

Supplemental material for: **Perturbations in dopamine synthesis lead to discrete physiological effects and impact oxidative stress response in *Drosophila***

Marley E. Hanna¹, Andrea Bednářová^{1,2}, Kuntol Rakshit³, Anathbandhu Chaudhuri⁴, Janis M O'Donnell⁵ and Natraj Krishnan^{1*}

¹Department of Biochemistry, Molecular Biology, Entomology and Plant Pathology, Mississippi State University, Mississippi State, MS 39762, USA.

²Institute of Entomology, Biology Centre, Academy of Sciences and Faculty of Science, University of South Bohemia, Branišovská 31, 370 05 České Budějovice, Czech Republic.

³Department of Physiology and Biomedical Engineering, Mayo Clinic, 200 First St. SW, Rochester, MN 55905, USA.

⁴Department of Natural Sciences, Stinson Mathematics and Science Building, 3601 Stillman Blvd, Stillman College, Tuscaloosa, AL 35043, USA

⁵Department of Biological Sciences, The University of Alabama, Tuscaloosa, AL 35487, USA

*Corresponding author: Phone: 662-325-2978, Fax: 662-325-8837

E-mail: nk260@msstate.edu

Supplemental Table 2.1: List of primers and their sequences used in this study.

Gene	Forward primer (5'-3')	Reverse primer (5'-3')
<i>rp49</i>	ACG TTG TGC ACC AGG AAC TT	CCA GTC GGA TCG ATA TGC TAA
<i>Cat</i>	AGA TGC TGC ATG GTC GTC TGT TGT TCT	TCC ATC CCG CTG GAA GTT CTC AAT
<i>MnSOD</i>	ACA TCA CCG ACT CCA AGA TTA C	TTG CCC GTT GAC TTG CT
<i>CuZnSOD</i>	TAA ATT GAT TAA TTC ATT CG	ACA TCG GAA TAG ATT ATC GC
<i>GSTO1</i>	CAT ATG AGC AAT ACT CAG CAC TTA ACT AT	GGA TCC CTA CCC CAA TTT GAC ACG TTT G
<i>GSTO3</i>	CAT ATG AGT TCT GGT AAA CAT TTG GCC AA	GGA TCC CTA AGC CAG CAG ATC GTA GTT T

Figure S1: Representative double-plotted actograms and periodograms of w^{1118} , Canton-S, *Catsup*²⁶, *ple*², *Pu*^{Z22} and *VMAT*^{A14} flies ~ 6-8 days after adult eclosion. Flies were entrained for 3 days in 12h:12h LD (Light/Dark) cycles before being maintained in constant darkness (DD) for 7-10 days. Actograms and periodograms were generated using ClockLab (Actrimetrics). The Y-axis on actograms represents days, whereas the top axis denotes hours in military time (for further details refer to the text).

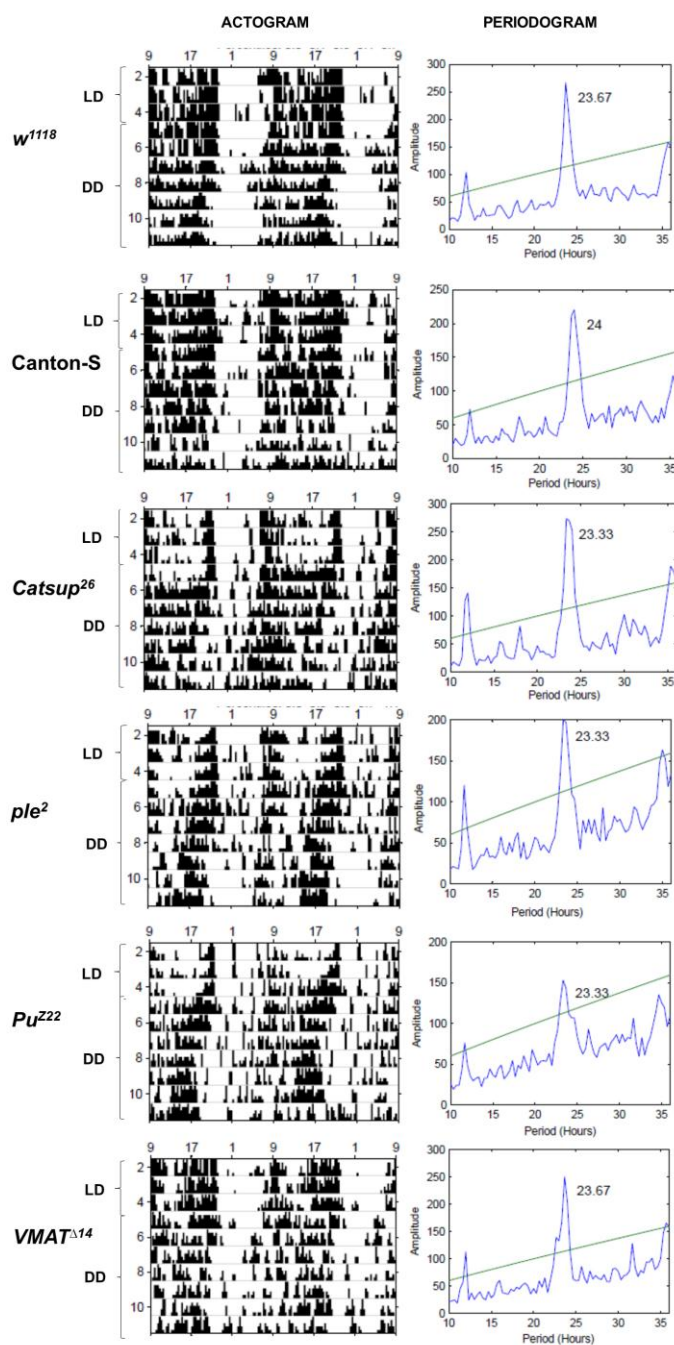


Figure S2: Representative double-plotted actograms and periodograms of *elav-Gal4/UAS-Catsup-RNAi* and *TH-Gal4/UAS-Catsup-RNAi* flies ~ 6-8 days after adult eclosion. Flies were entrained for 3 days in 12h:12h LD (Light/Dark) cycles before being maintained in constant darkness (DD) for 7-10 days. Actograms and periodograms were generated using ClockLab (Actrimetrics). The Y-axis on actograms represents days, whereas the top axis denotes hours in military time (for further details refer to the text).

