

Exogenous Melatonin Elevates the Plasma Leptin and Thyroxine Concentrations of the Mink (*Mustela vison*)

Anne-Mari Mustonen*, Petteri Nieminen, Heikki Hyvärinen and Juha Asikainen

Department of Biology, University of Joensuu, P. O. Box 111, FIN-80101 Joensuu, Finland.
Fax: +358–13–2513590. E-mail: ammusto@cc.joensuu.fi

* Author for correspondence and reprint requests

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Eight male and eight female minks were given exogenous melatonin as subcutaneous implants. The plasma leptin and thyroxine concentrations were measured. The leptin concentrations showed clear seasonal variations and differences between the experimental groups. In September most of the control females had undetectable plasma leptin concentrations, but the melatonin-treated females had detectable concentrations significantly higher than the leptin levels of the controls. Most of the males had undetectable leptin concentrations, too. In October the plasma leptin levels had increased significantly in all the groups except the control males. The melatonin-treated minks had significantly higher leptin levels than the controls. There was a significant rise in the thyroxine levels from September to October and the melatonin-treated groups had significantly higher thyroxine levels than the controls. The effects of exogenous melatonin are very pronounced in the mink. Melatonin elevates the plasma leptin and thyroxine levels possibly by direct and indirect mechanisms.