Supplemental Figure S1 and S2

All-trans retinoic acid disrupts development in ex vivo cultured fetal rat testes. I: Altered seminiferous cord maturation and testicular cell fate

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Supplemental Figure S1. Pre-culture gestation day 15 rat fetal testis. A. A pre-culture sample of gestational day 15 rat fetal testis showing normal testis architecture, including developing seminiferous cords. B. Seminiferous cords contained DDX4-positive germ cells. C. Most ACTA2 stain was localized to the tunica, but there was faint ACTA2 stain around some seminiferous cords. Scale bar = 100  $\mu$ m. Dashed lines indicate area of insets.



**Supplemental Figure S2. Enhanced expression of canonical retinoic acid signaling target genes. A.** Tretinoin (ATRA) was the most significant "upstream regulator" in IPA analysis. Network diagram showing predicted activation of regulatory molecules downstream of ATRA, based on microarray data (orange – activated, blue – inhibited). **B.** Network constructed from significant genes downstream of ATRA, plus retinoic acid receptors RARA, RARB, and RARG. Genes are colored by direction of regulation in 10<sup>-6</sup> M ATRA versus vehicle (red – upregulated, green – downregulated).