UNIVERSITY OF WARSAW | CeNT CENTRE OF NEW TECHNOLOGIES

Warsaw, 23.04.2018

POSTDOC POSITION

Laboratory of the Molecular Biology of Cancer at the Centre of New Technologies (University of Warsaw), headed by dr. Agnieszka Kobielak, invites applications for postdoctoral position. Position is funded by the National Science Centre within Opus grant "Role of catulin in the regulation of cell-extracellular matrix interactions in tumor invasion and metastasis of head and neck squamous cell carcinoma.

The project:
Head and neck squamous cell carcinoma (HNSCC) is highly aggressive tumor and despite various treatment options available, HNSCC patients are still faced with a high chance of recurrence and/or metastasis, with a 5-year survival rate of only about 50 percent. Thus understanding the metastatic process is of high importance and is highly significant for the development of novel treatments. Abnormal cell migration and invasion modulated by integrin-mediated interactions between the extracellular matrix (ECM) and the actin cytoskeleton are key components of metastasis. We recently identified that high expression of Rho-GEF binding protein α-catulin correlates with the ability of human squamous cell carcinoma cells to invade and metastasize. We showed that α-Catulin is preferentially expressed at the tumor invasion front and in the invasive streams of cells with minimal expression in the normal oral epithelia. Our in vitro data show that an upregulation of α-catulin expression correlates with the transition of tumor cells from an epithelial to mesenchymal morphology and knockdown of α-catulin in hHNSCC cell lines dramatically decreases the migratory and invasive potential of those cells in vitro and metastatic potential in xenotransplants in vivo. α-catulin deficient cells exhibit defects in actin dynamics, Rho signaling and directional migration. Performed by us transcriptional and biochemical analyses of tumors deficient in α-catulin demonstrate that its ablation prevent tumor cells from invading the surrounding stroma which is accompanied by changes in expression of genes involved in cell migration and invasion. The main goal of the project is to understand molecular mechanism of signal transduction by the catulin-Rho/ROCK downstream from integrins in metastasizing squamous cell carcinoma cells in order to identify novel strategies for HNSCC treatments and prevent cancer cell metastasis.

Qualifications:
- Ph.D. in Biology,
- Good knowledge of English,
- Experience in laboratory work: gel electrophoresis, PCR, RT-PCR, q-PCR, DNA/RNA/Protein extraction and purification, DNA cloning, lentiviruses, western blot, cryo- and paraffin- sectioning, immunofluorescent and immunoisochemistry staining, microscopy: fluorescent and confocal laser scanning microscopy, mammalian cell culture, FACS sorting, laboratory animals - mice handling,
- Knowledge of Adobe Photoshop, Adobe Illustrator, PowerPoint
- Team work skills,

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The application should include:

- Curriculum Vitae (CV)
- Cover letter, describing Candidate motivation
- PhD certificate
- One or more letters of recommendation from a scientist who is familiar with the Candidate (submitted directly to email address below)
- Information on scientific publications, scholarships, prizes and awards or other relevant documents demonstrating the excellence of Candidate
- A list of attended conferences with titles and authors of presentations
- A personal data processing agreement

Employment conditions:

The employment as full-time postdoctoral assistant with monthly salary 6000-7500 PLN (brutto) depending on the candidate experience. The initial appointment is for 6 months with possibility of renewal for up to 36 months. The appointment should start in June/July 2018.

Contact:

Please apply to: a.kobielak@cent.uw.edu.pl (entitle your email "A POSTDOC POSITION").

Deadline for applications: May 15th, 2018

Please include in the CV:

"I hereby give consent for my personal data included in my application to be processed for the purposes of the recruitment process under the Personal Data Protection Act as of 29 August 1997, consolidated text: Journal of Laws 2016, item 922 as amended."