**Supplementary Table 1:** Primers used in this study

|  |  |  |
| --- | --- | --- |
| **Primer name** | **Sequence (5' to 3')** |  |
| *ACTIN\_F* | GAGCCACCACTGAGGACAAT | This study |
| *ACTIN\_R* | GGATGGAAGCTGCTGGTATT |
| *GAPDH\_F* | TCCACTCTATCACTGCGACC | This study |
| *GAPDH\_R* | GATTCCTCCTTGATCGCTGC |
| *DXS2\_F* | GCAGTTTCTTGCCATTGCTCC | This study |
| *DXS2\_R* | AGACTCTCTCCACCACTTGC |
| *DXR\_F* | CGACTGCGTTTGCCTATTCT | This study |
| *DXR\_R* | ATTGTCGGGCTTCTTGAATG |
| *MCT\_F* | GCCATCCTTCAGAACCTTTG | This study |
| *MCT\_5* | TGGGAAAGAGAGGCAAGATT |
| *CMK\_F* | CGAGAGGTACAGGTGGAGGA | This study |
| *CMK\_R* | CAAGAGTGGTCGGGTGAGAT |
| *HDS\_F* | AGCACCGATAACCAAGTCGT | This study |
| *HDS\_R* | CAGCAGAGTTCATGCTGCAA |
| *HDR\_F* | AGGGGTTTGGGCATAAAGAG | This study |
| *HDR\_R* | CAGCAAGCTTCACCGTAACA |
| *GGPPS\_F* | GTGGTGGACATCAACTGCAC | This study |
| *GGPPS\_R* | AAAATGGCCCCCAAAACTAC |
| *RbcS\_F* | CAGAGTCTCCTGCATGAAG | This study |
| *RbcS\_R* | TTCCTTGAAGAGCTGCTC |
| *CAB\_F* | CCTCCTCCAAGTCCAAATTC | This study |
| *CAB\_R* | CTAGGTTTTCTGGGACTTCC |
| *LPPS\_F* | GATGGGTGATATCCGACCAC | Schalk et al., 2012 |
| *LPPS\_R* | ATTGCTGATTTCTGGCATCC |
| *ScS\_F* | TCCAAGGATTTCCTGTGACC | Schalk et al., 2012 |
| *ScS\_R* | TCGAAGAGTCGTTGTCGTTG |

**Supplementary Table S2: Interpretation of calyx extract 13C-NMR spectrum: attribution of peaks to carbon positions in sclareol and linalyl acetate.**

**δ**: 13C-NMR chemical shift. In **blue**: carbons predicted to be labeled only if the MVA pathway is involved in IPP biosynthesis; in **green**, carbons predicted to be labeled only if the MEP pathway is involved in IPP biosynthesis; in **orange**, carbons predicted to be labeled whatever the pathway involved in IPP biosynthesis; in **grey**, carbons predicted to be unlabeled whatever the pathway involved in IPP biosynthesis.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Sclareol** | **Linalyl acetate** | **δ [ppm]** |
| **Peak 1** |  | **Carbon 11** | 170,89 |
| **Peak 2** | **Carbon 14** |  | 146,50 |
| **Peak 3** |  | **Carbon 6** | 142,51 |
| **Peak 4** |  | **Carbon 7** | 132,66 |
| **Peak 5** |  | **Carbon 2** | 124,44 |
| **Peak 6** |  | **Carbon 1** | 113,86 |
| **Peak 7** | **Carbon 15** |  | 112,11 |
| **Peak 8** |  | **Carbon 3** | 83,58 |
| **Peak 9** | **Carbon 8** |  | 75,62 |
| **Peak 10** | **Carbon 13** |  | 74,60 |
| **Peak 11** | **Carbon 9** |  | 62,20 |
| **Peak 12** | **Carbon 5** |  | 56,69 |
| **Peak 13** | **Carbon 7** |  | 45,51 |
| **Peak 14** | **Carbon 12** |  | 44,83 |
| **Peak 15** | **Carbon 3** |  | 42,63 |
| **Peak 16** |  | **Carbon 4** | 40,55 |
| **Peak 17** | **Carbon 1** |  | 40,24 |
| **Peak 18** | **Carbon 10** |  | 39,86 |
| **Peak 19** | **Carbon 18** |  | 34,20 |
| **Peak 20** | **Carbon 4** |  | 33,83 |
| **Peak 21** | **Carbon 16** |  | 27,90 |
| **Peak 22** |  | **Carbon 9** | 26,51 |
| **Peak 23** | **Carbon 17** |  | 25,00 |
| **Peak 24** |  | **Carbon 10** | 24,16 |
| **Peak 25** |  | **Carbons 5+12** | 23,01 |
| **Peak 26** | **Carbon 19** |  | 22,21 |
| **Peak 27** | **Carbon 11** |  | 21,19 |
| **Peak 28** | **Carbon 6** |  | 19,75 |
| **Peak 29** | **Carbon 2** |  | 19,11 |
| **Peak 30** |  | **Carbon 8** | 18,24 |
| **Peak 31** | **Carbon 20** |  | 16,12 |

**Supplementary sequence data**

>SsDXS2

TGGCAGGCTAATTTGTCATTTTCTGTATGAGAAGTCACCTCTTTGCATTTACCTCTTGGTCTTAAATTTTTGCTATAAAATGCTCCAACAATCCACCTTCTTATTTCCAGCACTAACAACTTCTCCTCATACAACCTCTCTCTCTCTCAACACGCTTTCATTCTCTGCCTGCTTCAACTCACTCCAAAAGAAAGAGATACAGAGAGAGAGAGAGAGAGAGAGAGATGGCGTCGTCTTGTGGAGTTATCAACAGCAGTTTCTTGCCATTGCTCCATTCCGAGGATTCATCAACCTTGTTATCCCGTTCTAGTGCTCTTCTTTCCGTCAAAAAGCATAAGTTCGCCGTGGTAGCAGCTCTTCAACAGGATAACACCAACGACATGGTTGCAAGTGGTGGAGAGAGTCTGACGACGACGAGGCACAAAACAAGAGCTCTGAATTTCACGGGAGAGAAGCCTCCTACACCAATATTGGATACCATCAACTATCCAATCCACATGAAAAACCTCTCTCTCGAGGAACTTGGGAGATTGGCTGATGAATTGAGGGAAGAAATAGTGTACACGGTGTCGAAAACTGGGGGCCATTTAAGTTCAAGCTTAGGTGTGTCGGAGCTGACTGTGGCACTGCACCATGTGTTCAACACACCAGATGATAAGATCATCTGGGATGTGGGTCACCAGGCCTATCCGCACAAAATCTTGACAGGGAGGAGGGCCAGAATGCACACTATCAGGCAGACATTCGGGCTGGCAGGGTTCCCCAAACGAGATGAGAGCGCACACGATGCATTCGGAGCCGGCCACAGCTCCACTAGCATCTCTGCTGGCCTTGGTATGGCGGTCGGGAGGGACCTATTGCACAAAGACAACCACGTCATCTCAGTCATCGGAGACGGTGCCATGACAGCAGGGCAGGCGTATGAGGCGCTCAACAATGCAGGATTCCTCGATTCCAATCTCATCATCGTCTTGAACGACAACAAACAAGTCTCCCTGCCCACGGCCACCGTCGACGGCCCTGCTCCGCCTGTCGGAGCCTTGAGCAAGGCCCTCACGAGGCTGCAAGCCAGCCGGAAATTCCGCCTCCTCCGCGAAGCAGCAAAGGGCATGACTAAGCAGATGGGAGACCAGGCCCATGAGATCGCATCCAAGGTGGACACCTACATGAAGGGGATGATGGGGAAGCCCGGCGCCTCCCTGTTCGAGGAGCTTGGGATTTACTACATCGGCCCCGTCGACGGCCACAACATCGAAGATCTGGTTTACATTTTCAAGAAGGTGAAGGAAATGCCCGCGCCTGGACCTGTTCTGATCCACATCATCACAGAGAAGGGCAAAGGCTACCCTCCCGCAGAAGTCGCCGCAGACAAAATGCACGGCGTGGTCAAGTTCGATCCTACAACGGGAAAGCAGCTGAAGTCGAAAACCAAGACCAAATCATACACACAGTACTTCGCGGAGTCTCTGGTGGCGGAAGCAGAGCAGGACGACAAGATCGTGGCGATCCACGCGGCGATGGGCGGGGGCACGGGGCTCAACTACTTCCAGAAGCGGTTCCCTGACCGGTGCTTCGACGTGGGGATCGCGGAGCAGCACGCGGTCACCTTCGCGGCCGGGCTGGCCACGGAGGGCCTCAAGCCCTTCTGCACGATCTACTCGTCTTTCCTGCAGAGGGGATACGATCAGGTGGTGCACGACGTCGACCTTCAGAAGCTCCCCGTGCGCTTCATGATGGACCGTGCCGGCGTGGTCGGCGCCGACGGCCCCACCCACTGCGGCGCCTTCGACACCACCTACATGGCCTGCCTCCCCAACATGGTCGTCATGGCTCCCTCCGACGAGCTCGAGTTAATGCACATGATCGCCACAGCCGCCGCCATCGACGACCGCCCCAGCTGCGTCCGCTACCCCAGGGGAAACGGCGTCGGCGCGCCGCTCCCGCCTAACAACAAAGGAACTCCTCTCCAGGTTGGGAAGGGAAGGATATTGAGAGAGGGGAGTAGAGTTGCCATTCTAGGGTTTGGAACTATAGTGCAGAACTGTTTGGCGGCGGCGCAGCTTCTCCAAGAGCACGGCGTGTCCGTCACGGTAGCCGACGCCAGATTCTGCAAGCCGCTGGATGGAGATCTGATCAAGAAGTTGGTGCAGGAGCATGAAGTTCTCATCACTGTTGAAGAGGGATCTATTGGTGGATTCAGCGCTCATATTTCTCATTTCTTGTCTCTCAACGGACTTCTCGACGGGAATCTTAAGTGGAGGCCAATGGTTCTTCCCGACAGATACATCGATCATGGGGCACAGACCGATCAGATTGAAGAGGCTGGGTTGAGTCCAAAGCATATTGCAAAGACTGTTGTGTCACTTATTGGTGGAGGAAAAGATAGTCTTCATTTGATCAACAACTTGTAATCTAAATTTCGTCCAAGAAACAACGTTAGTGATGGTGCCGGAACTCGAGCAGCCAGCTGCAGTTGATCTCCTCAGAGATGTTAGTTTTATGATGTAATGTAAATATACATGGGGATCGATTGCTGCTGGAAGACTCTAACCCATGAAGTTGGGGGAGTTTTTCTAAATAATCGTTCAGATGGCAACCTTATGTTTGTAGAAACAAATAATTACTCCATACTTTTATTAAATAAATTCATTTGTCCCATTCATACATTTCTAAGTGCAGTTATGTTCCAAGTTAAGATTATATTTGTGTGTATAGCCATGTGTCAATTTTAGATATTTCCTTCGTCCCCCATATTTATACATCTTTTGCTTTTTGATATATCCCACAAAATTATGCA

>SsDXR

CGATTCCTTATAAAATAGAGCCGAACTGTTATTATTGTACACAATCTACCTCCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTAACCGTCACTAATTTGTTTATAGTTTGCCATCCTTGACCAACTCGAAATTACAGTGTTGGTGCCTACTTATATCTCAGGTTTCTTGAAATAAAGAGAGGAAGAGACTGAAAAAGAAAGCACCTTTTTCTCAATCTTCAGCTTTTCTGTGCATTTCAGCTTGTGATAAGCCATGGCTCTCAACTTGATGTCTCCAACTGAAATCAAGACTCTGTCTTTCTTGGATTCCTCCAAATCGAATTACAATCTCAATCCTCTCAAGTTCCAAGGTGGATTTGCTTTCAAGAGGAAGGATAGCAGATGCACTGCTTCAAAGAGAGTCCATTGCTCGGCACAGCCACCTCCTCCTCCGGCTTGGCCCGGGAGGGCTGTTCCTGAGCCCGGTCGTATGACATGGGAGGGCCCGAAGCCCATTTCGGTTATTGGATCCACTGGCTCCATTGGAACTCAGACGTTGGACATAGTTGCTGAAAATCCGGATAAGTTCAGAATCGTGGCACTTTCTGCTGGTTCAAATGTCACTCTGCTTGCTGATCAAGTGAGGGCTTTCAAACCCAAATTAGTATCCGTGAGAGACGAGTCATTAGTTAGTGAGCTCAAAGAGGCTTTGGCTGGTATTGTGGAGATGCCTGAAATTATTCCGGGAGAGCAGGGAATGGTCGAGGTTGCACGCCATCCCGATGCTGTTACTGTAGTCACGGGAATTGTTGGATGTGCTGGTTTGAAGCCGACAGTGGCTGCCATAGAAGCTGGAAAAGACATTGCTTTGGCCAATAAAGAGACACTAATTGCTGGAGGACCTTTTGTCCTTCCTCTTGCAAAGAAGCATAATGTCAAGATTCTTCCTGCGGATTCTGAACATTCTGCTATATTTCAGTGTATCCAAGGCTTGCCAGAAGGTGCTTTGAGGCGTATAATTTTGACCGCATCCGGGGGTGCTTTCAGGGATTTGCCAGTTGAGAAATTGAAAGAAGTGAAAGTAGCAGATGCTTTAAAGCATCCCAACTGGAATATGGGAAAGAAAATTACAGTGGACTCTGCAACCCTCTTCAACAAGGGTCTAGAAGTTATAGAAGCTCACTATTTGTTTGGGGCCGAATATGATGATATCGAGATTGTTATCCATCCTCAATCTATCATTCATTCGATGATTGAAACACAGGATTCTTCCGTGCTAGCGCAATTGGGATGGCCCGACATGCGTTTGCCTATTCTATACACCTTATCGTGGCCGGAGAGAATCTACTGCTCCGAGATTACATGGCCTCGCCTTGACCTTTGCAACGTCGACCTAACATTCAAGAAGCCCGACAATGTCAAATACCCTTCGATGGATCTAGCTTATGCTGCTGGACGAGCTGGAGGCACCATGACCGGAGTTCTCAGCGCAGCCAACGAGAAAGCAGTTGAAATGTTCATCGACGAGAAAATCGGTTACCTCGACATATTCAAGGTTGTGGAGGTGACGTGCGACAAGCACCGAGCGGAGATGGTGTCGTCGCCTTCGTTGGAGGAGATCATCCACTACGACCAGTGGGCCCGGGATTACGCGGCGGGCGTGCAGCGGTCTGCGGGATTGAGTCCTGCTCTTGTATGAGCAGAGGTTGATGGATGTGATCATCAACTGGAAACTTGTTCCATTTCTTTTTCTTGGTTCTGTTTTTCCCTTCTTTGTTTGGGGGGAAGTCATTTATCATGAAAAGGAAAGGAATCATGTGACATTTATGCAACAGTGCCACCATAAAATAGATTCCAAAAAAAAAAAAGGGTCACGTGATTCTGTGTTTTTGATATTCATCATCGAAGTGTAAATTTGATGTCCAATGTTTTTCATAAGTTCCTTTTCTGAAAAGGGCATTTAGTGAGAGGGTGGAATAAATTTTAAAGATACATGAATATAAATTGTGTTTTCCTCATAATTGGGCCAAAAATATCAGAATTAGGACACTAATTGCGGCAGAATATCAATGTGAATTTTTGTATGACAGTGTTCTCGGAGTTTGAATGCATCAAACTAATATTCTTGTGTAAAGTTAATAGTTCGTAGATGGTGTTAATTTTTTACGGTTCTTTATTTATTATTACGAGGGCTGTATACATTACGACTTGGGCTTCAGGTGCTAAAATGT

>SsMCT

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>SsHDS

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>SsHDR

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