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Title: Understanding how gluten drives autoimmunity in celiac disease

Abstract: Among the most disease specific autoantibodies in humans are those reactive with transglutaminase 2 (TG2). IgA anti-TG2 antibodies are diagnostic for celiac disease, and strikingly, they are only formed when celiac patients are consuming cereal gluten proteins. Celiac disease patients have disease-driving gluten specific T cells that recognize deamidated gluten peptides, and it is TG2 that mediates this gluten peptide deamidation. This double role of TG2, both being the target of highly disease specific autoantibodies and being pivotal for creating gluten T-cell epitopes, is hardly coincidental. I my talk I will present work addressing B-cell tolerance to TG2 and discuss mechanisms how an exogenous antigen (gluten) can drive formation of autoantibodies and autoimmunity.

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