

Modulating factors of the energetic effectiveness of huddling in small mammals

Canals, Mauricio

Rosenmann, Mario

Novoa, F. Fernando

Bozinovic, Francisco

Huddling is effective in decreasing metabolic rate permitting energy saving. However, this decrease varies among different species depending on physical, physiological and behavioral characteristics of the huddled individuals. Following a general model we analyzed the effects of ambient temperature, thermal conductance and ontogeny on the huddling effectiveness (energy saving level from huddling behaviour) in white mice *Mus musculus*. Also, we studied the effects of thermal conductance by using the Sigmodontine *Abrothrix andinus* as a model organism. To put our results in a general context we analyzed literature data of huddling of several species of rodents at different temperatures. No effects of temperature and thermal conductance was detected. However, based on literature data, we found that at temperatures lower or near thermoneutrality the huddling effectiveness decrease. Also, the huddling effectiveness depends on the stage of development. Temperature probably affects the intensit