Article

Antibacterial and antibiofilm potential of ethanolic extracts of *Duguetia vallicola* (Annonaceae) against in-hospital isolates of *Pseudomonas aeruginosa*

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**Supplementary Materials**

**Table S1.** *NMR Spectroscopic Data (1H 400 MHz, 13C 100 MHz) of* ***1*** *in CDCl3*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ATOM | 1H (ppm) | MULT | *J* (Hz) | 13C (ppm) | DEPT | HMQC | HMBC |
| 1 |  |  |  | 147.9 | C |  | 7.15, 6.36 |
| 1a |  |  |  | 130.2 | C |  |  |
| 1b |  |  |  | 123.2 | C |  |  |
| 2 |  |  |  | 151.7 | C |  | 7.15, 6.36 |
| 3 | 7.15 | s |  | 103.2 | CH | 7.15 | 7.74 |
| 3a |  |  |  | 135.7 | C |  | 8.88 |
| 4 | 7.74 | d | 5.0 | 124.2 | CH | 7.74 | 8.88 |
| 5 | 8.88 | d | 5.1 | 144.8 | CH | 8.88 |  |
| 6a |  |  |  | 145.2 | C |  | 8.88 |
| 7 |  |  |  | 182.3 | C |  | 8.56 |
| 7a |  |  |  | 131.2 | C |  | 7.55 |
| 8 | 8.56 | dd | 7.9 – 0.7 | 128.8 | CH | 8.56 | 7.71 |
| 9 | 7.55 | pst | 7.7 – 7.4 | 128.5 | CH | 7.55 | 8.59 |
| 10 | 7.71 | dt | 8.2 – 1.2 | 133.9 | CH | 7.71 |  |
| 11 | 8.59 | d | 8.1 | 127.3 | CH | 8.59 | 7.55 |
| 11a |  |  |  | 132.8 | C |  | 8.59, 7.71 |
| 12 | 6.36 | s |  | 102.4 | CH2 | 6.36 | 6.36 |



**1**

**Table S2.** *NMR Spectroscopic Data (1H 400 MHz, 13C 100 MHz) of* ***2*** *in CDCl3*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ATOM | 1H (ppm) | MULT | *J* (Hz) | 13C (ppm)\* | HMQC | HMBC |
| 1 |  |  |  | 156.4 |  | 4.08 |
| 1a |  |  |  | 115.8 |  | 9.11 |
| 1b |  |  |  | 122.8 |  | 8.22 |
| 2 |  |  |  | 147.2 |  | 4.10 |
| 3 |  |  |  | 148.4 |  | 8.22, 4.19 |
| 3a |  |  |  | 130.8 |  | 8.97 |
| 4 | 8.22 | d | 5.3 | 119.1 | 8.22 | 8.97 |
| 5 | 8.97 | d | 5.3 | 144.6 | 8.97 |  |
| 6a |  |  |  | 145.6 |  | 8.97 |
| 7 |  |  |  | 182.6 |  | 8.58 |
| 7a |  |  |  | 131.1 |  | 9.11, 7.54 |
| 8 | 8.58 | dd | 7.8 – 1.4 | 129.0 | 8.58 | 7.75 |
| 9 | 7.54 | dt | 7.9 – 1.0 | 128.2 | 7.54 | 9.11 |
| 10 | 7.75 | dt | 8.5 – 1.6 | 134.3 | 7.75 | 8.58, 7.75 |
| 11 | 9.11 | d | 8.3 | 127.5 | 9.11 | 7.54 |
| 11a |  |  |  | 131.5 |  | 9.11, 7.54 |
| 12 | 4.08 | s |  | 61.0 | 4.08 |  |
| 13 | 4.10 | s |  | 61.4 | 4.10 |  |
| 14 | 4.19 | s |  | 61.7 | 4.19 |  |



**2**

**Table S3.** *NMR Spectroscopic Data (1H 400 MHz, 13C 100 MHz) of* ***3*** *in CDCl3*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ATOM | 1H (ppm) | MULT | *J* (Hz) | 13C (ppm) | DEPT | HMQC | HMBC |
| 1 |  |  |  | 145.7 | C |  | 6.65, 3.66 |
| 1a |  |  |  | 126.8 | C |  | 6.65 |
| 1b |  |  |  | 125.1 | C |  | 6.65, 3.12, 3.03 |
| 2 |  |  |  | 152.9 | C |  | 6.65, 3.89 |
| 3 | 6.65 | s |  | 111.6 | CH | 6.65 |  |
| 3a |  |  |  | 127.3 | C |  | 3.61 |
| 4 | 2.82  3.29 | dd  m | 3.2 – 16.4  5.6 | 27.2 | CH2 | 2.82  3.29 | 6.65, 3.61 |
| 5 | 3.12  3.61 | m  dd | 4.2 – 13.8  5.9 – 12.1 | 42.1 | CH2 | 3.12  3.61 |  |
| 6 | 4.81 | s *broad* |  |  |  |  |  |
| 6a | 4.05 | m |  | 53.2 | CH | 4.05 |  |
| 7 | 3.03  3.12 | pst  m | 13.7  4.2 – 13.8 | 35.6 | CH2 | 3.03  3.12 |  |
| 7a |  |  |  | 131.7 | C |  | 3.12, 3.03 |
| 8 | 7.25 | m |  | 127.7 | CH | 7.25 | 7.32, 3.12 |
| 9 | 7.25 | m |  | 128.0 | CH | 7.25 | 7.25 |
| 10 | 7.32 | m | 8.0 – 2.6 | 127.4 | CH | 7.32 |  |
| 11 | 8.39 | d | 7.8 | 128.5 | CH | 8.39 | 8.39 |
| 11a |  |  |  | 134.6 | C |  | 8.39, 3.12, 3.03 |
| 12 | 3.66 | s |  | 60.2 | CH3 | 3.66 |  |
| 13 | 3.89 | s |  | 55.9 | CH3 | 3.89 |  |



**3**



**Figure S1.** 1H-NMR spectrum (amplification 6.2 – 9.1 ppm) of **1**, (CDCl3, 400 MHz).



**Figure S2.** 1H-NMR spectrum (amplification 4.0 – 9.2 ppm) of **2**, (CDCl3, 400 MHz).



**Figure S3.** 1H-NMR spectrum (amplification 7.5 – 9.2 ppm) of **2**, (CDCl3, 400 MHz).



**Figure S4.** 1H-NMR spectrum of **3**, (CDCl3, 400 MHz).



**Figure S5.** 1H-NMR spectrum (amplifications) of **3**, (CDCl3, 400 MHz).