

## TESTING THE ROLE OF MATE RECOGNITION PROTEINS IN AN INCIPIENT ECOLOGICAL SPECIATION PROCESS

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It has been demonstrated that Reproductive Proteins (RPs) play a primordial role in speciation and reproductive success of external fertilizers, but little is known regarding their role in internal fertilizers. This lack of knowledge is mostly due to the probable higher number of proteins mediating mate recognition in these last organisms, most of which are not yet identified. To test the role of RPs in speciation processes of internal fertilisers, we have chosen *Littorina saxatilis* as our model organism. This internal fertiliser gastropod is a well know example of ongoing ecological speciation with two ecotypes, RB and SU, adapted to different shore levels and habitats occurring in sympatry. To identify proteins involved in mate recognition, we are doing proteomic analyses of several reproductive tissues: female's ovary and bursa and male's testis, seminal vesicle and prostate using bidimensional electrophoresis (2DE) and mass spectrometry protein identification. The resulting protein maps of reproductive as well as non reproductive tissues will be compared between both ecotypes looking for potential expression differences. Our bidimensional maps clearly show great differences in spot patterns between tissues and suggest that expression patterns obtained in previous studies from the entire individual of this species mostly reflect those of foot muscle, the most abundant tissue on these organisms. These first results clearly highlight the necessity of dissecting tissues separately when testing for expression differences between the two ecotypes observed in this species. Further studies are needed to understand RPs' spots patterns and explain their role in internal fertilization.