

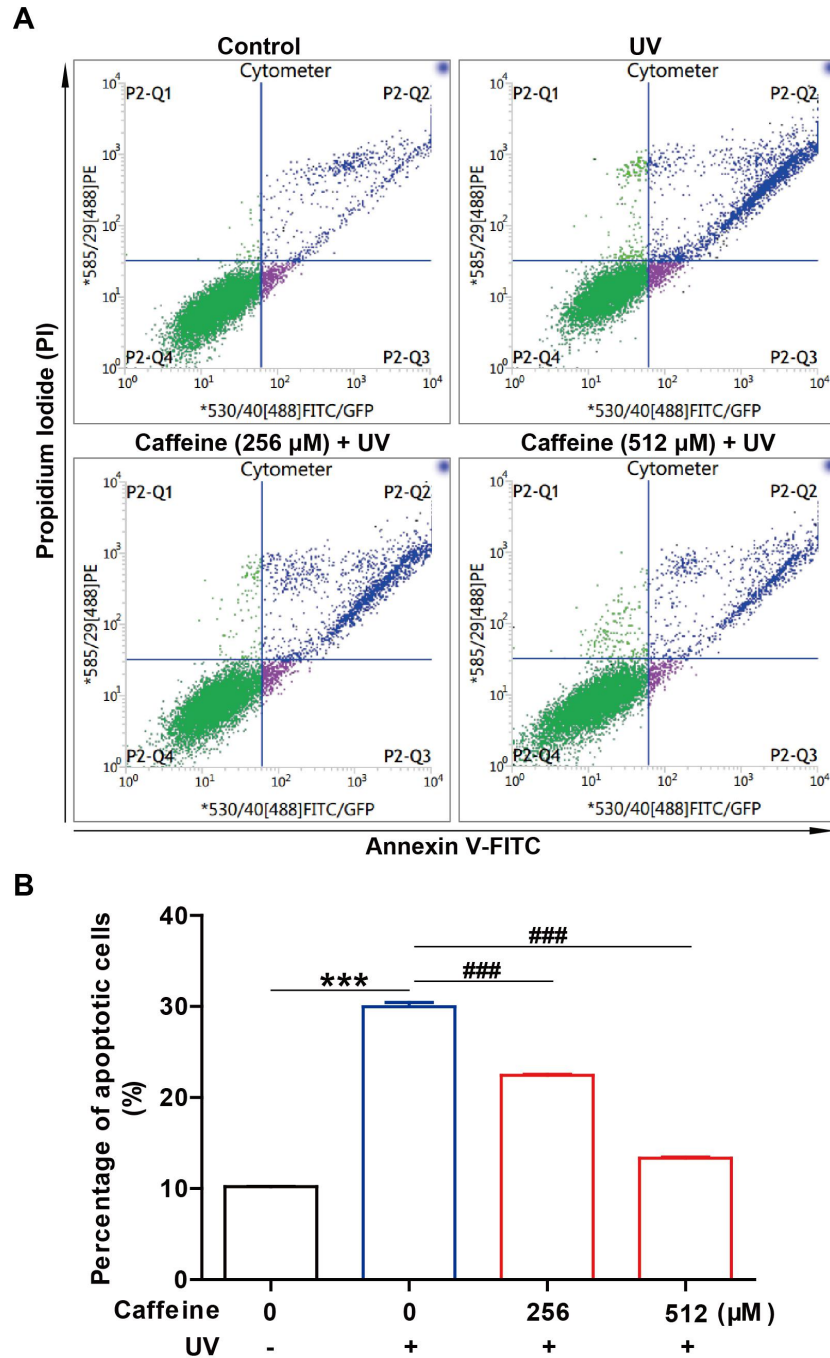
Supplementary Material

Caffeine Targets SIRT3 to Enhance SOD2 Activity in Mitochondria

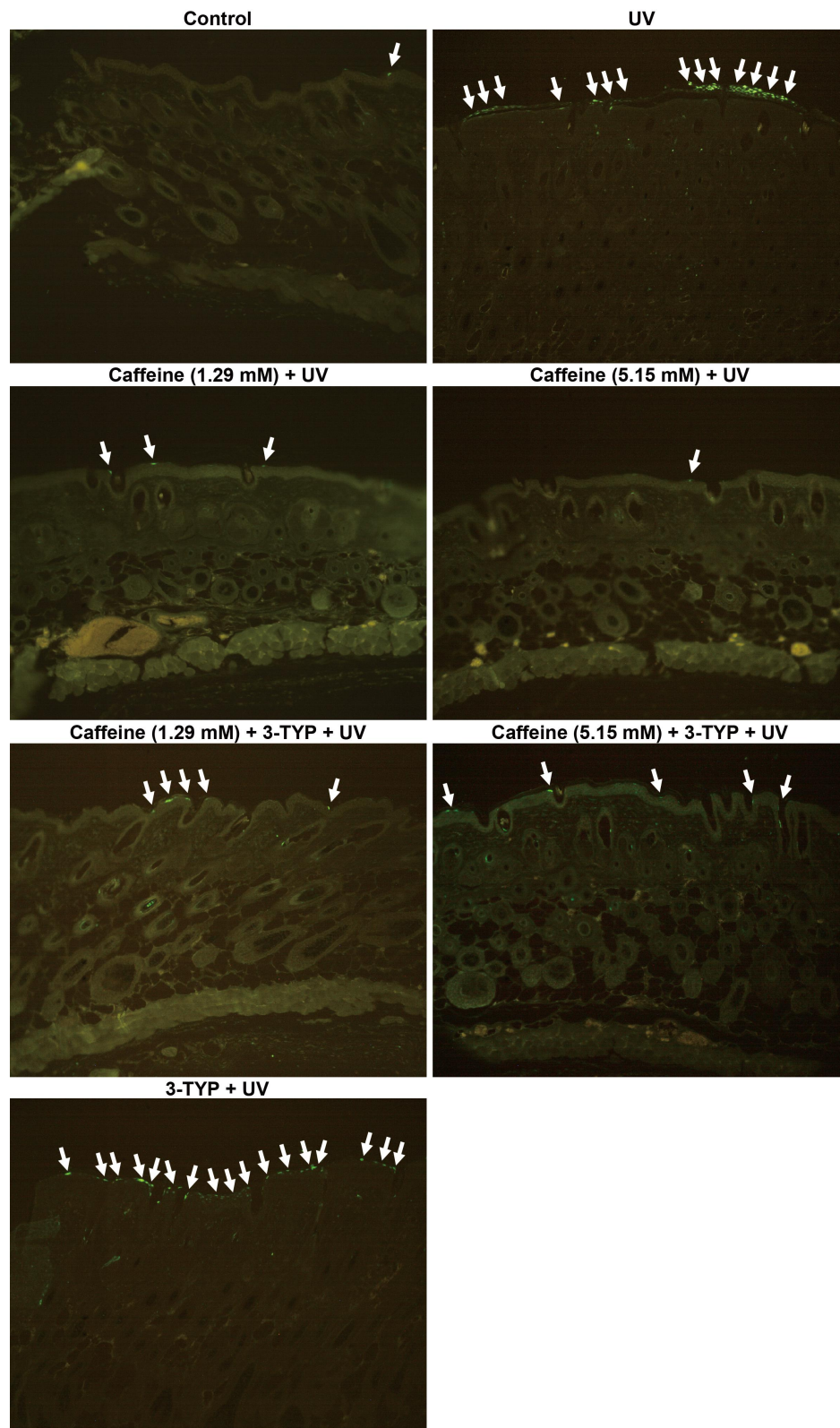
Huanhuan Xu^{1,2†}, Chunxia Gan^{1,3†}, Ziqi Gao^{1,3}, Yewei Huang^{1,2}, Simin Wu^{1,3}, Dongying Zhang^{1,2*}, Xuanjun Wang^{1,2,4*} and Jun Sheng^{1,4*}

***Correspondence to:** Key Laboratory of Pu-er Tea Science, Ministry of Education, Yunnan Agricultural University, No. 452, Fengyuan Road, Panlong District, Kunming 650201, China. E-mail addresses: 757664982@qq.com (Dongying Zhang); jwang@ynau.edu.cn (Xuanjun Wang); shengj@ynau.edu.cn (Jun Sheng).

[†]These authors contributed equally to this work.



Supplementary Figure 1. Caffeine inhibits UV irradiation-induced apoptosis in HaCaT cells. **(A)** Flow cytometry was used to detect cell apoptosis in UV-irradiated HaCaT cells treated with various concentrations of caffeine. **(B)** The ratio of apoptotic cells in each group are expressed as percentages. Data are expressed as the mean \pm SEM of three independent experiments. *** $P < 0.001$ vs. the control; ### $P < 0.001$ vs. UV irradiation only.



Supplementary Figure 2. Caffeine effectively inhibits apoptosis in UV-irradiated mouse skin. Apoptosis in mouse skin sections was examined by TUNEL staining and images were captured at $\times 100$ magnification. The green fluorescence represents apoptotic cells.