

July 19th, 2023

Co-authored article: The Oral Transglutaminase 2 Inhibitor ZED1227 Accumulates in the Villous Enterocytes in Celiac Disease Patients during Gluten Challenge and Drug Treatment

We are excited to share novel research results on celiac disease (CeD). Scientists from Zedira together with Jorma Isola, Markku Mäki, Keijo Viiri, Valeriia Dotsenko, Toni Montonen, Timo Zimmermann, Ralf Mohrbacher, Roland Greinwald and Detlef Schuppan, have co-authored an article that sheds new light on the localization of active TG2 and the mode-of-action of ZED1227. The first-in-class tissue transglutaminase inhibitor ZED1227 [1] was successfully evaluated in a phase 2a gluten challenge study in patients with celiac disease [2].

Surprisingly, the new paper suggests that the inhibition of tissue transglutaminase activity, as indicated by the TG2-ZED1227 complex formed, is predominantly observed in the villous enterocytes of post-treatment biopsies. The signal obtained using our ZED1227-binding monoclonal antibody A083 was strongest at the luminal epithelial brush border. Based on these findings, the authors concluded that these observations “may have important implication for the treatment of celiac disease (CeD) with oral TG2 inhibitors.”

We sincerely thank the participating patients and the dedicated researchers of the ZED1227 ([TAK-227](#)) clinical trials who contributed to this study. Your unwavering commitment and enthusiasm drive us forward in our mission to make a meaningful impact on the lives of patients and advance transglutaminase research in academia and industry.

Here you find the open-access article and author affiliations:

<https://www.mdpi.com/1422-0067/24/13/10815>

[1] [Buechold et al., Cells 2022, 11\(10\), 1667](#)

[2] [Schuppan et al., N Engl J Med 2021; 385:35-45](#)

Zedira offers a comprehensive range of products for transglutaminase and celiac disease research, including antigens for celiac disease diagnostics. Further, our recombinant microbial transglutaminase (Andracon™) is widely recognized as the industrial gold standard for this unique bio-crosslinker. For detailed information concerning our products, please refer to our website at www.zedira.com.

We are continuously expanding our product portfolio to meet the evolving needs of researchers in the field of transglutaminase R&D. Should you have any questions or queries about our products, please do not hesitate to contact us at contact@zedira.com

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