

*Supplementary material*

# **The Combination of Gold and Silver Food Nanoparticles with Gluten Peptides Alters the Autophagic Pathway in Intestinal Crypt-like Cells**

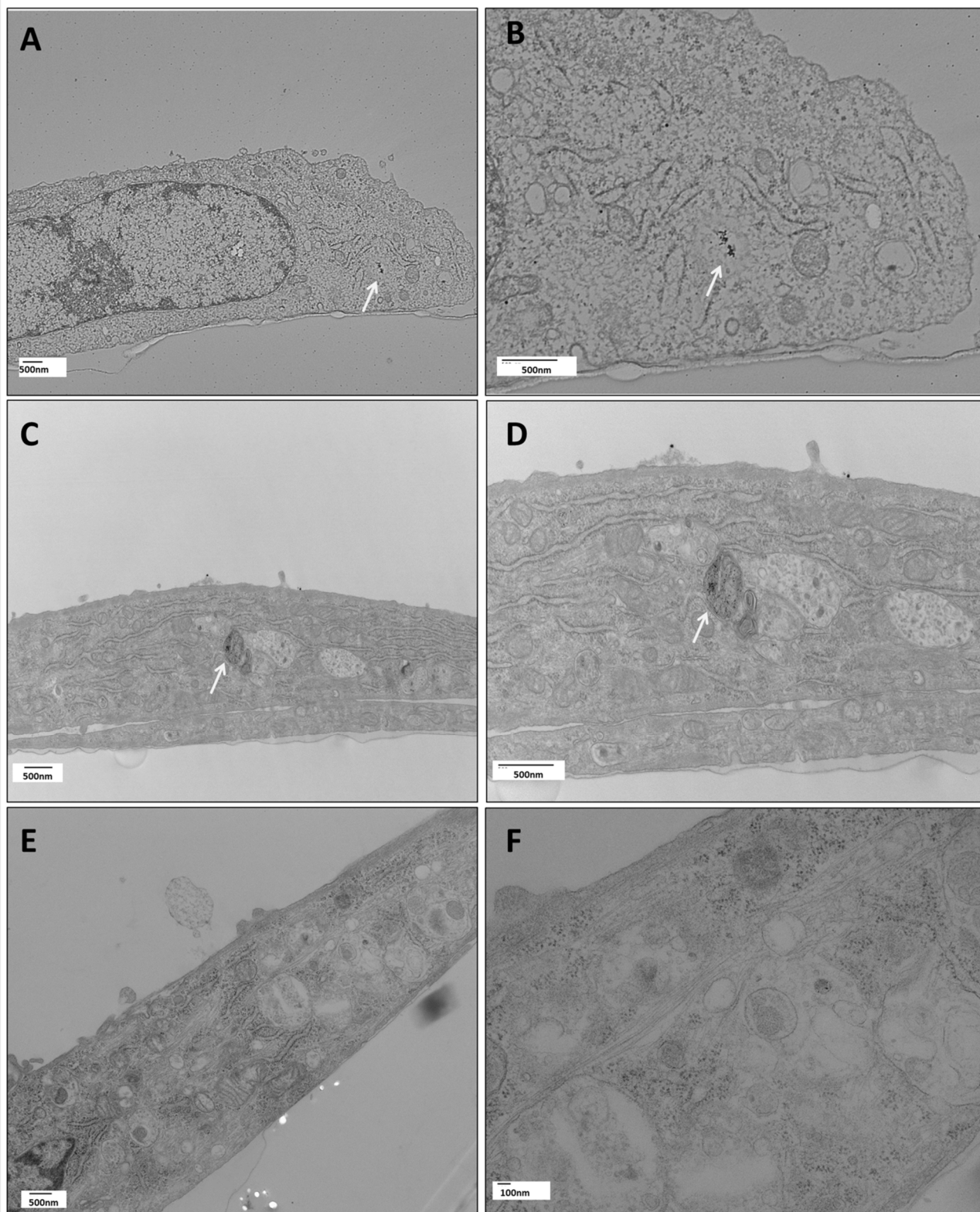
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**Figure S1.** TEM images of HIEC cells exposed to: A,B) AuNPs 25 $\mu$ g/ml for 24 hours; C,D) AgNPs 5 $\mu$ g/ml for 24 hours; E,F) Bafilomycin 50nM for 2 hours. Scalebars are reported on each panel. Images were obtained with an HITACHI H-7500 TEM after proper fixation.

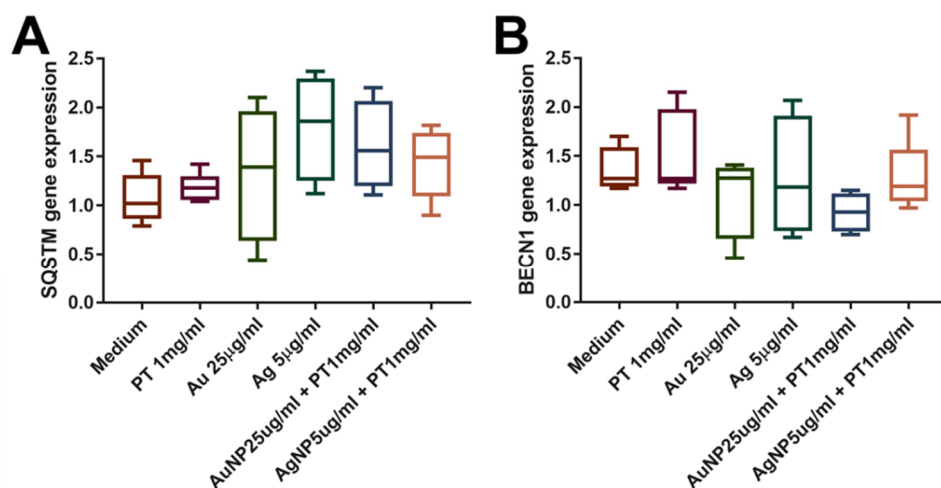


Figure S2. mRNA expression of SQSTM (A) and BECN1 (B) genes. Box plots represent median, 25th, and 75th percentiles. Whiskers indicate 5th and 95th percentiles.

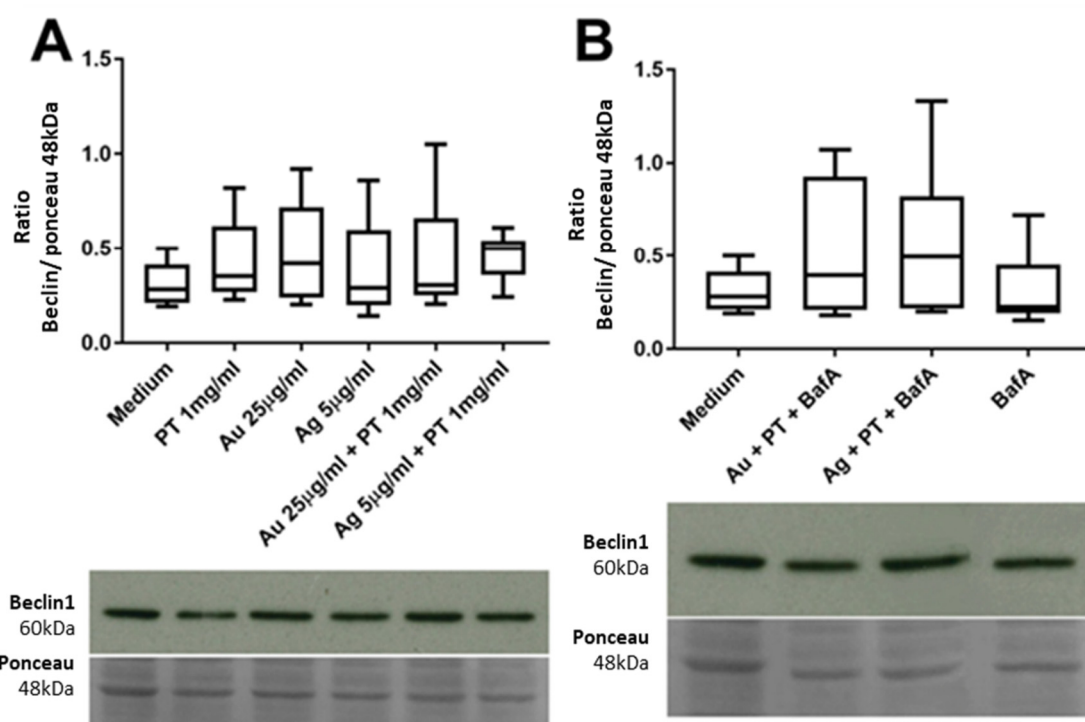
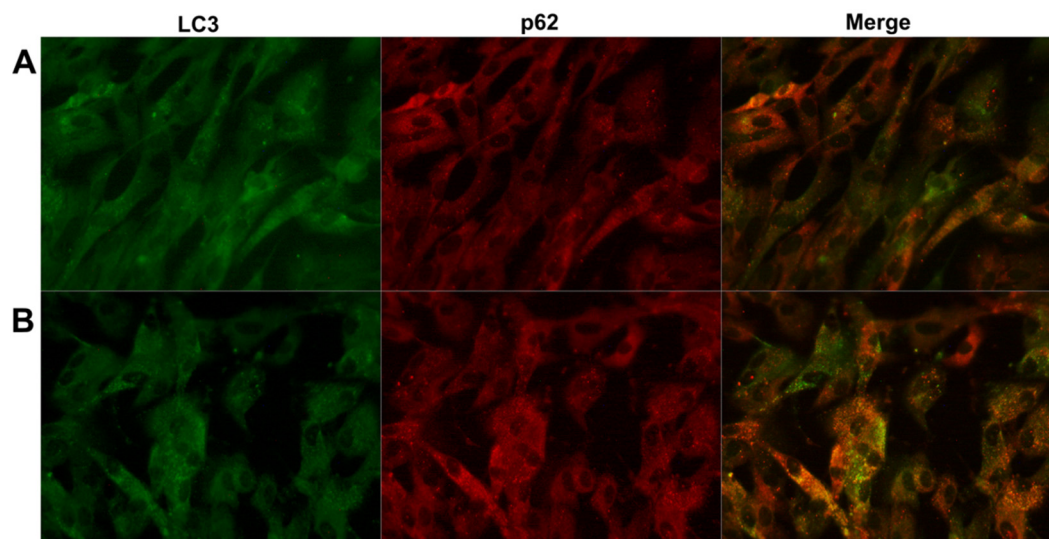


Figure S3. Quantification of Beclin-1 protein level with western blot assays, after the stimulation with PT and mNPS (A) or the combination of PT, mNPs and BafA (B). The target protein was normalized on Ponceau staining in correspondance of the 48kda band. Box plots represent median, 25th, and 75th percentiles. Whiskers indicate 5th and 95th percentiles. Western blot image representative of at least three independent experiments.



**Figure S4.** Indirect immunofluorescence of HIEC cells after 24 hours treatment with AuNPs 25µg/ml (A) or AgNPs 5µg/ml (B). Green signal shows LC3, Red signal p62, yellow signal shows the merge between the two. (40x)