This above findings provide a novel insight for the regulation of core clock molecule period in the pacemaker clock cells of *D. melanogaster*. It implies a new regulatory input in the intracellular molecular feedback loop. The expression profile of novel *per* specific antisense transcripts in 24 hours time period of *D. melanogaster* might substantiate a post-transcriptional regulation of *period* sense transcript. This mode of regulation does not seem to control the feedback loop but fine tunes for providing the desired optimal effect. Therefore three major regulatory control operates for providing rhythmicity of *period*. Fine-tuning of *period* level in posttranscriptional regulation is important for optimizing of *period* concentration in the cytoplasm, which might dictate the feedback loop.

The production of small RNAs from the *per* coding region indicates formation of a sense-antisense dsRNA, which probably is processed further. As observed the small RNAs are single stranded and derived from the antisense RNA we could not rule out the possibility of their processing by the slicing activity of a novel enzyme, as found in piwi and ago-1 proteins. However the size difference of these novel RNA as compared to the conventional siRNAs make us speculate that the processing is performed by a novel, yet to be identified dsRNA dependent RNase or a slicer RNA molecule. The accumulation of novel small RNA from the *period* coding region indicates a possibility of a new regulatory mechanism. This probably fine-tunes the expression level of the sense *per* transcript at the transcriptional level by modulating chromatin of the coding region. It is possible that some known components of nuclear RNAi machinery are involved in rapid remodeling process using small RNA as an instigating component. However we cannot rule out the presence of exclusive components for this pathway as well. Together our data proposed a novel mechanism of *period* regulation for fine-tuning of its concentration in the cytosol.