

## Changes in ornithine decarboxylase activity in response to temperature stress and stimulation of juvenile hormone in *Anastrepha fraterculus* (Diptera, Tephritidae)

*Cardoso, V.V.<sup>1</sup>; Pizzol, F.<sup>2</sup>Prestes, P.R.<sup>11</sup>; Moreira, J.C.F.<sup>21</sup>; Oliveira A.K.<sup>1</sup>*

<sup>1</sup>Departamento de Genética - Laboratório de Genética do Desenvolvimento, Instituto de Biociências - Universidade Federal do Rio Grande do Sul - Porto Alegre, RS, Brazil.

ODC activity was analyzed in *Anastrepha fraterculus* females (4 day old) submitted to temperature stress (6°C and 20/6°C) and the topical application of juvenile hormone (JH). ODC activity and ejaculatory apodeme measurements (length and width) were made in males (15 day old) after 6°C stress. JH concentration of 500 ng and time incubation of 3, 7, and 18 hours increased ODC activity. Females reared at 6°C and 20/6°C showed higher ODC activity than those reared at 25°C. The treatment of 6°C and JH incubation for one hour increased ODC activity when compared to 6°C treatment only. However, the treatment of 20/6°C only after 3 or 18 hours of JH incubation showed higher ODC activity than controls (20/6°C) or 20/6°C plus one hour of JH incubation. Males did not show differences in ODC activity when reared at 6°C or 25°C but the ejaculatory apodeme measurements was higher in those reared at 25°C than in those reared at 6°C. The results can be considered an adaptive process to environmental changes.