

1 **Human Adipose-derived Pericytes Display Steroidogenic Lineage Potential in**
2 ***Vitro* and Influence Leydig Cell Regeneration *in Vivo* in Rats**

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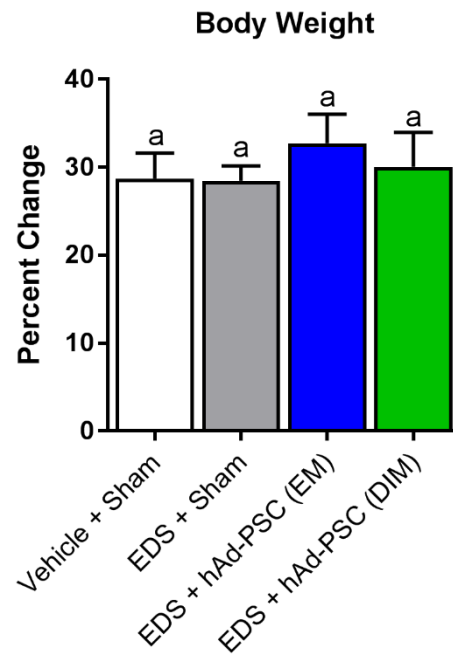
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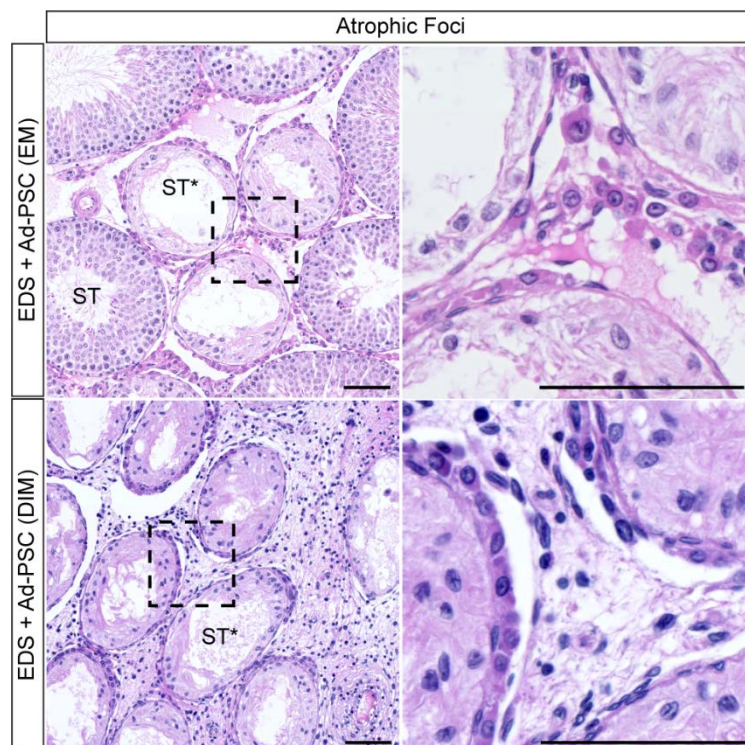
17 e-mail: lee.smith@ed.ac.uk

18 **Supplementary Information**

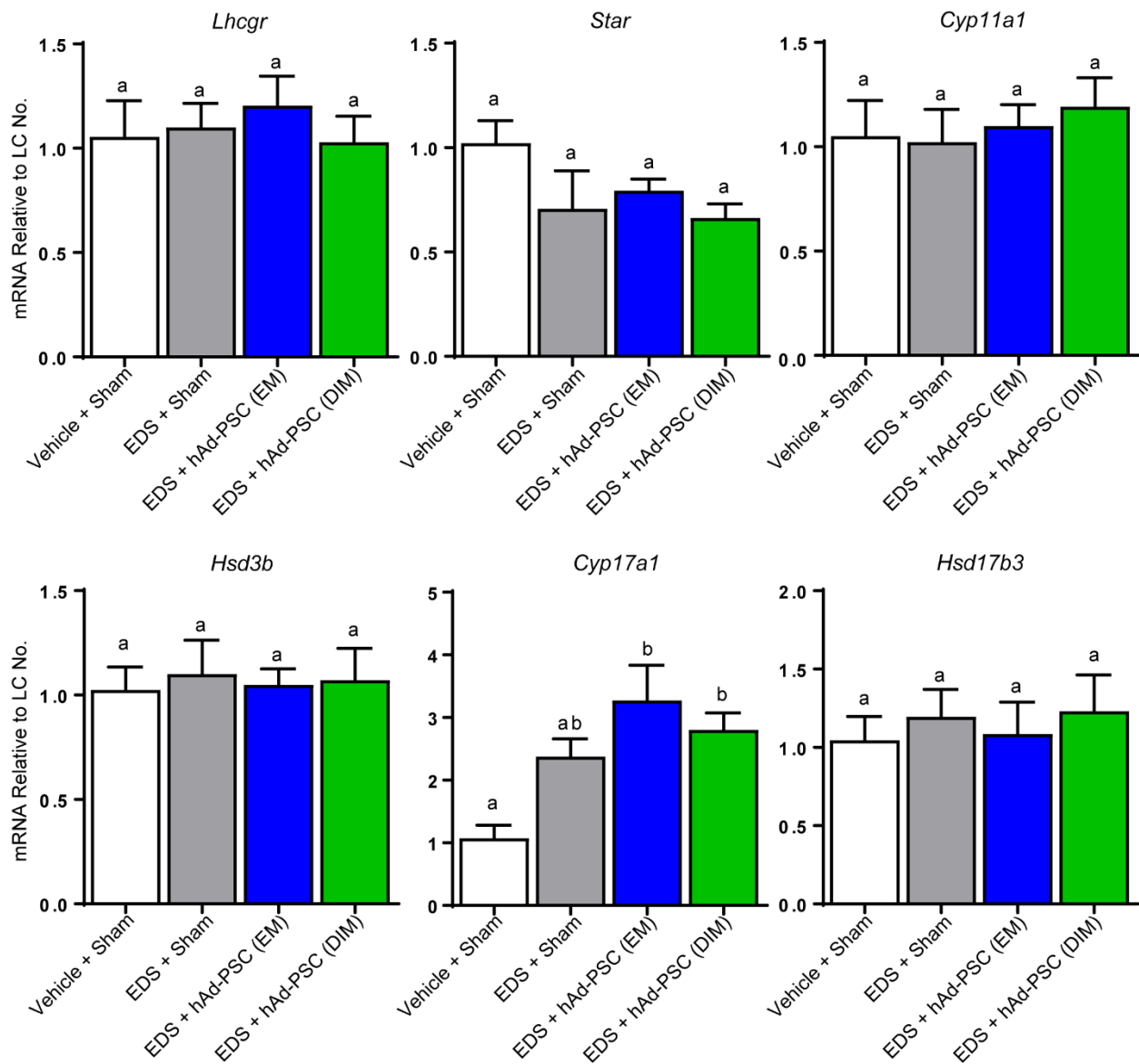
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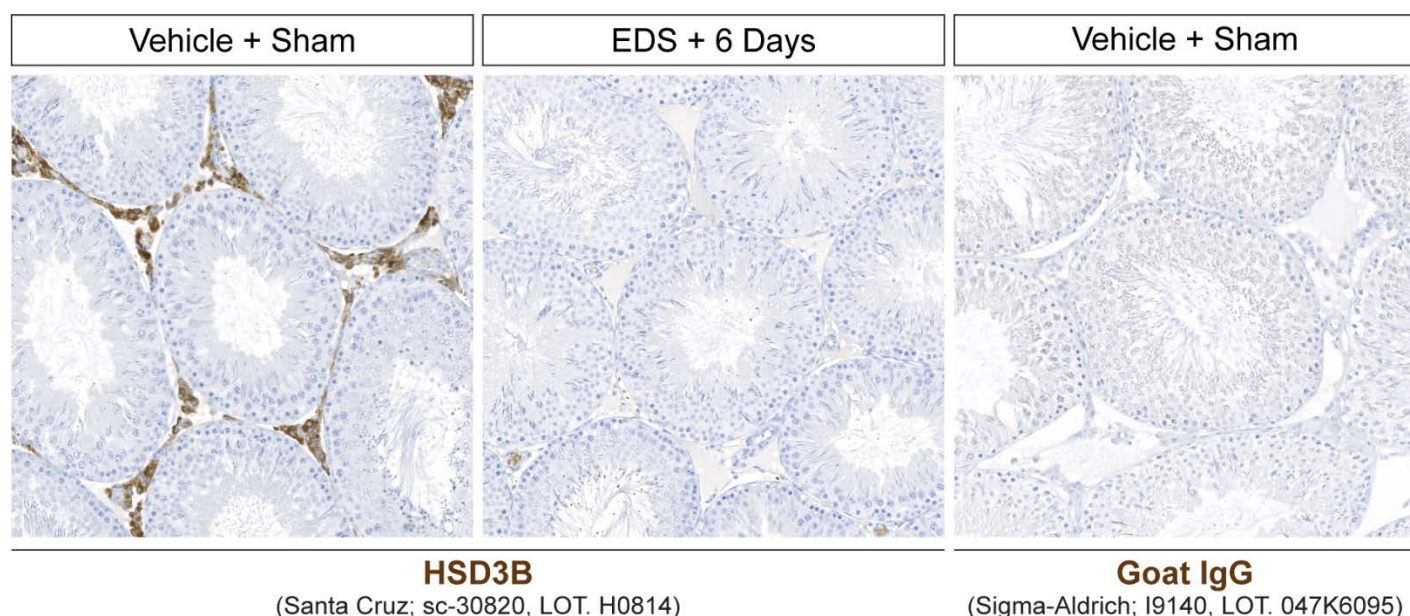
Supplemental Figure 1. No difference in body weight was noted in experimental animals. Body weight changes were similar between Vehicle + Sham controls and Leydig cell ablated animals with or without transplantation of EM or DIM cultured hAd-PSCs (1-way ANOVA). Tukey's post-hoc analysis was used to compare means between groups where a shared letter denotes no significant difference. Data presented are mean $\pm$ SEM from n=5-6 separate animals per group.



Supplemental Figure 2. Regions containing atrophic tubules. Occasionally, regions containing atrophic tubules (ST*) and possible inflammatory cell infiltrates were noted both in EM and DIM hAd-PSC-transplanted testes. Scale = 100 μ m.



Supplemental Figure 3. Steroidogenic mRNA expression ‘per Leydig cell’. No difference in mRNA expression levels (relative to Leydig cell number) of luteinising hormone/chorionic gonadotropin receptor (*Lhcgr*); steroidogenic acute regulatory protein (*Star*); P450 cholesterol side-chain cleavage enzyme (*Cyp11a1*); hydroxysteroid dehydrogenase 3-beta (*Hsd3b*); or hydroxysteroid dehydrogenase 17-beta type 3 (*Hsd17b3*) was noted between experimental groups and Vehicle + Sham controls (1-way ANOVA). However, expression of 17 α -hydroxylase, 17,20-lyase (*Cyp17a1*) was significantly increased both in hAd-PSC (EM) and in hAd-PSC (DIM) groups (1-way ANOVA; $p = 0.0027$). Tukey’s post-hoc analysis was used to compare means between groups where a shared letter denotes no significant difference. Data presented are mean $\pm$ SEM from $n=5-6$ separate animals per group.



Supplemental Figure 4. Immunohistochemistry primary antibody controls. Sections of Vehicle + Sham control testis incubated with primary antibody (positive control, left pane) shows positive HSD3B staining (brown) in interstitial cells. No staining is observed in sections of rat testis incubated with primary antibody 6 days following EDS-mediated Leydig cell ablation (middle pane). No staining is observed in sections of Vehicle + Sham control testes incubated with isotype IgG (right pane; I9140, Lot 047K6095; Sigma-Aldrich, Dorset, UK).