

Guest scientist: Tatiana Krylova, research scientist and a laboratory geneticist at the Research Centre of Medical Genetics, Moscow, Russia.

Host laboratories: University Clinic of Child and Adolescent Medicine, Mitolab Speziallabor, Salzburg, Austria (Host - Dr Johannes Mayr); Helmholtz Centrum Munchen, Institute of Human Genetics, Research Group Genetics of Mitochondrial Disorders, Munich, Germany (Host - Dr Holger Prokisch).

This training was organized by Dr Holger Prokisch and Dr Johannes Mayr to get acquainted with advanced NGS analysis and biochemical methods in mitochondrial pathology.

I visited SALK in the period of 20.01.2020-24.01.2020. During my visit at the laboratory of Centre for the Diagnosis of Mitochondrial Disorders the following methods were learned:

- 1) isolation of mitochondria from fibroblasts cells;
- 2) OXPHOS enzyme analysis from muscle biopsy and fibroblast mitochondria;
- 3) OXPHOS analysis from Blue Native PAGE;
- 4) immunohistochemical analysis of OXPHOS complexes.

During the next 2 weeks (from 27.01.2020 till 07.02.2020) I had a training at the Institute of Human Genetics (Helmholtz Centrum Munchen) and I learned the following techniques:

- 1) Seahorse measurements;
- 2) single - cell sequencing;
- 3) Western Blot analysis;
- 4) analysis of WES, WGS and RNA-sequencing data;
- 5) culture cell works.

This short-term visit will improve the diagnostics of mitochondrial disorders in my laboratory and it will be beneficial in my ongoing research.

I would like to thank Dr Holger Prokisch and Dr Johannes Mayr and all their team members for organizing my stay in Munich and Salzburg, showing me all the methods and for the interesting and very useful discussions. I am also thankful to Martina Kuhnert and Christiane Edlinger for preparing all necessary business documents. I am very grateful to the SSIEM for giving me a Travel Bursary for funding this scientific visit.