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Gravitostat: A Homeostatic Regulator of Body Weight

Ever wondered if your body has its own built-in scale? This thesis uncovers biological properties of a system termed “the gravitostat” - your body’s personal weight management expert. Like a smart thermostat adjusting room temperature, this biological system uses sensors in your legs to monitor body weight, triggering appetite-reducing signals to your brain when extra pounds are added. Through experimental work with rodents carrying additional weight, we mapped out an intricate network of nerve cells that are activated by increased body load. These findings don’t just solve a biological puzzle - they reveal how gravity plays a surprising role in regulating our body weight. This discovery opens exciting new possibilities for understanding weight regulation and might just revolutionize how we approach weight management in the future. Who knew that simply standing on our own two feet could teach us so much about how our body controls its weight?

Jovana graduated in medicine from the University of Niš. Her passion for metabolic health led her to pursue a PhD at the University of Gothenburg under Professor John-Olov Jansson’s supervision, focusing on neuroendocrine mechanisms of body-weight regulation.

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