

Root extracts of two cultivars of *Paeonia* species: lipid composition and biological effects on different cell lines. Preliminary results.

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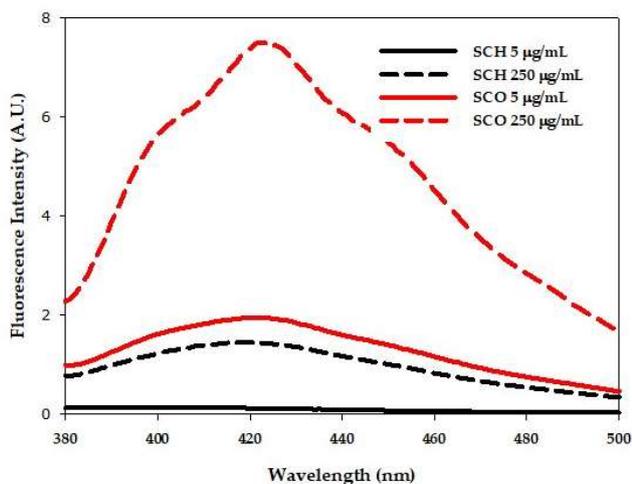
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Supplementary Material

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Emission Spectra of TMA-DPH



Excitation Spectra of TMA-DPH

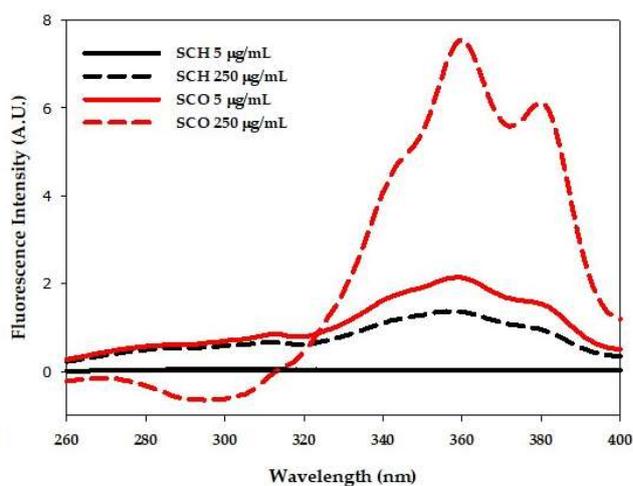


Figure S1. TMA-DPH fluorescence spectra in SCH (Black) and SCO (Red) at a concentration of 5µg/mL (continuous line) and at a concentration of 250µg/mL (dashed line). (left) Emission spectra of TMA-DPH recorded with the excitation set at 360 nm; (right) Excitation spectra of TMA-DPH recorded with the emission wavelength set at 430nm (left).



Figure S2. Soxhlets assembled in parallel to extract SCH with chloroform and, in a second time, also SCO.

File : D:\FILEDATA\ELENA\BSB\EF.SCO5.D
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 Instrument : GC-MS
 Sample Name :
 Misc Info :
 Vial Number: 1

20190614

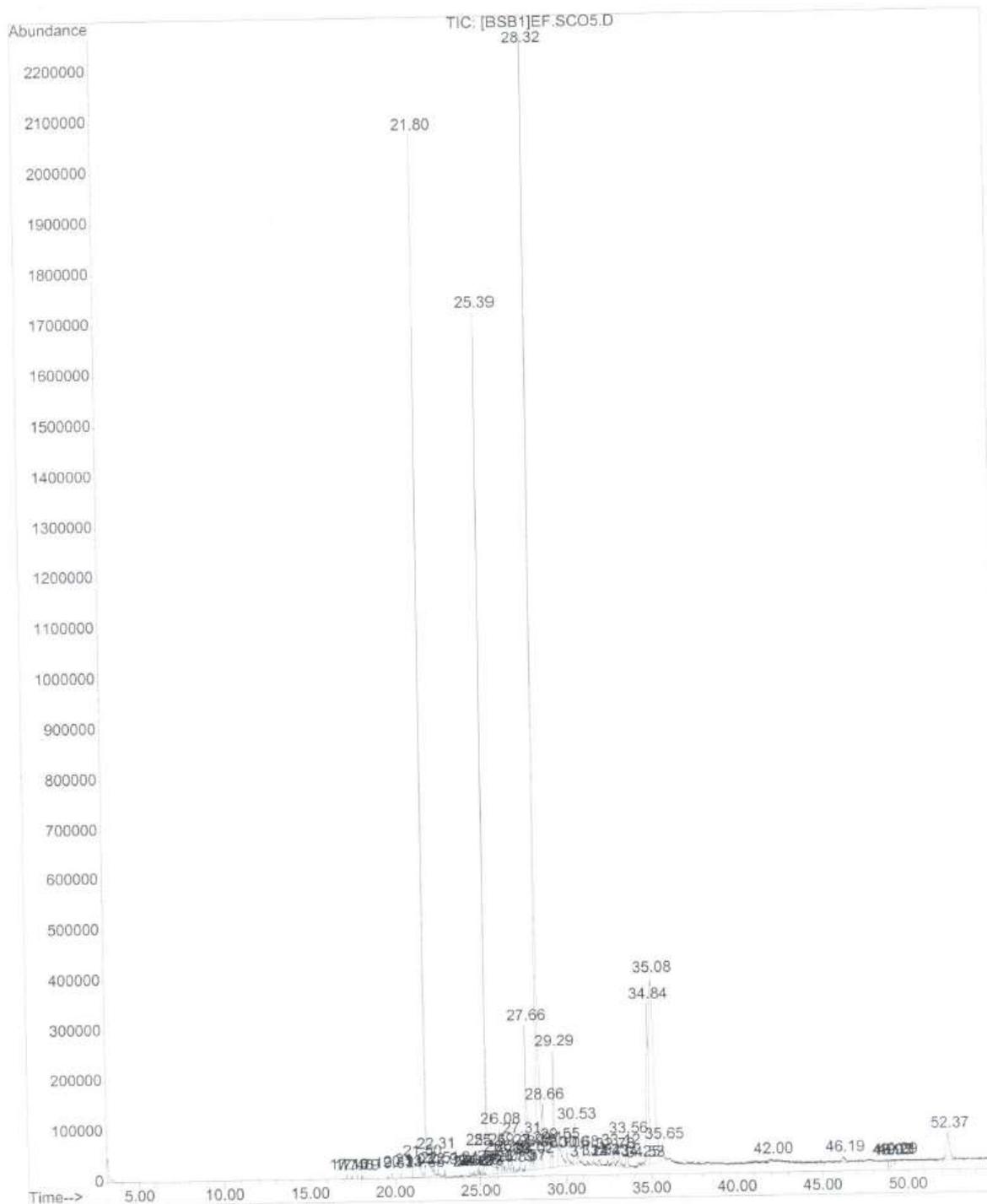


Figure S3. GC-MS chromatogram of SCO. Main peaks: r.t. = 21.80 min.: benzoic acid; r.t. = 25.39 min.: hexadecanoic acid; r.t. = 27.66 min.: oleic acid; r.t. = 28.32 min.: linoleic acid; r.t. = 29.29 min.: methyl linolenate; r.t. = 34.84 min.: aplysteryl acetate; r.t. = 35.08 min.: γ -sitosterol; r.t. = 52.37 min.: vitamin E.

File : D:\FILEDATA\ELENA\BSB\EF.SCH2.D *con scryano*
 Operator : [BSB1]
 Acquired : 13 Jun 2019 12:20 using AcqMethod ELENA1 *~47 min*
 Instrument : GC-MS *retention*
 Sample Name:
 Misc Info :
 Vial Number: 1 *extr. ethyl acet*

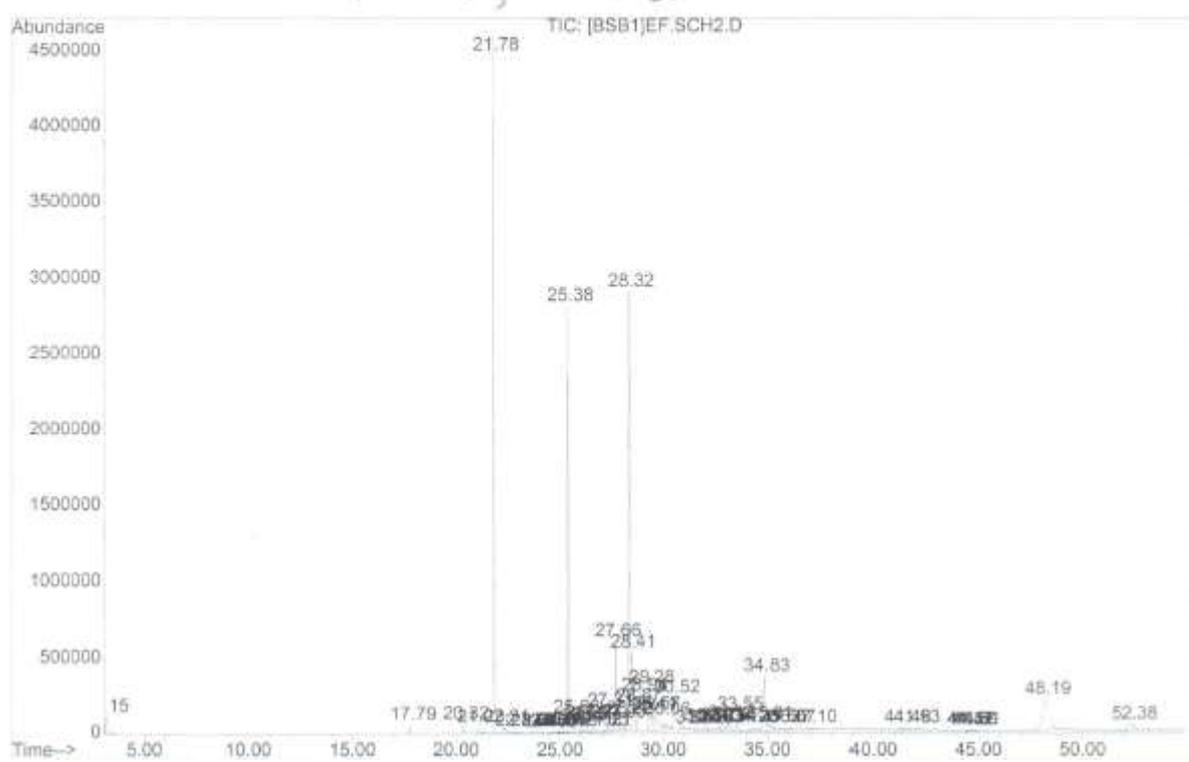


Figure S4. GC-MS chromatogram of **SCH**. Main peaks: r.t. = 17.79 min.: phenol; r.t. = 21.78 min.: benzoic acid; r.t. = 25.38 min.: hexadecanoic acid; r.t. = 27.66 min.: oleic acid; r.t. = 28.32 min.: linoleic acid; r.t. = 29.28 min.: methyl linolenate; r.t. = 34.83 min.: aplysteryl acetate; r.t. = 48.19 min.: β -sitosterol; r.t. = 52.38 min.: vitamin E.

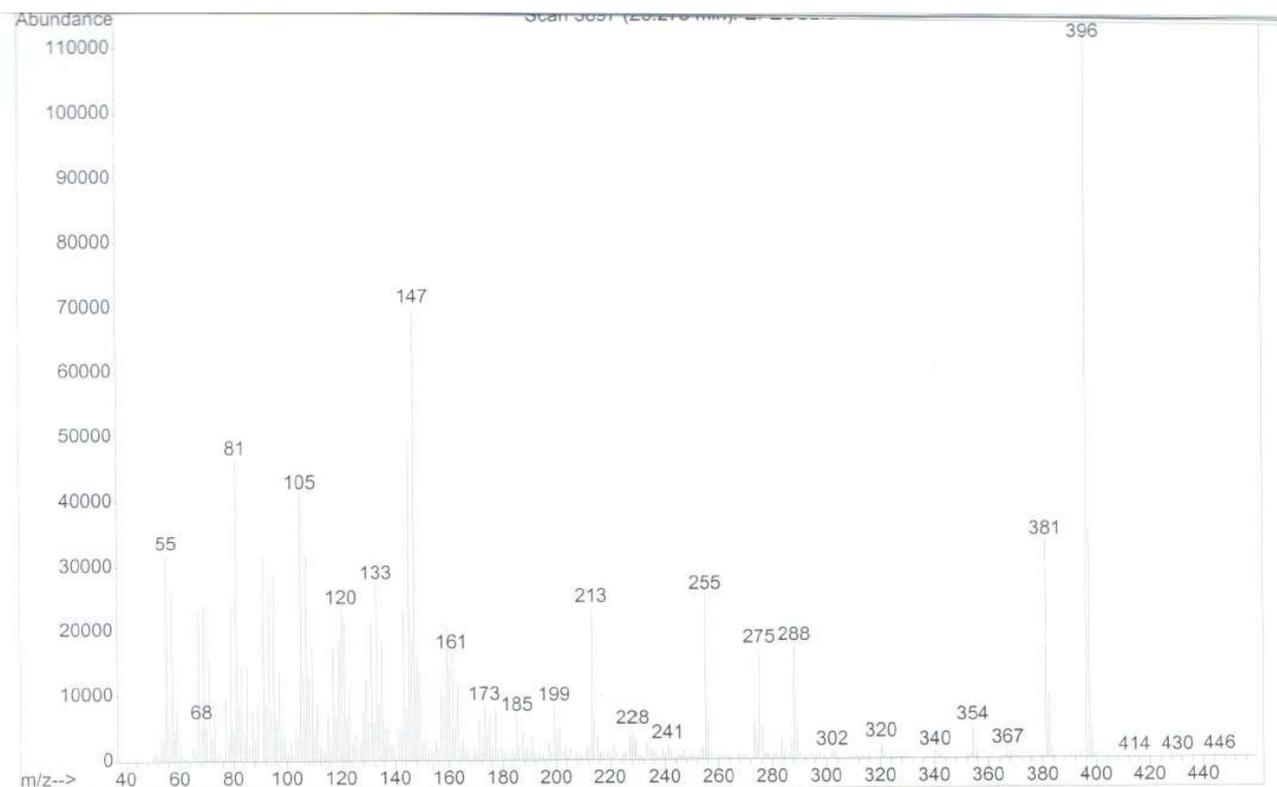


Figure S5. Mass spectrum recognized as belonging to aplysteryl acetate.

Extractions with ethyl acetate:

1. Powdered roots of *Paeonia Officinalis Rubra Plena* (75 g) were put in an Erlenmeyer flask and extracted with 200 mL of ethyl acetate at room temperature under magnetic stirring for 24 h. After decantation, the residue was subjected to a further extraction with 200 mL of ethyl acetate at room temperature under magnetic stirring for 24 h. After filtration, the combined organic layers were extracted with water (3 x 50 ml) and the organic layer was dried over anhydrous magnesium sulfate. After filtration and removal of the solvent *under vacuum* 0.57 g of residue were obtained (0.8%). 0.050 g of this extract are dissolved in 1 mL of dichloromethane and 0.5 μ L were analyzed by GC-MS.
2. Powdered roots of *Paeonia Pink Hawaiian Coral* (115 g) were inserted in an Erlenmeyer flask and extracted with 400 mL of ethyl acetate at room temperature under magnetic stirring for 24 h. After decantation, the residue was subjected to a further extraction with 400 mL of ethyl acetate at room temperature under magnetic stirring for 24 h. After filtration, the combined organic layers were extracted with water (3 x 100 ml) and the organic layer was dried over anhydrous magnesium sulfate. After filtration and removal of the solvent *under vacuum* 0.52 g of residue were obtained (0.5%). 0.050 g of this extract have been dissolved in 1 mL of dichloromethane and 0.5 μ L were analysed by GC-MS.

Extrakt der Wurzel von *Paeonia officinalis*

File : D:\FILEDATA\ELENA\888\EP.E00.D
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Instrument : GC-MS
Sample Name : Telle Gattung und a 05
Misc Info :
Vial Number: 1

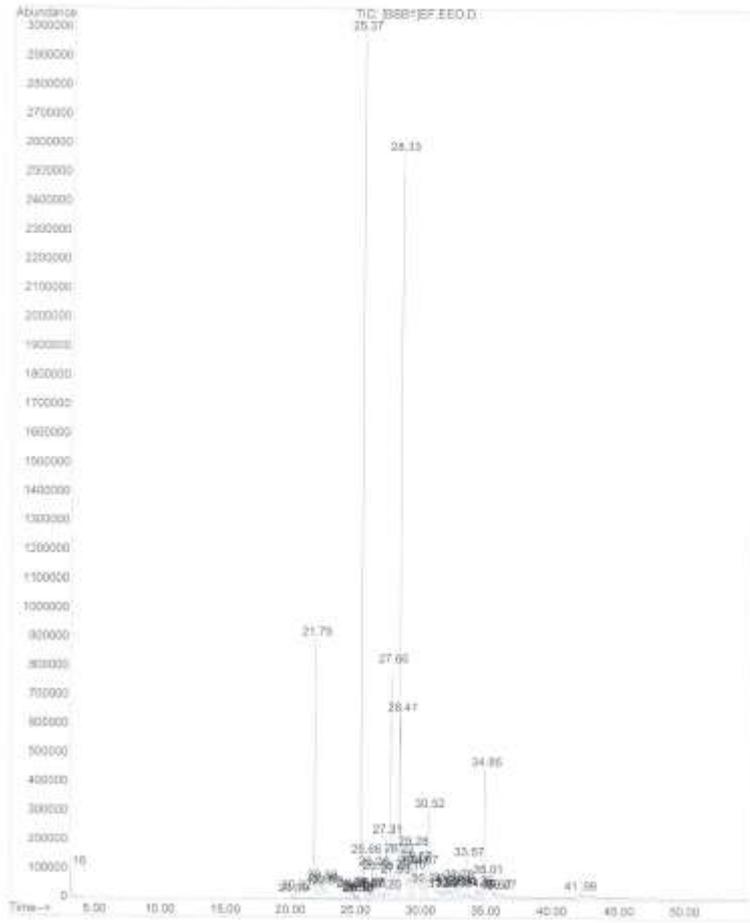


Figure S6. GC-MS chromatogram of ethyl acetate extract from roots of *Paeonia officinalis* 'Rubra Plena'.

File : D:\FILEDATA\ELENA\BSB\EF.EEH2.D
 Operator : [BSB1]
 Acquired : 14 Jun 2019 10:41 using AcqMethod ELENA1
 Instrument : GC-MS
 Sample Name:
 Misc Info :
 Vial Number: 1

Pa
arveta
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Beck a 69 m

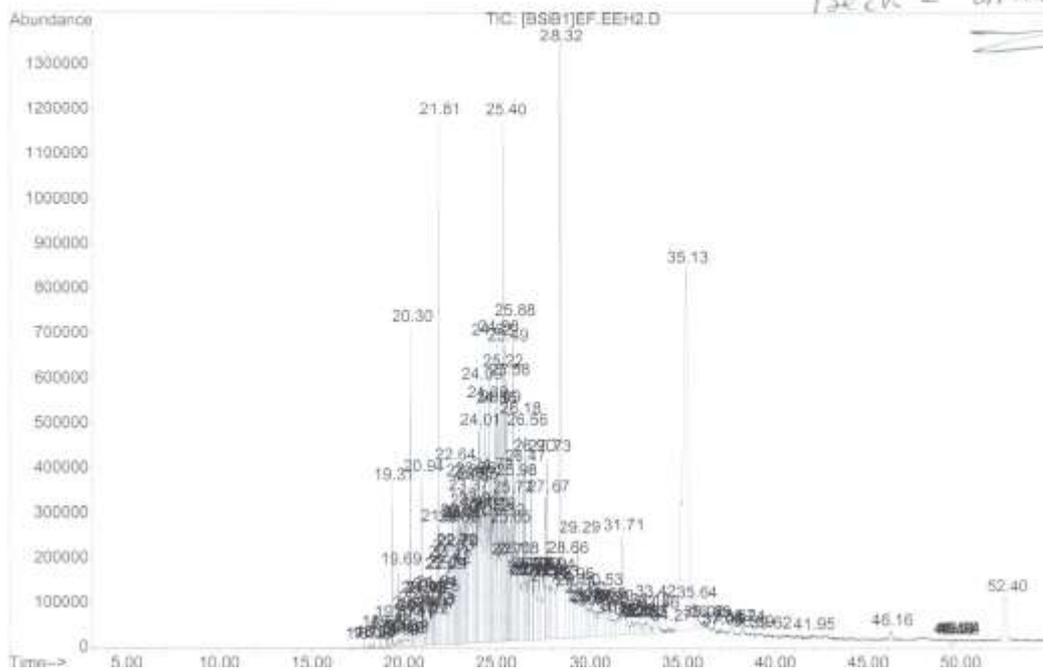


Figure S7. GC-MS chromatogram of the ethyl acetate extract from roots of *Paeonia* 'Pink Hawaiian Coral'.

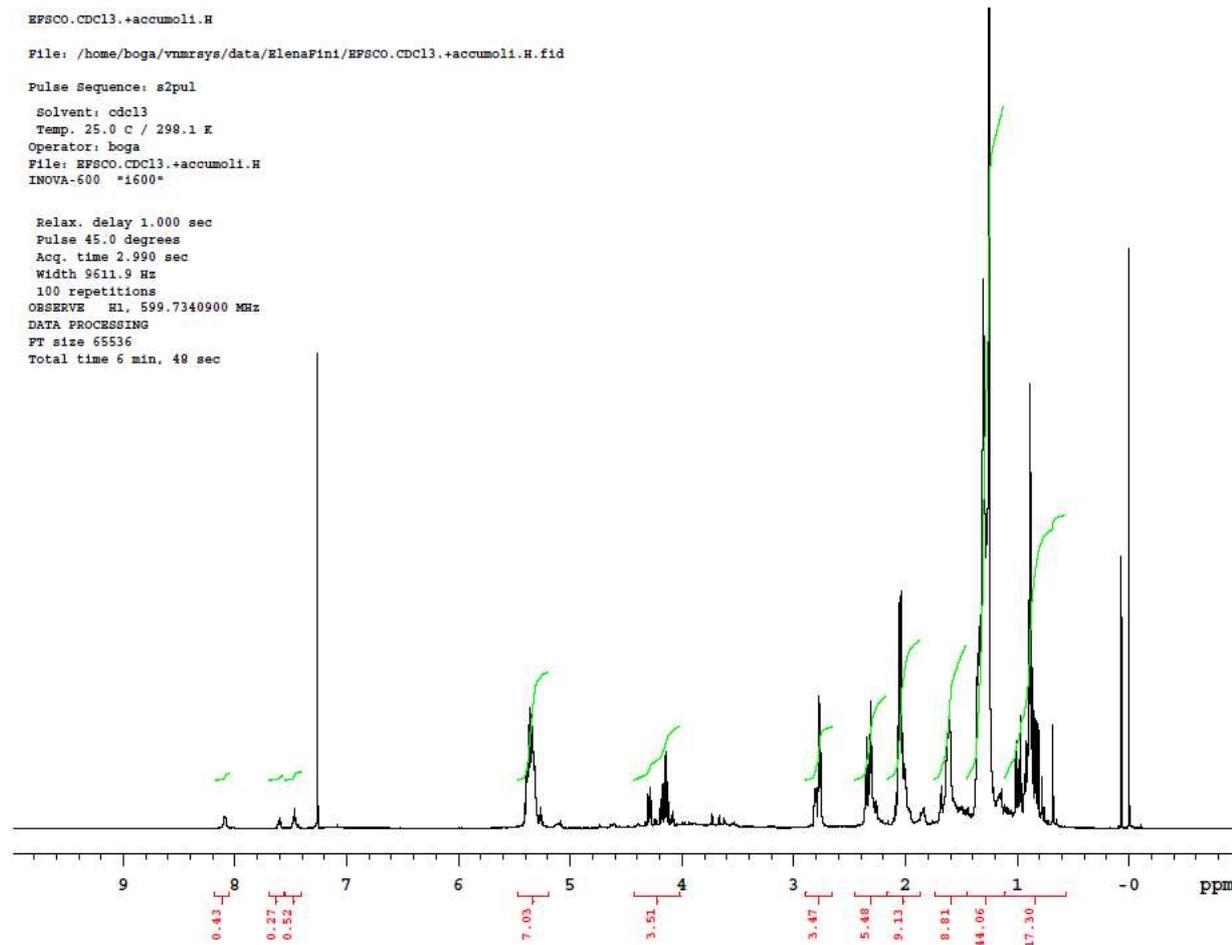


Figure S8. ¹H NMR spectrum (600 MHz, CDCl₃, 25 °C) of the extract **SCO** from roots of *Paeonia officinalis* 'Rubra Plena'.

EPSCH.CDCl3.+accumoli.H
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Pulse Sequence: s2pul
Solvent: cdcl3
Temp. 25.0 C / 298.1 K
Operator: boga
File: EPSCHE.CDCl3.+accumoli.H
INOVA-600 *1600*

Relax. delay 1.000 sec
Pulse 45.0 degrees
Acq. time 2.990 sec
Width 9611.9 Hz
100 repetitions
OBSERVE H1, 599.7340900 MHz
DATA PROCESSING
FT size 65536
Total time 17 min, 12 sec

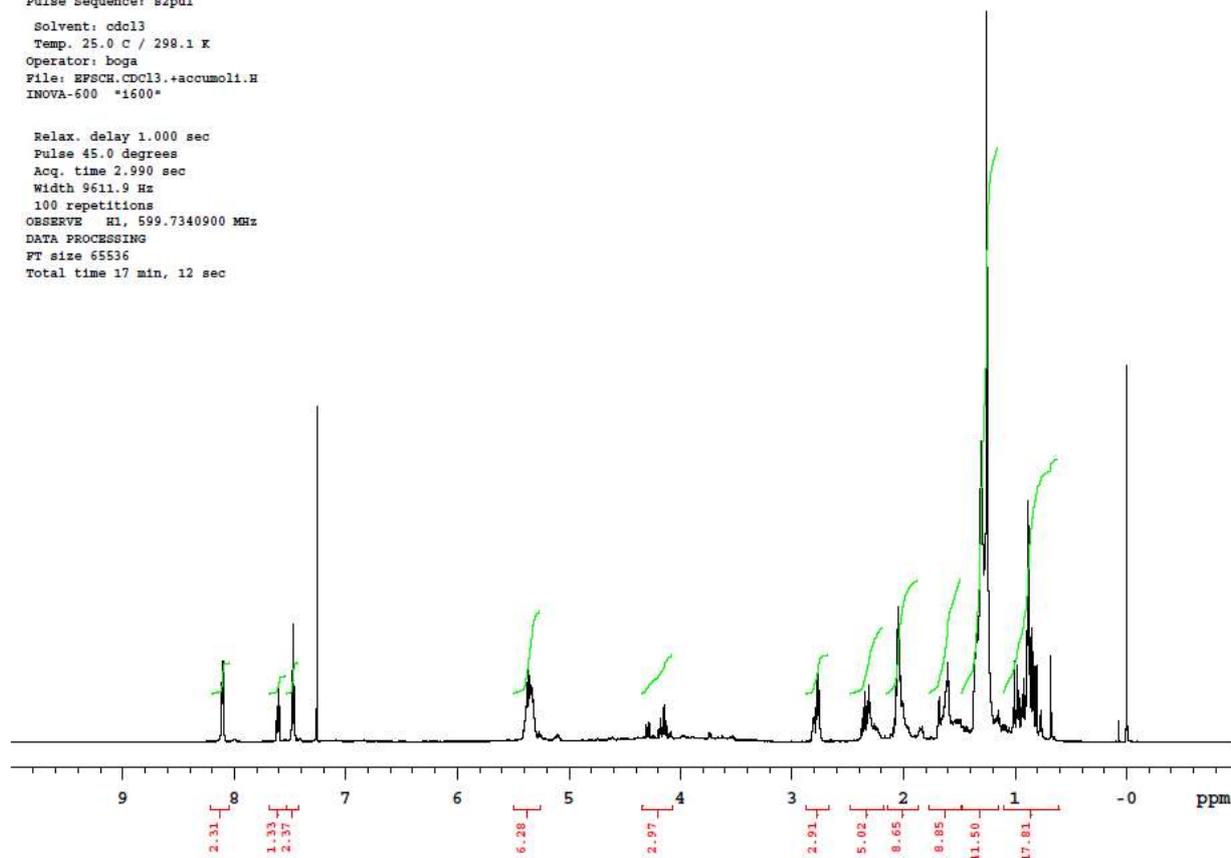


Figure S9. ¹H NMR spectrum (600 MHz, CDCl₃, 25 °C) of the extract **SCH** from roots of *Paeonia* 'Pink Hawaiian Coral'.