SUPPLEMENTARY MATERIAL

Two new alkaloids from *Melodinus hemsleyanus* Diels

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Abstract: Two new monoterpenoid indole alkaloids, named 14,15-dihydro-14 β , 15 β -epoxy-10-hydroxyscandine (**1**) and 15 α -hydroxy-meloscandonine (**2**), together with 12 known compounds, were isolated from the aerial parts of *Melodinus hemsleyanus* Diels. The structures of **1** and **2** were elucidated on the bases of 1D and 2D NMR spectra and MS. Two new compounds were evaluated for their PTP1B and Drak2 inhibitory effects, and inactive.

Keywords: *Melodinus*; Apocynaceae; alkaloid

List of Supplemental Material

Figure S1. HRESIMS spectrum of **1**.

Figure S2. ^1H NMR (600 MHz, CDCl_3) of **1**.

Figure S3. ^{13}C NMR (150 MHz, CDCl_3) of **1**.

Figure S4. ^1H - ^1H COSY spectrum of **1**.

Figure S5. HMQC spectrum of **1**.

Figure S6. HMBC spectrum of **1**.

Figure S7. NOESY spectrum of **1**.

Figure S8. HRESIMS spectrum of **2**.

Figure S9. ^1H NMR (600 MHz, CD_3OD) of **2**.

Figure S10. ^{13}C NMR (150 MHz, CD_3OD) of **2**.

Figure S11. ^1H - ^1H COSY spectrum of **2**.

Figure S12. HMQC spectrum of **2**.

Figure S13. HMBC spectrum of **2**.

Figure S14. NOESY spectrum of **2**.

Figure S15. Key HMBC correlations and H-H COSY of **1** and **2**.

Mass Spectrum SmartFormula Report

Analysis Info

Analysis Name D:\Data\USER-2013\CSC-7-2-2-1.d
Method WU_tune_low_20121222.m
Sample Name CSC-7-2-2-1
Comment

Acquisition Date 1/15/2013 4:45:15 PM

Operator Ma
Instrument / Ser# micrOTOF-Q II 10203

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.3 Bar
Focus	Active	Set Capillary	4500 V	Set Dry Heater	180 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set Collision Cell RF	150.0 Vpp	Set Divert Valve	Source

Meas. m/z	#	Formula	Score	m/z	err [ppm]	Meas. n err [ppm]	mSig	rdb	e ⁻ Conf	N-Rule
383.1607	1	C ₂₁ H ₂₃ N ₂ O ₅	100.00	383.1601	-1.4	-1.3	21.8	11.5	even	ok

Figure S1. HRESIMS spectrum of **1**.

Figure S2. ^1H NMR (600 MHz, CDCl_3) of **1**.

Figure S3. ^{13}C NMR (150 MHz, CDCl_3) of **1**.

Figure S4. ^1H - ^1H COSY spectrum of **1**.

Figure S5. HMOC spectrum of **1**.

Figure S6. HMBC spectrum of **1**.

Figure S7. NOESY spectrum of **1**.

Mass Spectrum SmartFormula Report

Analysis Info

Analysis Name D:\Data\USER-2013\CSC-9-1.d
 Method WU_tune_low_20121222.m
 Sample Name CSC-9-1
 Comment

Acquisition Date 1/11/2013 3:04:12 PM

Operator Ma
 Instrument / Ser# micrOTOF-Q II 10203

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.2 Bar
Focus	Active	Set Capillary	4500 V	Set Dry Heater	180 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set Collision Cell RF	150.0 Vpp	Set Divert Valve	Source

Meas. m/z	#	Formula	Score	m/z	err [ppm]	Mean err [ppm]	mSigma	rdb	e ⁻ Conf	N-Rule
339.1695	1	C ₂₀ H ₂₃ N ₂ O ₃	100.00	339.1703	2.5	3.5	24.7	10.5	even	ok

Figure S8. HRESIMS spectrum of **2**.

Figure S9. ^1H NMR (600 MHz, CDCl_3) of **2**.

Figure S10. ^{13}C NMR (150 MHz, CDCl_3) of **2**.

Figure S11. ^1H - ^1H COSY spectrum of **2**.

Figure S12. HMQC spectrum of **2**.

Figure S13. HMBC spectrum of **2**.

Figure S14. NOESY spectrum of **2**.

Figure S15. Key HMBC correlations ($\rightarrow$) and H-H COSY (—) of **1** and **2**