

May 27th, 2024

Project Review Board for Serbian Clinical Immunology Fund
c/o Professor Sophie Hambleton
Newcastle University
Newcastle upon Tyne, UK

Final Report

Dear Sirs,

I've included below my final report on the grant kindly provided by the Lilić-Abinun Foundation, aimed to visit the Laboratory of prof. Muzlifah Haniffa, Newcastle upon Tyne, January 21st until February 3rd 2024.

The visit was an exceptional opportunity to gain knowledge and hands-on experience about the single cell RNA sequencing. I had the privilege of working alongside Dr. Emily Stephenson, a dedicated researcher who generously answered all my questions and addressed my doubts. During my visit, we have covered isolation of cells from formaldehyde fixed and paraffin embedded tissue sections, probe hybridization, generation of gel beads in emulsion, their barcoding on Chromium Next GEM Chip Q and running the Chromium X. After this, a gene expression library was constructed. The subsequent sequencing was thoroughly explained to me, as there was insufficient time to cover it during the visit.

Antony Rose, PhD, delivered an excellent session on the basics of bioinformatics, single-cell RNA sequencing data interpretation, data analysis, and recommendations for software and visualization tools. He also provided me with comprehensive tutorials and guides on best practices.

The meetings of prof. Haniffa's group, held twice weekly, were very important for the learning process at NCU. These meetings covered various topics, including their research results, which enhanced my understanding and facilitated engaging discussions. In one of these meeting, I presented my Department's research and the research of my group, fostering new ideas and collaborations.

Overall, this visit was an excellent opportunity to upgrade my knowledge in the field of single cell RNA sequencing, it broadened my understanding of the concepts and principles of multiplexing and possible applications of RNAseq technique in my own research.

I wanted to let you know that I sent an email on May 27th, 2024, to the Project Administrator in which I attached copies of the receipts.

Sincerely yours,

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