

Erratum: Antibacterial properties of nanoparticles

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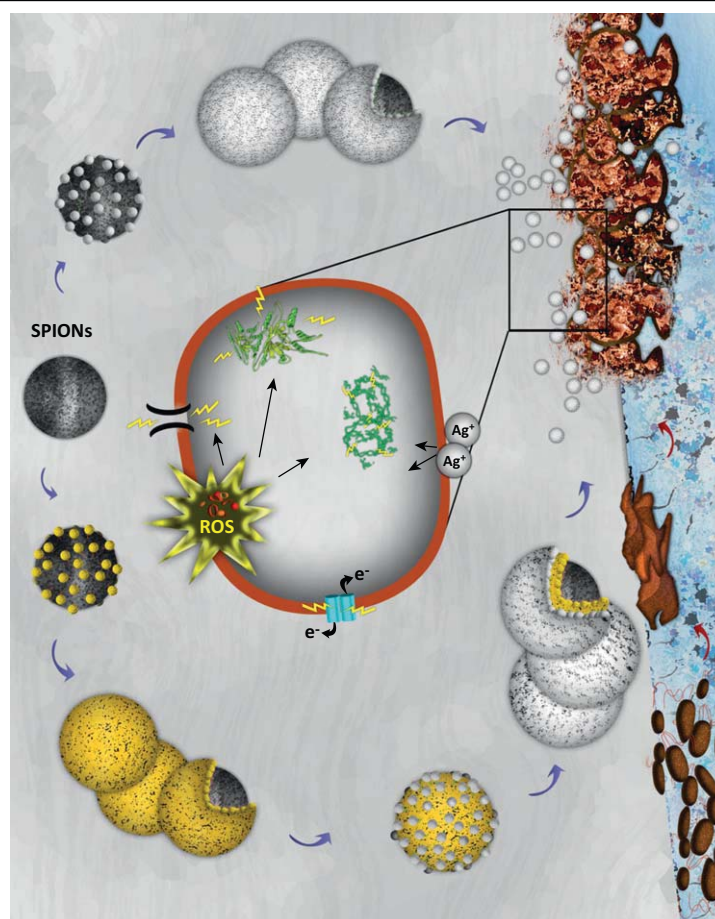
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Figures 3 and 4 contained errors. The corrected figures and figure captions are shown here. The authors apologize for this error.



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Figure 3. Schematic representation of toxicology effect of multifunctional nanoparticles (NPs) in bacterial biofilms. Monodisperse superparamagnetic iron oxide NPs (SPIONs; black spheres) are coated with silver (gray shell), gold (yellow shell), and silver ring-coated, gold-coated SPIONs; silver ring-coated SPIONs and silver ring-coated, gold-coated SPIONs have strong toxic effects on bacterial biofilms, by penetration into the biofilms. Both SPIONs cores and the intermediate gold shell have the capability to induce heat by applying alternative magnetic and laser fields, respectively; the produced heat can be used as additional means to escalate bacterial death using these NPs. The magnified section in the center illustrates the irreversible effects of NPs and their ions on the various parts of the bacteria.

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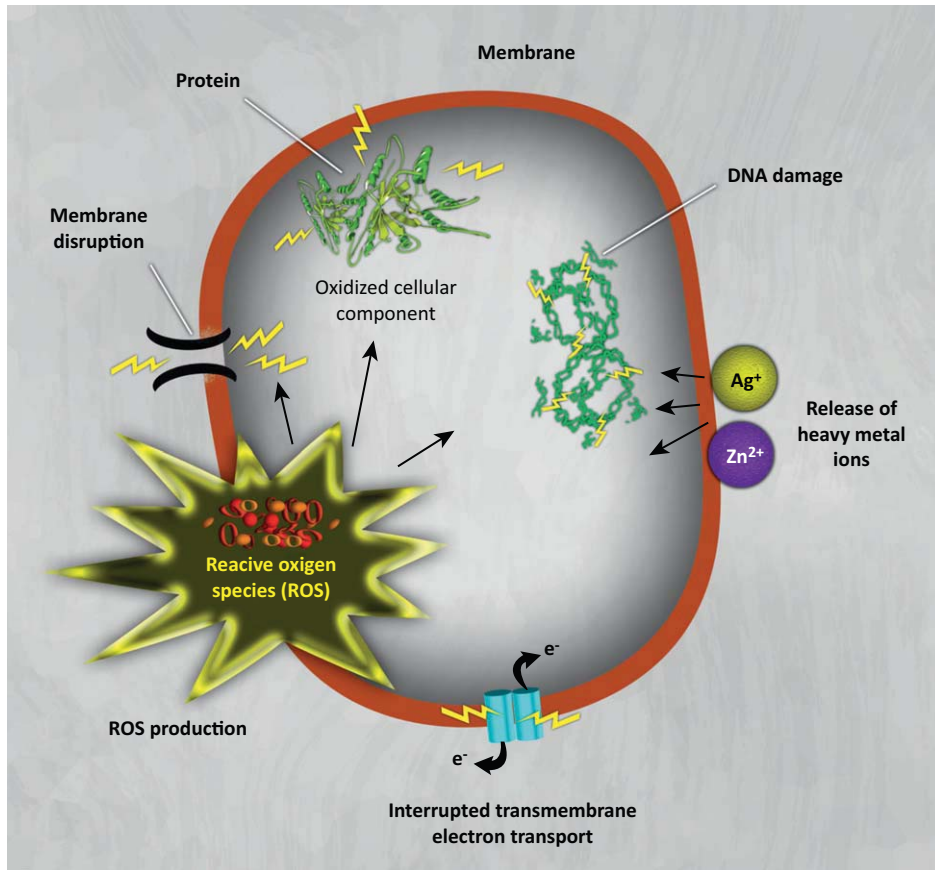


Figure 4. Mechanisms of toxicity of nanoparticles (NPs) against bacteria. NPs and their ions (e.g., silver and zinc) can produce free radicals, resulting in induction of oxidative stress (i.e., reactive oxygen species; ROS). The produced ROS can irreversibly damage bacteria resulting in bacterial death.

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