



Laboratory of Human Disease Multiomics at  
Mossakowski Medical Research Centre of Polish Academy of Sciences in  
Warsaw, Poland



## is seeking a postdoctoral researcher

for the project: **Multi-onco-map: a multi-omics map of the major oncogene function in cancer**  
(with dr Dawid Walerych)

**The project:** The main objective is to build a systematic, proteomics- and transcriptomics-based map of downstream functional molecular programs of the main driver oncogenes mutant *TP53*, *KRAS* or *CMYC*, in human cancer types causing most deaths in humans (multi-onco-map) and use this map to pinpoint novel therapeutic targets in human cancers, validated in organoid cultures of pancreatic, colon and lung cancers. **The main hypothesis of the project** is that molecular programs of the driver oncogenes - mutant *TP53*, *KRAS* or *CMYC* - intersect in multiple critical points and in different cancer types, while there exist important oncogene- and cancer-specific molecular signatures. The molecular mapping and overlap of these programs will put in focus new drug targets and reveal already known targets for drug combinations and repositioning in specific cancer types.

**Location and duration:** Participation in the project offers a possibility to take a key part in establishing a new, dynamic Laboratory of Human Disease Multi-omics in the bio-medical institute with long traditions (<http://www.imdik.pan.pl/en/>), within the stimulating Ochota Biocenter campus environment. The location is the **Mossakowski Medical Research Centre Polish Academy of Sciences in Warsaw, 02-106 Poland, Pawinskiego street 5.**

**The project and employment is planned for 45 months, with the employment start in September 2018; salary 7000 PLN gross.** The laboratory does not exclude a possibility of further employment. The project is multidisciplinary, includes international and Polish collaborations and will allow to learn and develop skills of open and flexible scientific approach.

### **Requirements:**

- Ph.D. in molecular biology, biotechnology, medicine, genetics, biochemistry or related life sciences topic – obtained formally until September 2018. The PhD degree has to be also obtained not earlier than September 2011 (extended by every maternity/paternity/disability leave period, and for women extended by 18 months for each child-birth/adoption)
- Excellent command of English and practice in scientific writing/presentation of data in English
- Knowledge of basic molecular biology techniques (DNA manipulation, qPCR, RNA handling, western blot etc.) and basic cell culture methods. Knowledge of 3D/organoid cultures will be an additional advantage
- Knowledge of mass spectrometry and/or basic bioinformatics will be an advantage
- Possibility to work full-time in Warsaw, Poland for the 4 following years

**How to apply:** Please send your CV, including a publication list, a contact to your Ph.D. supervisor and (if applicable) later employers in science, by e-mail to dr Dawid Walerych: [dwalerych@imdik.pan.pl](mailto:dwalerych@imdik.pan.pl). Do not write a motivation letter – if you want to justify your application (not required), do so briefly in the e-mail.

**The application deadline is 3<sup>rd</sup> of June 2018. Selected candidates will be invited for an interview on 5<sup>th</sup>-15<sup>th</sup> June 2018 – the interview will be in English (possible via Skype).**

### **Related reading:**

Walerych, D. et al. Proteasome machinery is instrumental in a common gain-of-function program of the p53 missense mutants in cancer. *Nat Cell Biol* **18**, 897-909 (2016).

Walerych, D., Lisek, K. & Del Sal, G. Multi-omics reveals global effects of mutant p53 gain-of-function. *Cell Cycle*, 1-2 (2016).

Mantovani, F., Walerych, D. & Sal, G.D. Targeting mutant p53 in cancer: a long road to precision therapy. *FEBS J* **284**, 837-850 (2017).

Kress, T.R., Sabo, A. & Amati, B. MYC: connecting selective transcriptional control to global RNA production. *Nat Rev Cancer* **15**, 593-607 (2015).

Cox, A.D., Fesik, S.W., Kimmelman, A.C., Luo, J. & Der, C.J. Drugging the undruggable RAS: Mission possible? *Nat Rev Drug Discov* **13**, 828-51 (2014).

Hart, T. et al. High-Resolution CRISPR Screens Reveal Fitness Genes and Genotype-Specific Cancer Liabilities. *Cell* **163**, 1515-26 (2015).

Smith, A.R. & Kuo, C.J. Organoids lead the cancer attack. *Nat Med* **23**, 1399-1400 (2017).