

Supporting Information

Size and Shape-Dependent Antimicrobial Activities of Silver and Gold Nanoparticles: A Model Study as Potential Fungicides

Francis J. Osonga ¹, Ali Akgul ², Idris Yazgan ³, Ayfer Akgul ⁴, Gaddi B. Eshun ¹, Laura Sakhae ³ and Omowunmi A. Sadik ^{1,*}

¹ Sensors Mechanisms Research and Technology Center (The SMART Center), Chemistry and Environmental Science Department, New Jersey Institute of Technology, University Heights, 161 Warren Street, Newark, NJ 07102, USA; fosonga1@binghamton.edu (F.J.O.); gbe4@njit.edu (G.B.E.);

² Department of Sustainable Bioproducts, College of Forest Resources, Mississippi State University, Starkville, MS 39759, USA; aa1116@msstate.edu

³ Department of Chemistry, Center for Research in Advanced Sensing Technologies & Environmental Sustainability (CREATES), State University of New York at Binghamton, P. O. Box 6000 Binghamton, NY, 13902, USA; iyazgan1@binghamton.edu (I.Y.); lsakhae1@binghamton.edu (L.S.);

⁴ Department of Basic Sciences, College of Veterinary Medicine, Mississippi State University, Starkville, MS 39759, USA; aa1625@msstate.edu

* Correspondence: sadik@njit.edu

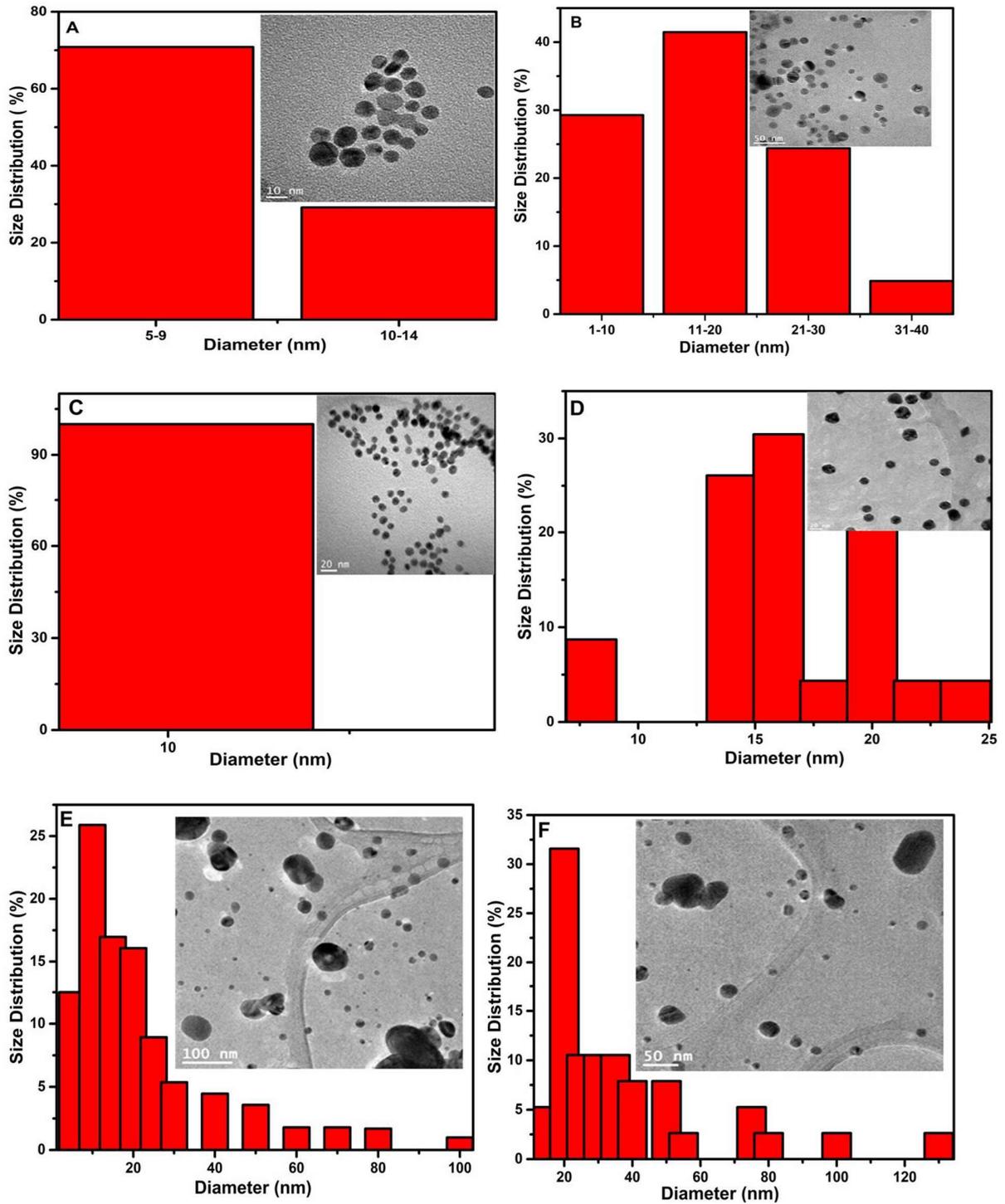


Figure 1. Histograms and the corresponding TEM micrographs (inset) for (A) LTP-AuNP1 (spherical, 8 nm), (B) LTP-AgNP2 (spherical, 16 nm), (C) LTP-AuNP3 (spherical, 10 nm), (D) LTP-AuNP4 (cubic, 16 nm), (E) LTP-AgNP5 (quasi-spherical, 21 nm), (F) LTP-AgNP6 (quasi-spherical, 37 nm).

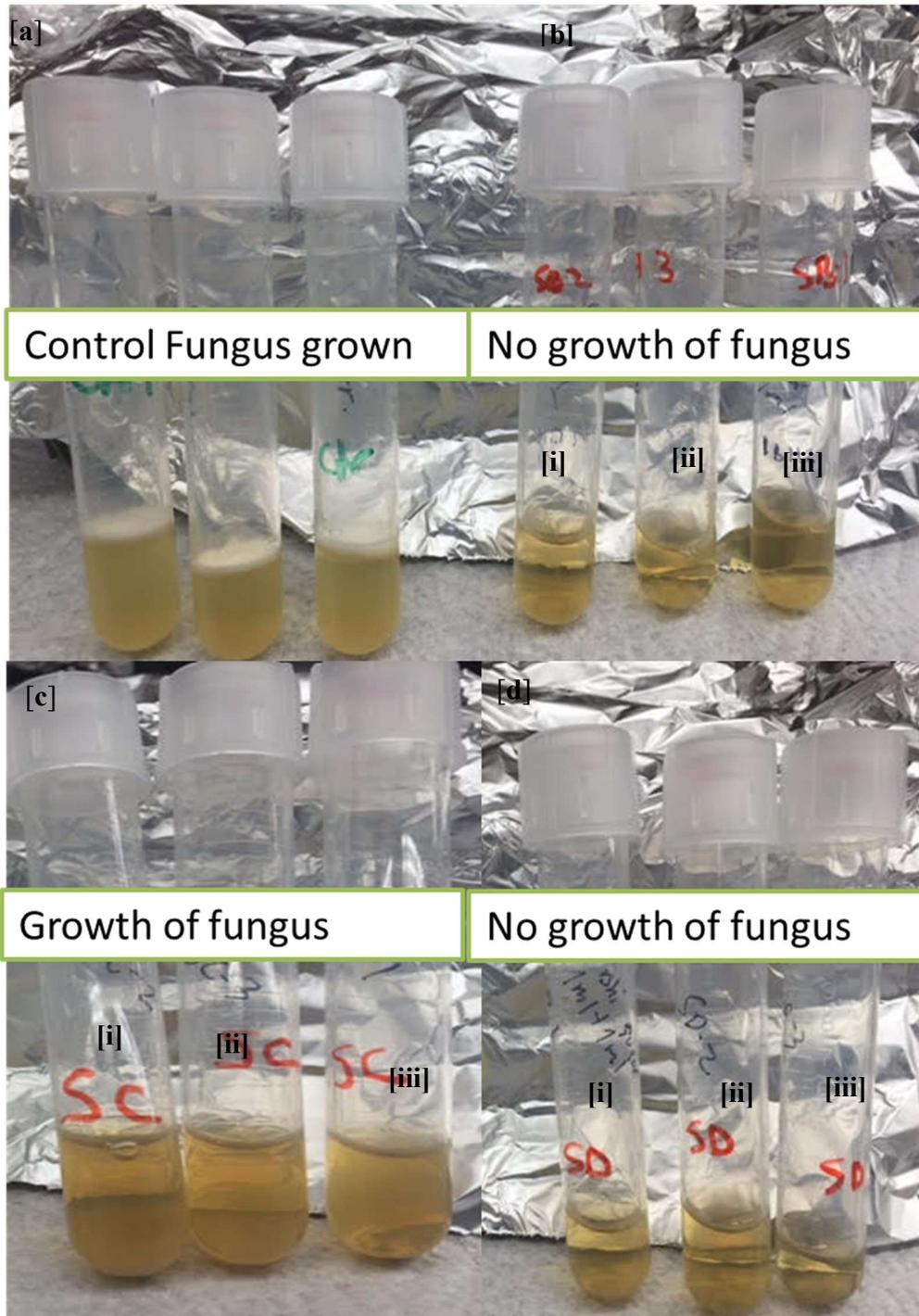


Figure S2: (a) Control of *A.nidulans*, (b) (i) 1 μ M, (ii) 2 μ M and (iii) 4 μ M LTP-AgNP1, (c) (i) 20 μ g/mL, (ii) 40 μ g/mL and (iii) 80 μ g/mL LTP, (d) (i) 36 μ M, (ii) 72 μ M and (iii) 144 μ M LTP-AgNP2 after one week growth.

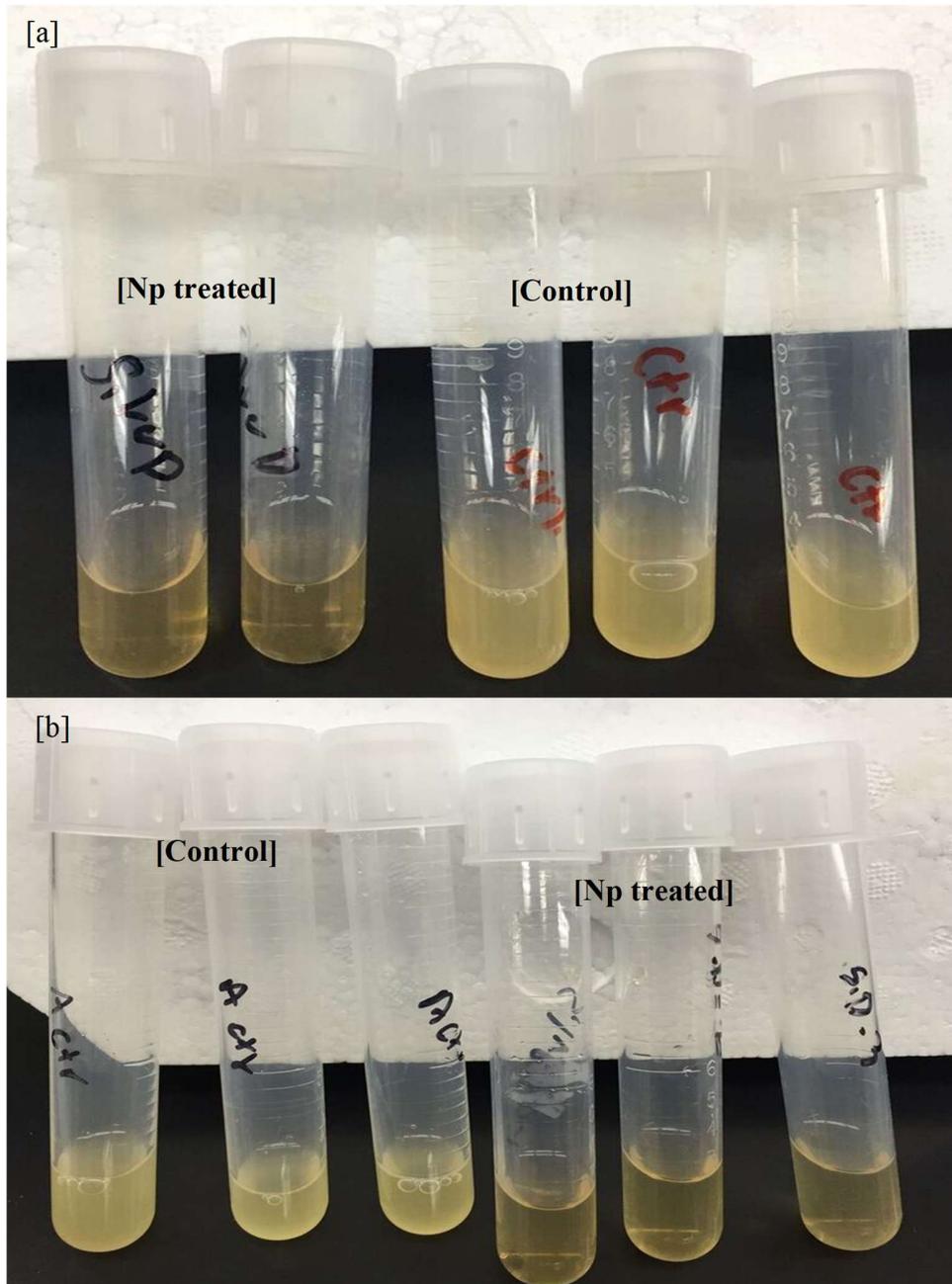


Figure S3: (a) 36 μM LTP-AgNP2 treated *P.aeruginosa*, (b) 18 μM LTP-AgNP2 treated *A.hydrophila*

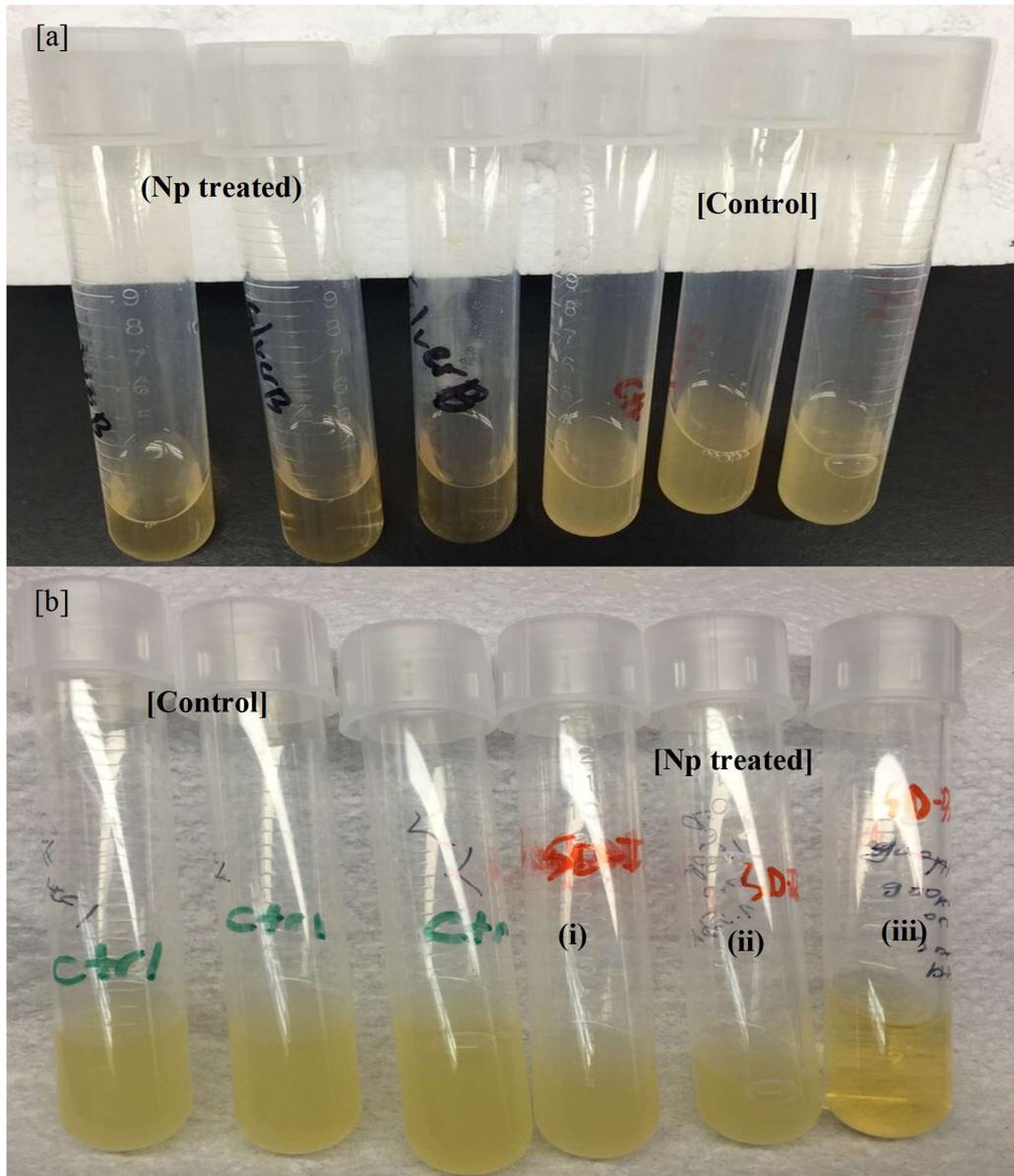


Figure S4: (a) 4 μM LTP-AgNP1 treated *A. hydrophila* and (b) (i) 4.5 μM , (ii) 9 μM and (iii) 18 μM LTP-AgNP2 treated *L. monocytogenes* samples.