

Effects of Royal Jelly in Combination With Juvenile Hormone Agonists and Antagonists on *Drosophila Melanogaster*

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Previous research has shown that administering Royal Jelly (RJ) to the fruit fly (*Drosophila melanogaster*) results in an increase in growth rate along with several changes to development. However, the combined effects of RJ and another hormonal modulator of growth, Juvenile Growth Hormone (JH), have formerly been overlooked. Royal Jelly has been linked with increased ovary size and hastened turnover time from youth to functioning adult (Kamakura, 2011). Conversely, JH maintains adolescent morphology and physiology in juveniles and increases reproductive output (via vitellogenesis) in adults. Here we describe our studies on the effects of RJ combined with both JH agonists and antagonists. We studied the impact of these hormonal combinations on both larval and adult fruit flies and will report on effects on morphology, developmental time course, and mortality.

Kamakura, M. (2011). Royalactin induces queen differentiation in honeybees. *Nature*, 473(7348), 478.