**A prospectus of plant growth promoting endophytic bacterium from Orchid (*Vanda cristata*)**

Sujit Shah1,4\*, Krishna Chand1, Bhagwan Rekadwad2, Yogesh S. Shouche2, Jyotsna Sharma3, Bijaya Pant1\*

1Central Department of Botany, Tribhuvan University, Nepal

2National Centre for Microbial Resource, National Centre for Cell Science, Savitribai Phule Pune University Campus, Ganeshkhind, Pune 411021, India

3Department of Plant Science, Texas Tech University, USA

4 Daffodil Agro Biological Research Center, Nepal

\*Corresponding authors email addresses: b.pant@cdbtu.edu.np sujitaug16shah@gmail.com

****

**Supplementary Figure 1: The GCMS chromatogram of the methanol extract of uncolonised plant**

**Supplementary Table1: The list of the compounds identified from methanol extract of uncolonised plant**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Peak | Retention Time | Name  | Mass peak | Base Peak |
| 1. | 10.410 | Hexadecanoic acid, methyl ester | 640 | 74.10 |
| 2. | 11.125 | Heptadecanoic acid, heptadecyl ester | 586 | 43.15 |
| 3. | 12.930 | Hexadecanoic acid, 1-(hydroxymethyl)-1,2-ethanediyl ester | 588 | 57.15 |
| 4. | 13.580 | d-Mannitol, 1-O-(22-hydroxydocosyl)- | 613 | 73.10 |
| 6. | 17.850 | Ethyl iso-allocholate | 685 | 55.10 |
|  |  |  |  |  |
| 7. | 19.445 | d-Mannitol, 1-O-(22-hydroxydocosyl)-  | 704 | 73.10 |
| 8. | 25.975 | beta. Carotene | 820 | 55.10 |
| 9. | 28.080 | Ethyl iso-allocholate | 685 | 43.15 |

****

**Supplementary Figure 2: The GCMS chromatogram of the methanol extract of colonised plant by PVL1**

**Supplementary Table2: List of the compounds identified from methanol extract of plant colonized by PVL1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Peak | Retention Time | Name | Mass peak | Bass peak |
| 1. | 10.015 | 1H-Indole-3-acetic acid, methyl ester | 562 | 130.15 |
| 2.  | 10.405 | Palmitic acid, methyl ester | 574 | 74.10 |
| 3. | 10.065 | 1H-Indole-3-acetic acid | 558 | 130.15 |
| 4. | 11.705 | Octadecanoic acid | 576 | 74.10 |
| 5.  | 11.565 | Ethyl iso-allocholate | 576 | 44.10 |
| 6. | 14.610 | Digitoxin | 596 | 44.10 |
| 7. | 13.490 | d-Mannitol, 1-O-(22-hydroxydocosyl)- | 595 | 44.05 |
| 8. | 28.680 | L-Ascorbic acid 6-palmitate | 548 | 44.10 |



**Supplementary Figure 3: The GCMS chromatogram of the methanol extract of colonized by DLMB**

**Supplementary Table3: List of the compounds identified from methanol extract of colonised plant by DLMB**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Peak | Retention Time | Name | Mass peak | Bass peak |
| 1. | 9.990 | 1H-Indole-3-acetic acid, methyl ester | 445 | 130.15 |
| 2. | 10.300 | Cinnamic acid, | 442 | 55.15 |
| 3. | 10.705 | Eicosanoic acid | 451 | 73.10 |
| 4. | 10.400 | Hexadecanoic acid, methyl ester (Palmatic acid) | 460 | 74.10 |
| 5. | 10.535 | Octadecanoic acid | 442 | 55.10 |
| 6. | 11.865 | d-Mannitol, 1-O-(22-hydroxydocosyl)- | 457 | 55.15 |
| 7. | 11.565 | Oleic acid | 457 | 55.10 |

****

**Supplementary Figure 4: The GCMS chromatogram of the methanol extract of PVL1 (Bacteria)**

**Supplementary Table 4: List of the compounds identified from methanol extract of PVL1 (Bacteria)**

****