

**Table S1.** The time course of changes in the levels of hormones and biogenic amines and the activity of their metabolic enzymes in *Drosophila* under heat stress (38 °C).

Hormone/enzyme	Direction of changes	Time course, min	Reference
Dopamine	rise	15	Rauschenbach et al., 1993 <sup>1</sup> ; Hirashima et al., 2000 <sup>2</sup>
Octopamine	rise	15	Hirashima et al., 2000 <sup>2</sup>
20-hydroxyecdysone	rise	60	Hirashima et al., 2000 <sup>3</sup>
Juvenile hormone	assumed rise		Gruntenko, Rauschenbach, 2018 <sup>4</sup>
JH-esterase	drop	180	Gruntenko et al., 1999 <sup>5</sup>
JH-epoxide hydrolase	drop	180	Gruntenko et al., 1999 <sup>5</sup>
Ecdysone 20-monooxygenase	rise	60	Chentsova et al., 2007 <sup>6</sup>
Thyrosine hydroxylase	drop rise	30 60	Sukhanova et al., 1995 <sup>7</sup>
Alkaline phosphatase	drop rise	30 240	Sukhanova et al., 1995 <sup>7</sup>
Tyrosine decarboxylase	drop	60	Sukhanova et al., 1997 <sup>8</sup>
N-acetyl transferase	drop rise	30 60	Rauschenbach et al., 1997 <sup>9</sup>
DOPA decarboxylase	drop	30	Rauschenbach et al., 1997

<sup>1</sup> Rauschenbach, I.Yu., Serova, L.I., Timochina, I.S., Chentsova, N.A., Schumnaja, L.V. Analysis of differences in dopamine content between two lines of *Drosophila virilis* in response to heat stress. *J. Insect Physiol.* **1993**, 39, 761–767.

<sup>2</sup> Hirashima, A., Sukhanova, M.Jh., Rauschenbach, I.Yu. Biogenic amines in *Drosophila virilis* under stress conditions. *Biosci. Biotechnol. Biochem.* **2000a**, 64, 2625–2630.

<sup>3</sup> Hirashima, A., Rauschenbach, I.Yu., Sukhanova, M.Jh., . Ecdysteroids in stress responsive and nonresponsive *Drosophila virilis* lines under stress conditions. *Biosci. Biotechnol. Biochem.* **2000b** 64, 2657–2662.

<sup>4</sup> Gruntenko, N.E.; Rauschenbach, I.Yu. The role of insulin signalling in the endocrine stress response in *Drosophila melanogaster*: A mini-review. *Gen. Comp. Endocrinol.* **2018**, 258, 134–139. <https://doi.org/10.1016/j.ygcen.2017.05.019>.

<sup>5</sup> Gruntenko, N.E., Khlebodarova, T.M., Sukhanova, M.Jh., Vasenkova, I.A., Kaidanov, L.Z., Rauschenbach, I.Yu.. Prolonged negative selection of *Drosophila melanogaster* for a character of adaptive significance disturbs stress reactivity. *Insect Biochem Mol Biol.* **1999**, 29, 445–452. [https://doi.org/10.1016/s0965-1748\(99\)00021-1](https://doi.org/10.1016/s0965-1748(99)00021-1).

<sup>6</sup> Chentsova, N.A.; Gruntenko, N.E.; Rauschenbach, I.Yu. Ecdysone 20-monooxygenase activity in *Drosophila virilis* strains varying in ecdysteroid response to heat stress. *Russ. J. Genet.*, **2007**, 43, 829–830. <https://doi.org/10.1134/S1022795407070174>.

<sup>7</sup> Sukhanova, M.Z.; Grenback, L.G.; Gruntenko N.E.; Khlebodarova T.M.; Rauschenbach I.Y. Alkaline phosphatase in *Drosophila* under heat stress. *J. Insect Physiol.* **1995**, 42, 161–165.

<sup>8</sup> Sukhanova, M.Z.; Grenback, L.G.; Gruntenko N.E.; Khlebodarova T.M.; Rauschenbach I.Y. Tyrosine decarboxylase and dopa decarboxylase in *Drosophila virilis* under heat stress. *Biochem. Genet.* **1997**, 35, 91–103. <https://doi.org/10.1023/a:1022209707655>.

<sup>9</sup> Rauschenbach, I.Yu.; Sukhanova, M.Jh.; Shumnaya, L.V.; Gruntenko, N.E.; Grenback, L.G.; Khlebodarova, T.M.; Chentsova, N.A. Role of DOPA decarboxylase and N-acetyltransferase in regulation of dopamine content in *Drosophila virilis* under normal and stress conditions. *Insect Biochem. Molec. Biol.* **1997**, 27,, 729–734. [https://doi.org/10.1016/s0965-1748\(97\)00051-9](https://doi.org/10.1016/s0965-1748(97)00051-9).