Supporting Information

NMR insights on Nano silver post-surgical treatment of superficial caseous lymphadenitis in small ruminants

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Figure S1. SEM Images of *Corynebacterium pseudotuberculosis*: (a) cells at a great dilution; (b) after addition of the biogenic AgNPs synthesized from the orange (*Citrus sinensis*) peel extract in the concentration of 11.0 μg mL⁻¹ (half of the MIC); (c) at the concentration 22.0 μg mL⁻¹ (MIC); (d) bacteria with biogenic AgNPs synthesized from *Fusarium oxysporum* in the concentration 16.8 μg mL⁻¹ (half of the MIC); (e) at the concentration 33.5 μg mL⁻¹ (MIC).
Figure S2. PCA on *C. pseudotuberculosis* NMR data: 2D score (left) and loading graphs (right). NMR data variances were 31.5% in PC 1 and 18.4% in PC 2. The NMR data were normalized by sum and mean centered previous to PCA. The red circles present the group of *C. pseudotuberculosis* extract, the green circles correspond to *C. pseudotuberculosis* extract under ampicillin effects and blue circles represent the *C. pseudotuberculosis* extract under AgNP effects.

Figure S3. Cross validation of *C. pseudotuberculosis* extract PLS-DA model using different number of components. The red star indicates the best classifier.
Figure S4. Mean $^1$H NMR spectra of serum samples taken from goats treated with iodine solution (red line) and AgNP-based cream (gray line).

Figure S5. Mean $^1$H NMR spectra of serum samples taken from sheep treated with iodine solution (red line) and AgNP-based cream (gray line).
Figure S6. Subtraction of serum $^1$H NMR mean spectra, shown in Figure S4, iodine solution versus AgNP-based cream (I-P). There are minimal differences in spectral data when compared serum samples from two treatments.

Figure S7. Subtraction of serum $^1$H NMR mean spectra, shown in Figure S5. Iodine solution versus AgNP-based cream (I-P). There are minimal differences in spectral data when compared serum samples from two treatments.
Figure S8. $^1$H NMR PCA data on goat serum samples: 3D scores (left) and loadings (right) with variance of 28.2% in PC 1 and 14.8% in PC 2. The NMR data were normalized by sum and mean centered after the exclusion of outliers. The green circles correspond to animals treated with AgNP-based cream (P) and the red circles correspond to the NMR data of animals treated with iodine 10% (I).

Figure S9. $^1$H NMR PCA data on sheep’ serum samples: 3D scores (left) and loadings (right) with variance of 40.6% in PC 1 and 24.4% in PC 2. The NMR data were normalized by sum and mean centered after the exclusion of outliers. The green circles correspond to animals treated with AgNP-based cream (P) and the red circles correspond to the NMR data of animals treated with iodine 10% (I).
Figure S10. Concentration of silver in serum sample from sheep treated with AgNP-based cream during 10 weeks, numbers 1-10 mean week upon treatment had started.