BIOMEDICAL CENTER

FACULTY OF MEDICINE IN PILSEN
Charles University

Supervisor's evaluation report

Student: Nazila Navvabi

Thesis topic: Molecular prognostic and predictive markers in colorectal cancer

Nazila Navvabi joined our laboratory in 2017 and has been actively involved in various activities both within and outside our team. Throughout her studies, she consistently demonstrated a strong commitment to learning and improving her understanding of the complex methods associated with colorectal cancer biomarkers. I commend her efforts to advance her knowledge and skills in this field.

During her time in our laboratory, Nazila acquired expertise in a range of methods, including mammalian cell cultures and nucleic acid isolation and analysis. She also gained a solid understanding of basic statistical approaches for data analysis. Importantly, she demonstrated an ability to learn from both successful projects and those that did not generate sufficient data for publication. For instance, she explored the induction of epithelial-mesenchymal transition in colon cancer cells, although the analyzed genes did not exhibit substantial changes in expression.

In addition to her primary research topic, Nazila actively participated in projects organized by teams from the Institute of Experimental Medicine at the Czech Academy of Sciences and the Department of Biology at the Faculty of Medicine in Pilsen. In the initial years of her studies, she dedicated her summer breaks to expanding her skill set by working in a laboratory in her home country of Iran. Her contributions to multiple publications in diverse fields of biology during this time highlight her commitment to broadening her knowledge base.

Nazila's doctoral thesis primarily focuses on the analysis of alternative splicing factors from the MBNL family in colorectal cancer patients. Her findings were summarized in her first-author publication, and she also contributed as a co-author to studies exploring the deregulation of DNA repair genes hOGG1 and MUTYH, as well as the relationship between miRNA-140 expression and tumor sensitivity to oxaliplatin treatment. In her final work, she skillfully presented colorectal cancer as a heterogeneous disease with a broad range of predictive and prognostic markers that have implications for patient treatment. She discussed pre-mRNA splicing, emphasizing alternative splicing and its impact on cancer development. She thoroughly described the methodologies used, presented a summary of her results, and provided a comprehensive discussion of her findings with respect to hypothesis of her projects in the concluding sections.

Overall, Nazila performed well during her time at our faculty, overcoming obstacles and successfully meeting all the prerequisites necessary to complete her studies. It is with great pleasure that I recommend Nazila Navabi for her Ph.D. defense.

In Pilsen, on 20th of June 2023   Pavel Pitule, MSc. Ph.D.