Supplementary information

Oral collagen drink for anti-aging: anti-oxidation, facilitation of the increase of collagen synthesis, and improvement of protein folding and DNA repair in human skin fibroblasts

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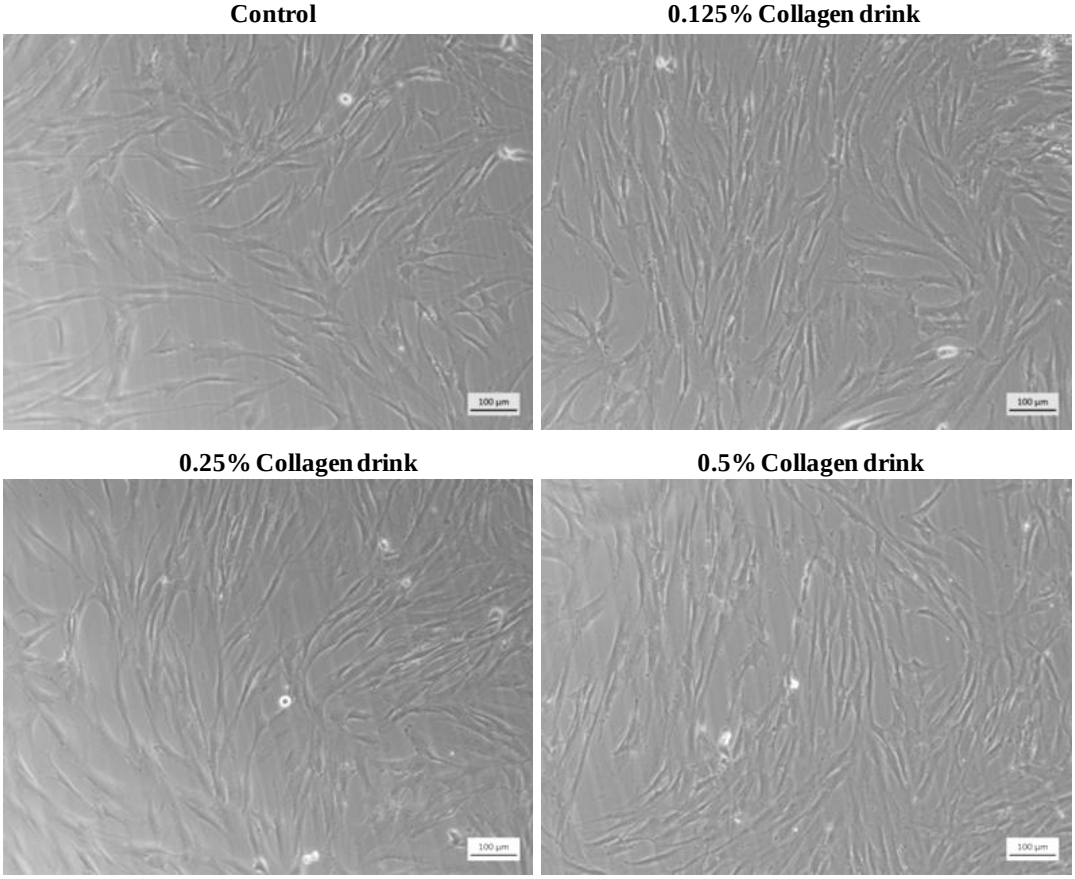

Figure 1. Optical images of fibroblasts after treatment with different concentrations of collagen drinks for 24 hours.

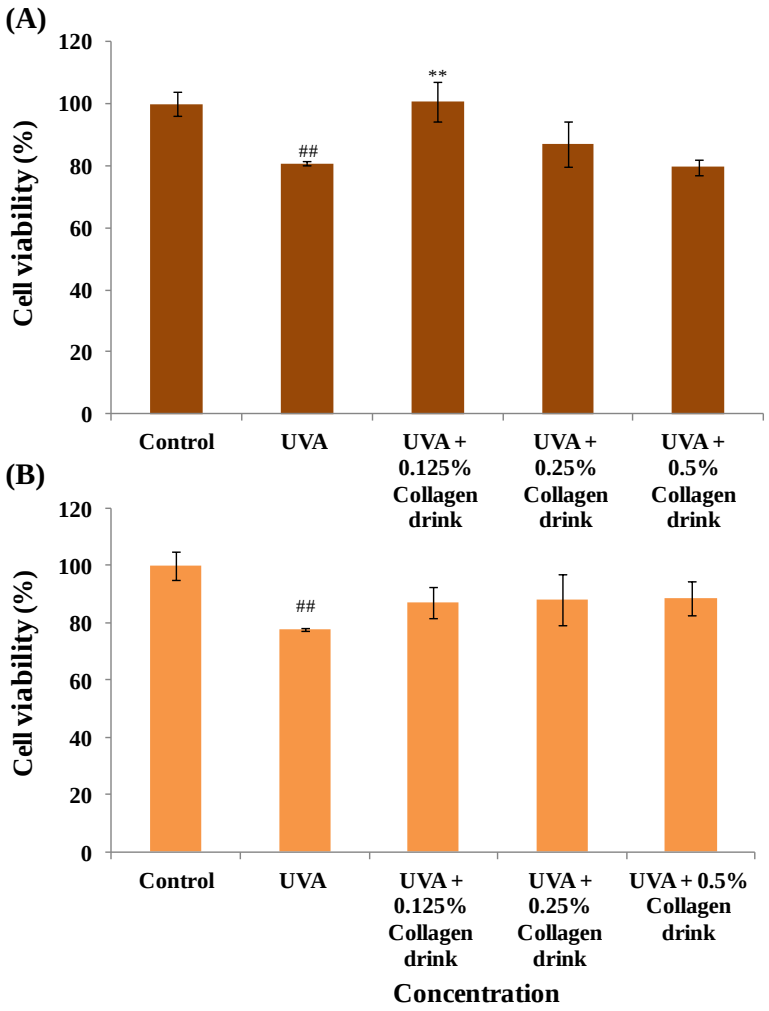

Figure 2. Result of cell viability of fibroblasts. (A) CCD-966Sk cells were treated with 0%, 0.125%, 0.25%, or 0.5% for 24 hrs following UVA treatment (10 J/cm^2). (B) CCD-966Sk cells in 0.125%, 0.25%, or 0.5% collagen drink were treated with UVA (10 J/cm^2) followed by 24-hour incubation. (n = 3, mean value ± S.D.) (Corresponding to the control group: $^{\#\#}$, $p < 0.01$; corresponding to the UVA group: **, $p < 0.01$)

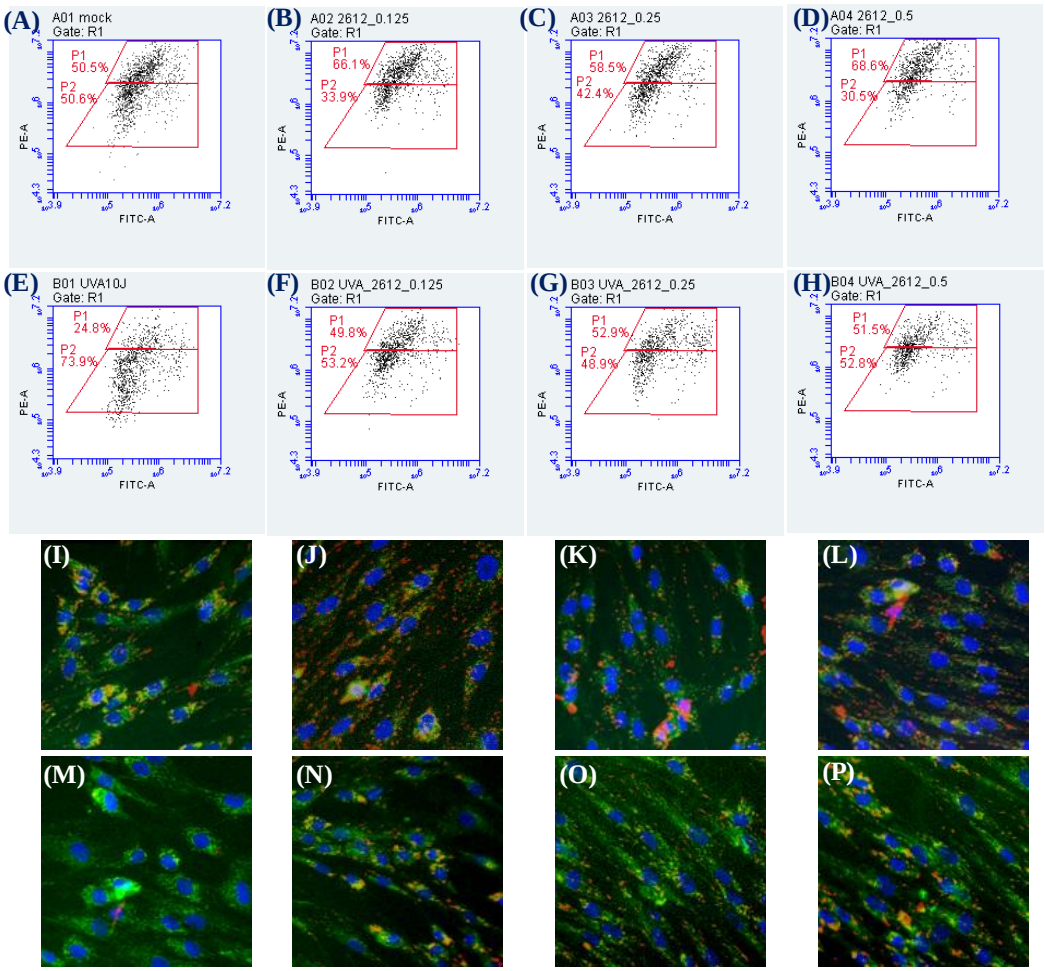

Figure 3. Results of flow cytometry pattern and fluorescence image of imitochondrial activity in fibroblasts. CCD-966Sk cells were treated with JC-1 dye (red signal) to assess the mitochondrial activity in fibroblasts and their signals were analysed by a flow cytometry by the percentage of cell signal at the P1 zone, which was defined by a ratio of 1(green signal from FITC channel) : 1 (red signal from PE-A channel). (A, I) Control. (B, J) 0.125% Collagne drink. (C, K) 0.25% Collagne drink. (D, L) 0.5% Collagne drink. (E, M) UVA only. (F, N) UVA + 0.125% Collagne drink. (G, O) UVA + 0.25% Collagne drink. (H, P) UVA + 0. 5% Collagne drink

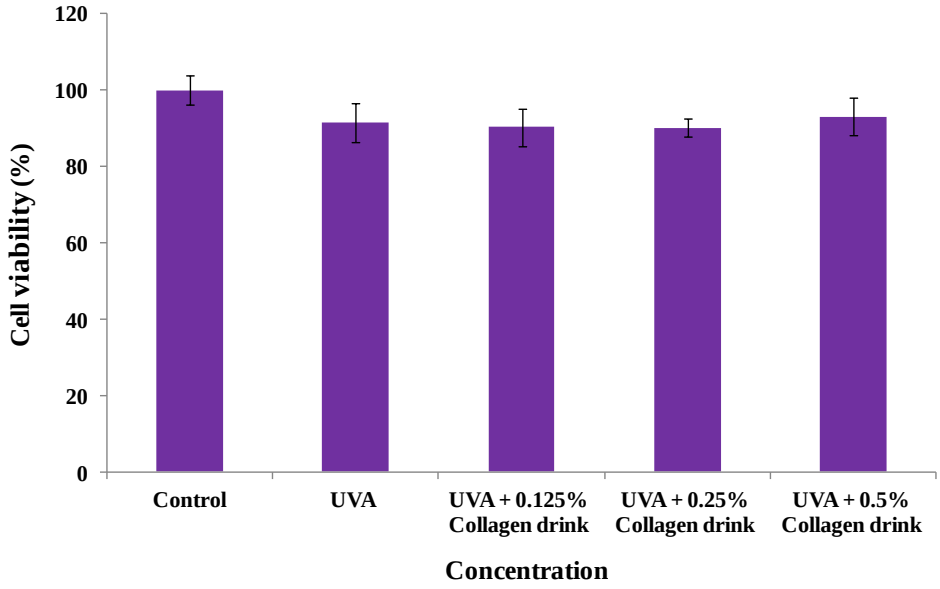

Figure 4. Result of cell viability of fibroblasts. CCD-966Sk cells were treated with 0.125%, 0.25%, or 0.5% for 48 hrs. (n = 3, mean value ± S.D.)