FACULTY OF MEDICINE
IN PILSEN
Charles University

POSTDOCTORAL POSITIONS IN TRANSLATIONAL CANCER RESEARCH

In European Union-funded project on translational cancer research, headed by Professor Kari Hemminki, several postdoctoral positions with different areas of expertize are currently sought to work in Biomedical Center, Faculty of Medicine, Charles University in Pilsen, Czech Republic.

The focus will be initially on colorectal cancer. The aims are to assess genetic and cellular changes taking place in the progression of colorectal cancer from precursor tumors (adenomas) to single or multiple colorectal cancers and lastly to metastases. The results will help to understand the role of genetic and cellular events at different phases of tumor development with possible clues about therapeutic targets. While the evidence shows that majority of colorectal carcinomas evolve from adenomatous polyps it is also believed that most neoplastic adenomas may not evolve to cancer. Immune system plays a key role in trying to suppress malignant transformation. Under the pressure of immune surveillance, surviving tumor cells tend to selectively accumulate traits that help them evade immune destruction. A strongly immunogenic tumor in an immunocompetent host may result in optimal stimulation of the immune system and elimination of the tumor. Alternatively, mutated tumor cells selectively develop variants that have acquired insensitivity to immunologic surveillance (e.g., through increased tumor-induced immunosuppression) and that can expand in an unrestrained fashion. A general deterioration of an individual's immune defense may contribute to tumor escape

METHODS: Studies are carried out in close collaboration with clinical departments allowing access to human samples, Genomic, transcriptomic and epigenomic analyses will focus on use of pathological slides and frozen tissue samples from polyps of early adenomas, colorectal tumors and adjacent gut epithelial samples and tumor metastases. The analysis will include DNA and mRNA targeted and next generation sequencing, copy number analyses and epigenomic profiling. Detailed analysis of cellular evolution of tumors requires detection of the key immune cell types and cellular signaling modulators in pathological slides and frozen tissue samples. The results of cell composition are correlated with clinical and prognostic data.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 856620.

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BIOMEDICAL CENTER

QUALIFICATIONS

- PhD or equivalent in biology, genetics, immunology or medicine
- Scientific skills shown in publications
- Technical skills in laboratory work
- Motivation and ability to conduct collaborative work
- Communication skills in oral and written English

TO APPLY BY March 2, 2020

- Cover letter with short explanation of prior research and experience
- Curriculum vitae with publication list
- Copies of diplomas and PhD thesis (if completed; applicants close to completion would be eligible to apply)

SEND APPLICATIONS/INQUERIES BY E-MAIL to personalista@lfp.cuni.cz

Charles University is committed to employment equality (esp. European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers) and welcomes applications from all qualified candidates fulfilling requirements specified in this announcement.

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