Supporting Information

**Rhamnolipids coated iron oxide nanoparticles as a novel multi-target candidate against major foodborne E. coli serotypes and methicillin-resistant S. aureus**

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**Table S1.** Average Size, PDI and zeta potential p-CoA and GA loading efficiency in the prepared nanoparticles

| Sample                  | Size (nm)    | PDI          | zeta potential (mV) | Leading efficiency (%)(p-CoA) | Leading efficiency (%) (GA) |
|-------------------------|--------------|--------------|---------------------|-------------------------------|----------------------------|
| Fe₃O₄                   | 15.09±2.8    | 0.385±0.16   | −18.7±0.22          | —                            | —                          |
| RHL-Fe₃O₄              | 25±4.8       | 0.153±0.04   | −33.3±0.66          | —                            | —                          |
| Fe₃O₄@PVA@p–CoA/GA     | 213.8±26.6   | 0.264±0.017  | −33.7±0.25          | 95±2.8                       | 97±2.2                     |
| RHL–Fe₃O₄@PVA@p–CoA/GA | 254.6±32.1   | 0.202±0.014  | −34.3±0.33          | —                            | —                          |

Numerical data are reported as mean ± SD to Z-potential (n=3) and particle size and PDI (n=4).

**Fig. S1:** Chemical structures of (A) p-Coumaric acid (p-CoA), and (B) Gallic acid (GA)
Fig. S2 Hydrodynamic size, zeta potential and polydispersity index (PDI) to different Fe₃O₄ formulation; (A) bare Fe₃O₄, (B) Fe₃O₄@PVA, (C) Fe₃O₄@PVA@p–CoA/GA NPs and (D) RHL–Fe₃O₄@PVA@p–CoA/GA biosurfactants NPs. Numerical data is reported as mean ± SD z-potential (n=3) and particle size and PDI (n=4).