



“OPEN PHD POSITION”

[23/2023/IGC/PSD] Announcement concerning recruitment to the Poznań Doctoral School of the Institutes of the Polish Academy of Sciences (PDS IPAS) as part of a research project

The Director of the Institute of Human Genetics, Polish Academy of Sciences (IHG PAS), and leader of the current research project, **Maciej Giefing, professor PhD** gives notice of an open competition to be held for the position of **PhD student-scholarship holder at the Poznan Doctoral School of Institutes PAS, Department of Cancer Genetics IHG PAS**
Number of vacancies: **1**

I. General information

1. Department in which candidate will work: **Department of Cancer Genetics**
2. Discipline: **Medical Science**
3. Planned remuneration: scholarship to the value of **4300 PLN gross/per month (3800 PLN net /per month)**
4. Period of involvement in research project: **15 months (extension possible)**
5. Deadline for submission of documents: **03.09.2023 r.**
6. Date of announcement: **21.07.2023 r.**

The proposed study will be carried out within the **OPUS-21 2021/41/B/NZ2/01235**

PI – Maciej Giefing, professor PhD

Project title: ***“BCOR alterations and the activation of CXCL12 oncogenic pathway in classical Hodgkin lymphoma”***

7. Description of research:

In our previous study we reported recurrent alterations of BCOR, a transcriptional repressor and component of the Polycomb repressive complex PRC1.1, in classical Hodgkin lymphoma (cHL). Further analyzes performed prior to this application triggered the hypothesis that there is a mechanistic link between BCOR loss and the activation of the oncogenic CXCL12 chemokine in cHL. We think that loss of BCOR triggers an important CXCL12-based oncogenic and microenvironment modulating pathway in the pathogenesis of cHL.

Therefore the aim of this project is the functional validation whether BCOR loss-of-function alterations result in changes in chromatin accessibility and subsequent transcriptional activation of CXCL12. Moreover, we will focus on its effect on cell viability and the tumor microenvironment. We will use advanced molecular tools including CRISPR/Cas9 genome editing to establish BCOR knock-out cell lines and ATAC-seq to analyze if BCOR loss in the edited cell lines resulted in open chromatin

of the CXCL12 promoter region. Moreover, we will use several functional assays like cell viability or chemotaxis assay to analyze for changed chemoattractive properties of the edited CXCL12 expressing cell lines versus non-edited control cell lines. Last we will perform sequencing of microdissected Hodgkin and Reed-Sternberg cells to screen for potential BCOR inactivating mutations in primary cHL cases.

In conclusion, in this project we will decipher the mechanism of CXCL12 activation in cHL and show the contribution of this chemokine in the formation of the unique microenvironment in cHL, crucial element of HRS cell survival. The project will be realized in collaboration with German and US research groups.

Keywords:

classical Hodgkin lymphoma, Polycomb proteins, PRC1.1, *BCOR*, activation of the CXCL12 oncogenic pathway, tumor microenvironment

Predicted tasks in the project:

- active participation in the realization of project goals and analysis of obtained results
- presenting at seminars and conferences, participation in writing scientific papers
- supervision of students

Opportunities:

- getting familiar with a rich palette of molecular and cellular experimental techniques
- working with a team engaged and enthusiastic about science
- participation in national and international trainings, conferences and workshops
- chance for a brilliant scientific career

II. Requirements for candidates

1. master's degree in molecular biology, biotechnology, genetics or a related field
2. knowledge of molecular biology and cancer genetics
3. experience in molecular biology techniques: PCR, RT-qPCR, preferably also Western blot and flow cytometry
4. basic experience in CRISPR/Cas9 based genome editing technique
5. basic experience in cell line culture and cell transfection
6. experience in handling DNA and RNA, extraction of nucleic acids
7. very good written and oral communication in English
8. motivation and enthusiasm about working in science
9. good collaborative and team work skills

III. Required documents

1. CV, including research achievements.
2. Cover letter.
3. A copy of the diploma confirming completion of a Master's Studies Programme, or a certificate of their completion (in the case of diplomas issued by foreign institutions, the diploma referred to in article 326 para.2 point 2 or article 327 para. 2 of the Act of 20 July 2018 – Law on Higher Education and Science (Journal of Laws of 2018, item 1668 as amended), giving the right to apply for a doctoral degree in the country in which the University of Higher Education issuing the diploma operates. If the candidate does not have the above-mentioned documents, s/he is obliged to provide them before being admitted to Poznań Doctoral School IPAS. More information about foreign diplomas is available at: <https://nawa.gov.pl/en/recognition/recognition-for-academic-purposes/applying-for-admission-to-doctoral-studies>.
4. Contact details of at least one current supervisor or other researcher who has previously agreed to issue an opinion about the candidate. The opinion should not be included in the application.
5. Consent for the processing of candidate's personal data for the purposes of the recruitment process: http://bip.igcz.poznan.pl/wp-content/uploads/2018/10/Zgoda-rekrutacja-Consent_for_the_processing.pdf
6. Application for admission to the Poznań Doctoral School IPAS, together with a consent to the processing of personal data for the purposes of the recruitment procedure plus a statement on his/her familiarity with recruitment regulations for the Poznań Doctoral School (Application is available on: <http://igcz.poznan.pl/en/phd-studies/poznan-doctoral-school-of-institutes-of-pas/recruitment-regulations-for-psd-ipan/>)
7. Certificates or other documents indicating level of English language proficiency, if the candidate possesses any.

IV. Criteria for the evaluation of candidates

1. Candidate's scientific and professional experience based on his/her participation in conferences, workshops, training courses and internships; participation in research and commercial projects; involvement in scientific societies and associations; international and professional mobility; experience in other sectors, including industry.
2. Background in molecular biology.
3. Candidate's scientific achievements, based on study grades, scientific and popular science publications, scholarships; prizes and awards resulting from research carried out; student activity or other achievements.
4. Communication skills in English.

V. Announcement of results

Up to 30 days after the deadline of documents submission.

VI. Additional conditions

1. A condition of involvement in the project is participation in the Institutes of PAS (after passing the recruitment procedure). Details of the studies are available on <https://igcz.poznan.pl/en/phd-studies/poznan-doctoral-school-of-institutes-of-pas/> Fulfillment of requirements as set out in the Regulations for Granting Scholarships in Research Grants Financed by the National Research Center are available on https://www.ncn.gov.pl/sites/default/files/pliki/uchwaly-rady/2019/uchwala25_2019-zal1_ang.pdf.

VII. Additional information

Address to which documents should be submitted:

by e-mail to the Secretary for Scientific Purposes: phdstudies@igcz.poznan.pl. Please, include the number of the announcement: [23/2023/IGC/PSD] in the title of your e-mail.

Additional information is available from:

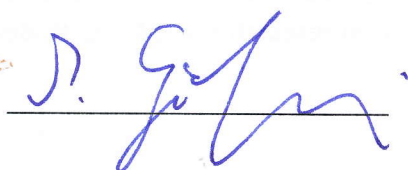
- Maciej Giefing: maciej.giefing@igcz.poznan.pl,
- Secretary for Scientific purposes: phdstudies@igcz.poznan.pl,

Application sent after the deadline will not be considered.

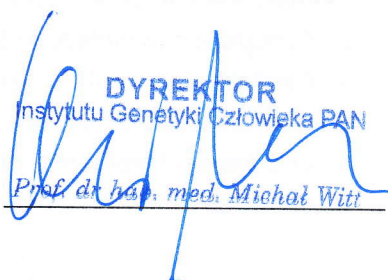
Once the recruitment process is finished, unsuccessful candidates will be informed about the scores they have obtained at each step of evaluation.

Refusal of admission to PDS IPAS takes place by way of an administrative decision. The candidate is entitled to submit a request for reconsideration of the decision to the director of the institute concerned.

Project Leader



Director of the Institute



DYREKTOR
Instytutu Genetyki Człowieka PAN
Prof. dr hab. med. Michał Witt