International team examines how selenium could help in fight against ovarian cancer

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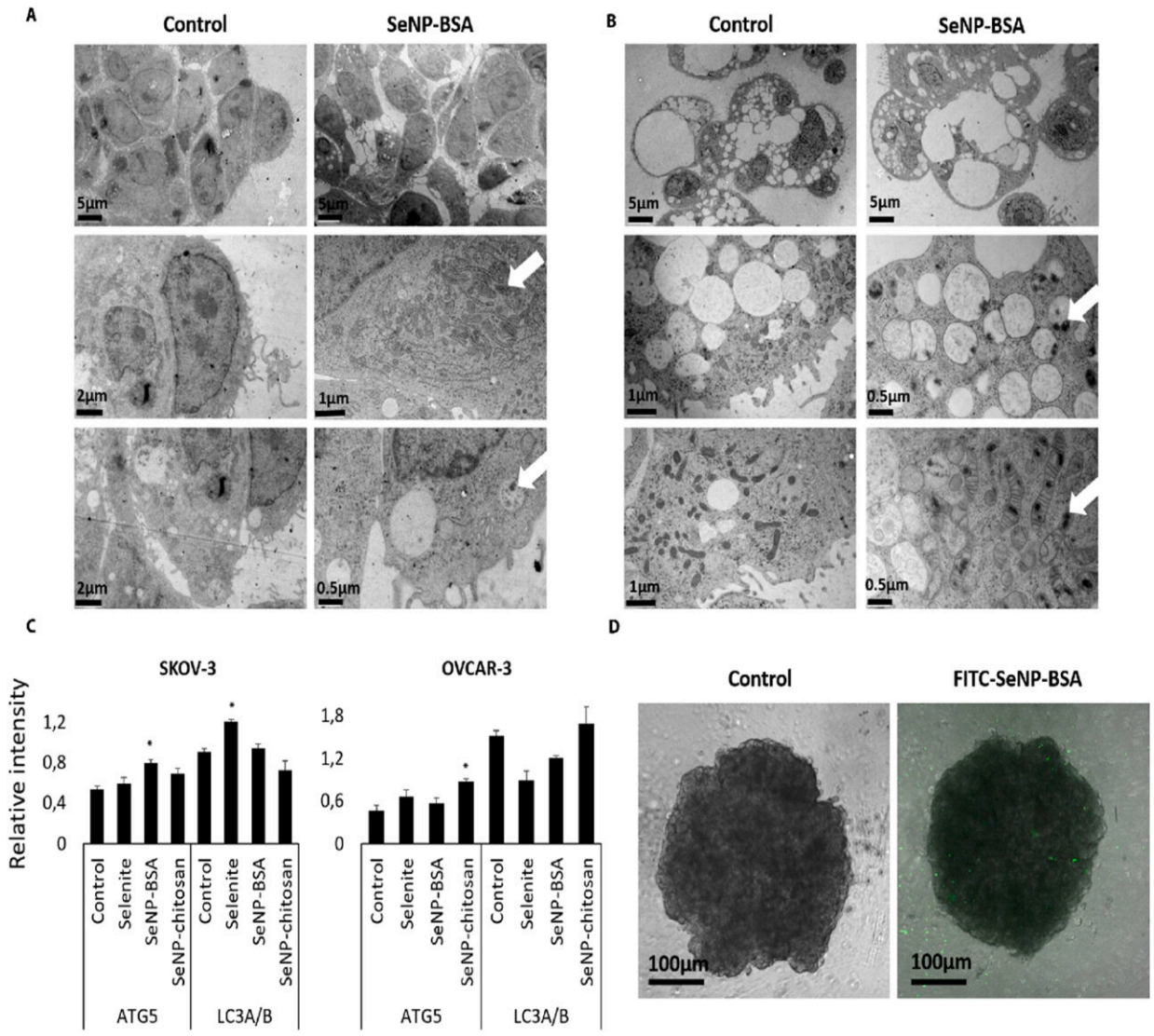

SeNP accumulation in SKOV-3 and OVCAR-3 spheroids. SeNPs penetrate and accumulate in SKOV-3 and OVCAR-3 spheroids. SKOV-3 (a) and OVCAR-3

(b) cell spheroids were treated with BSA-SeNPs at IC20 concentrations for 24 h and imaged by TEM. Scale bars are displayed on the images (between 0.5 and 5 μm). SeNP accumulation was observed in vesicles and mitochondria. SKOV-3 show a limited accumulation of SeNPs. All images are representative of a minimum of 3 biological repeats. SKOV-3 and OVCAR-3 cell spheroids were treated for 24 h with selenite or SeNPs and profiling autophagy markers (c). Control and selenite treated SKOV-3 displayed similar levels of ATG5 (respectively 0.53 and 0.59), whereas SeNP-BSA treated cells showed a significant increase (0.79, $p = 0.05$) of ATG5 levels. SeNP-chitosan treated SKOV-3 cells showed a non-significant elevated level of ATG5 (0.68). Selenite, but not SeNPs, had significantly increased LC3B levels in SKOV-3 cells. OVCAR-3 cells displayed an increase of ATG5 expression in the different conditions (selenite 0.65, SeNP-BSA 0.56, SeNP-chitosan 0.87) compared to the control (0.46) that was only significant for SeNP-chitosan (p