

PE16) The Biological Effects of Biocompatible Nanoparticle through Hybrid Ethosome

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This study made empty ethosomes of the control. The prepared empty ethosomes were compared with resveratrol hybridized ethosomes, hybrid ethosome encapsulating gold nanoparticles through resveratrol. The incorporation efficiency for resveratrol was measured on resveratrol hybrid ethosomes. First, this work successfully created a hybridized ethosome containing resveratrol. Based on these results, we designed a synthesis that encapsulating gold nanoparticles into the ethosome. It is very simple and nontoxic. The gold nanoparticles in the ethosomes were produced consistently and maintained their inherent physicochemical properties. The formation of gold nanoparticles in the ethosome can be demonstrated by comparison of the size of the peaks measured by DLS. The only ethosome's size is observed at the peak. The completed ethosomes turned to light purple and showed absorbance at the original wavelength of 540 nm. The size and zeta potential were also measured using a DLS. When we analyzed at images using TEM, it showed mostly spherical shapes and confirmed the crystallinity of gold nanoparticles through SAED pattern. This study enhanced the potential of existing gold nanoparticles in terms of antioxidant effects and permeability. It is expected that it will be provided as basic data for application in various fields.