

Supplementary materials

Metallo-Glycodendrimeric Materials against Enterotoxigenic *Escherichia coli*

Aly El Riz ^{1,†}, Armelle Tchoumi Neree ^{2,3,†}, Leila Mousavifar ¹, René Roy ¹, Younes Chorfi ^{2,3} and Mircea Alexandru Mateescu ^{1,3,*}

¹ Department of Chemistry, Université du Québec à Montréal, Succ. Centre-Ville, P.O. Box 8888,
Montréal, QC H3C 3P8, Canada; el_riz.aly@courrier.uqam.ca (A.E.R.);
leilyanmousavifar@gmail.com (L.M.);
roy.rene@uqam.ca (R.R.)

² Department of Veterinary Biomedicine Sciences, Faculty of Veterinary Medicine, Université de Montréal,
St-Hyacinthe, QC J2S 2M2, Canada; armelle.tchoumi.neree@umontreal.ca (A.T.N.);
younes.chorfi@umontreal.ca (Y.C.)

³ Centre de recherche en infectiologie porcine et avicole (CRIPA), Université de Montréal,
St-Hyacinthe, QC J2S 2M2, Canada

* Correspondence: mateescu.m-alexandru@uqam.ca; Tel.: +1-(514)-987-4319

† These authors contributed equally to this work as first author.

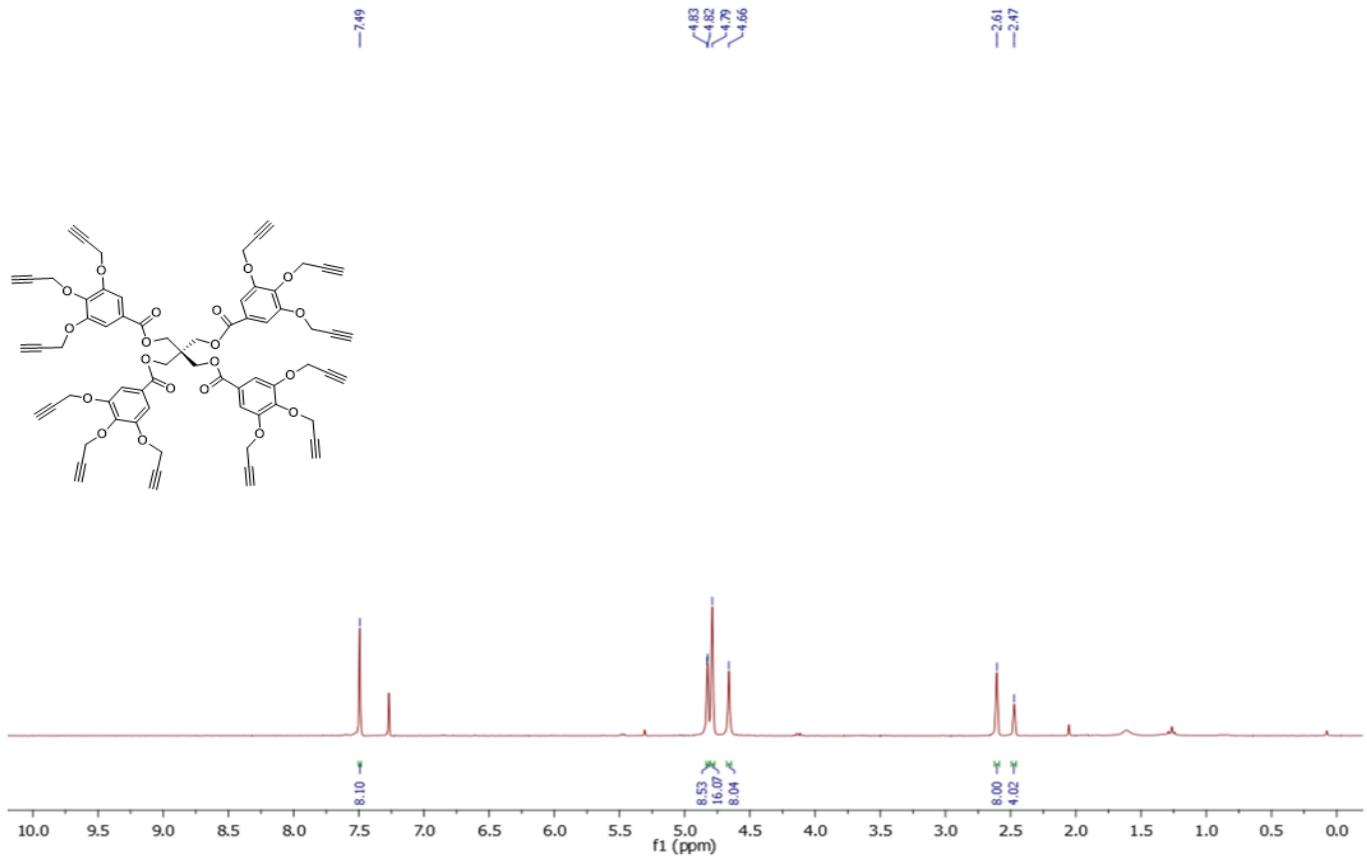


Figure S1. ^1H -NMR (300 MHz, CDCl_3) of compound 5

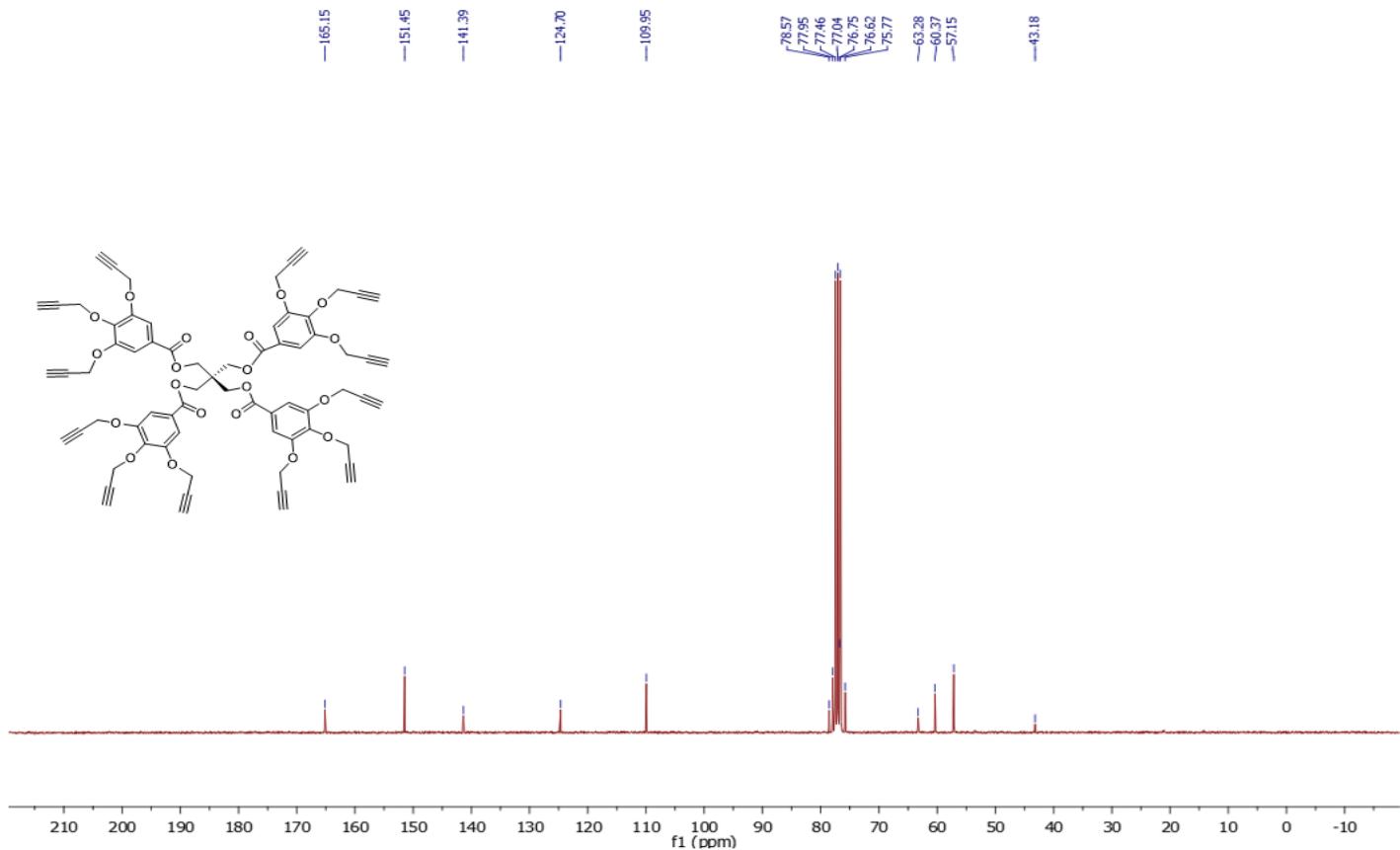


Figure S2. ^{13}C -NMR (75 MHz, CDCl_3) of compound 5

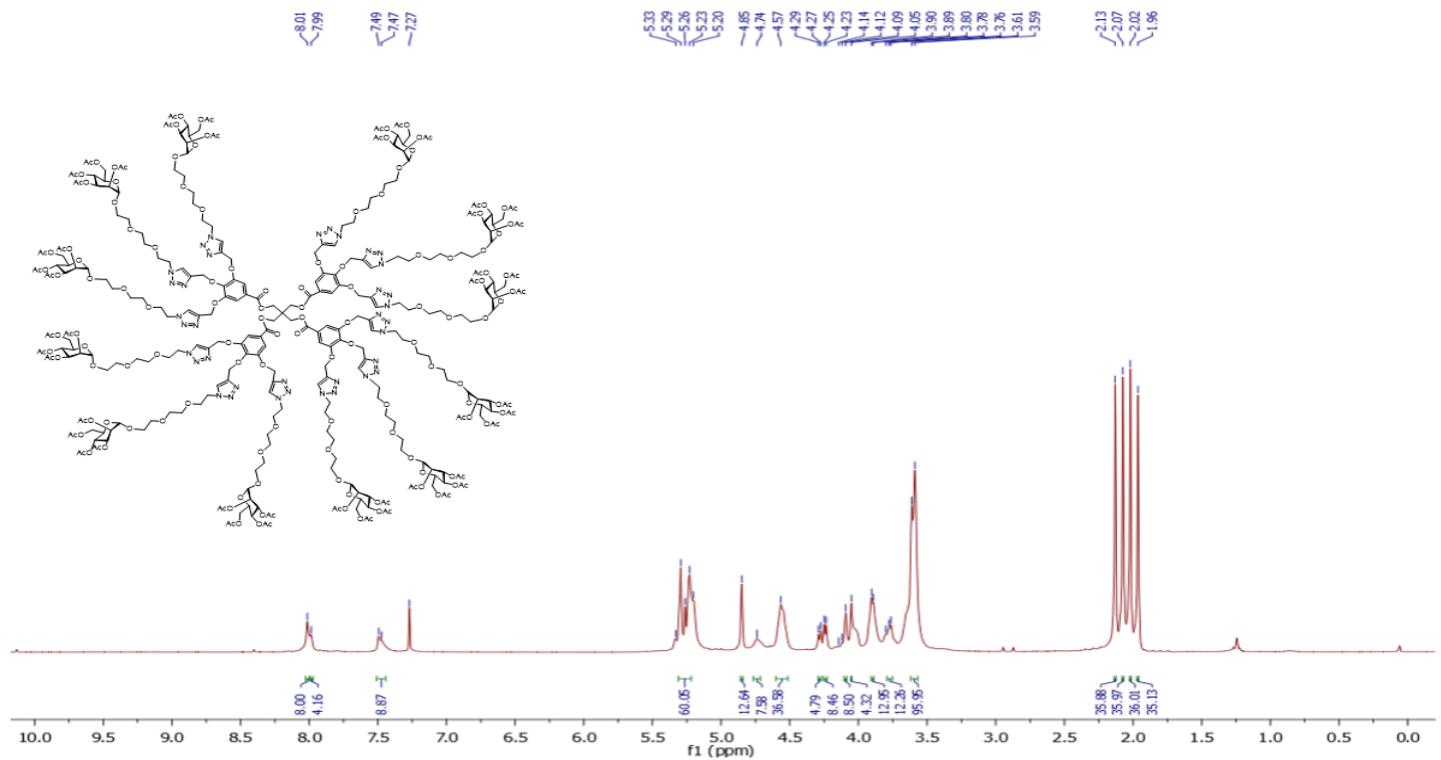


Figure S3. ^1H -NMR (300 MHz, CDCl_3) of compound 10

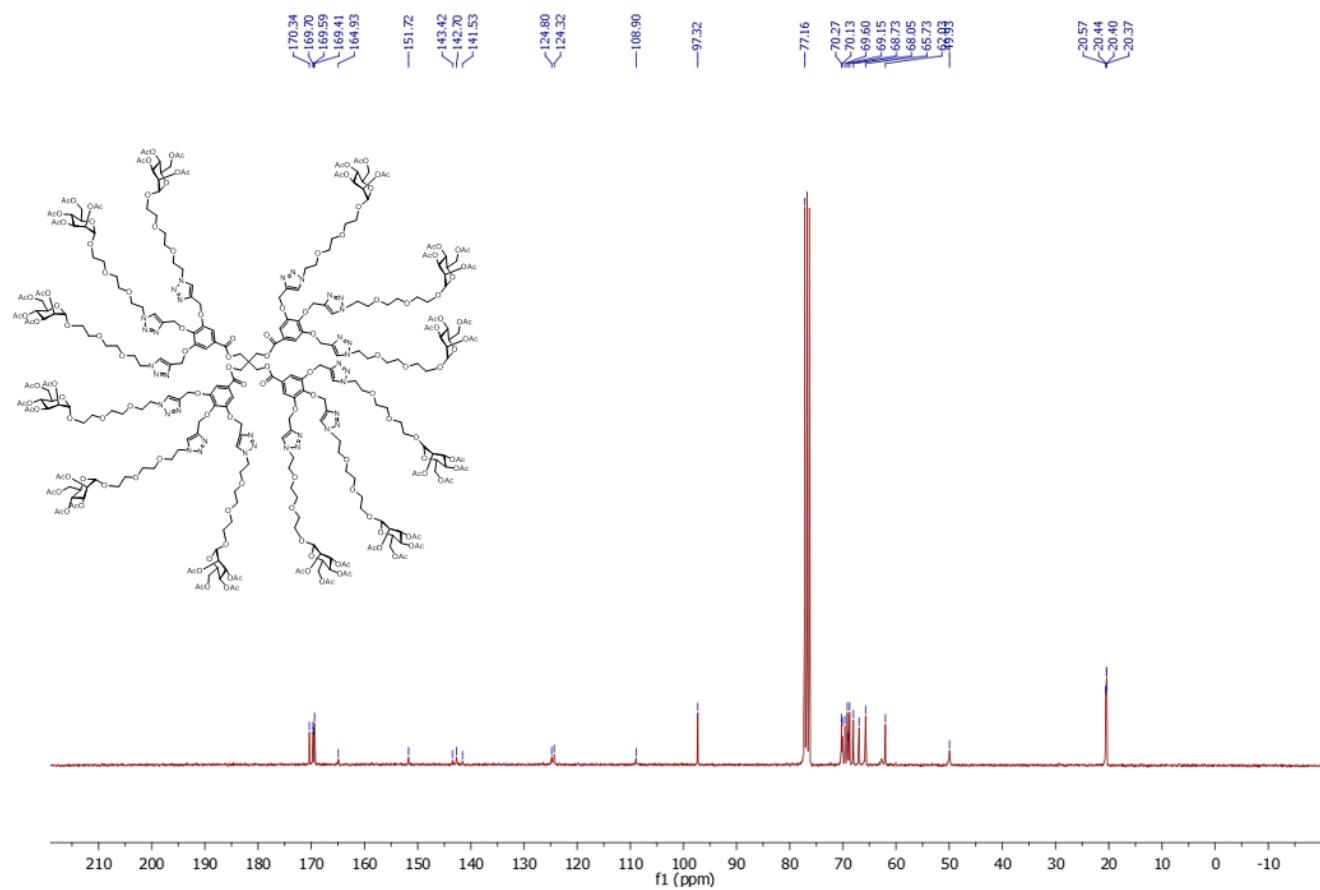


Figure S4. ^{13}C -NMR (75 MHz, CDCl_3) of compound 10

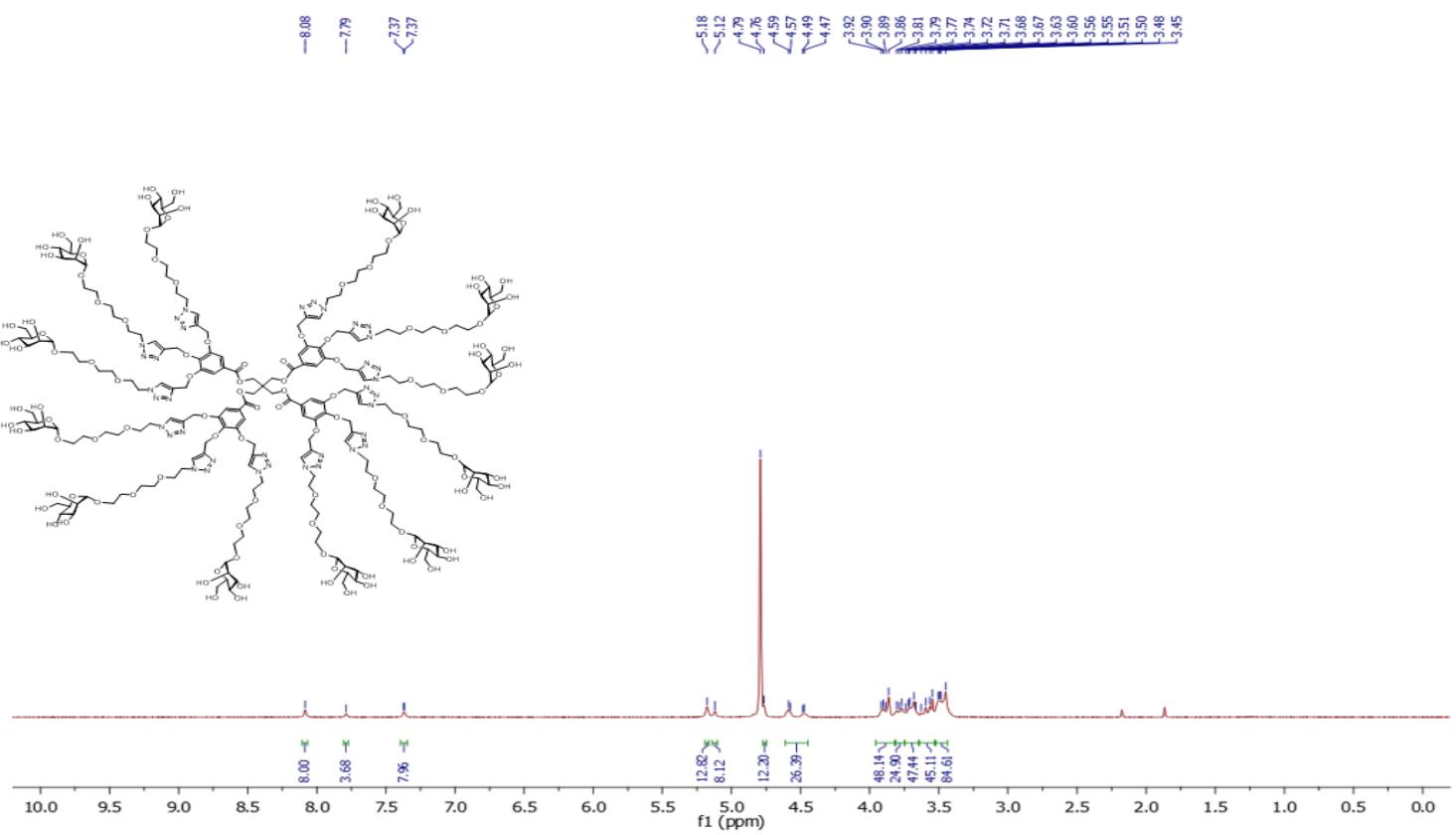


Figure S5. ^1H NMR (300 MHz, D_2O) of compound 11

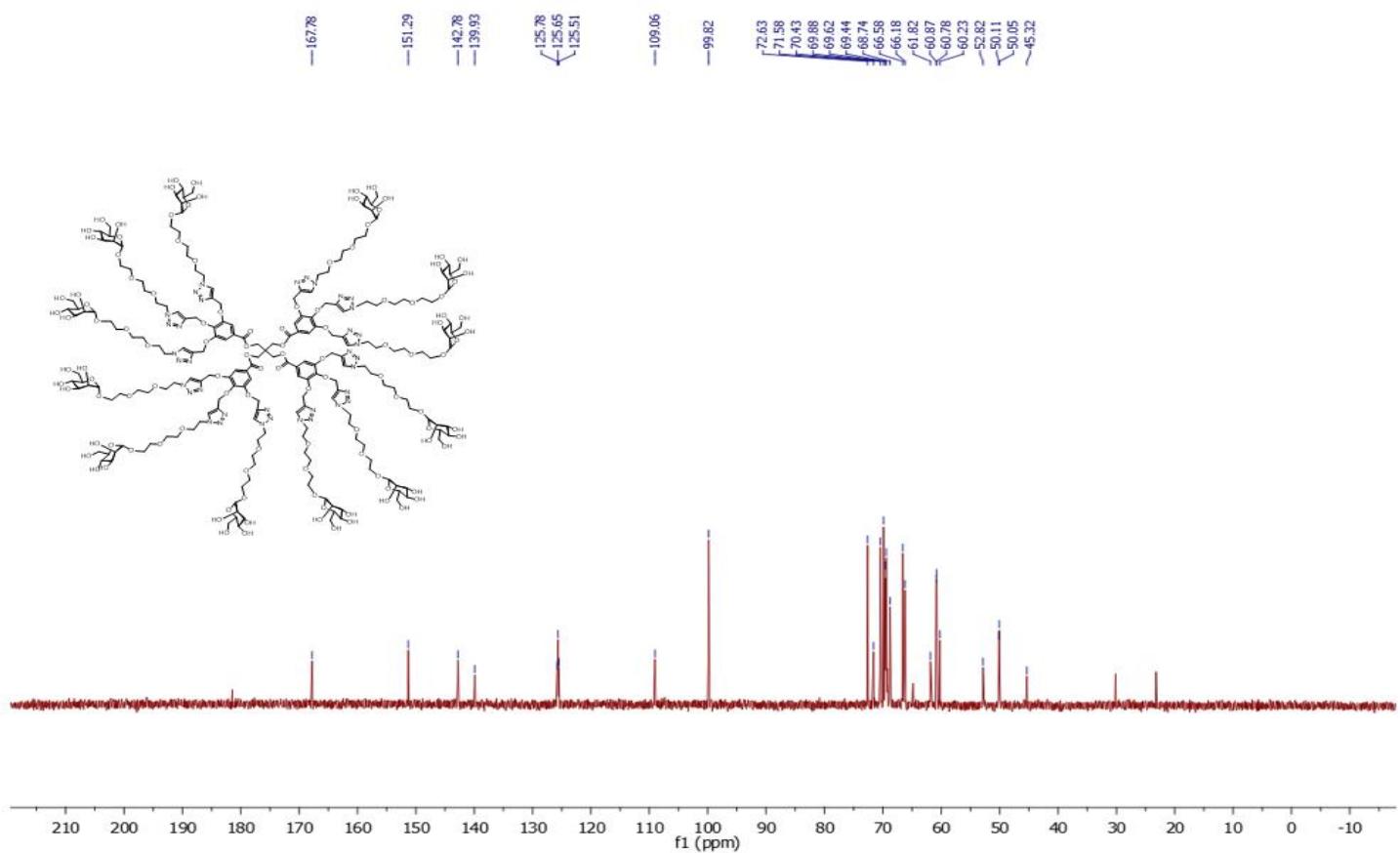


Figure S6. ^{13}C NMR (75 MHz, D_2O) of compound 11

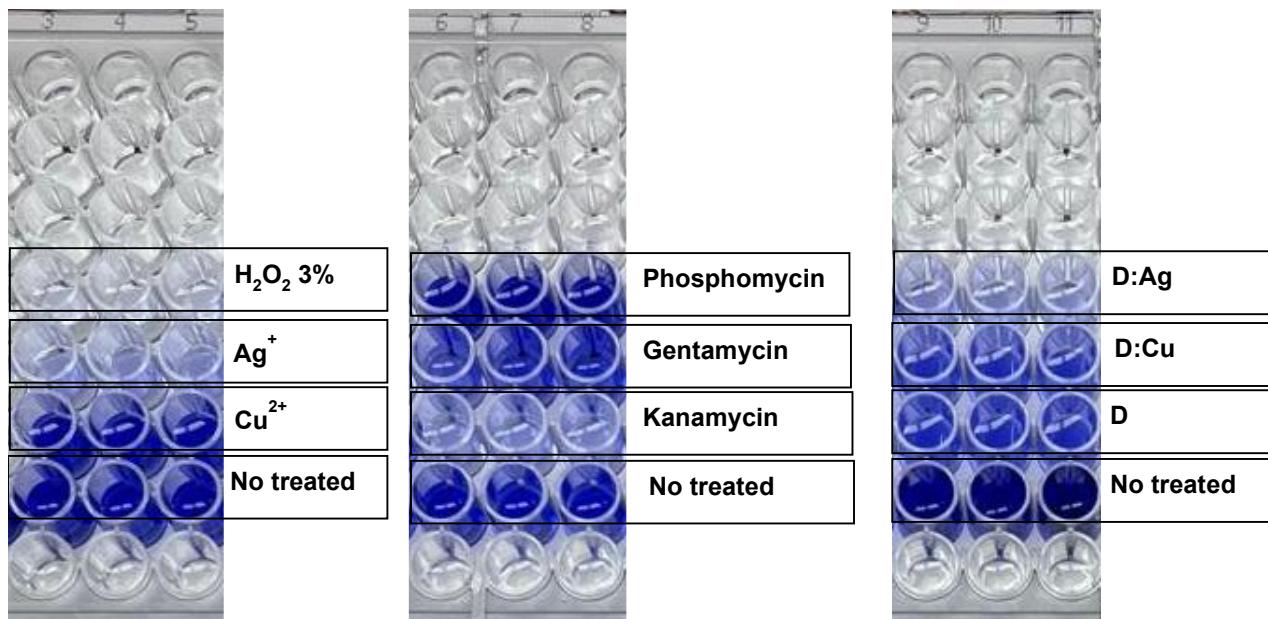


Figure S7. Biofilm production capabilities of *E. coli* enterotoxigenic fimbriae 4 (ETEC:F4) in the absence or presence of bactericidal agents by crystal violet Assay.

Table S1. Antibiotics effect on ETEC:F4

| Materials | | Inhibition zone (cm) |
|-----------------------------------|-------------------------------|----------------------|
| Dendrimers | D | 1.10 ± 0.14 |
| | D:Cu | 1.11 ± 0.15 |
| | D:Ag | 2.25 ± 0.25 |
| Current used bactericidal agents | Gentamycin | 1.02 ± 0.18 |
| | Phosphomycin | 1.04 ± 0.18 |
| | Kanamycin | 2.18 ± 0.19 |
| Metal ions | Cu ²⁺ | 1.35 ± 0.12 |
| | Ag ⁺ | 1.35 ± 0.12 |
| Components of dendrimer synthesis | Gallic acid | 0.78 ± 0.05 |
| | mannose | 0.98 ± 0.13 |
| Positive control | H ₂ O ₂ | 3.15 ± 0.21 |

Average diffusion diameters as growth inhibition of bacteria induced by 1 mg of dendrimeric materials, of current antibacterial agents usually used and of 10 µL of 3% H₂O₂