

Genomics and transcriptomics in the invasive Zebra mussel: insights in to molluscan genome architecture and regulatory evolution.

Andrew Calcino

andrew.calcino@univie.ac.at

PostDoc

Advisor: Andreas Wanninger

Department of Integrative Zoology, University of Vienna

Molluscs are a morphologically diverse and speciose phyla. Recent progress has begun to elucidate the developmental and genetic innovations that underpin these phenomena and with the increasing power of phylogenetic approaches, we are gaining an ever clearer understanding of the history of molluscan evolution. Despite these successes, the relationship between evolutionary innovation in molluscs and changes to the gene regulatory environment remain largely unexplored. In this talk I will discuss ideas about how we might investigate whether changes to genome architecture could have influenced gene regulation and evolution in molluscs. I will outline my work on building the genome and several transcriptomes of the invasive bivalve, the Zebra mussel *Dreissena polymorpha*, and I will present the wnt pathway as a specific example of how we will use these tools to investigate individual gene regulatory systems. This talk will provide an update of my work to date and will lay out a plan for future studies.