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BioMed X Institute to launch autoimmunity and drug delivery research programs

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New research groups in Heidelberg to examine protective tissue factors in autoimmune diseases and the translocation of complex macromolecules across the intestinal epithelial barrier in collaboration with Janssen



German independent research institute BioMed X announces the start of two new research projects with Janssen Research & Development, LLC, one of the Janssen Pharmaceutical Companies of Johnson & Johnson. Both collaborations were facilitated by Johnson & Johnson Innovation.

The new research group PTA ('Protective Tissue Factors in Autoimmune Diseases') in Switzerland will develop novel approaches to combat chronic inflammatory diseases. The aim is to identify protective factors in the tissue microenvironment of patients with auto-inflammatory diseases with the overall goal of discovering and validating novel drug targets in these diseases.

Dr. Mojca Frank Bertoncelj, new group leader of team PTA said, "We aim to develop a 3D human joint-in-a-dish platform that closely mimics the inflamed joints of patients with rheumatoid arthritis utilizing diverse methodologies including single-cell omics, gene-editing, bio-scaffold manufacturing, and stem to adult joint cell differentiation. This innovative platform will enable high-throughput testing and discovery of novel joint-protective therapeutics."

The second research group TMI ('Translocation of Complex Macromolecules Across the Intestinal Epithelial Barrier') strives to discover novel transport mechanisms in the human intestinal tract that could be used for oral delivery of various macromolar therapeutic modalities.

"Our mission is to characterize the human intestinal epithelial barrier and thereby gain insights into how macromolecular therapeutics may be orally delivered. The biology of the barrier will be explored at the cellular and molecular level.", says Dr. Kyungbo Kim, new group leader of team TMI.