2O), 4.2 (2H, s, H-6), 3.89 (3H, s, O-CH_3), 3.79 (3H, s, OCH_3). The N-CH3 resonance was masked by the residual DMSO-d6 resonance.

Dihydrochelirubine [**7**]: ^{1}H NMR (DMSO-d6, 500 MHz) δ 8.23 (1H, d, J= 8.5 Hz, H-11), 7.51 (1H, d, J= 9.6Hz, H-12), 7.5 (1H, s H-4), 7.3 (1H, s, H-1),6.87 (1H,s, H-9), 6.19-6.09 (OCH_2O, 2 and 7) 4.05 (2H, s, H-6), 3.87(3H, s, O-CH_3), 2.57 (3H, s, N-CH_3)

Dihydrosanguinarine [**8**]: ^{1}H NMR (DMSO-d6, 500 MHz) δ7.79 (1H, d, J= 8.5Hz, H-11), 7.58 (1H, d, J=8.6Hz, H-12), 7.55 (1H, s, H-4), 7.42 (1H, d, J=8.0 Hz, H-10), 7.34 (1H, s, H-1), 6.97 (1H, d, J= 7.9Hz, H-9), 6.15-6.16 (OCH_2O, 2 and 7), 4.15(2H, s, H-6), 2.57 (3H, s, N-CH_3)

Supplemental Figure 1:



Comparison of the chemical shifts of Chelerythrine (Bottom) and compound 3 (δ 5 ppm to δ 9). In addition to containig resonances from chelerythrine, there are resonaces from a compound that co-elutes with chelerythrine.