



UNIWERSYTET JAGIELLOŃSKI
COLLEGIUM MEDICUM

**Jagiellonian University Medical College in Krakow
is looking for a specialist in statistics with skills in the analysis of big data
for a post of researcher in a project group
in the Laboratory for Research on Aging Society,
in the Department of Medical Sociology,
Chair of Epidemiology and Preventive Medicine,
Faculty of Medicine**

The team of the Laboratory for Research on Aging Society under the supervision of Professor Katarzyna Szczerbińska (MD) currently carries out epidemiological investigations using big data regarding older adults and the chronically ill, in the framework of a broad international cooperation, among others financial – from the program HORIZON 2020. The Laboratory regularly publishes papers in leading English-language medical journals.

We offer **an attractive job** in cooperation with an international group of researchers from renown science centers, from Europe, the United States, America and Canada, as well as an opportunity of scientific growth, in the framework of the research project *Individualized CARE for OLDER Persons with Complex Chronic Conditions in home care and nursing homes* (I-CARE4OLD), financed from the EU program HORIZON 2020.

The aims of the project are development and validation of prognostic algorithms using artificial intelligence to predict health outcomes and to modify the influence of pharmacological and non-pharmacological treatments among chronically ill older adults. To achieve this aim, the existing databases including data from over **50 million patients** in different countries in Europe and North America will be used. The result will be an e-platform supporting physicians in the process of making clinical decisions regarding chronically ill patients.

You will find the description of the project below and on the project web sites: www.icare4old.eu, [Twitter](#), [LinkedIn](#).

We are looking for a person to realize the following tasks in the research project:

- making highly advanced quantitative analysis of big data (health and demographic), including modeling medical interventions;
- interpretation of the results in cooperation with experts in the field of public health and medicine;
- harmonization of databases for realization of research tasks;
- preparation of the results for publication;
- participation in preparation of scientific articles.

Required qualifications and skills:

- professional education confirmed with a master's degree in mathematics, physics, sociology with specialization in data analysis, or related domain;
- ability to conduct complex statistical analysis of big data or data collections with many variables, which should be confirmed with at least one such analysis carried out in the past;
- command of the software: SAS, R;
- command of the Python language and the libraries XGBoost or LightGBM;
- experience in modeling medical interventions;
- knowledge of SQL;
- very good command of the English language allowing to participate in international research programs and preparing reports from analysis and texts for publication.



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Considering the specificity of the post, it requires such soft skills as: easiness of working in a team, communicativeness, flexibility, reliability, timeliness in accomplishment of the confided duties.

Additional assets of the candidate will be:

- experience in cooperation with international research teams, especially in health sciences, confirmed with a previous participation in research programs or scientific publications;
- knowledge of social and medical sciences, preferably in the area of research on multimorbidity and older adults;
- knowledge of qualitative research methods, preferably with experience in conducting analysis of qualitative research outcomes using programs for the analysis of such sort of data (e.g. MAXQDA);
- command of the software IBM SPSS Statistics;
- acquaintance of data visualization and preparing reports (e.g. in the program PowerBI);
- basic knowledge of machine learning;
- interest in scientific development.

Employment conditions: fixed-term contract (maximally till the end of the project), preceded by a standard contract for a trial period.

The selected candidate will have a full-time employment and will receive an attractive salary taking into account high qualifications and a fluent communication in English.

Required documents:

- CV in electronic version (PDF format; max 5MB);
- Cover letter (PDF format)

Candidates are asked to send the required documents (in one PDF file) to the e-mail address: violetta.kijowska@uj.edu.pl, with the following subject: "recruitment-*surname and name*".

Deadline: 25th of March 2022, 12:00

The immediate supervisor will be the project manager:

prof. dr hab. med. Katarzyna Szczerbińska

Laboratory for Research on Aging Society, Chair of Epidemiology and Preventive Medicine, Faculty of Medicine, Jagiellonian University Medical College

Selected candidates will be invited for an interview (online or offline).

Jagiellonian University conditions the right to contact only selected candidates and the right to informing about the decision regarding occupation of the post only the selected candidate.

In case of rejection of an application, the documents sent by the candidate will be destroyed following the accomplishment of the procedures of selection, according to the procedures for personal data protection.



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Information about the project:

Project I-CARE4OLD – financed from the program HORIZON 2020.

We are happy to announce that the European Commission granted the budget of 5.832.551 Euro (including 392.341 Euro for JUMC) for realization of the international scientific research project with the acronym I-CARE4OLD. The project was evaluated extremely high – it received 100% points. The coordinator of the project is dr Hein van Hout from VUMC in Amsterdam, and the manager of the Polish team is Prof. Katarzyna Szczerbińska, MD, who coordinates the works of the Laboratory for Research on Aging Society in JUMC. The project will be carried out over the course of 4 years till May 2025 by the employees of the Laboratory. The full name of the project is: *Individualized CARE for OLDER Persons with Complex Chronic Conditions in home care and nursing homes (I-CARE4OLD)*.

The aims of the project are development and validation of prognostic algorithms using artificial intelligence to predict health outcomes and to modify the influence of pharmacological and non-pharmacological treatments among older adults staying in their homes or in long-term care facilities. To achieve this aim, the existing databases including data from over 50 million patients in several countries in Europe and North America will be used. The expected result should be improvement of the process of making clinical decisions regarding chronically ill older adults thanks to the use of high-quality, internationally validated prognostic algorithms with regards to disease trajectories and treatment outcomes.

One of the tasks will be preparation of an international e-platform for health professionals, especially physicians, allowing to program treatment based on the aforementioned predictive models.

You can find more information on the project on the newly created web site:

<https://www.icare4old.eu/>

We also encourage you to follow the progress and results of the project on:

LinkedIn: <https://www.linkedin.com/company/icare4old>

Twitter: https://twitter.com/ICare4old_H2020