



Instytut Katalizy i Fizykochemii Powierzchni
im. Jerzego Habera
Polskiej Akademii Nauk



HR EXCELLENCE IN RESEARCH

KSN 1/2024

Kraków, 07.03.2024

Adjunct (post-doc) in the Theoretical and Experimental Biocatalysis group

- Employer: Jerzy Haber Institute of Catalysis and Surface Chemistry Polish Academy of Sciences, Krakow, Poland
- Research field:
Chemistry > biochemistry
- Researcher profile: R2
- Deadline for applications: 08.04.2024, 3:00 pm GTM+1
- Place: Poland, Kraków
- Type of Contract: temporary
- Job Status: Full-time
- Working hours/week: 40
- Start of employment: 01.05.2024
- Key Words: proteins, enzymes, molecular biology, chromatographic protein purification, enzymatic kinetics, stopped-flow method

Jerzy Haber Institute of Catalysis and Surface Chemistry PAS invites applications for an Adjunct (post-doc) in the Theoretical and Experimental Biocatalysis group. The candidates who meet the conditions stated in the act "Ustawa o Polskiej Akademii Nauk" dated 30 April 2010 (Dz.U. 2018 poz. 1475 z póź. zm.), art 89. Ust. 3 for the position of Adjunct are encouraged to apply for the position.

The candidate will participate in research conducted in the Theoretical and Experimental Biocatalysis group on iron enzymes catalysing ring closing or cleavage reactions as part of the OPUS 23 research project. According to the short description of the project: "Very many natural products, a significant part of which are useful in medicine, contain in its structure one or more rings. ... As part of this project, we will undertake closely integrated research that will use protein crystallography, measurements of fast enzymatic kinetics, Mossbauer spectroscopy and computational methods (molecular dynamics simulations, QM/MM studies on reaction mechanisms, calculations of Mossbauer spectral properties, rational redesign of enzymes), in aim: to obtain crystal structures of enzymes and their complexes with substrates/mimetics or products, to elucidate the mechanisms of catalytic reactions, to unravel the structure and dynamic factors determining the activity, specificity and efficiency of enzymatic reactions, and to carry out rational redesign of enzymes."

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PL 36 1130 1150 0012 1186 5820 0004

NIP: 6750001805, REGON: P-000326351



In particular, the Adjunct's responsibilities will include:

- protein production by overexpression in *E. coli*;
- protein purification using affinity chromatography and molecular filtration;
- testing of enzymatic activity;
- enzymatic kinetics studies;
- studies of rapid enzymatic kinetics using stopped-flow and rapid freeze quench methods;
- preparing scientific publications.

Required education:

The candidate should have a doctoral degree in chemistry, biology or related disciplines.

Skills/qualifications:

- PhD degree in chemistry, biology or related fields;
- knowledge of molecular biology methods;
- knowledge of protein purification methods;
- knowledge of methods for determining enzymatic activity;
- knowledge of methods used to determine enzymatic kinetics;
- knowledge of the English language;
- ability to conduct independent scientific work;
- The candidate must meet the requirements specified in the NCN regulations governing the principles of employment for the postdoctoral position in the OPUS competition (23rd edition).

Specific requirements:

1. An application.
2. Completed and signed “Consent to the processing of personal data for the needs necessary to carry out the recruitment process” in accordance with the Act of 29 August 1997 on the protection of personal data (t.j. Dz. U. z 2016 r. poz. 922, z 2018 r. poz. 138, 723.) [[FORM](#)] and “Information obligations – recruitment of a perspective employee/collaborators” confirming acquainting with its content [[FORM](#)].
3. A copy of scientific degree certificate.
4. Full CV (including information on maternal leaves, voluntary work and periods of work in the industry).
5. At least one opinion on the Candidate given by an independent researcher.



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6. List of scientific achievements (scientific papers, patent, patent applications, grants, etc.).
7. The Candidate's report on his/her scientific interests and research aims (an A4 page).

Languages:

Good command of the English language in speech and writing.

Research experience:

4-10 years of experience in research in the field of biochemistry, biological chemistry or related fields.

Additional information:

Remuneration:

The gross salary **8200** PLN/month (roughly **1850** Euro/month) depending on the Candidate's experience.

Eligibility criteria:

- Documented experience in conducting scientific research in the field of biochemistry, biological chemistry or related fields, confirmed by a list of publications in journals from the Journal Citation Reports list (0-10 points). Minimum number of points required: 3;
- Knowledge of protein purification techniques (0-5 points). Minimum number of points required: 2;
- Knowledge of enzymatic kinetics techniques (0-5 points). Minimum number of points required: 2.

Selection process:

Applications should be sent in electronic form to: sekretariat@ikifp.edu.pl with the subject title „Biocatalysis KSN 1/2024”

Deadline for applications: **08.04.2024** at **3:00 pm GTM+1**. The competition will be settled by **22.04.2024**. The candidates will be notified of the results.

The employment will be proceeded with accordance to the rules of Labour Code for 24 months.

Additional information:

The Institute has been adapted to the needs of the disabled. The Institute does not provide accommodation. The recruitment process is conducted according to [OTM-R policy](#).

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