Supporting Information

FIRST TOTAL SYNTHESIS OF PALMARUMYCIN C₈ BASED ON DOUBLE OXA-MICHAEL ADDITION OF 1,8-DIHYDROXYNAPHTHALENE TO 3-BROMO-1-INDENONE

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¹H and ¹³C NMR spectra
$^1$H NMR spectrum of 10
$^{13}$C NMR spectrum of 10
$^1$H NMR spectrum of 3a
$^{13}$C NMR spectrum of 3a
$^{1}H$ NMR spectrum of 12
$^{13}$C NMR spectrum of 12
$^1$H-COSY spectrum of 12

`Filename` = TFA_Buszovor_upper_1H-COSY-
`Author` = hamou
`Experiment` = cosy_cfg.ex2
`Sample_Id` = sample
`Solvent` = CLELON/FORM-D
`Creation_Time` = 22-FEB-2018 21:46.47
`Revision_Time` = 22-FEB-2018 21:50.43
`Current_Time` = 22-FEB-2018 21:51.52

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`Dim_Title` = 1H 1H
`Dim_Options` = [ppm] [ppm]
`Dimensions` = X Y
`Site` = JNA500
`Spectrometer` = JNM-ECA600

`Field_Strength` = 14.09636928 [T] (600 [MHz])
`X_Avg_Duration` = 0.297984 [s]
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`X_Points` = 1024
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`X_Respoints` = 0
`X_Resolution` = 3.3588488 [Hz]
`X_Sweep` = 4.29553265 [kHz]
`Y_Domain` = 1H
`Y_Freq` = 600.172504 [MHz]
`Y_Offset` = 6.37831 [ppm]
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`Y_Respoints` = 0
`Y_Resolution` = 3.42169461 [Hz]
`Y_Sweep` = 3.65575032 [kHz]
`Z_Domain` = 1H
`Z_Freq` = 600.172504 [MHz]
`Z_Offset` = 5 [ppm]
`Z_Points` = 1024

`Clipped` = false
`Scans` = 4
`Total Scans` = 1024

`Relaxation_Delay` = 1.5 [s]
`Heavy_Gain` = 50
`Temp_Det` = 24.8 [°C]
`X_Ramp_Width` = 14.3 [ms]
`X_Avg_Time` = 0.297984 [s]
`X_Avg_Time` = 4 [kHz]
`X_Pulse` = 14.3 [ms]
`Y_Avg_Time` = 74.50624 [ms]
`Z_Avg_Time` = 0.5 [kHz]
`Grad_Mode` = off
`Grad_Mode` = off
`Gauge_Freqset` = false
`Delta` = 0 [ms]
`Grad_1` = 1 [ms]
`Grad_1_Amp` = 5 [%]
`Grad_2` = 1 [ms]
`Grad_2_Amp` = 5 [%]
`Grad_Recovery` = 0.1 [ms]
`Grad_Selection` = 1.1
HMHC spectrum of 12
HMOC spectrum of 12
HMBC spectrum of 12
HMBC spectrum of 12
NOESY spectrum of 12
NOESY spectrum of 12
^1H NMR spectrum of 6
$^{13}$C NMR spectrum of 6
$^1$H NMR spectrum of 13
$^{13}\text{C NMR spectrum of 13}$
$^{1}$H NMR spectrum of 14

![NMR spectrum with peaks labeled]
$^{13}$C NMR spectrum of 14
\(^1\text{H NMR spectrum of } 8a\)
$^{13}$C NMR spectrum of 8a
$^1$H NMR spectrum of 8b
$^{13}$C NMR spectrum of 8b
$^1$H NMR spectrum of 17
$^{13}$C NMR spectrum of 17
$^1$H NMR spectrum of 18
$^{13}$C NMR spectrum of 18
$^1$H NMR spectrum of 4,7-dihydroxy-2,3-dihydro-1H-inden-1-one
$^{13}$C NMR spectrum of 4,7-dihydroxy-2,3-dihydro-1H-inden-1-one
$^1$H NMR spectrum of 19
$^{13}$C NMR spectrum of 19
\(^1\)H NMR spectrum of 8c
$^{13}$C NMR spectrum of 8e
\( ^1H \) NMR spectrum of 11a
$^{13}$C NMR spectrum of 11a
$^1$H NMR spectrum of 20

[Spectrogram image]

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$^{13}$C NMR spectrum of 20
$^{1}$H NMR spectrum of 11b
$^{13}$C NMR spectrum of 11b
$^1$H NMR spectrum of 1
$^{13}$C NMR spectrum of 1