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Correction: “*Salvia officinalis* extract–conjugated magnetite and selenium nanocomposites showed enhanced antibacterial and anti-biofilm activity against multidrug-resistant pathogens”

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Correction to: *Scientific Reports* <https://doi.org/10.1038/s41598-026-39983-6>, published online 16 March 2026

In the original version of this Article a previous rendition of Figures 1–6 was published. The original Figures 1, 2, 3, 4, 5 and 6 and accompanying legends appear below.

As a result, the original Figures 1–6 legends were incomplete,

Figure legend 1:

“Characterization of magnetite nanoparticles: (A) TEM image of single Fe_3O_4 NPs; (B) TEM image of conjugated $\text{SaO-Fe}_3\text{O}_4$ NPs; (C) DLS particle size distribution of Fe_3O_4 NPs; (D) DLS particle size distribution of $\text{SaO-Fe}_3\text{O}_4$ NPs; (E) XRD of Fe_3O_4 NPs; (F) XRD of $\text{SaO-Fe}_3\text{O}_4$ NPs; (G) FTIR of Fe_3O_4 NPs; and (H) FTIR of $\text{SaO-Fe}_3\text{O}_4$ NPs.”

now reads:

“Characterization of magnetite nanoparticles (Fe_3O_4 NPs): (A) TEM image of Fe_3O_4 NPs; (B) TEM image of conjugated $\text{SaO-Fe}_3\text{O}_4$ NPs; (C) DLS particle size distribution of Fe_3O_4 NPs; (D) DLS particle size distribution of $\text{SaO-Fe}_3\text{O}_4$ NPs; (E) Zeta potential of Fe_3O_4 NPs; (F) Zeta potential of $\text{SaO-Fe}_3\text{O}_4$ NPs; (G) XRD of Fe_3O_4 NPs; (H) XRD of $\text{SaO-Fe}_3\text{O}_4$ NPs; (I) FTIR of Fe_3O_4 NPs; and (J) FTIR of $\text{SaO-Fe}_3\text{O}_4$ NPs.”

Figure legend 2:

“Characterization of selenium nanoparticles: (A) TEM image of single SeNPs; (B) TEM image of conjugated SaO-SeNPs ; (C) DLS particle size distribution of SeNPs; (D) DLS particle size distribution of SaO-SeNPs ; (E) XRD of SeNPs; (F) XRD of SaO-SeNPs ; (G) FTIR of SeNPs; and (H) FTIR of SaO-SeNPs .”

now reads:

“Characterization of selenium nanoparticles (SeNPs): (A) TEM image of SeNPs; (B) TEM image of conjugated SaO-SeNPs ; (C) DLS particle size distribution of SeNPs; (D) DLS particle size distribution of SaO-SeNPs ; (E) Zeta potential of SeNPs; (F) Zeta potential of SaO-SeNPs ; (G) XRD of SeNPs; (H) XRD of SaO-SeNPs ; (I) FTIR of SeNPs; and (J) FTIR of SaO-SeNPs .”

Figure legend 3:

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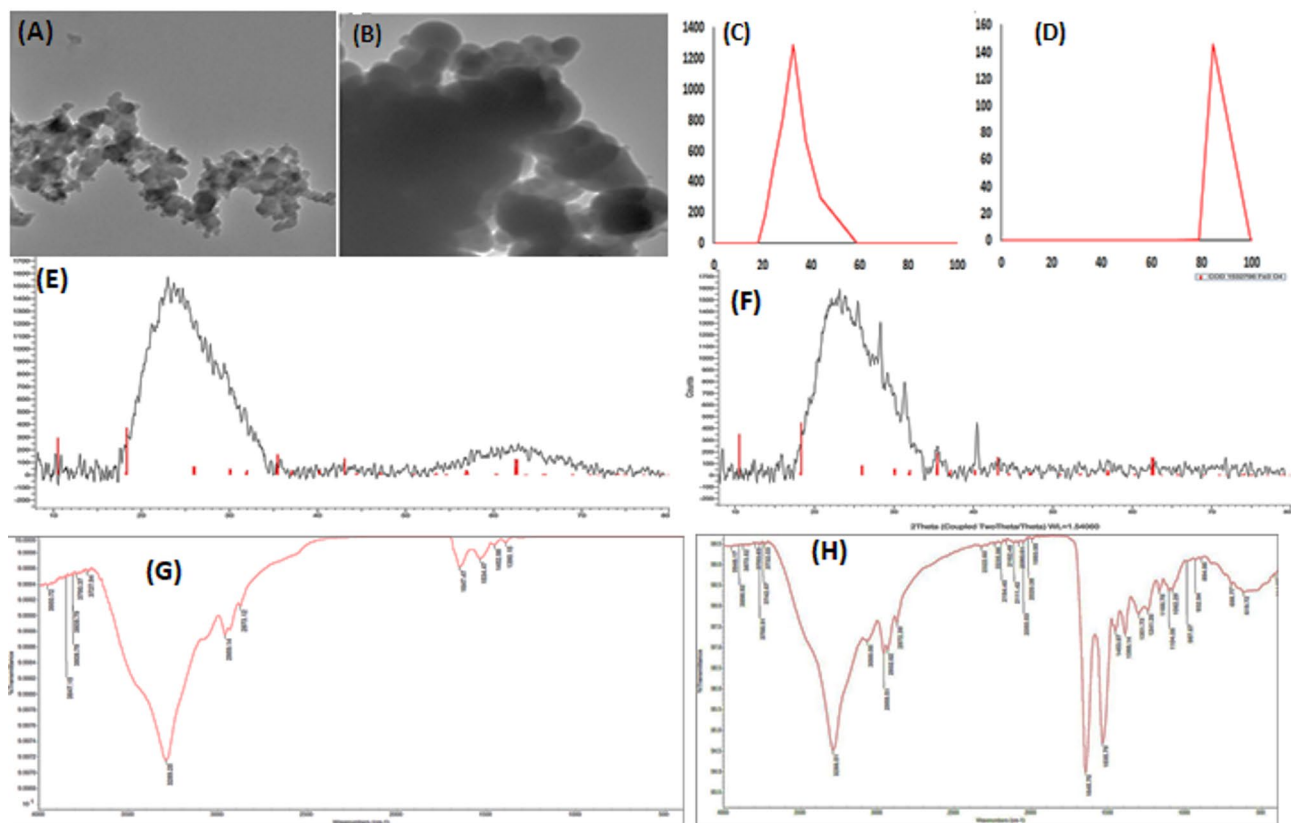


Fig. 1. Characterization of magnetite nanoparticles: (A) TEM image of single Fe₃O₄ NPs; (B) TEM image of conjugated SaO-Fe₃O₄ NPs; (C) DLS particle size distribution of Fe₃O₄ NPs; (D) DLS particle size distribution of SaO-Fe₃O₄ NPs; (E) XRD of Fe₃O₄ NPs; (F) XRD of SaO-Fe₃O₄ NPs; (G) FTIR of Fe₃O₄ NPs; and (H) FTIR of SaO-Fe₃O₄ NPs.

“Quantitative inhibition profile of pathogenic bacteria exposed to magnetite nanoparticles (Fe₃O₄ NPs) and their conjugated form (SaO-Fe₃O₄ NPs).”

now reads:

“Quantitative antibacterial inhibition of pathogenic bacteria following treatment with magnetite nanoparticles (Fe₃O₄ NPs) and their conjugated form with *Salvia officinalis* extract (SaO-Fe₃O₄ NPs), as determined by growth inhibition relative to the untreated control. Data are presented as mean ± SE of three independent biological replicates (n = 3).”

Figure legend 4:

“Quantitative inhibition profile of pathogenic bacteria exposed to selenium nanoparticles (SeNPs) and their conjugated form (SaO-SeNPs).”

now reads:

“Quantitative antibacterial inhibition of pathogenic bacteria following treatment with selenium nanoparticles (SeNPs) and their conjugated form with *Salvia officinalis* extract (SaO-SeNPs), as determined by growth inhibition relative to the untreated control. Data are presented as mean ± SE of three independent biological replicates (n = 3).”

Figure legend 5:

“Transmission electron microscopic (TEM) (11,000X) images of *Staphylococcus pasteurii* (Gram-positive) and *Proteus mirabilis* (Gram-negative) as treated with 2xMICs of meropenem, SaO-Fe₃O₄ NPs, and SaO-SeNPs compared to untreated control. Red arrows indicate extracellular deformation, while yellow arrows highlight intracellular alterations.”

now reads:

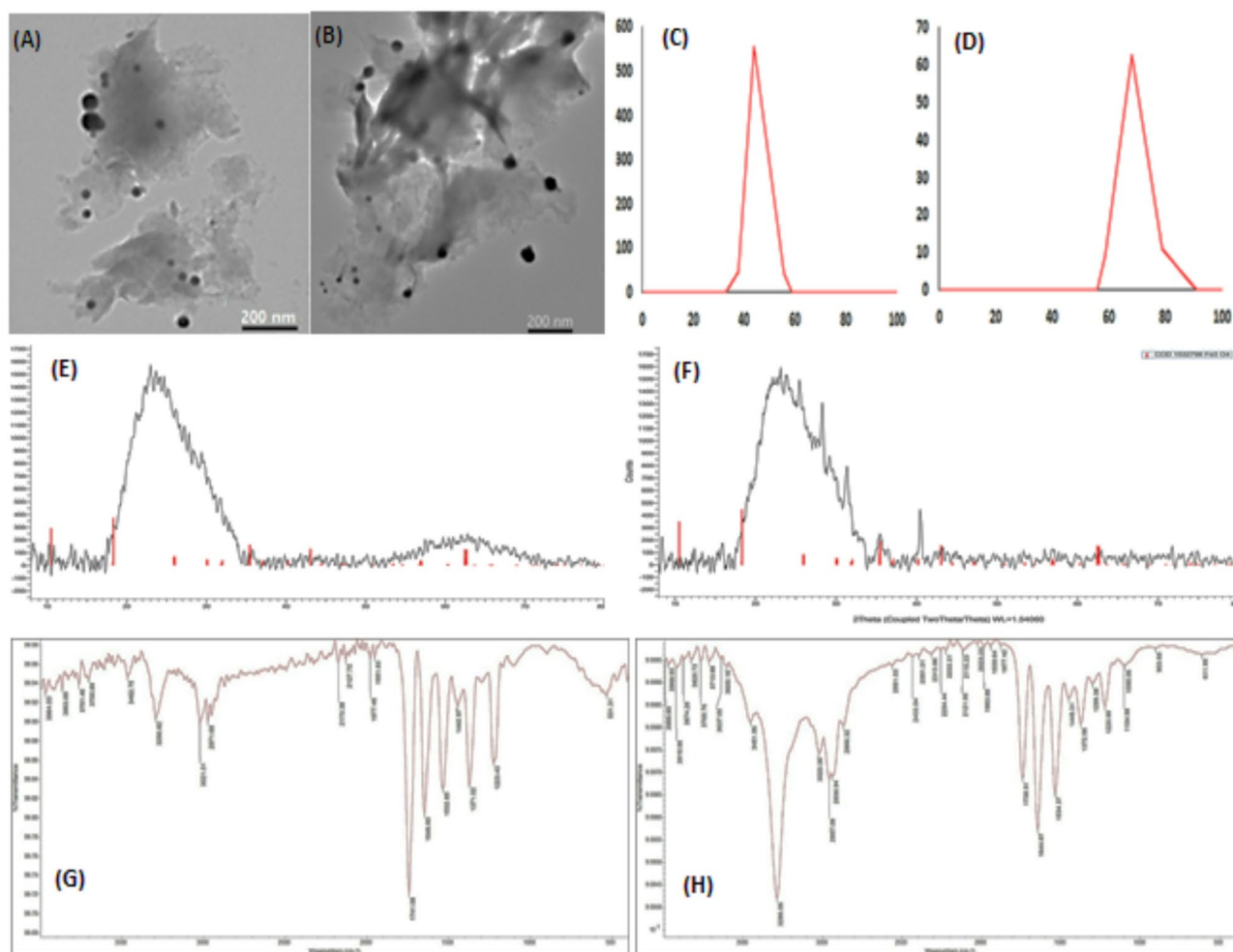


Fig. 2. Characterization of selenium nanoparticles: (A) TEM image of single SeNPs; (B) TEM image of conjugated SaO-SeNPs; (C) DLS particle size distribution of SeNPs; (D) DLS particle size distribution of SaO-SeNPs; (E) XRD of SeNPs; (F) XRD of SaO-SeNPs; (G) FTIR of SeNPs; and (H) FTIR of SaO-SeNPs.

“Transmission electron microscopic (TEM) images (11,000X) of *Staphylococcus pasteurii* (Gram-positive) and *Proteus mirabilis* (Gram-negative) cells as treated with 2x MICs of meropenem, SaO-Fe₃O₄ NPs, and SaO-SeNPs compared with untreated control cells. Red arrows indicate extracellular structural deformation, while yellow arrows highlight intracellular ultrastructural alterations.”

Figure legend 6:

“Showing comparative antibiofilm activity of *Salvia officinalis* L. extract (SaO), MNPs (Fe₃O₄ NPs and SeNPs), and their composites (SaO-Fe₃O₄ NPs, SaO-SeNPs) against three Gram-positive bacteria relative to meropenem.”

now reads:

“Fig. 6. Comparative antibiofilm activity of *Salvia officinalis* L. extract (SaO), MNPs (Fe₃O₄ NPs and SeNPs), and their composites (SaO-Fe₃O₄ NPs, SaO-SeNPs) against Gram-positive bacteria: (A) *S. pasteurii*, (B) *L. monocytogenes*, and (C) *B. cereus* relative to meropenem, as determined by the crystal violet staining assay. Data are presented as mean ± SE of three independent biological replicates (n = 3).”

The original Article has been corrected.

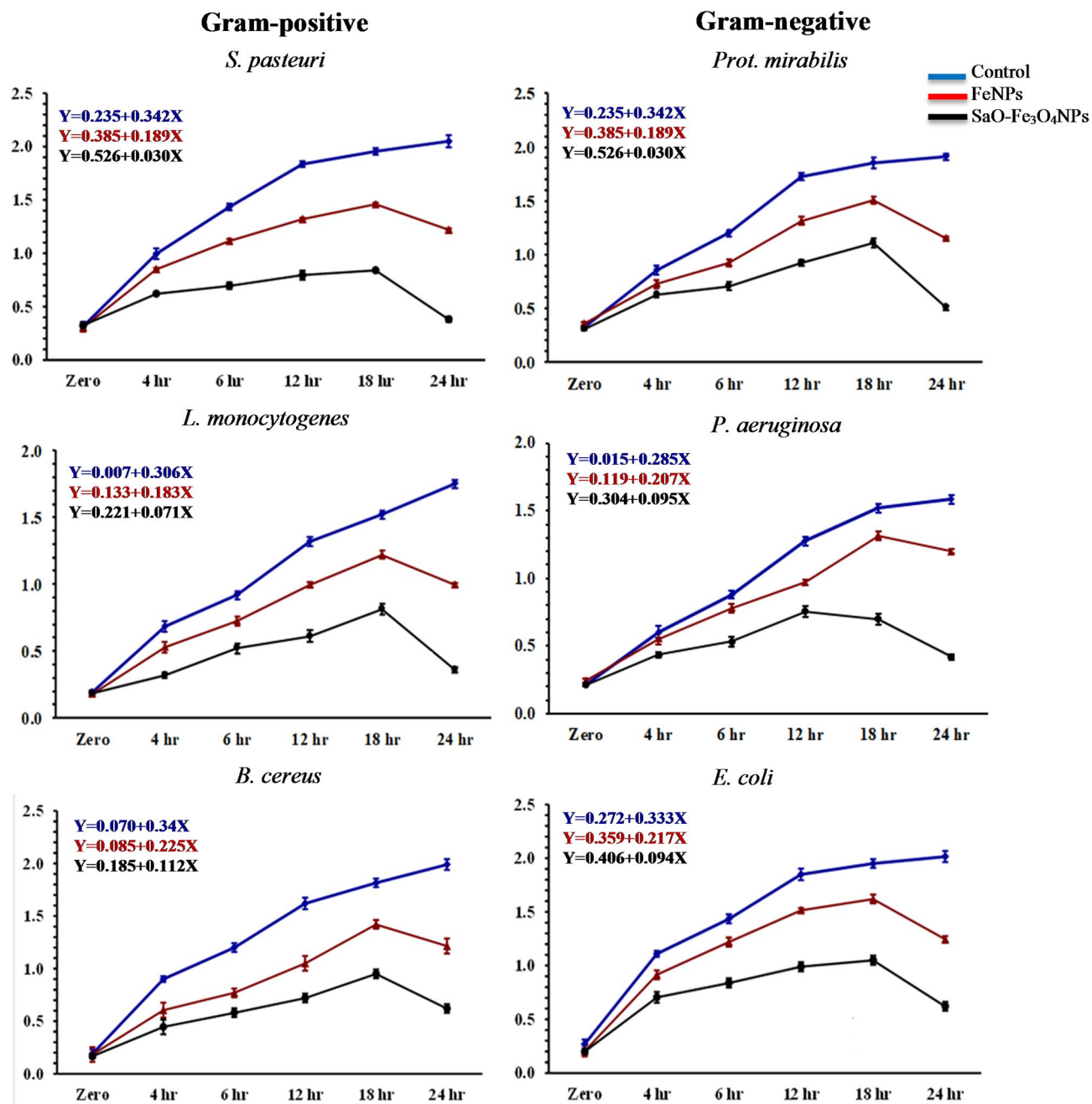


Fig. 3. Quantitative inhibition profile of pathogenic bacteria exposed to magnetite nanoparticles (Fe₃O₄NPs) and their conjugated form (SaO-Fe₃O₄NPs).

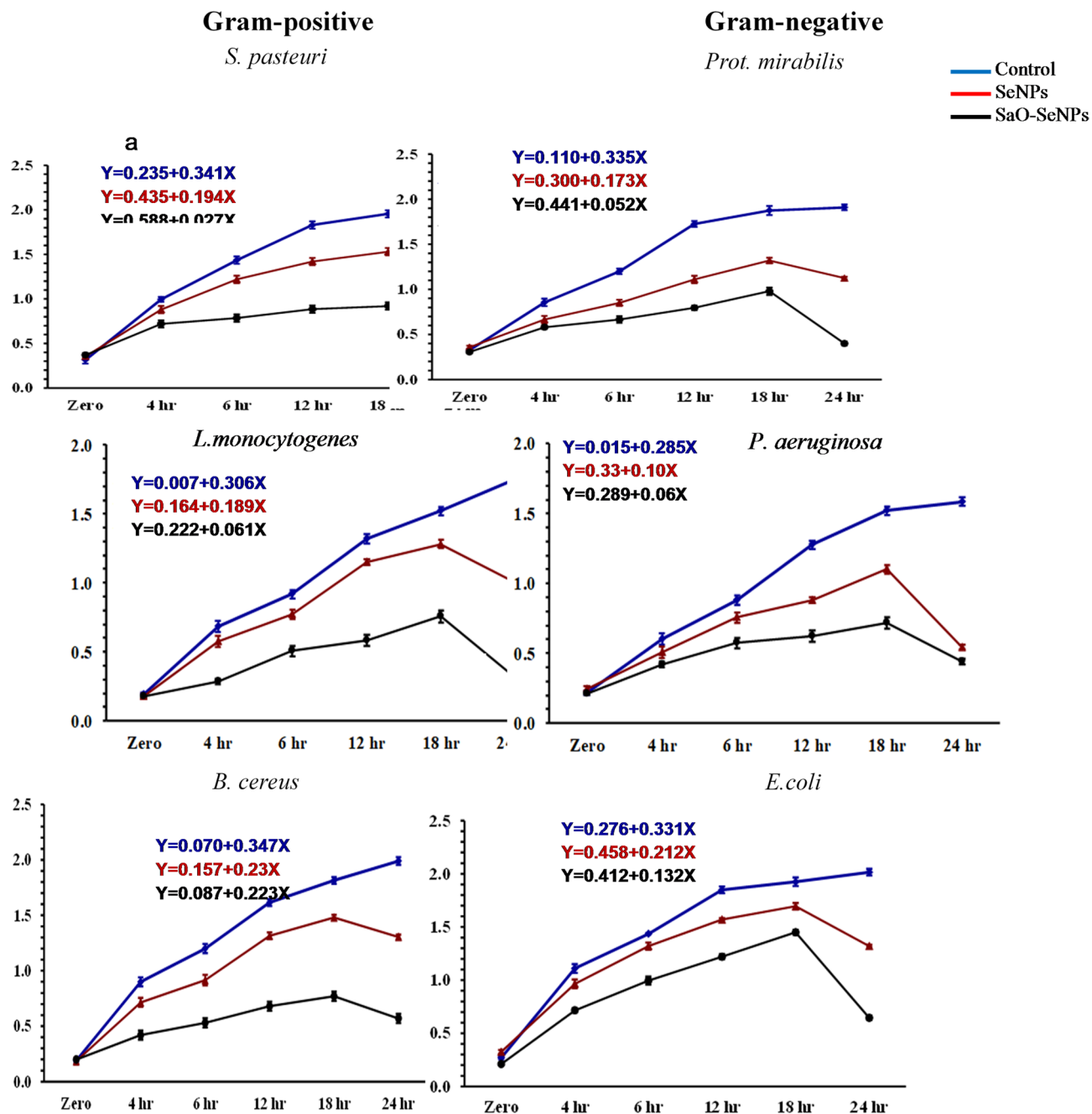


Fig. 4. Quantitative inhibition profile of pathogenic bacteria exposed to selenium nanoparticles (SeNPs) and their conjugated form (SaO-SeNPs).

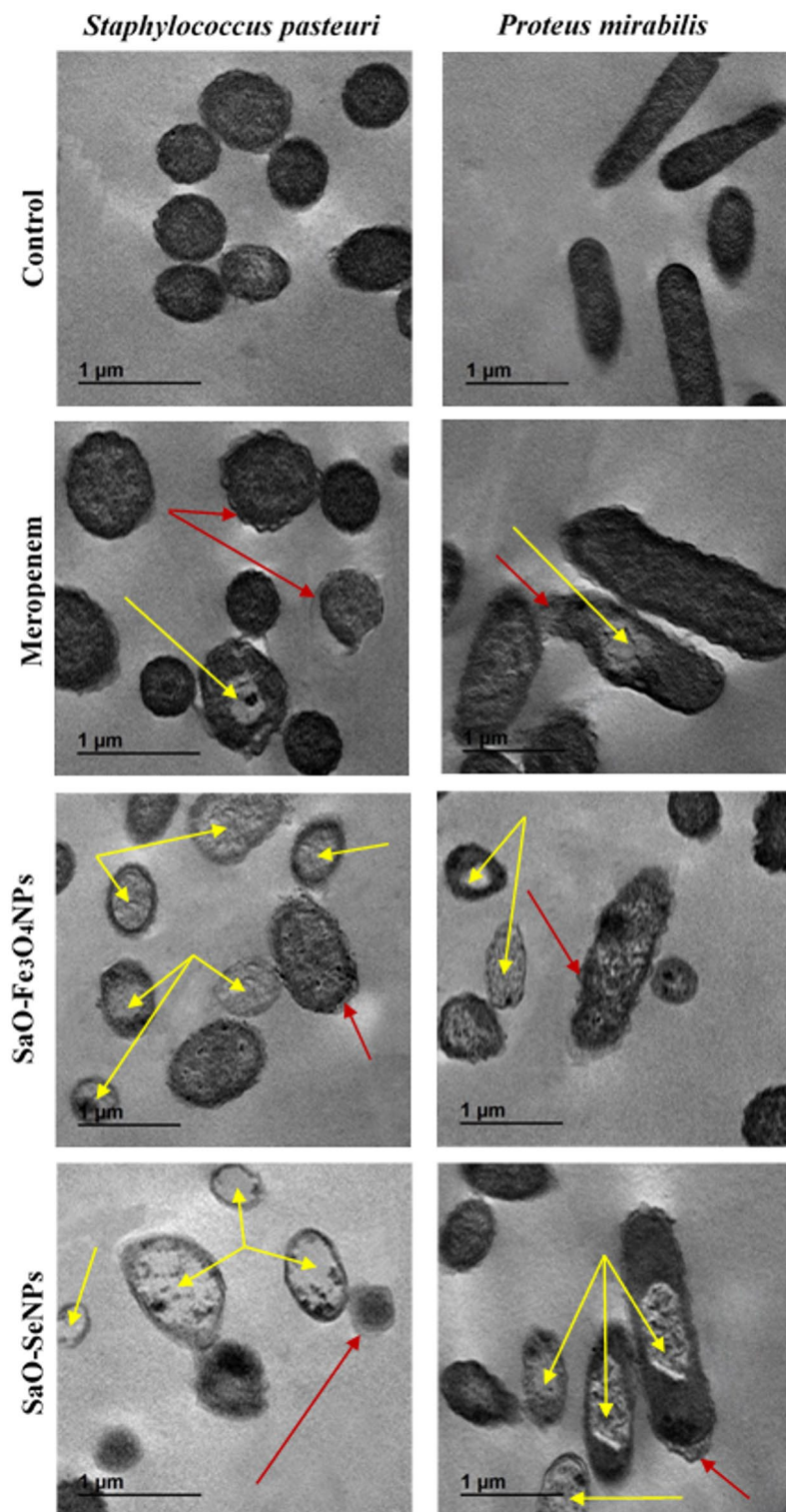


Fig. 5. Transmission electron microscopic (TEM) (11,000X) images of *Staphylococcus pasteuri* (Gram-positive) and *Proteus mirabilis* (Gram-negative) as treated with 2xMICs of meropenem, SaO-Fe₃O₄NPs, and SaO-SeNPs compared to untreated control. Red arrows indicate extracellular deformation, while yellow arrows highlight intracellular alterations.

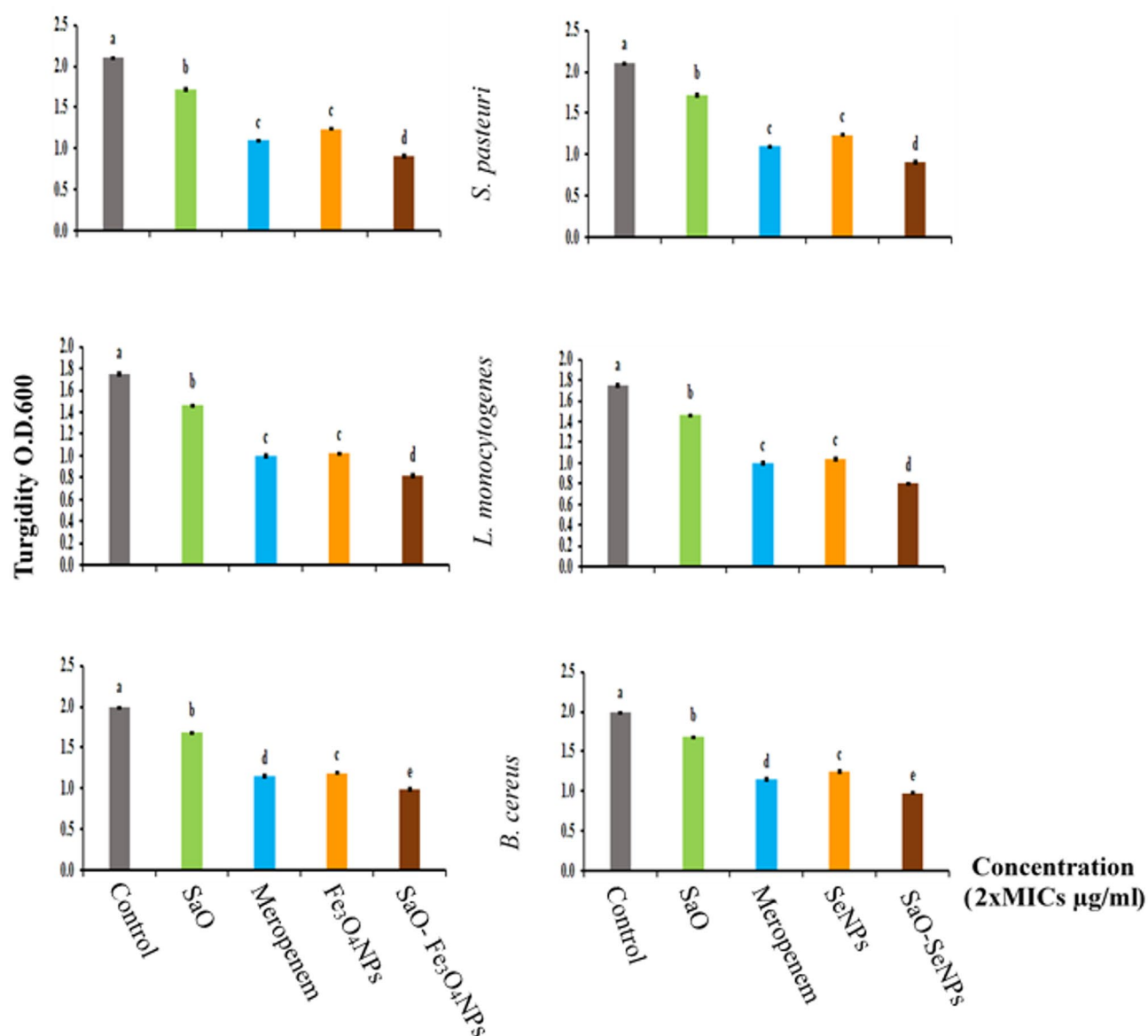


Fig. 6. Showing comparative antibiofilm activity of *Salvia officinalis* L. extract (SaO), MNPs (Fe₃O₄ NPs and SeNPs), and their composites (SaO-Fe₃O₄ NPs, SaO-SeNPs) against three Gram-positive bacteria relative to meropenem.

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