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# Allozyme heterozygosity and escape response performance of the scallops, *Argopecten purpuratus* and *Placopecten magellanicus*

**Hernán M. Pérez · Katherina B. Brokordt · Réjean Tremblay · Helga E. Guderley**

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**Abstract** Multilocus allozyme heterozygosity (MLH) has been positively correlated with growth in some marine bivalves and was suggested to facilitate swimming activity in pectinids. Using two highly mobile scallops, *Placopecten magellanicus* and *Argopecten purpuratus*, we examined escape response performance and morphometric characteristics as a function of allelic variability at metabolic loci. Ten allozyme systems were used for *A. purpuratus* and 7 for *P. magellanicus*. In each species, the morphometric characteristics and escape response parameters were analyzed separately using principal components analysis (PCA) and the scores of the major principal components were related to allozyme heterozygosity. In both *P. magellanicus* and *A. purpuratus*, positive correlations were found between MLH and morphometric parameters, but escape response parameters were only positively linked to MLH in *P. magellanicus*, and then weakly. The hypothesis that MLH improves fitness of pectinids by increasing the capacity to escape predators is not supported.

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H. M. Pérez (✉) · H. E. Guderley
Département de Biologie, Université Laval, Québec, QC G1K 7P4, Canada
e-mail: hernan.perez@ceaza.cl; hmpc15@hotmail.com

H. M. Pérez · K. B. Brokordt
Centro de Estudios Avanzados en Zonas Áridas (CEAZA), Facultad de Ciencias del Mar, Universidad Católica del Norte, Larrondo 1281, Coquimbo, Chile

R. Tremblay
Institut des Sciences de la Mer de Rimouski, Université du Québec à Rimouski, 310 allée des Ursulines, Rimouski, QC G5L 3A1, Canada

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