

### Detection of 70 kDa heat shock protein in the saliva of dairy cows

Elsa Lamy <sup>(a1)</sup>, Viktor Jurkovich <sup>(a2)</sup>, Lénia Rodrigues <sup>(a1)</sup>, Ana Geraldo <sup>(a1)</sup>, Liliana Cachucho <sup>(a1)</sup>, Flávio Silva <sup>(a1)</sup>, Catarina Matos <sup>(a1)</sup>, Fernando Capela e Silva <sup>(a1) (a3)</sup>, Cristina Pinheiro <sup>(a1) (a4)</sup>, László Könyves <sup>(a2)</sup>, Mikolt Bakony <sup>(a2)</sup> and Alfredo Pereira <sup>(a1) (a4)</sup>

**(a1)** <sup>1</sup> Institute of Mediterranean Agricultural and Environmental Sciences, University of Évora, Núcleo da Mitra, Apartado 94 7006-554, Portugal

**(a2)** <sup>2</sup> Department of Animal Hygiene, Herd Health and Veterinary Ethology, University of Veterinary Medicine, István utca 2, H-1078 Budapest, Hungary

**(a3)** <sup>3</sup> Department of Biology, University of Evora, Largo dos Colegiais 2, 7000 Évora, Portugal

**(a4)** <sup>4</sup> Department of Zootechnics, University of Evora, Largo dos Colegiais 2, 7000 Évora, Portugal

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### Abstract

This Research Communication describes, for the first time, the detection of HSP70 in saliva of dairy cows. Thermal stress is a major environmental stress that limits animal growth, metabolism, and productivity. The cellular response to heat stress involves the synthesis of heat shock proteins (HSPs), presumably to protect the functional stability of cells at increasing temperatures. HSP70 has been found to be present in cattle blood serum and may also be present in other secretory fluids, such as saliva, as already observed in humans. The aim of this study was to detect heat shock protein HSP70 in bovine saliva. Saliva samples were taken from higher- ( $n = 5$ ) and lower milk producing ( $n = 5$ ) Holstein-Friesian cows in summer and in winter for the detection of HSP70. HSP70 concentrations were assayed using the ELISA technique. Salivary HSP70 concentrations ranged from 0.524 to 12.174 ng/ml in cows. Higher salivary HSP70 concentrations were significantly associated with higher milk production and higher environmental temperature, but not with rectal temperature.

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## Corresponding author

\*For correspondence; e-mail: jurkovich.viktor@univet.hu

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## Footnotes

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The authors contributed equally.

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