

(P28) **Morph-specific correlations between immunity, sexual characteristics and personality in male *Podarcis muralis***

ALEJANDRA MIQUELEIZ<sup>1</sup>, MAIDER IGLESIAS CARRASCO<sup>1,2</sup>, CARLOS CABIDO<sup>1</sup>

<sup>1</sup>Departamento de Herpetología, Sociedad de Ciencias Aranzadi. Alto de Zorroaga 11, 20014 Donostia-San Sebastián, Guipúzcoa, Spain.

<sup>2</sup>Departamento de Ecología Evolutiva, Museo Nacional de Ciencias Naturales, Consejo Superior de Investigaciones Científicas (CSIC). José Gutiérrez Abascal 2, 28006 Madrid, Spain.

In some lizard species, individuals occur in discrete, stable, genetically based colour morphs (CMs) which coexist at different equilibrium levels within the same population. Theory predicts that colour polymorphism is evolutionarily stable because morphs have exactly equal fitness or a fitness advantage when rare. Different CMs reflect alternative behavioural strategies related with reproduction (e.g. territoriality), which are modulated by complex interactions among environmental pressures in constant change (e.g. social interactions and relative morph density). Thus, the differences in fitness among morphs vary over time. We hypothesize that behavioural strategies reflected by CMs may affect to individual investment in other morphological, behavioural or physiological characteristics (related or not with reproduction) and they may imply different trade-offs or correlations between them. To explore this hypothesis, we measured the following characteristics in pure CMs of male *Podarcis muralis* (orange, yellow and white morphs): sexual signalling investment (number of blue ocelli and phemoral pores), head size (related to male dominance), health status (immune response and parasite load), body condition, and personality (antipredatory and exploratory behaviour). We predict that different evolutionary pressures which promote the persistence of each CM also promote morph-specific correlations between measured male characteristics. We found that CMs differed in head width and immune response (yellow and orange CMs over white in both cases) and number of phemoral pores and blue ocelli (orange and white CMs more than yellow in both cases). Immune response was positively related with body condition in white and yellow morphs, but not in orange ones. In the latter, body condition was positively related to the number of phemoral pores. Boldness to predation risk was positively related to head width in orange males, but negatively related in yellow ones. Finally, yellow males with more ocelli were bolder. Differences detected among CMs and morph-specific correlations support our hypothesis. Results were discussed in the context of different behavioural strategies of each CM.

Colour polymorphism, PHA, personalities, behavioural syndromes, sexual signals, sexual selection.