Supervisor's statement – Karolína Kravériková

Karolína Kravériková worked on her project from October 2019 to January 2020 and then finished distantly remaining analysis under more challenging conditions due to my maternity leave and coronavirus. The aim of her project was to identify and characterise novel genes in mouse oocytes and preimplantation embryos, focusing in more detail on oocytes, early embryos following zygotic genome activation and first two cell lineages segregating in embryos. Her project served as a first and very valuable step of identification of novel unannotated candidate genes potentially playing roles in oocytes or embryos, or in segregation or specification of first two embryonic cell linages. Based on her results and follow up bioinformatic analyses, we will select the best candidates and functionally test their functions in the laboratory. After submission of her thesis, unfortunately, a similar study was published in Nature Communications, however, we hope we can put the main focus elsewhere and publish the results.

In her project, Karolína developed and practised essential bioinformatics skills for work with RNA-seq datasets. She performed transcriptome assembly and expression quantification from multiple oocyte and embryo datasets, analysed data in program Seqmonk and used Python scripts and available R packages. She also became familiar with the use of a computer cluster, and had to grasp biological background of the project through her independent work with scientific literature, to be able to understand the meaning of the analysis she was doing, and to interpret the data.

Karolína was very motivated to successfully complete the project and put a lot of effort into it, managing very well challenging conditions in the second half of the project when my time allowance was very limited. For her own benefit, she did not let the project be at a standstill in times when I had very little time and made sure she got the feedback she needed in order to be able to continue with the project, providing very quickly new set of results. She was very driven and organised, working hard and always keeping the agreed schedule. When something was not clear, she wanted to understand it. Despite the demanding schedule of her studies and exams, she found enough time for her project and obtained appropriate amount of results for a short project. She also coped well with thesis writing, producing excellent background section showing she understood the biology behind her project and excellent discussion showing she understood what she was doing. She also learnt very quickly how to describe results well. Overall, I was very happy with Karolína's work and her attitude towards the project.

In České Budějovice on 29th June 2020

Mgr. Lenka Gahurová, Ph.D.