

UPDATE FROM THE CUTTING EDGE

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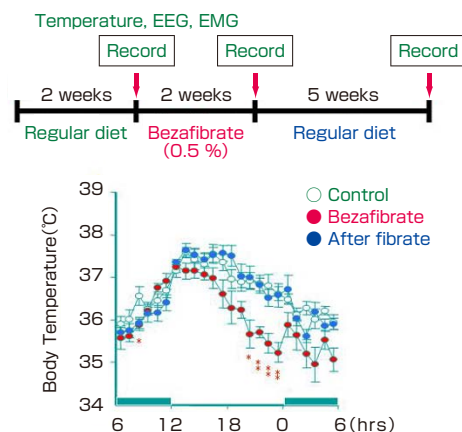
The abstracts of the recent research information appearing in Vol.9 No.1-3 of "AIST TODAY" are introduced here, classified by research area. For inquiry about the full article, please contact the author via e-mail.

Life Science and Biotechnology

Daily circadian clock tells four seasons to seasonal clock Hypolipidemic drug, bezafibrate changes seasonal physiological clock of mice

We found that bezafibrate, which is an well-known hypolipidemic drug for humans, influences animals' biological seasonal clocks, including torpor and non-REM sleep.

This study revealed that mice fed on a diet containing fibrate showed physiological patterns similar to those in the hibernating state. It is well known that fibrate is a ligand for Peroxisome Proliferator-Activated Reactor α PPAR α , a nuclear receptor on liver cells. In 2007, we found that fibrate advanced the pace of the circadian clock forward and had a therapeutic effect on sleep rhythm disorders called delayed sleep phase syndrome. In this news, we showed that PPAR α effects not only the circadian clock but also the biological seasonal clock.



Mice were housed on 12 hours day and 12 hours night cycles for the whole experimental period of 9 weeks, and were fed a fibrate diet for 2 weeks (red circle).

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