

Warsaw, 30/11/2022

### Job offer

for a **student NCN scholarship** in an NCN OPUS project No. 2019/33/B/ST4/02021: 'Novel methods for structural biology of large symmetric protein assemblies by solid-state Nuclear Magnetic Resonance (NMR) with ultrafast magic-angle spinning and proton detection'.  
Principal Investigator: **Jan Stanek, PhD** (Novel Methods of Spectroscopy group)

Available positions (scholarships): 1

#### We offer :

- NCN scholarship for up to 14 months, remuneration 2000-2500 net (untaxed), position starting 1/03/2022 at the latest
- Flexible working hours, partial remote work feasible
- Fascinating and timely research in an interdisciplinary young and dynamic team
- Access to ultramodern NMR equipment (incl. 800 & 600 MHz spectrometers for studies in solution and in the solid state) and biochemical lab

**Project description** : This is an interdisciplinary project, bridging chemistry, physics and molecular biology. We seek novel and improve existing methods of spectroscopic characterisation of biomolecules by Nuclear Magnetic Resonance (NMR) spectroscopy. The particular emphasis is on studies in solid state by using fast magic-angle spinning at frequencies approaching 100 kHz, and with sensitive detection of  $^1\text{H}$  nuclei. We look for advancements in isotope labelling schemes, methods of sample preparation (by crystallization and sedimentation), spectroscopy (e.g. novel radiofrequency pulse schemes) and data analysis (automation + high dimensionality). One of the object of ongoing research is SARS-CoV-2 main protease (Mpro/3CLpro/Nsp5).

#### Key and representative responsibilities :

- Full involvement in the project (roughly 20h weekly)
- Assistance in sample preparation for NMR studies (e.g. preparation of buffers, protein crystallization, evaluation of sample quality, transferring sample to NMR rotors)
- Qualitative and quantitative analysis of NMR data
- Automation of data analysis with home written scripts or simple programs

#### Profile of candidates & requirements :

- Student status (bachelor or master) in the field of chemistry, physics, biology or related *at the moment of the employment in the project*
- Ability of analytical thinking and critical assessment of data
- Independence at work, high motivation and initiative, ability to find information and screen literature, readiness to learn new software
- wysoka średnia ocen (np. dla kierunków chemicznych w szczególności z przedmiotów takich jak spektroskopia, chemia fizyczna, chemia kwantowa)
- communicative English (in reading, speaking and writing)

*highly welcome are any of the following:*

- prior experience in chemical or biochemical laboratory
- previous involvement in research projects or apprentice, scholarships
- manual skills, particularly ability to work with tiny objects
- basic programming skills (e.g. Python, bash, C/C++), and/or operating in Linux env.



**Documents required :**

- CV (in Polish or English), with clearly enlisted: project or professional experience, awards, professional skills such as: known lab techniques and equipment operated, known software, soft skills, contact data (email and/or phone no)
- Transcription of records from bachelor and master studies (if applicable)
- Certificate of admission for BSc or MSc programme or a certificate of valid student status (not mandatory at the time of application, however a candidate must hold a student status at University of Warsaw or other higher education Polish institution as of (from on) January 1, 2023.)
- Any proof of English knowledge (e.g. self-statement, grade from English course during BSc/MSc studies, studies in English (e.g. Erasmus), etc).
- Data processing agreement signed (download : <http://www.chem.uw.edu.pl/oferty-pracy/> or at the end of this offer)

**Workplace:**

Faculty of Chemistry of University of Warsaw (Radiochemistry building & Centre of Biological and Chemical Studies), Żwirki i Wigury str. 101

**Deadline for applications** 19/12/2022 8:59 CEST (Warsaw time).

Submit the documents by email to: [janstaneke@chem.uw.edu.pl](mailto:janstaneke@chem.uw.edu.pl)

Extra information or informal requests by email or in person after prior arrangement (room Radiochemistry building). Group webpage:

<http://nmr.cent3.uw.edu.pl>

<https://cnbch.uw.edu.pl/badania/grupy-badawcze/nowe-metody-spektroskopii/>

The evaluation of candidatures will be performed by the Committee according to Rules of Research Scholarships financed from National Science Center.

**The Committee reserves the right not to award the scholarship and to renew the competition if the candidates do not meet the requirements set out in the competition or if there are other significant circumstances affecting the planned manner of project implementation.**

Decision of the Evaluation Committee will be communicated to candidates by email or phone by 28/12/2022.



## DATA PROCESSING CONSENT

Hereby I agree to the processing of personal data provided in CV, cover letter and other submitted documents by University of Warsaw, based Krakowskie Przedmieście 26/28, 00-927 Warsaw for realising my recruitment process and implementing job or scholarship contract at University of Warsaw. I have been informed on my rights and responsibilities in this respect. I accept that providing my personal data in the scope resulting from law is necessary to participate in the recruitment process and that providing other personal data is voluntary.

I confirm that I have read and understood "Information on personal data processing" available in English at <http://www.chem.uw.edu.pl/oferty-pracy/>.

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Place and date, applicant's signature