2 PhD FELLOWSHIPS to Smart tissue engineering to change the paradigm of diabetes treatment.

Project summary: In recent decades, significant changes have been observed in lifestyle factors such as diet, physical activity, and exposure to microorganisms, which contribute to the rising prevalence of overweight and obesity worldwide. This, in turn, leads to numerous complications and serious conditions associated with metabolic disorders, such as diabetes. Diabetes is currently treated as a chronic disease requiring lifelong maintenance treatment. Natural and long-lasting regeneration of beta cell mass resulting in actual diabetes cure is an important milestone that we all anticipate.

Candidate requirements: we are seeking an enthusiastic PhD student with passion for studying diabetes and the mechanisms underlying the disease using the most advanced cellular models and validating the specific inhibitors that can modulate the regeneration of the pancreatic beta cells.

- She/he is a PhD student at Doctoral School of Exact and Natural Sciences at the JU;
- M. Sc in molecular biology, biotechnology, biochemistry or related areas;
- Expertise in; cell isolation and culture (beta cells, pancreatic islets and organoids), immunohistochemistry, confocal microscopy, biochemical assays (immunoprecipitation, ELISA, Western Blot), and/or molecular biology (qPCR, transfection and CRISPR/Cas9 gene editing) will be an asset.
- Cell Signaling and Perturbation-role of the kinases
- For Inhibitory Screening: a) Devise assays to test kinase inhibitors
- Assess inhibitor impact on pathways through data analysis

- Proficient communication (verbal and written) skills in English.
- Publications in the indicated research fields or other proof of productivity will be an asset.

The candidate is expected to start in December 2023. Interested candidates are encouraged to submit a motivation letter, a complete CV and one reference letter (as one PDF file Ref OPUS23/PhD/last name of the candidate) to anna1.czarna@uj.edu.pl Application closes on November 27th.