

COMMENTARY TO HABILITATION THESIS

Commentary

Inflammatory bowel disease (IBD) is an umbrella term describing disorders that cause chronic inflammation of the gastrointestinal tract. IBD affects both children and adults, but children have their specificities. IBD is classically divided into Crohn's disease and ulcerative colitis. In the current view, pediatric IBD encompasses a continuum of clinical categories, including typical ulcerative colitis, atypical ulcerative colitis, Crohn's colitis, and Crohn's disease. Where none of the above can be determined, we refer to inflammatory bowel disease unclassified. The incidence of IBD has been increasing in recent decades worldwide, and IBD has moved from being previously at the periphery of interest among gastroenterologists into focus as one of the most studied diseases. The pathogenesis of IBD involves an interaction of genetic and environmental variables that disrupt the relationship between the immune system and the gut microbiota. The clinical manifestations of IBD can be not only intestinal but also extraintestinal, and more aggressive forms of the disease are often present in children compared to adults. The course of IBD is unpredictable, with alternating periods of flare-up and remission. IBD in childhood can disrupt somatic and psychological development and has relevant social and economic consequences. Therefore, accurate and timely diagnosis and adequate therapy are essential. The presented habilitation thesis documents the author's experience in managing pediatric patients with various gastroenterological problems, but at its core is a focus on IBD and description of modern diagnostic approaches. This habilitation thesis is conceived as a collection of 10 articles previously published by the author and his colleagues. It contains individual chapters dealing with the basic aspects of IBD. Where relevant, it is followed by commentaries introducing the topic of each publication, describing the current state of knowledge and how the author has contributed to knowledge in this field. The work is based on research activities at the authors' workplaces, the Department of Pediatrics, University Hospital Brno; the Faculty of Medicine, Masaryk University; and Central European Institute of Technology. In total, 10 articles related to the habilitation thesis are shown in the following overview. The author's contributions to these articles are summarized in tables with special attention to the experimental work, supervision, manuscript composition, and research direction.

[1] **Jabandziev P**, Hlavackova E, Bily V, Karaskova E, Ravcukova B, Grombirikova H, Kozumplikova R, Buckova H, Slaba K, Pinklasova T, Jouza M, Pecl J, Jezova M, Curtisova V, Freiberger T. Trichohepatoenteric syndrome in a patient with TTC37 mutations – a case report. *Gastroent Hepatol.*2020;74(6):481-487.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
20%	50 %	70%	30%

[2] **Jabandziev P**, Pinkasova T, Kunovsky L, Papez J, Jouza M, Karlinova B, Novackova M, Urik M, Aulicka S, Slaby O, Bohosova J, Bajeroval K, Bajer M, Goel A. Regional Incidence of Inflammatory Bowel Disease in a Czech Pediatric Population: 16 Years of Experience (2002-2017). *J Pediatr Gastroenterol Nutr.* 2020;70(5):586-592.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
50%	90%	50%	80%

[3] **Jabandziev P**, Bohosova J, Pinkasova T, Kunovsky L, Slaby O, Goel A. The Emerging Role of Noncoding RNAs in Pediatric Inflammatory Bowel Disease. *Inflamm Bowel Dis.* 2020;26(7):985-993.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
	60%	60%	50%

[4] **Jabandziev P**, Kakisaka T, Bohosova J, Pinkasova T, Kunovsky L, Slaby O, Goel A. MicroRNAs in Colon Tissue of Pediatric Ulcerative Pancolitis Patients Allow Detection and Prognostic Stratification. *J Clin Med.* 2021;10(6):1325.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
50%	50%	70%	50%

[5] Formankova R, Kanderova V, Rackova M, Svaton M, Brdicka T, Riha P, Keslova P, Mejstrikova E, Zaliova M, Freiburger T, Grombirikova H, Zemanova Z, Vlkova M, Fencel F, Copova I, Bronsky J, **Jabandziev P**, Sedlacek P, Soukalova J, Zapletal O, Stary J, Trka J, Kalina T, Skvarova Kramarzova K, Hlavackova E, Litzman J, Fronkova E. Novel SAMD9 Mutation in a Patient With Immunodeficiency, Neutropenia, Impaired Anti-CMV Response, and Severe Gastrointestinal Involvement. *Front Immunol.* 2019;10:2194.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
5%	5%	5%	5%

[6] Slaba K, Noskova H, Vesela P, Tuckova J, Jicinska H, Honzik T, Hansikova H, Kleiblova P, Stourac P, **Jabandziev P**, Slaby O, Prochazkova D. Novel Splicing Variant in the PMM2 Gene in a Patient With PMM2-CDG Syndrome Presenting With Pericardial Effusion: A Case Report. *Front Genet.* 2020;11:561054.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
10%	10%	10%	10%

[7] Pecl J, Karaskova E, Kunovsky L, Jimramovsky F, Schneiderova H, Pinkasova T, Veverkova M, Jouza M, Hlouskova E, Bajerova K, Latalova V, Veghova-Velganova M, Geryk M, Sulakova A, Toukalkova L, Jaksic D, Zimen M, Jezová M, Urik M, Wiesnerova, M, **Jabandziev P**. Eosinophilic esophagitis – 10 years of experience in five Czech pediatric endoscopy centers. *Gastroent Hepatol* 2020;74(6):469–480.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
50%	90%	50%	90%

[8] **Jabandziev P**, Jouza M, Pecl J, Urik M, Papez J, Pinkasova T, Slaba K, Trna J, Kyclova J, Vaculova J, Kunovsky L. Herpetic esophagitis in a 7-year-old immunocompetent patient. *Gastroent Hepatol* 2020; 74(3): 233–237.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
70%	90%	80%	80%

[9] Poredska K, Kunovsky L, Marek F, Kala Z, Prochazka V, Dolina J, Zboril V, Kovalcikova P, Pavlik T, **Jabandziev P**, Pavlovsky Z, Vlazny J, Mitas L. The Influence of Microscopic Inflammation at Resection Margins on Early Postoperative Endoscopic Recurrence After Ileocaecal Resection for Crohn's Disease. *J Crohns Colitis*. 2020;14(3):361-368.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
5%	5%	10%	10%

[10] **Jabandziev P**, Smerek M, Michalek J, Fedora M, Kosinova L, Hubacek JA. Multiple gene-to-gene interactions in children with sepsis: a combination of five gene variants predicts outcome of life-threatening sepsis. *Crit Care*. 2014;18(1):R1.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
30%	10%	90%	10%