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## Turning back the clock

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The relevance and prevalence of antisense and non-coding RNA transcripts in eukaryotes is only now beginning to be appreciated. In the February 27 *Nature* Kramer *et al.* report the characterization of an antisense transcript in *Neurospora crassa* that is a regulator of the circadian clock (*Nature* 2003, **421**:948-952). Cyclic expression of the frequency (*frq*) gene is important for the rhythmicity of the *Neurospora* clock. An antisense *frq* RNA is also rhythmically produced in the dark and is 180 degrees out of phase with sense *frq* RNA. The antisense transcript is also induced by light. Disruption of antisense *frq* expression led to a delay in the timing of the internal clock and defects in the resetting of the clock. These results offer another example of the regulation of complex biological processes by naturally occurring antisense RNA and highlight the importance of both sense and antisense transcripts in setting the circadian clock.

## References

1. Non-coding RNA genes and the modern RNA world.
2. *Nature*, [<http://www.nature.com>]
3. Negative feedback defining a circadian clock: autoregulation of the clock gene frequency.