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Felipe P.A. Cohen, Tânia Pimentel, Wagner C. Valenti, Ricardo Calado

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First insights on the bacterial fingerprints of live seahorse skin mucus and its relevance for traceability

Felipe P. A. Cohen[a,b,1,*] fcohen.bio@gmail.com, Tânia Pimentel[c], Wagner C. Valenti[a,b] and Ricardo Calado[c,2,*] rjcalado@hotmail.com

[a]UNESP - Univ Estadual Paulista, Centro de Aquicultura (CAUNESP). Via de Acesso Prof. Paulo Donato Castellane s/n. 14884-9000. Jaboticabal, São Paulo, Brazil.

[b]Instituto de Biociências, Campus do Litoral Paulista – Univ Estadual Paulista. Praça Infante Dom Henrique s/n. 11330-900. São Vicente, São Paulo, Brazil.

[c]Departamento de Biologia & CESAM & ECOMARE, Universidade de Aveiro, Campus Universitário de Santiago. 3810-193. Aveiro, Portugal.

[*]Corresponding authors.

ABSTRACT

Developing a technique to trace the geographic origin of live seahorses is paramount to increase trade regulation and foster conservation. The present study evaluated for the first time the suitability of using bacterial fingerprints present in live seahorse skin mucus to trace their origin. Bacterial 16S rDNA fragments were retrieved from seahorse mucus in a non-invasive and non-destructive way, with their profile (fingerprint) being determined using denaturing gradient gel electrophoresis (DGGE). Bacterial fingerprints were compared among seahorses: (1) originating from different geographic origins sampled at the same period; (2) originating from the same location but sampled one month apart; and (3) originating from specimens in the wild and after being stocked in captivity for 40 and 80 days. Similarities in bacterial fingerprints were determined

[1] Felipe P.A. Cohen; Present address: Departamento de Biologia & CESAM & ECOMARE, Universidade de Aveiro, Campus Universitário de Santiago. 3810-193. Aveiro, Portugal.

[2] Ricardo Calado; Present address: Departamento de Biologia & CESAM & ECOMARE, Universidade de Aveiro, Campus Universitário de Santiago. 3810-193. Aveiro, Portugal.