

Supplementary Materials for

Prostaglandin D₂ Inhibits Hair Growth and Is Elevated in Bald Scalp of Men with Androgenetic Alopecia

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The PDF file includes:

Fig. S1. Verification of hair cycle stage in wild-type mice.

Fig. S2. 15-Deoxy- $\Delta^{12,14}$ -prostaglandin J₂ (15-dPGJ₂) induces apoptosis in cultured human keratinocytes.

Fig. S3. Analogs of PGD₂ inhibit hair lengthening according to their relative agonism of GPR44.

SUPPLEMENTARY FIGURES

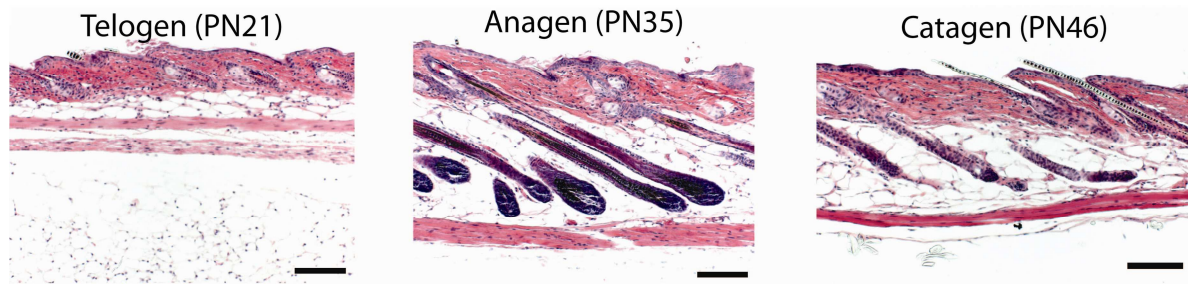


Figure S1. Verification of hair cycle stage in wild-type mice. (A to C) Representative skin biopsies from mice showing histology characteristic of telogen at PN21 (A), late anagen at PN35 (B), and early catagen at PN46 (C). Scale bars, 100 μ m.

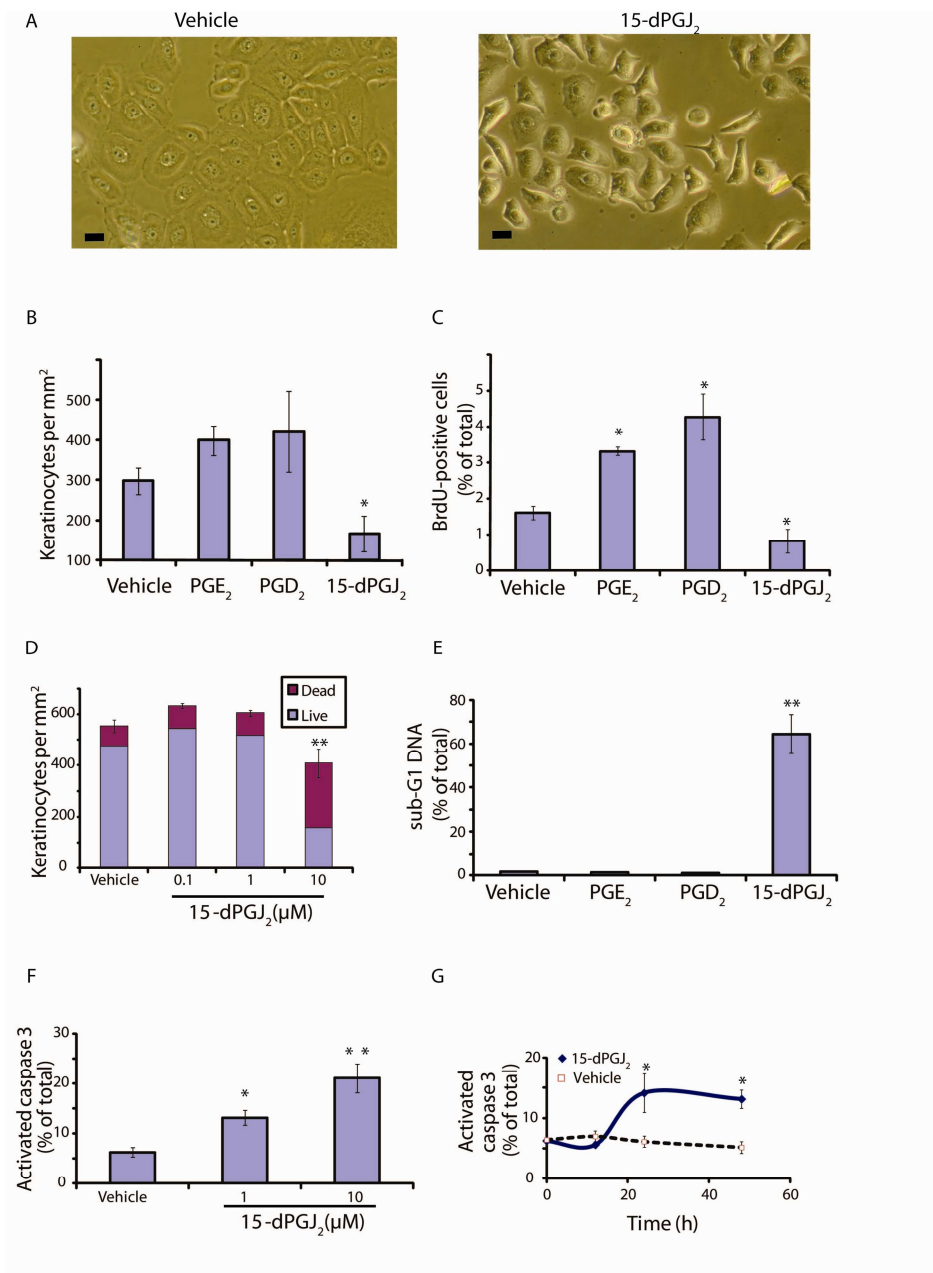


Figure S2. 15-Deoxy- Δ 12,14-prostaglandin J₂ (15-dPGJ₂) induces apoptosis in cultured human keratinocytes. **(A)** Phase contrast microscopy of cultured human foreskin keratinocytes treated with either acetone vehicle or 10 μ M 15-dPGJ₂. Scale bars, 10 μ m. **(B)** Total number of keratinocytes recovered after treatment with vehicle, PGE₂, PGD₂, or 15-dPGJ₂. Data are means \pm SEM ($n = 4$ per treatment group). **(C)** Percent of cells with incorporated BrdU after treatment with vehicle, PGE₂, PGD₂, or 15-dPGJ₂. Data are means \pm SEM ($n = 4$). **(D)** Total numbers of live and dead keratinocytes after treatment with vehicle or varying concentrations of 15-dPGJ₂. Data are means \pm SEM ($n = 4$ per treatment group). **(E)** Percentage of keratinocytes with sub-G1 quantities of DNA after treatment with vehicle, PGE₂, PGD₂, or 15-dPGJ₂. Data are means \pm

SEM ($n = 4$ per treatment group). (F) Percentage of keratinocytes with activated caspase after 48 h of treatment with vehicle or 15-dPGJ₂. Data are means \pm SEM ($n = 3$ per treatment group). (G) Percentage of keratinocytes with activated caspase 3 after 10 μ M 15-dPGJ₂ exposure for the indicated time of treatment. Data are means \pm SEM ($n = 3$). * $P < 0.05$, ** $P < 0.01$, compared to vehicle, Student's t test.

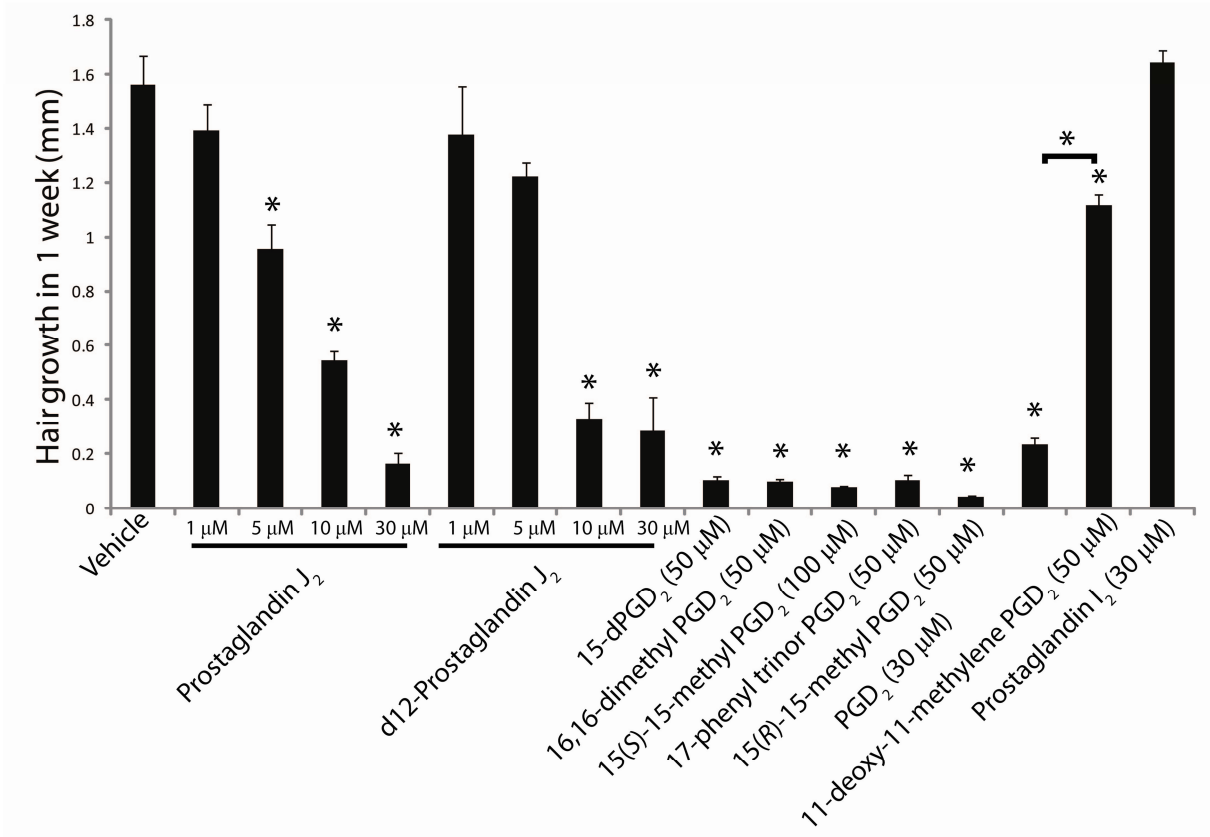


Figure S3. Analogs of PGD₂ inhibit human hair lengthening according to their relative agonism of GPR44. In vitro growth of explanted human hair follicles over the course of 7 days in culture with listed PGD₂ analogues, prostaglandin I₂, or vehicle control ($n = 3$ per treatment group). * $P < 0.05$ compared to vehicle, unless otherwise noted, Student's t test.