Supplementary Information for

Oxyresveratrol inhibits R848-induced pro-inflammatory mediators release by human dendritic cells even when embedded in PLGA nanoparticles

Salvatore Calogero Gaglio [1], Marta Donini [2], Piyachat Evelyn Denbaes [1], Stefano Dusi [2*], Massimiliano Perduca [1*]

1   Department of Biotechnology, University of Verona, Strada Le Grazie 15, 37134 Verona, Italy.
2   Department of Medicine, Section of General Pathology, University of Verona, Strada Le Grazie 8, 37134, Verona, Italy
*   Correspondence: MP, massimiliano.perduca@univr.it, Tel.: +39 0458027984; SD, stefano.dusi@univr.it, Tel.: +39 0458027124

Number of pages: S1-S6
Number of Tables: Table S1-S2
Number of Figures: Figure S1-S3

Table S1. Comparison between DLS, AFM and Nanosight tracking analysis data for empty and oxyresveratrol loaded (PLGA[oxy]) nanoparticles.

Nanoformulation	Z-average (nm)	Peak number (nm)	Afm diameter*(nm)	Nanosight tracking analysis (nm)
Empty	170.2 ± 2.5	148.3 ± 43.0	165.0 ± 34.5	140.8 ± 25.0
PLGA[Oxy]	169.6 ± 3.5	140.5 ± 42.9	171.0 ± 58.7	139.3 ± 26.7

*The statistical analysis was performed over a population major than 100 particles using SPIP™ statistical tool.

Table S2. Comparison between encapsulation efficiency value calculated directly breaking the nanoparticles (EE$_{direct}$) and the same value indirectly estimated (EE$_{indirect}$). The results are expressed as the mean value of the percentage ±SD of the initial amount of oxyresveratrol added to the reaction for three independent measures on three replica samples.

Nanoformulation	EE$_{direct}$ (%)	EE$_{indirect}$ (%)
PLGA[OXY]	43.75 ± 3.1	45.47 ± 4.55

50-50 oxy 1 5000 singole.mdt #7

Z Range: 32.20 nm

165 nm

Y Range: 2.50 µm

X Range: 2.50 µm

(**a**)

50-50 oxy 1 5000 singole.mdt #9

Z Range: 199.0 nm

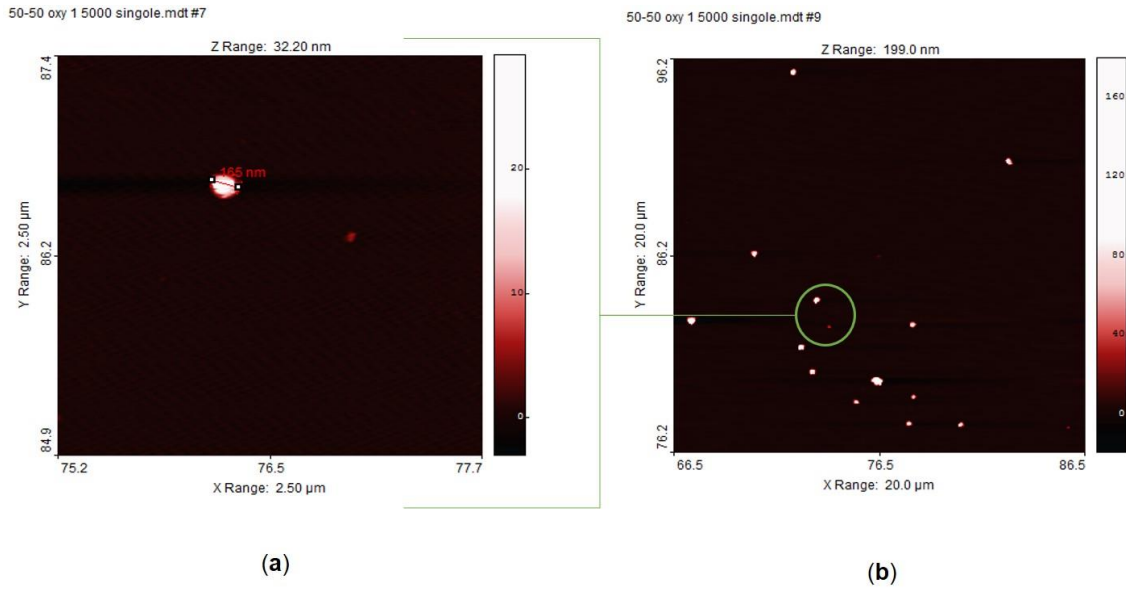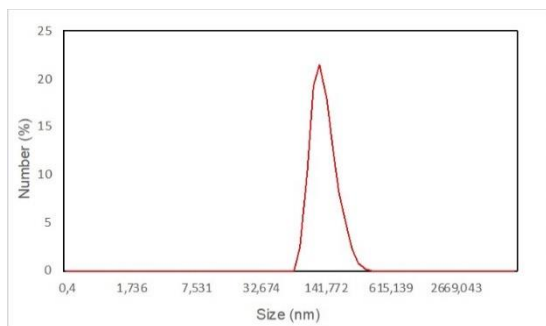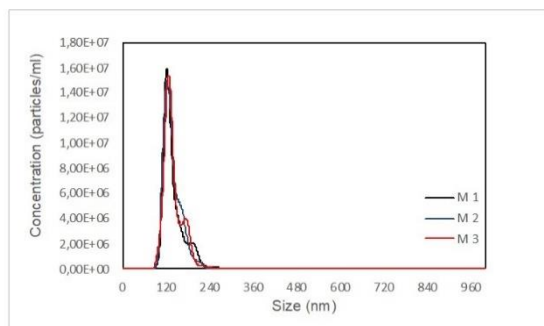Y Range: 20.0 µm

X Range: 20.0 µm

(**b**)

Figure S1. AFM image of a single oxyresveratrol-loaded PLGA nanoparticle with a resolution of 2.5x2.5 um (**a**). Image of several single loaded nanoparticles and an aggregate with a resolution of 20X20 um (**b**). The images were collected in intermittent mode.
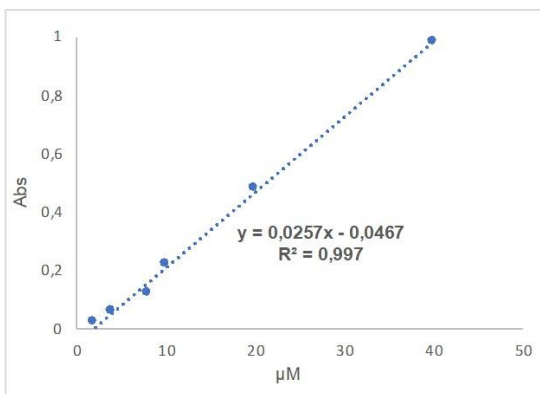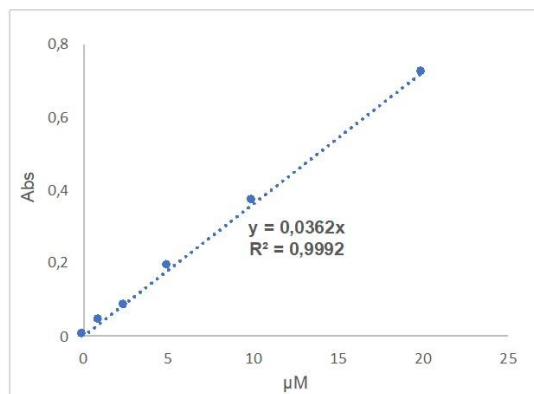
Figure S2. DLS Number diagram (**a**) and Nanosight tracking analysis diagram (**b**) of oxyresveratrol-loaded PLGA nanoparticles. Measurements where performed in triplicate.

(**a**)   (**b**)

Figure S3. Calibration curve for oxyresveratrol in DMSO (**a**). Calibration curve for oxyresveratrol in aqueous solution (**b**).