

# **Influence of insertion-deletion mutations on the ecotype differentiation of the marine gastropod *Littorina saxatilis***

## **Background and aim**

The integration of population genomics into speciation research has revealed evolutionary patterns of species differentiation that previously were mostly only theoretically described. Observations obtained using traditional biogeography analysis have been improved by the application of genomic tools on genome-wide scans (Storz, 2005; Seehausen *et al.*, 2014). Various sequencing approaches have enabled identification of single nucleotide polymorphisms (SNPs) associated with divergence between ecotypes that potentially contribute to speciation. However, SNP-based analyses ignore the role of insertion-deletion polymorphisms and gene copy number variation in divergence. Their influential evolutionary role in other species and their presence in *L. saxatilis*, documented from preliminary studies, imply a significant function in ecotype differentiation of the marine snail that I wish to tackle. I will use existing sequence data to analyse insertion-deletion polymorphisms, an important but under-studied component of variation.

## **References**

- Seehausen, O., Butlin, R.K., Keller, I., Wagner, C.E., Boughman, J.W., Hohenlohe, P.A., *et al.* 2014. Genomics and the origin of species. *Nat. Rev. Genet.*, **15**: 176–192.
- Storz, J.F. 2005. Using genome scans of DNA polymorphism to infer adaptive population divergence. *Mol. Ecol.*, **14**: 671–688.