LILIAN KAJÁRI

National Academy of Scientist Education, 2nd year

University of Szeged
Faculty of Science and Informatics, 3rd year

YEAR OF BIRTH

2003

FORMER SZENT-GYÖRGYI PUPIL

yes

SZENT-GYÖRGYI MENTOR

József Maléth

JUNIOR MENTOR

Csaba Jójárt Boldizsár

SPECIALIZATION

gastroenterology, inflammatory bowel diseases (IBD), fibrosis

SECONDARY SCHOOL

Kempelen Farkas High School

NAME OF TEACHER

Gergely Juhász

LANGUAGES

English/C1

IMPORTANCE, AIMS AND POSSIBLE OUTCOME OF RESEARCH

Inflammatory bowel diseases (IBD) are multifactorial, immune-mediated, chronic inflammations affecting the gastrointestinal system. Nearly 5 million patients in the world live with some type of IBD, in Hungary there are more than 55,000 registered patients and more and more patients are diagnosed at a young age. Many drug therapies are available in the clinic, but 40-60% of patients do not respond to the treatments or a subsequent loss of effect is observed. Definitive therapy is not yet available. The exact pathomechanism of the disease is unknown, but an overactive immune system, damage to the epithelial layer, and altered cytokine homeostasis contribute to the manifestation and progression of intestinal inflammation. In addition, as the disease progresses, it can be observed that the proteins forming the extracellular matrix accumulate in the intestinal tissue, which leads to the development of fibrosis. During this process, the transformation of epithelial cells into fibroblast cells of mesenchymal origin can be observed. As a result of this process, the epithelium loses its functionality, which causes serious tissue damage to intestinal homeostasis. Anti-fibrotic drug therapy is currently not available, the affected intestinal section is surgically removed. In the course of our research, we investigate the role of signaling processes mediated by cells of epithelial and fibroblast origin in the pathomechanism of inflammatory bowel diseases (IBD). As a result, we would like to better understand the process leading to the development of fibrosis, and our study may contribute to the identification of new potential drug targets.

AMBITIONS AND CAREER GOALS

I am curious by nature, so I consider learning and development to be the most important during my time in the program. I would like to get to know and master as many processes and techniques as possible, so that I can later work independently in the field. My long-term goal is that my work can be used to treat and cure diseases, thus helping patients.

HONORS AND PRIZES

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PUBLICATIONS

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