Supporting Information for

A Natural Deep Eutectic Solvent Formulation Promotes Hair Growth by Enhancing the Transdermal Delivery and Bioactivity of Hydroxytyrosol

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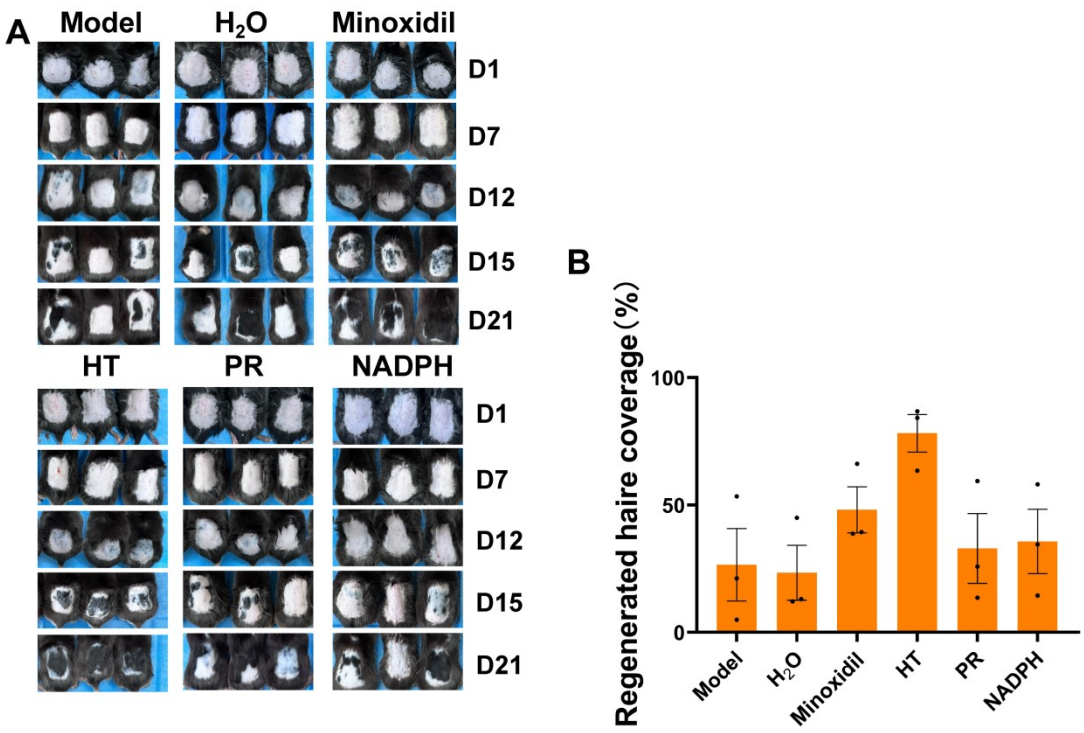

Figure. S1 Effect of different antioxidantive molecules on AGA model. (A) Representative images of hair regeneration status in different groups of mice from 1-16 days. (B) Statistics of the regenerated hair coverage of mice on day 16 (n = 3 mice). Hydroxytyrosol (HT 10mg/ml), Puerarin (PR 10mg/ml), NADPH (10mg/ml)

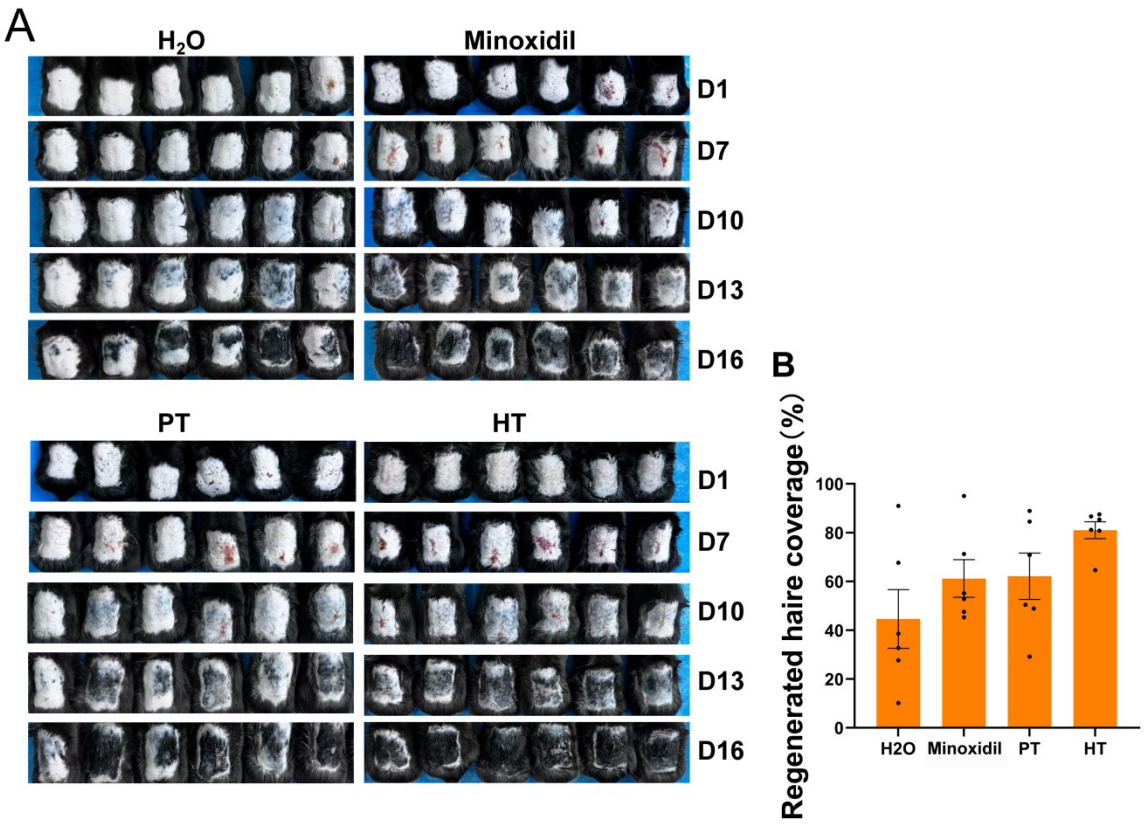

Figure. S2 Effect of different antioxidantive molecules on AGA. (A) Representative images of hair regeneration status in different groups of mice from 1-16 days. (B) Statistics of the regenerated hair coverage of mice on day 16 (n = 5 mice). Hydroxytyrosol (HT 10mg/ml), Piceatannol(PT 10mg/ml).

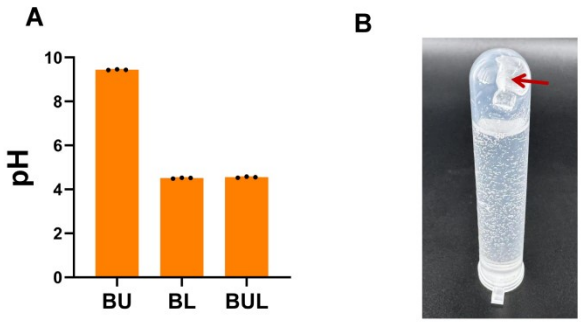

Figure S3. Physicochemical properties of deep eutectic solvents (DES). (A) pH of BU, BL, and BUL DESs at room temperature. (B) Crystal formation in DES-BL following 24-hour incubation at room temperature. Crystals are marked with red arrows.

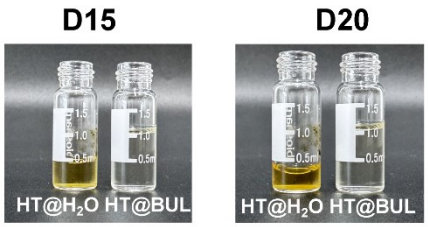

Figure S4. Enhanced stability of HT by BUL. Physical appearance of water and BUL-formulated HT samples following 15 and 20 days of outdoor exposure.

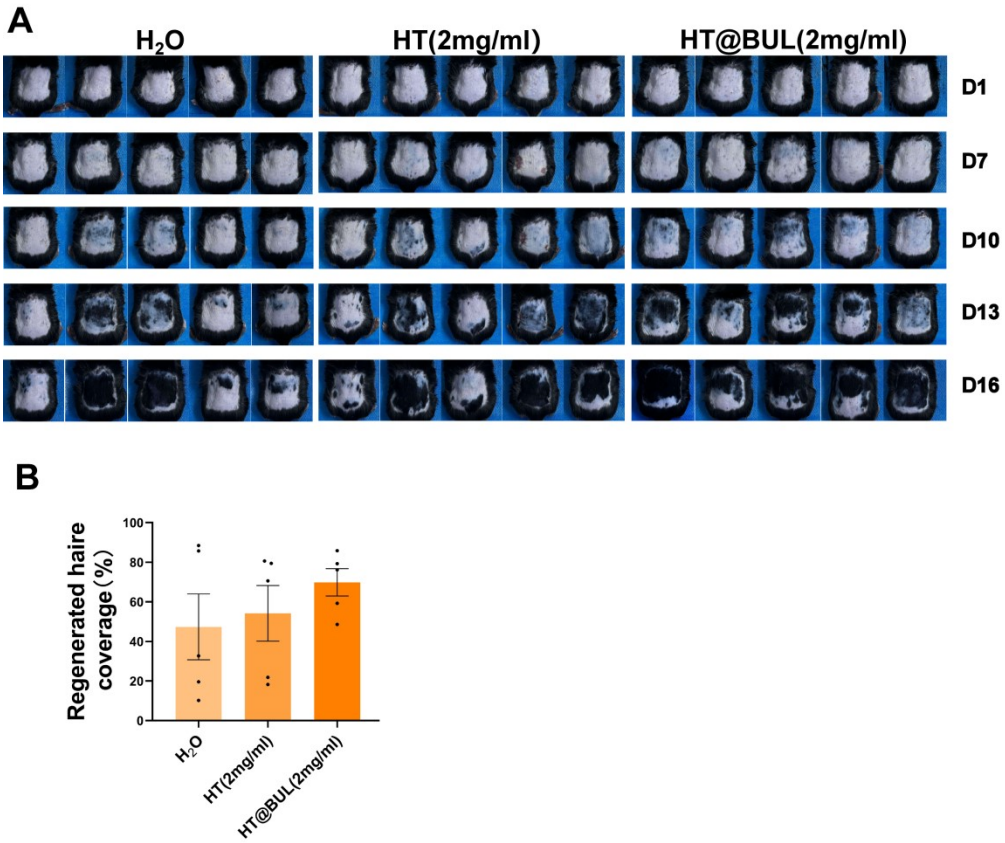

Figure. S5 The effect of low-concentration HT loaded in BUL on AGA model. (A) Representative images of hair regeneration status in different groups of mice from 1-16 days. (B) Statistics of the regenerated hair coverage of mice on day 16 (n = 5 mice)

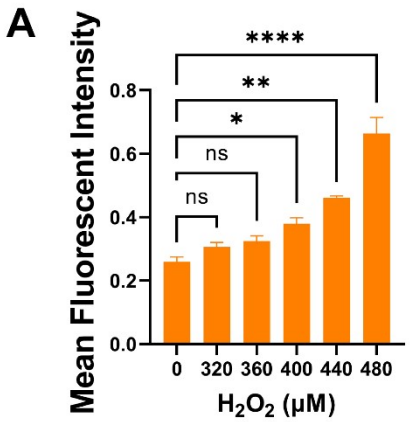

Figure S6A. H_2O_2-dependent induction of oxidative stress in HDPCs. (A) Dose-response curve of DHE fluorescence intensity in HDPCs following treatment with H_2O_2 (n=3).