

Seasonal flexibility of organ mass and intestinal function for the Andean lizard

Liolaemus nigroviridis

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One of the most fundamental questions in organismal ecology is how animals work in a continuously changing environment. In order to contribute to the current understanding of this question, this study evaluated seasonal changes in digestive enzymes activities, organs size, and energy reserves in *Liolaemus nigroviridis*, a medium-size lizard that inhabit extreme environments in the Andes range. We found that digestive enzymes (trehalase, maltase, and aminopeptidase-N) hydrolytic activities, dry masses of digestive organs and liver, and energy reserve (dry mass of fat bodies and tail energy density) were greater during summer than during winter months. By contrast, dry mass of the kidneys, lungs, heart, and gonads were greater during winter (though significance was reach only for the last two organs). In summary, obtained results reinforce the idea that hibernation is connected with phenotypic adjustments at different organizational levels, which in turn, potentially affects rates of ener