

**Lena Bonassin (ERASMUS Internship)**

Project title: Cytogenomics in freshwater crayfish

Project description:

Freshwater crayfish are a highly diverse group of decapod crustaceans. Their variability is also seen in the large range of genome sizes: from 2 to 18.7 Gb. Also, the reported diploid chromosome numbers is generally higher than 170, positioning freshwater crayfish among the species with the highest chromosomal number among all Metazoans. The variation of the chromosome number indicates rearrangements, fissions and fusions that diversified the karyotype of the species with repetitive DNA as driving forces. In the project we are investigating crayfish genomes from a cytogenetic perspective. We aim to identify chromosomal features of the European freshwater crayfish species and the content of satellite DNA and repetitive elements within the genome. The mapping of the sequences using fluorescence *in situ* hybridisation allows to explore the genome organisation and karyotype evolution.