

FORM FOR EMPLOYERS

INSTITUTION: Institute of Human Genetics PAS

CITY: Poznań

POSITION: : Adjunct (post-doc)

DISCIPLINE: Medical sciences

POSTED: July 24, 2025

EXPIRES: August 31, 2025

WEBSITE: <http://bip.igcz.poznan.pl/konkurs/>

KEY WORDS: primordial germ cell development; infertility; post-transcriptional regulation of gene expression; RNA–protein complexes

DESCRIPTION (field, expectations, comments):

The Director of the Institute of Human Genetics, Polish Academy of Sciences in Poznan (IHG PAS) announces an open competition for the position of an **post-doc (adjunct)** at the **Independent Research Group of RNA Biology** of the IHG PAS

The competition is open to persons who meet the conditions set out in the Act of 30 April 2010 on the Polish Academy of Sciences (Journal of Laws of 2020, item 1796, as amended) and the Regulations for conducting competitions for scientific positions at the Institute of Human Genetics, Polish Academy of Sciences in Poznan

I. General information

1. Institution announcing the competition: **Institute of Human Genetics PAS**
2. City: **Poznań**
3. Position: **post-doc (adjunct)**
4. Discipline: **medical sciences**
5. Number of vacancies: **1**
Fixed-term employment contract - 12 months (with a 12-month extension, after the project was extended)
6. Planned remuneration: ca. **8 000 PLN** gross per month, full time employment contract starting at **October 1, 2025**
7. Deadline for submitting documents: **August 31, 2025**

8. Address to which documents should be submitted: personally or by post (stating “post-doc OPUS22”) to the **Institute of Human Genetics PAS, 32 Strzeszynska street, PL-60-479 Poznan** or electronically to the following address: **kamila.kusz-zamelczyk@igcz.poznan.pl** putting “**post-doc OPUS22**” in the title
9. Link: <http://bip.igcz.poznan.pl/konkurs/>
10. Key words: **primordial germ cell development; NANOS3; post-transcriptional regulation of gene expression; RNA–protein complexes**
11. Department / Team in which the candidate would work: **Independent Research Group of RNA Biology**
12. A concise description of the scientific research in which the candidate would participate:

The project is carried out within the OPUS22 grant from the National Science Centre, Poland, project leader **dr hab. n. med. Kamila Kusz-Zamelczyk**

Project title: **“The role of NANOS3 in modulating genetic processes of early human germ cell development and implication in the human reproductive health”**

Research Description:

Reproductive failures affect about 15% of couples worldwide. They are caused by, among others, mutations that disrupt the development of germ cells, which in turn is a risk factor for the occurrence of germline cancers. Dysfunction of *NANOS3* gene is one of the cause of infertility. The NANOS3 protein, an RNA-binding protein and post-transcriptional regulator of gene expression, is a marker of germ cells, starting from the earliest stage of their development – specification. This stage of germ cell development, which takes place in early embryogenesis, is poorly understood, and RNAs regulated by NANOS3 at this stage of development have not yet been described.

The general goal of the project is to identify RNA molecules regulated by the NANOS3 protein and entire pathways underlying the early stages of germ cell development, in particular those that are altered by the NANOS3 p.Glu120Lys (v-NANOS3) mutation associated with infertility. The specific goals are as follows: **1.** Modification of human pluripotent stem cell lines (hPSCs) using CRISPR/Cas9 technology to develop cell lines for: **a)** induced degradation of NANOS3 protein (degron), **b)** identification of RNA molecules bound by NANOS3 of wild type and v-NANOS3 (TRIBE, STAMP). These lines will then be differentiated into primordial germ cell like cells (hPGCLCs), which will serve as material for further studies on NANOS3 **2.** Identification of genes whose expression is regulated by NANOS3 and v-NANOS3 at early stages of human germ cell development using whole transcriptome RNA sequencing (RNA-Seq). **3.** Identification of RNAs directly regulated by NANOS3 compared to v-NANOS3 using TRIBE. **4.** Confirmation of NANOS3 regulation and interaction with selected most interesting RNAs by RT-qPCR, western blot, luciferase reporter assay.

The project “The role of NANOS3 in modulating genetic processes of early human germ cell development and implication in the human reproductive health” is carried out within OPUS22 grant from the National Science Centre Poland.

Key responsibilities:

1. Active participation in the implementation of experimental tasks of the project (design and obtaining modified hPSC lines using the CRISPR/Cas9 technique, culturing and differentiation of hPSCs, preparation of samples for RNA-Seq after TRIBE, STAMP as well as for Nanopore sequencing, RT-qPCR, and western blot) and analysis of results
2. Presentation of results at seminars and conferences and participation in writing scientific publications
3. Writing review papers
4. Supervision of students

II.Requirements for candidates:

1. PhD degree in the field of in biological, chemical or medical sciences obtained no earlier than 2018
2. Knowledge and skills in molecular biology
3. Scientific achievements in the form of publications in the field of biological and/or medical sciences
4. International internships/trainings and documented international cooperation
5. Fluent knowledge of English in speech and writing
6. Independence, high motivation for work in science, problem solving
7. Ability to teamwork
8. Experience in CRISPR/Cas9 technology and primary stem cell differentiation will be an additional asset
9. During the employment period, the Employee will not receive any other remuneration from the funds allocated as direct costs from research projects financed under NCN calls
10. During the employment period, the Employee will not receive remuneration from another employer on the basis of an employment contract, including an employer based outside Poland.

III. A list of documents that the candidate should attach to the competition application:

1. Application for employment, along with the address for correspondence and contact details (e-mail address and telephone number)
2. Scan or photocopy of the university diploma
3. Scan or photocopy of the award of the degree (if applicable)
4. Scan or photocopy of the diploma of obtaining a scientific title (if applicable)
5. CV
6. A list of publications with the indication of a maximum of five most important works performed during the last 5 years of the candidate's scientific work (after deduction of breaks in scientific work), patent applications, patents, implementations, research projects (if applicable)
7. Information on the number of citations of publications without self-citations, the value of the Hirsch index and the number of years effectively worked in science (after deduction of breaks), (if applicable)
8. A list of research projects (including application and implementation projects) that the Candidate was leading or was the main contractor and 1-3 most important publications resulting from the implementation of this project, or other measurable results of the project (if applicable)
9. At least one opinion of an independent researcher (R3), specialist in the scope indicated in the Competition Announcement
10. No more than 3,500 printed characters (one A4 page) - summary of scientific interests, previous achievements, potential participation in research projects and research projects
11. Consent to the processing of personal data of the Candidate for the purposes of the Competition, (available at: http://bip.igcz.poznan.pl/wp-content/uploads/2018/10/Zgoda-rekrutacja-Consent_for_the_processing.pdf)
- 12.Candidate's statement about getting acquainted with the Regulations for conducting competitions for scientific positions at the Institute of Human Genetics, Polish Academy of Sciences in Poznań. (available at: http://bip.igcz.poznan.pl/wp-content/uploads/2018/10/Oswiadczenie_regulamin-Statement_Regulations.pdf)
- 13.Candidate's statement that, in case of winning the competition, the Institute of Human Genetics, Polish Academy of Sciences in Poznań will be the main place of employment (available at: http://bip.igcz.poznan.pl/wp-content/uploads/2018/10/Oswiadczenie_miejsce_pracy-Statement_place_of_work.pdf)

IV. Criteria for the evaluation of candidates

1. Creativity measured by the quality and number of scientific publications in which the candidate is the first author, corresponding author, or significant author, and patent applications / patents and / or implementations
2. Mobility in scientific career (including academic internships, change of scientific profile, internships and work in industry)
3. Number of citations of the candidate's works, especially those in which the candidate is the first author, corresponding or significant author
4. Creativity measured by the quality and number of research projects
5. Opinion of an independent researcher (R3)
6. Experience in CRISPR/Cas9 technology and primary stem cell differentiation
7. Any breaks in the scientific work and indicated achievements of the candidate converted into effective years of scientific work

V. Announcement of results

Up to 30 days from the deadline for submitting documents

Selected candidates will be invited for an interview. Each of the submitted candidates will receive individual information about the results of the competition in relation to their person. Information on the winner of the competition will be provided on the Institute's website

VI. Planned employment: October 1, 2025

VII. Additional information:

dr hab. n. med. **Kamila Kusz-Zamelczyk**, kamila.kusz-zamelczyk@igcz.poznan.pl

VIII. Information on the possibility of appeal of a candidate who has been negatively evaluated by the competition committee

Candidates who have been negatively evaluated by the Competition Commission have the right to appeal against the results of the assessment. The appeal is submitted to the Director of the Institute within 7 days from the date of receipt of negative feedback from the selection board. The decision of the Director of the Institute is final.