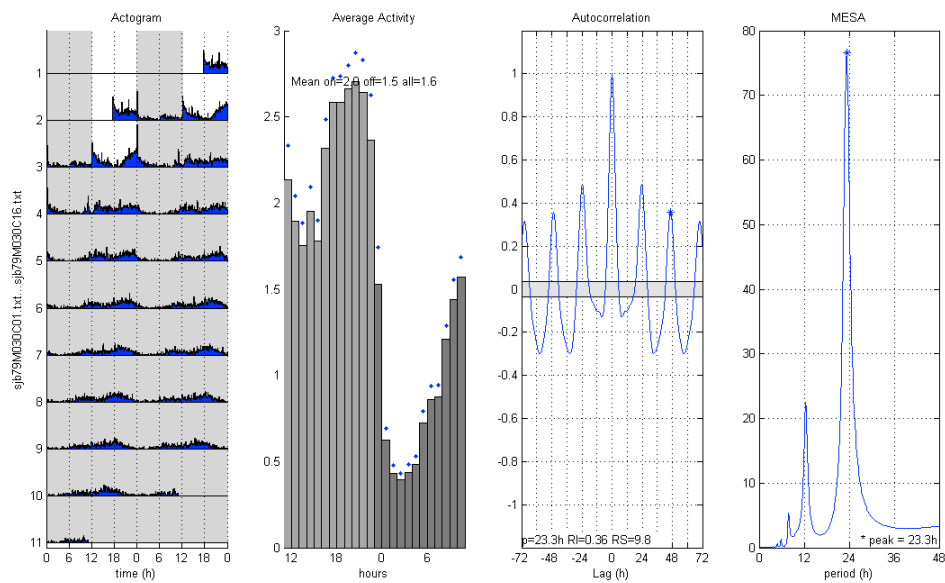


Genotype	n	mean	sd	se	off	off sd	ri	ri sd	rs	rs sd	%Rh
dNAT1 P2: w[1118]; P[w[+mGT]=GT1]NAT1[BG02338]	24	23.3	0.2	0.1	2.4	1.1	0.4	0.1	8.5	2.0	75%
P2/P1	24	23.4	0.3	0.1	3.5	1.9	0.5	0.1	13.1	3.6	100%
P2/P1cyo	22	24.2	0.3	0.1	2.1	0.7	0.5	0.1	12.3	3.4	91%
P2/P3	16	24.2	1.4	0.6	3.8	3.0	0.5	0.1	12.6	3.3	75%
dNAT P1: cn[1] P[ry[+7.2]=PZ]NAT1[O1424]/CyO; ry[506]	12	23.7	0.5	0.2	2.2	1.1	0.5	0.1	11.6	2.6	100%
P1/P3	15	24.0	0.3	0.1	1.7	0.9	0.5	0.1	11.3	2.9	80%
P1cyo/P3	20	24.2	0.3	0.1	2.9	1.7	0.5	0.1	10.1	1.6	70%
dNAT1 P3: y[1] w[67c23]; P[w[+mC] y[+mDint2]=EPgy2]NAT1[EY08892]	13	24.0	0.2	0.1	3.0	0.8	0.5	0.1	11.4	1.6	77%
+;pdfGAL4/cyo;UAS-NAT1R/UAS-NAT1R	22	25.7	0.3	0.1	3.4	1.3	0.4	0.1	8.5	2.5	91%
+;pdfGAL4/P[w[+mC] y[+mDint2]=EPgy2]NAT1[EY08892];UAS-NAT1R/+	15	25.6	0.3	0.1	3.7	1.3	0.4	0.1	8.9	2.6	100%
+;pdfGAL4/P[ry[+7.2]=PZ]NAT1[O1424];UAS-NAT1R/+	43	25.6	0.4	0.2	3.9	0.5	0.3	0.1	7.1	1.3	56%
+;pdfGAL4/P[w[+mGT]=GT1]NAT1[BG02338];UAS-NAT1R/+	30	25.5	0.4	0.1	2.5	1.3	0.4	0.2	10.2	4.0	73%



genotype	n	mean	sd	se	off	off sd	ri	ri sd	rs	rs sd	%Rhy
+; pdfGAL4/UAS-FMRPRNAi; UAS-NAT1aRNAi/+	26	25.0	0.4	0.1	4.1	1.8	0.5	0.1	10.2	2.0	73%
+; pdfGAL4/+; UAS-NAT1aRNAi/UAS-NAT1bRNAi	24	25.6	0.8	0.3	3.3	1.8	0.4	0.2	8.4	3.1	58%
+; pdfGAL4/UAS-eIF4ARNAi; UAS-NAT1aRNAi/+	27	25.1	0.9	0.5	4.4	1.2	0.5	0.2	10.5	3.4	26%
+; pdfGAL4/UAS-eIF4GRNAi; UAS-NAT1aRNAi/+	23	25.4	0.8	0.3	2.7	1.9	0.3	0.1	6.5	1.5	61%
+; pdfGAL4/+; UAS-NAT1aRNAi/UAS-BELRNAi	20	25.4	0.4	0.1	2.2	1.6	0.4	0.1	9.0	2.2	90%
+; pdfGAL4/UAS-THORRNAi; UAS-NAT1aRNAi/+	21	24.7	0.4	0.2	4.4	3.3	0.4	0.1	7.6	2.6	62%
+; pdfGAL4/UAS-eIF5CRNAi; UAS-NAT1aRNAi/+	20	24.9	0.8	0.3	1.4	1.3	0.4	0.1	9.1	2.3	65%
+; pdfGAL4/UAS-PAIP2RNAi; UAS-NAT1aRNAi/+	26	25.1	0.2	0.1	1.9	0.7	0.5	0.1	11.6	2.9	81%
+; pdfGAL4/+; UAS-NAT1aRNAi/UAS-eIF3.10RNAi	21	25.3	1.0	0.3	3.7	1.8	0.4	0.1	8.9	1.9	71%
+; pdfGAL4/+; UAS-NAT1aRNAi/UAS-AKTRNAi	22	24.4	0.6	0.2	1.5	0.6	0.4	0.1	8.4	1.3	64%
+; pdfGAL4/UAS-LK6RNAi; UAS-NAT1aRNAi/+	24	25.2	0.4	0.1	2.1	1.2	0.5	0.1	10.7	2.4	83%

Figure S4 P-element insertions at the NAT1 locus combined with *pdf>NAT1RNAi* provided no additional increase in period lengthening. (Top) Various combinations of mutant alleles, where the most severe period phenotype is present with two copies of *UAS-NAT1RNAi*. Behavior metrics are calculated for flies with a DD rhythmic index of 0.2 or more. (Middle) only one mutant allele, dNAT P2, provided a period effect on its own, which was faster than WT controls. (Bottom) Combinations of interesting RNAi lines in PDF cells do not provide significant alterations from the *pdf>NAT1RNAi* long-period phenotype, although an increased fraction of arrhythmic flies was found. Behavior metrics are calculated for flies with a DD rhythmic index of 0.2 or more.