Supplementary Data

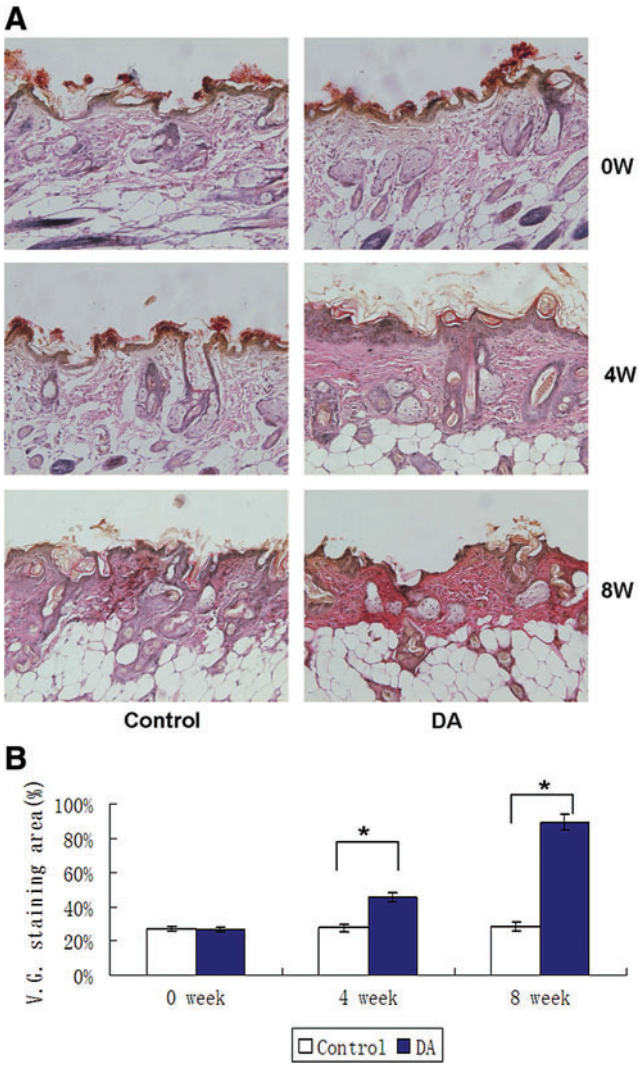
Supplementary Materials and Methods

V.G staining of histopathological changes in nude mice skin caused by dedifferentiated adipocytes

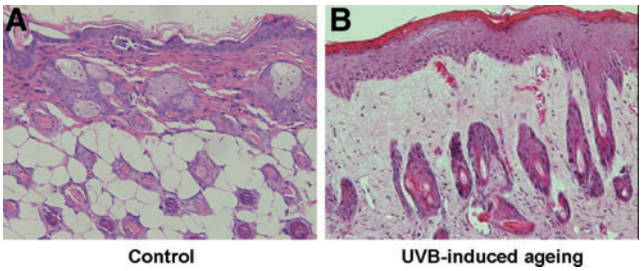
The slices of nude mice skin after subcutaneous injection of one milliliter of hydrogel with dedifferentiated adipocytes (DAs, 10^5 cells/1 mL) also underwent V.G staining to verify the results of Masson trichrome staining, using a V.G staining kit (Rongbai Biotechnology). The pictures were taken under ×200 magnification. The V.G staining positive areas were analyzed by ImageJ by a blinded observer and the average percentage of stained area was calculated.

Immunofluorescent staining for γH2AX in UVB-irradiated human dermal fibroblasts

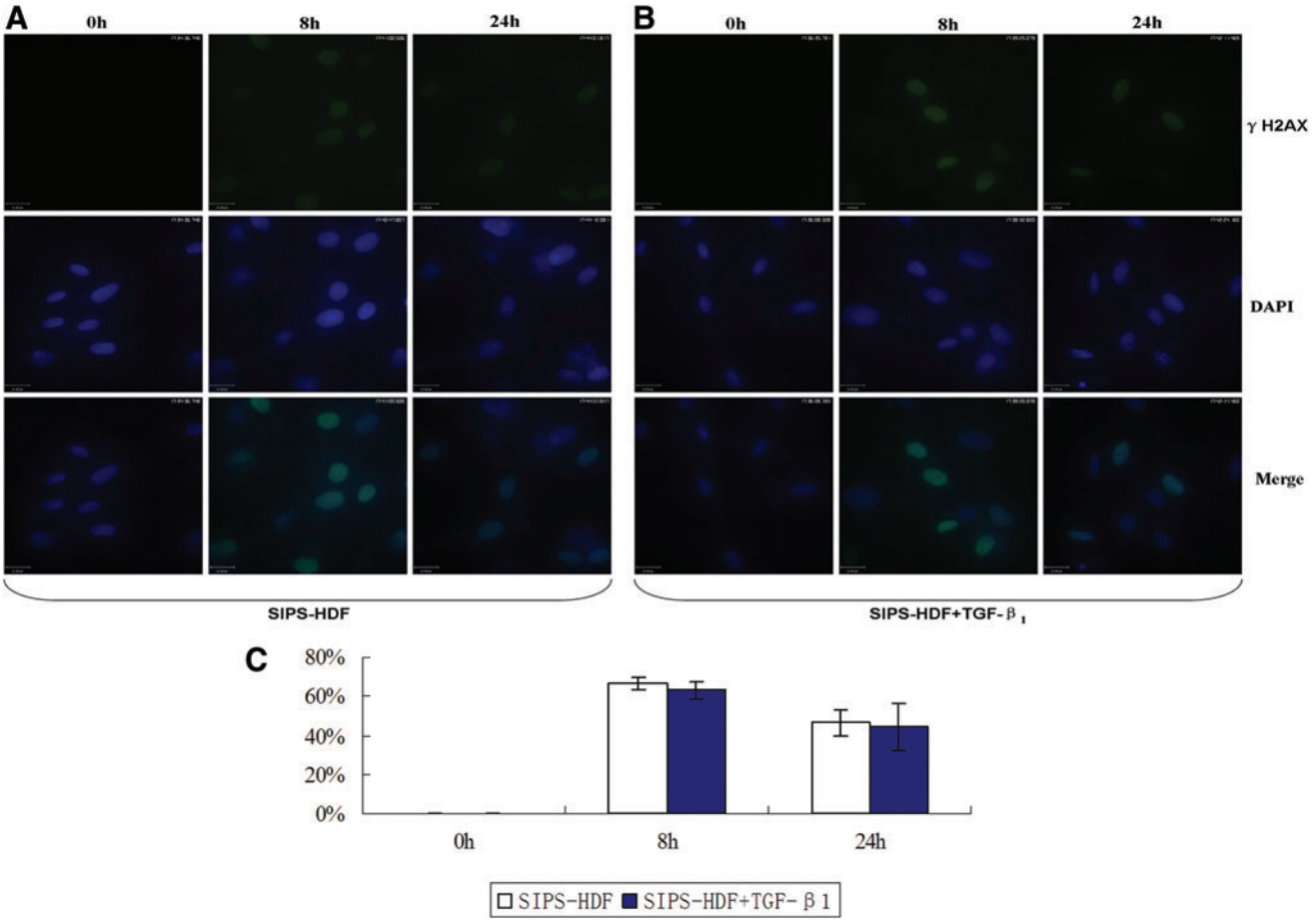
Two groups of human dermal fibroblasts (HDFs) were irradiated by single dosage of 30 mJ/cm^2 ultraviolet B (UVB), one with added 3 ng/mL transforming growth factor-β_1 (TGF-β_1; Abcam). After 0, 8, and 24 h, the cells were fixed in 3.7% formaldehyde for 10 min, and then in ice-cold methanol for 5 min. They were then incubated with 1:100 diluted rabbit anti-gamma H2AX (phospho S139) antibody (Abcam) in phosphate-buffered saline (PBS) overnight at 4°C, rinsed, and incubated with 1:1,000 diluted goat anti-rabbit-FITC (KLP) in PBS at room temperature for 30 min. The DNA was stained with DAPI. Cells were observed under a confocal fluorescent microscope. The percentages of positive staining cells were calculated.



SUPPLEMENTARY FIG. S1. Subcutaneous injection of DAs improves the density and arrangement of collagen fibers in the dermis of nude mice skin (**A,** V.G staining, ×200). The V.G staining positive areas were analyzed by ImageJ and the average percentage of stained area was calculated **(B)**. *$P < 0.05$. DAs, dedifferentiated adipocytes.



SUPPLEMENTARY FIG. S2. Histological changes in UVB-induced photoaged mice skin **(B)** vs. Control **(A)** (hematoxylin and eosin staining, ×200). UVB, ultraviolet B.



SUPPLEMENTARY FIG. S3. TGF-β_1 exhibits no influence on UVB-induced DNA damage in HDFs. HDFs were irradiated by 30 mJ/cm^2 UVB, with one group with added 3 ng/mL TGF-β_1. The percentages of positive immunofluorescent staining cells for γH2AX were counted after 0, 8, and 24 h **(A** and **B)**. Cell nuclei were counterstained by DAPI. No significant difference was found between the two groups at different time points **(C)**. Data are mean ± SD, $n = 3$. HDFs, human dermal fibroblasts; TGF-β_1, transforming growth factor-β_1.