

1 **Injection of seminal fluid into the hemocoels of honey bee queens (*Apis mellifera*)**
2 **can stimulate post-mating changes**
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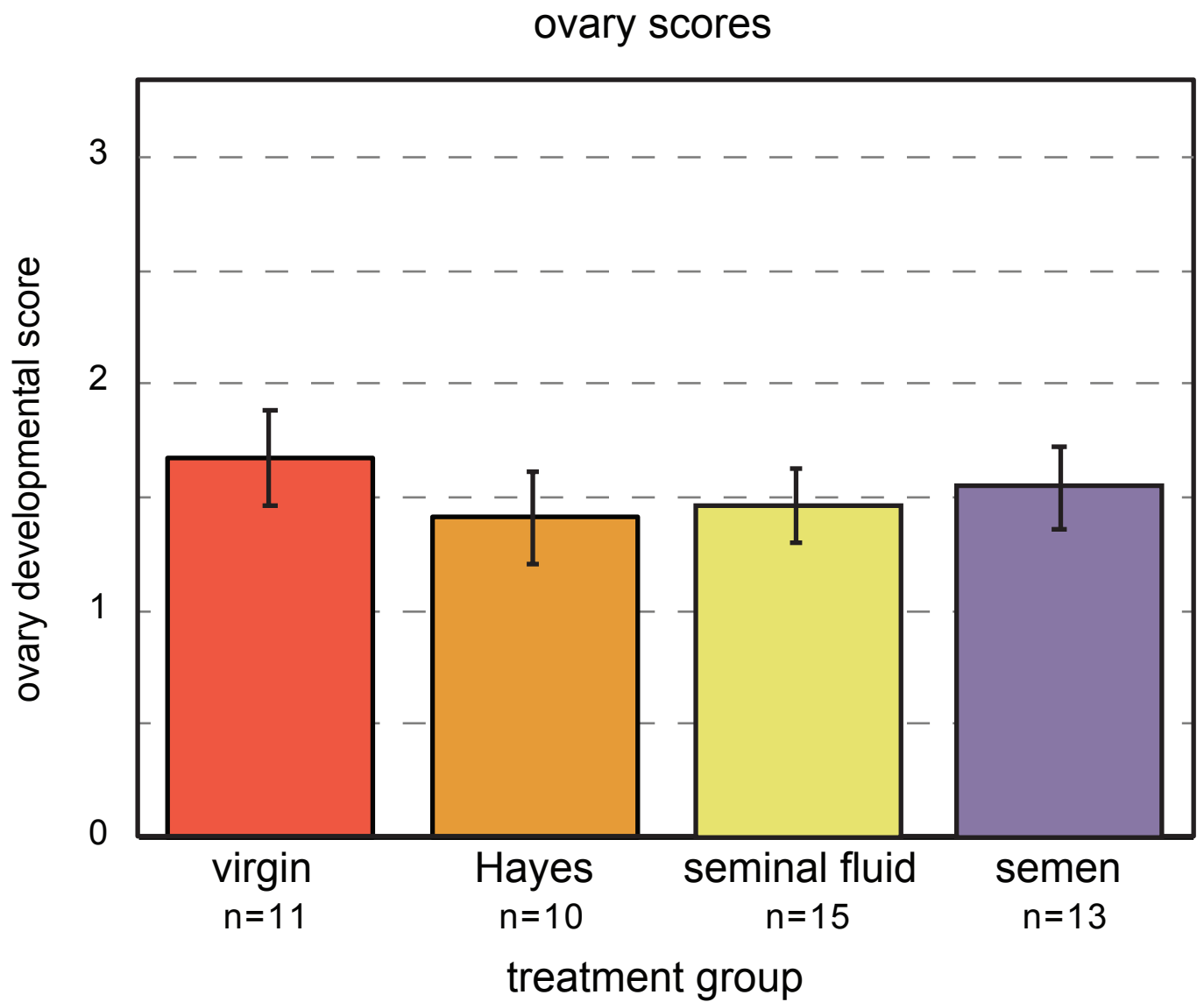
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Supplemental Figure S4. Ovary developmental scores of queens injected with Hayes solution, seminal fluid, or semen and queens that were not treated (virgin). Ovaries were dissected and assessed for no development (score=1), thickening of ovarioles (score=2), presence of developing eggs (score=3), and presence of fully developed eggs (score=3). Overall, there was no statistical difference in ovary scores amongst the four treatment groups (Non-parametric Kruskal-Wallis test; $df=3$, Chi-square value=1.29, $P=0.73$).