

PRESS RELEASE FROM *MOLECULAR PSYCHIATRY*

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Physiology: Ghrelin may protect against ageing

The hormone ghrelin may have a role in protecting against ageing-related diseases, such as vascular disease, according to a mouse study published in *Molecular Psychiatry* this week. The authors found that treatment with the traditional Japanese medicine rikkunshito led to increased levels of internally produced ghrelin and prolonged survival in mouse models of accelerated ageing.

Previous studies have shown that caloric restriction — a process that reduces calorie intake without incurring malnutrition or a reduction in essential nutrients — slows ageing and delays functional decline as well as the onset of some diseases. During this process the hormone ghrelin is secreted from the stomach in response to caloric restriction and regulates energy metabolism.

By studying two male mouse strains with genetic backgrounds that mimic accelerated rates of ageing and one strain for normal ageing, Akio Inui and colleagues investigated the impact of ghrelin signalling. The authors found that treatment with rikkunshito, and atractylodin — a compound contained within rikkunshito which stimulates the uptake of ghrelin by target organs — prolonged the life span of groups of 9-11 mice in all three models. In experiments involving the administration of rikkunshito, increased levels of ghrelin improved cardiac output, and memory consolidation in samples of 18-20 ageing mice. The authors suggest that elevated levels of ghrelin may play a role in protecting against age-associated changes, including pathologies of the heart and brain.

ARTICLE DETAILS

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