

Exploring Unconventional Plant-Derived Metabolites to Keep Away Diabetes: The Case of Pomegranate

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1. CBIOS: Centro de Investigação em Biociências e Tecnologias da Saúde
2. CICANT: Centro de Investigação em Comunicação Aplicada, Cultura e Novas Tecnologias
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Abstract:

EXPLORER proposes the development of a human intervention study to evaluate the effect of ellagitannin-rich pomegranate supplements in the metabolic and β -cells functional markers, IAPP aggregation risk, urolithin B (UroB) circulating levels, and microbiota status in individuals with pre-diabetes to test the hypothesis that UroB is the bioactive molecule improving metabolic health via mitigation of IAPP cytotoxicity. Given the poor UroB bioavailability and scarcity of information on its tissue distribution, an innovative nanotechnology solution, followed by the required safety studies, is proposed to ensure the proper delivery of the molecule to β -cells in the pancreatic tissue. With this experimental design, the team expects to overcome the limitations associated with the low circulating concentrations of UroB provided by the diet. A powerful Science Communication plan was designed to efficiently disseminate the findings for stakeholders at the community, academia, and industry levels, to improve literacy about diabetes and mainly its prevention.

Partners:



Project logo:

