**“Supplementary data”**

**Antimicrobial activity of certain natural-based plant oils against the antibiotic-resistantacne bacteria**

Ahmed Esmaela,b,1, Mervat G. Hassanb,1, Mahmoud M. Amerb, Soheir Abdelrahmanc, Ahmed M. Hamedd, Hagar A. Abd-rabohb, Mohamed F. Fodaa,e,⁎

a*State Key Laboratory of Agricultural Microbiology, College of Plant Science and Technology, College of Life*

*Science and Technology, College of Science, Huazhong Agricultural University, Wuhan 430070, China*

b *Botany and Microbiology Department, Faculty of Science, Benha University, Qalubiya Governorate 13511, Egypt*

c *Clinical Pathology Department, Faculty of Medicine, Benha University, Qalubiya Governorate 13511, Egypt*

d *Dermatology Department, Faculty of Medicine, Benha University, Qalubiya Governorate 13511, Egypt*

e *Department of Biochemistry, Faculty of Agriculture, Benha University, Moshtohor, Toukh 13736, Egypt*

\***Correspondence:** Mohamed F. Foda, Email address: [m.frahat@fagr.bu.edu.eg](mailto:m.frahat@fagr.bu.edu.eg)

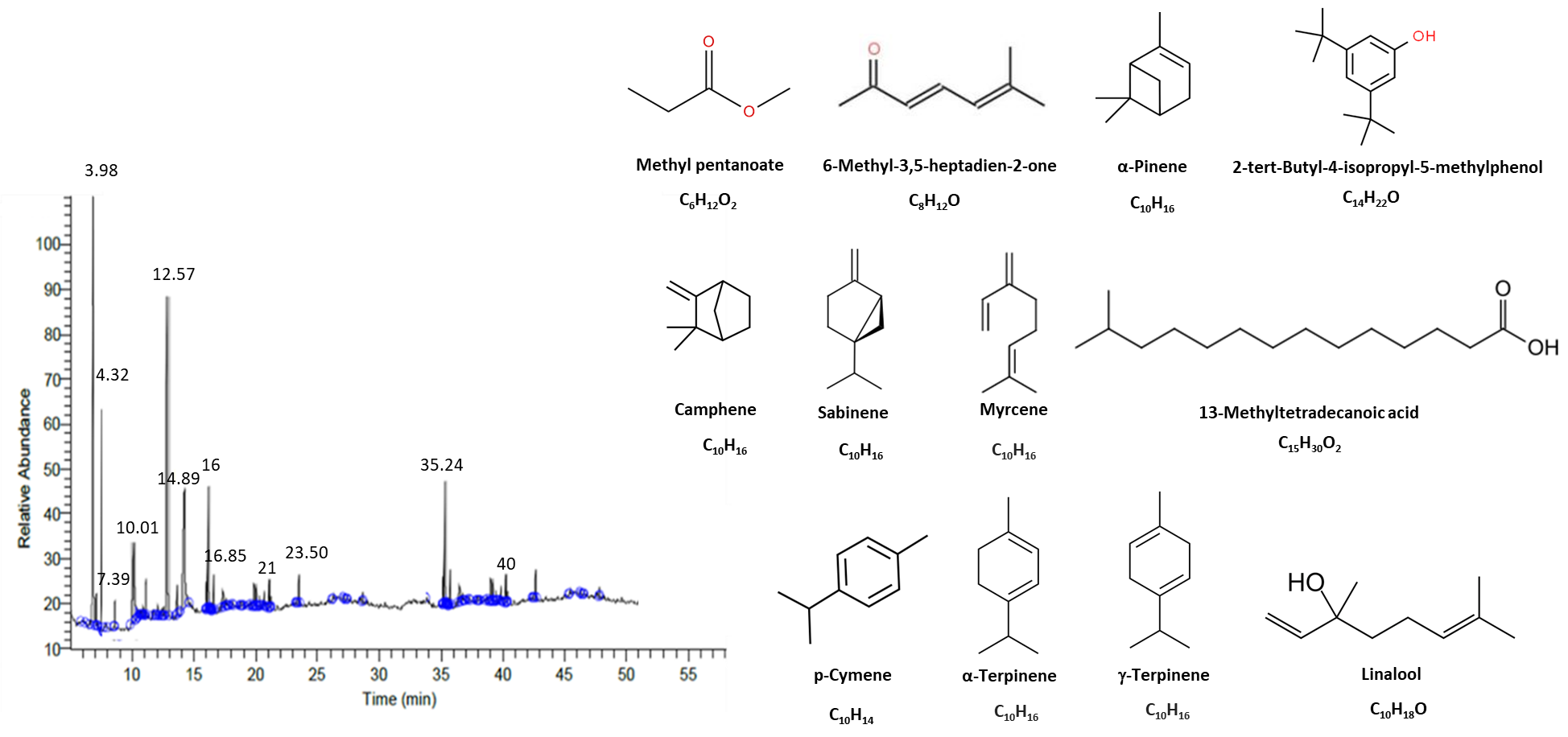
1 ***These two authors contributed equally to this manuscript.***

**Author Contributions:** A.E., M.G.H., M.M.A., S.A., A.M.H. and M.F.F designed research; A.E., M.G.H. and H.A.A performed the experiments; A.E., M.G.H., and M.F.F. assembled the 16S rRNA sequences; M.F.F. project administration; M.F.F. funding acquisition; A.E., M.G.H., M.M.A., S.A., A.M.H. and M.F.F. analyzed data; A.E., M.G.H and M.F.F wrote the paper. All authors listed have made a direct, substantial and intellectual contribution to this work therefore approved it for publication.

**Sup Table S1. Biochemical characterization of the acne bacteria isolated from Benha University Hospital, Egypt.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Isolates** | **Morphological characteristics and Biochemical tests** | | | | | | | | | | | | | **Designated name based on 16S rRNA sequencing** | **NCBI accession number** |
| **Morphology**  **& Arrange** | **Motility** | **Gram stain** | **blood hemolysis** | **Oxidase** | **Catalase** | **Gelatinase** | **Coagulase** | **DNase** | **Indole** | **Nitrate** | **Mannitol** | **glucose** |
| **Aerobic isolate #1** | Coccus in clusters | - | + | Beta hemolysis | - | + | + | + | + | - | + | + | + a | ***Staph. aureus***  **strain EG-AE1** | MK934843 |
| **Aerobic isolate #2** | Coccus in clusters | - | + | Gamma hemolysis | - | + | - | - | - | - | + | - | + a | ***Staph. epidermidis* strain EG-AE2** | MK937638 |
| **Anaerobic isolate** | Pleomorphic Bacilli | - | + | Weak or no hemolysis | NA | + | + | NA | - | + | + | + | +a | ***Cutibacterium acnes* Strain EG-AE1** | MN336167 |

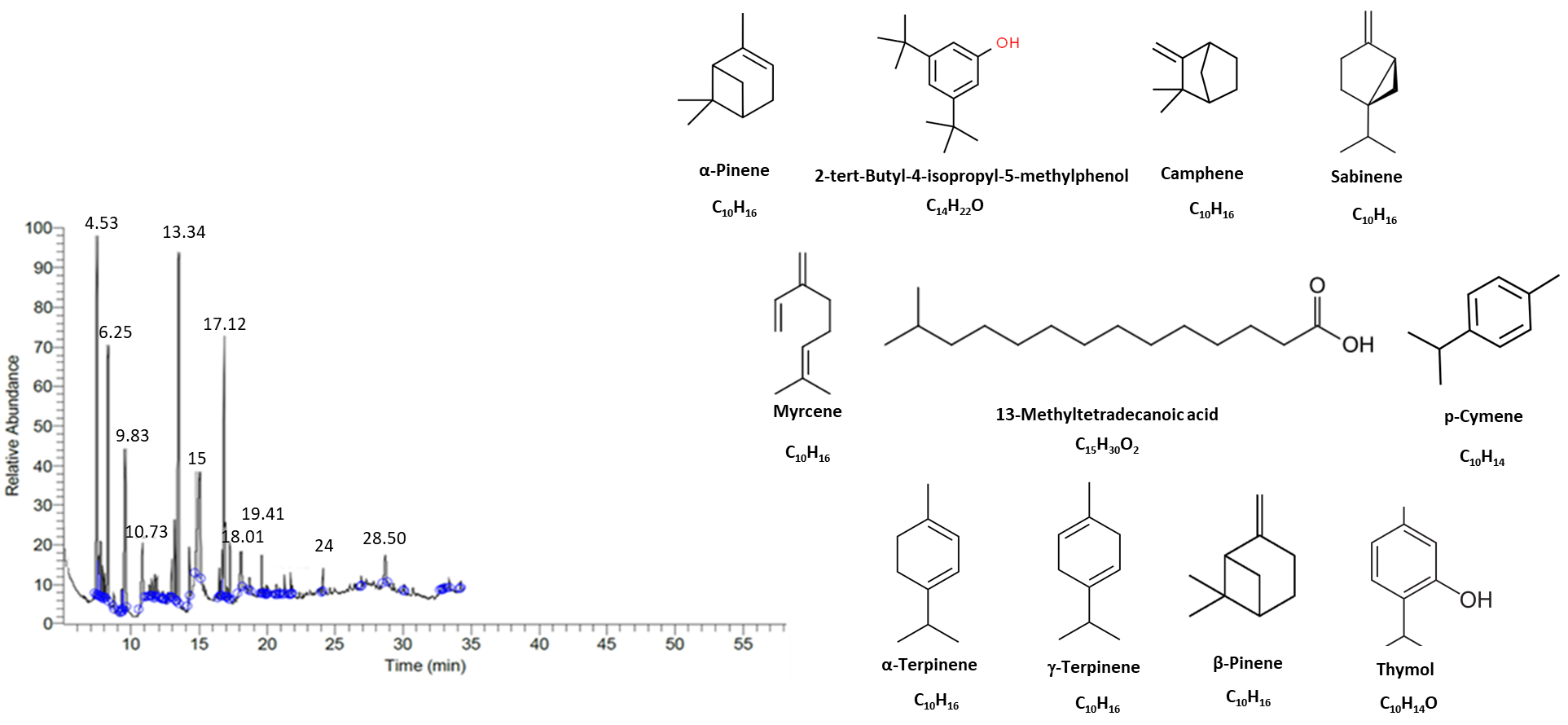
a denotes for Glucose fermentation with gas production, not tested (NA)



**a**

**b**

**Sup. Figure 1.** Gas chromatogram of the ethanolic extract of the tea tree oil resin. **a)** The GC-MS chromatogram. **b)** The chemical structure of the oil major constituents.



**a**

**b**

**Sup. Figure 2.** Gas chromatogram of the ethanolic extract of Rosemary oil resin. **a)** The GC-MS chromatogram. **b)** The chemical structure of the oil major constituents