

Supplementary materials

‘Hairy’ root Extracts as Source for ‘Green’ Synthesis of Silver Nanoparticles and Medical Applications

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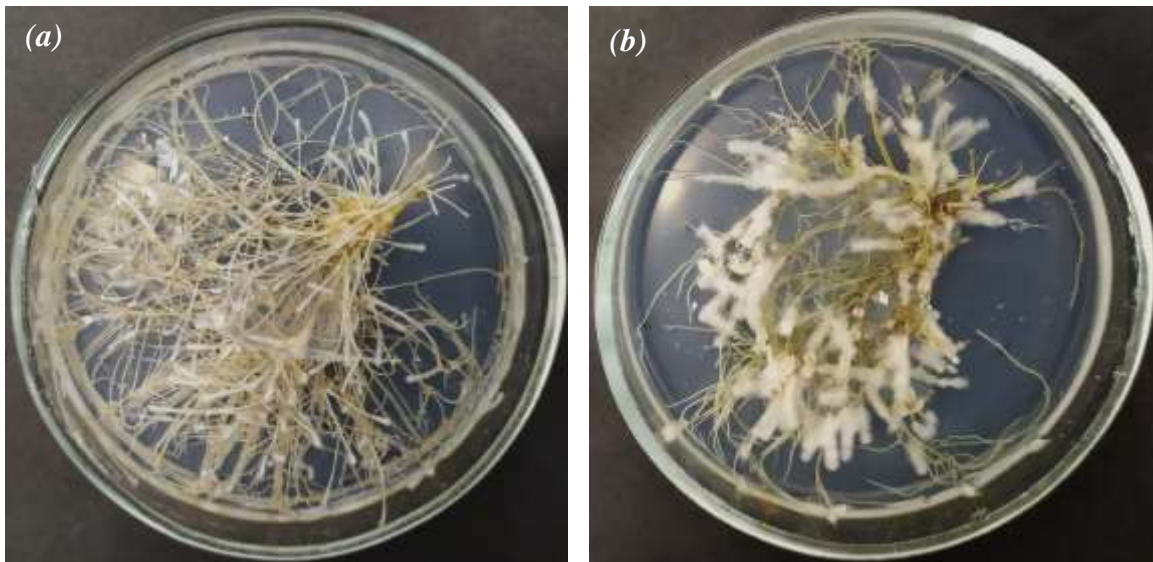
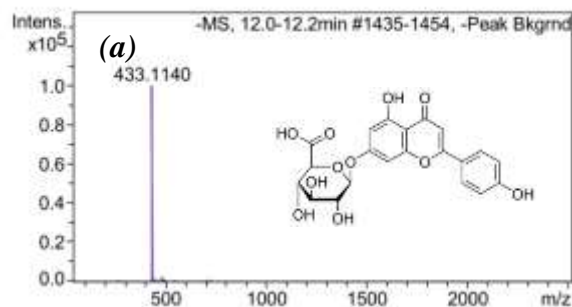
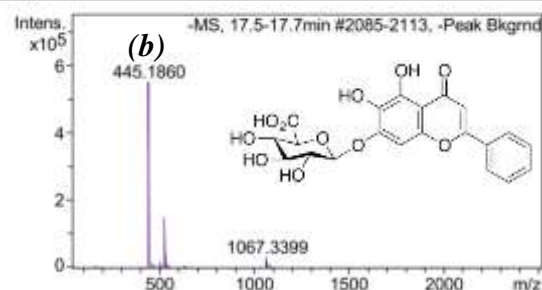


Fig. S1. Images of *Artemisia annua* (a) and *Artemisia tilesii* (b) “hairy” root clones

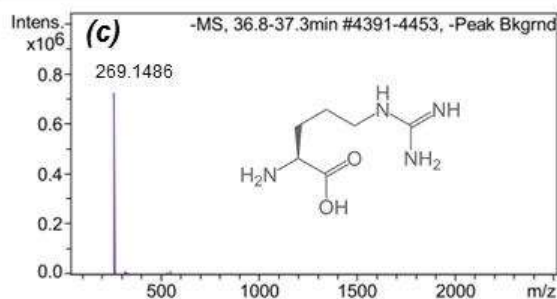
Cmpd 5, 12.1 min



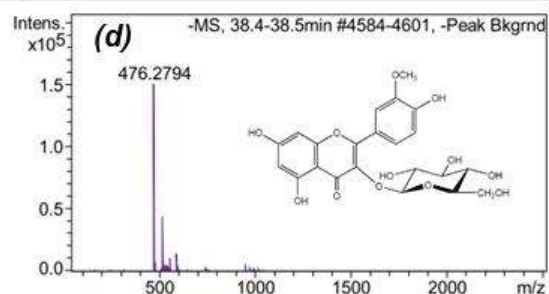
Cmpd 7, 17.6 min



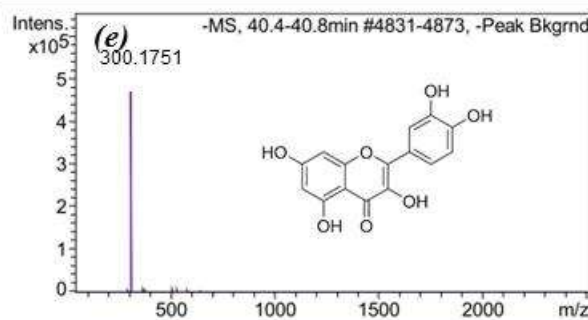
Cmpd 8, 36.9 min



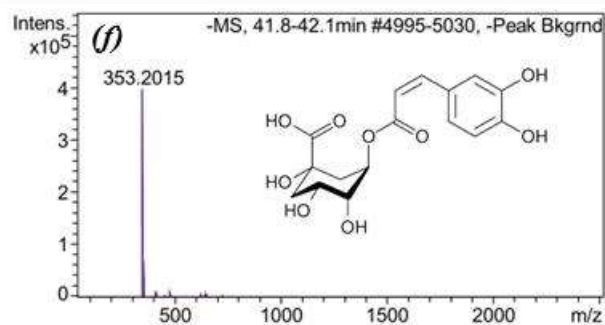
Cmpd 9, 38.4 min



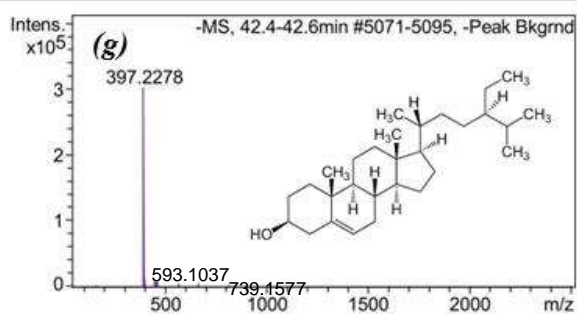
Cmpd 14, 40.6 min



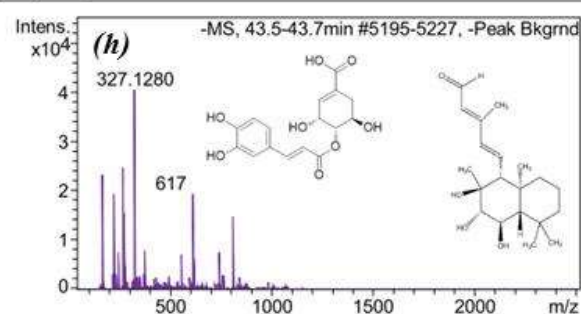
Cmpd 15, 41.9 min



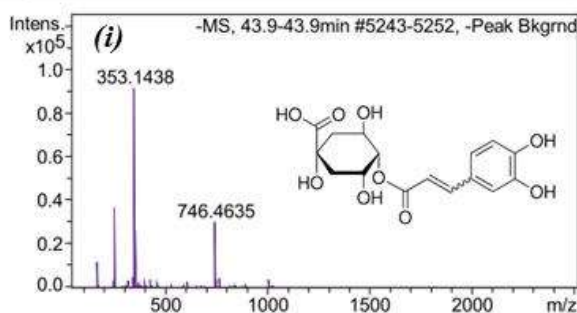
Cmpd 16, 42.5 min



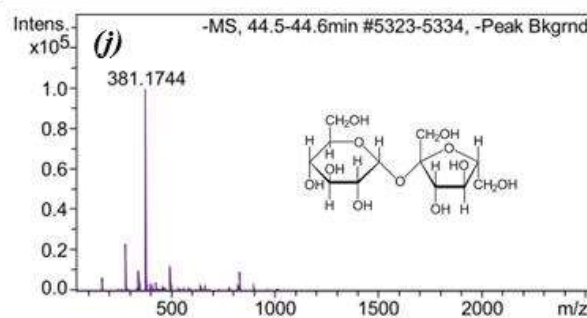
Cmpd 20, 43.7 min



Cmpd 21, 43.9 min



Cmpd 24, 44.6 min



Cmpd 25, 45.0 min

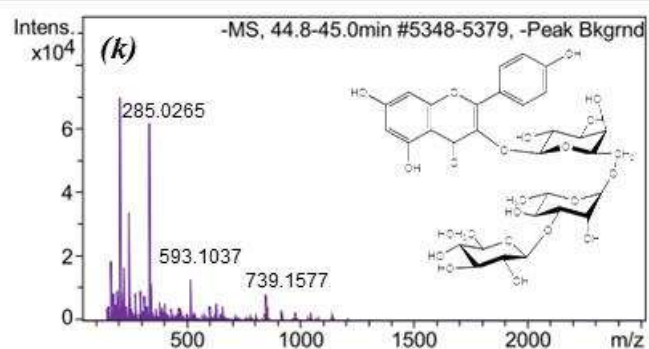


Fig. S2. Fragmentation behavior of the ethanol extracts of *A. tilesii* roots (*a* - Apigenin-7-O-glucoside; *b* - Baicalein-7-O-glucuronide; *c* - Arginin; *d* - Isorhamnetin 3-O-glucoside; *e* - Quercetin; *f* - Chlorogenic acid; *g* - Sitosterol; *h* - Caffeoylshikimic acids and Sterebin J/Sterebin I; *i* - Caffeoylquinic acid; *j* - Sucrose+K⁺; *k* - kaempferol-3-O-galactoside-rhamnoside-7-O-rhamnoside) MS in negative ionization mode.



Fig. S3. Stability of AgNPs in six month after the initiation by *Artemisia tilesii* “hairy” root extracts

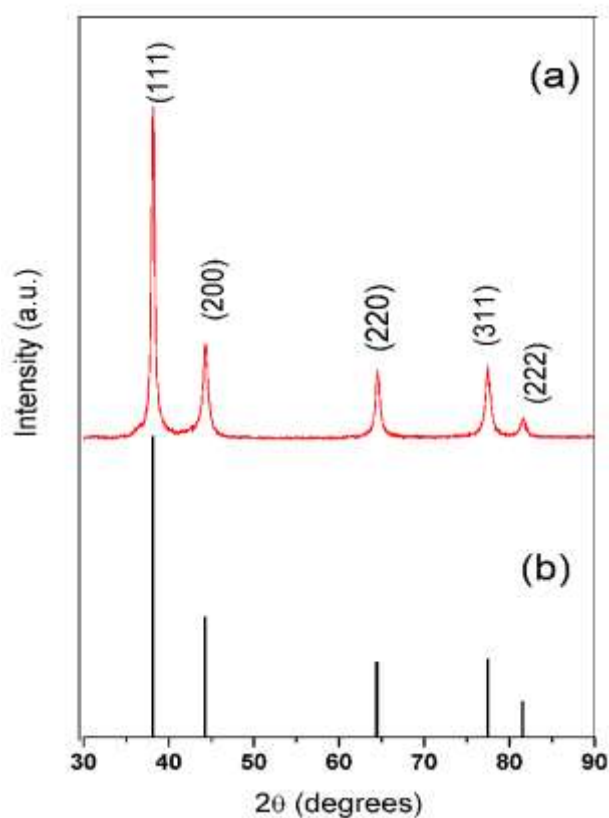


Fig. S4. XRD pattern of prepared AgNPs by *Artemisia tilesii* "hairy" root extracts (a) and JCPDS file No. 89-3722 (b)

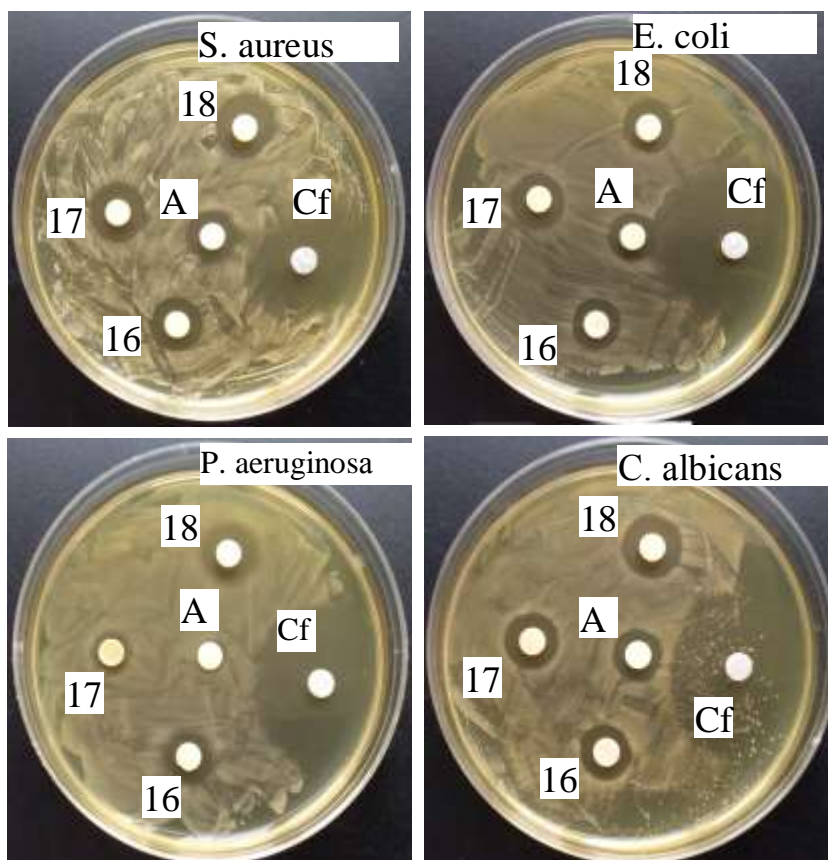


Fig. S5. Antimicrobial effect of AgNPs obtained from *A. tilesii* "hairy" root clones [22k: 16, 17,18], AgNO₃(solution) and antibiotic on *St. aureus*, *Candida albicans*, *Pseudomonas Aeruginosa* and *Escherichia coli*.