

Microarray of the wheat proteome to detect and classify gluten and non-gluten wheat sensitivity

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Technology description

Publications

[Dickerson F, Stallings C, Origoni A, Vaughan C, Khushalani S, Leister F, Yang S, Krivogorsky B, Alaedini A, Yolken R. Markers of gluten sensitivity and celiac disease in recent-onset psychosis and multi-episode schizophrenia. Vol. 68, Issue 1, July 2010, pp. 100-104.](#)

[Samaroo D, Dickerson F, Kasarda DD, Green PHR, Briani C, Yolken RH, Alaedini A. Novel immune response to gluten in individuals with schizophrenia. Schizophr Res 2010;118:248-255.](#)

[Lau NM, Green PHR, Taylor AK, Hellberg D, Ajamian M, et al. \(2013\) Markers of Celiac Disease and Gluten Sensitivity in Children with Autism. PLoS ONE 8\(6\): e66155.](#)

[Huebener S, Tanaka CK, Uhde M, Zone JJ, Vensel WH, Kasarda DD, Beams L, Briani C, Green PH, Altenbach SB, Alaedini A. Specific nongluten proteins of wheat are novel target antigens in celiac disease humoral response. J Proteome Res. 2014 Nov 7. PMID: 25329597.](#)

Application area

Expand immunological investigations of wheat intolerance to non-celiac peptides.

Biomarkers discovery for complex diseases that display an abnormal response to wheat.

Standardize the evaluation of immune responses between celiac disease, wheat allergy, and non-celiac gluten sensitivity to simplify research efforts while expanding the knowledge gained.

Detecting patterns of cross-reactive autoantibodies in other disorders.

Provide valuable disease-related information to assist healthcare workers in drafting personalized medicine treatment plans.

High throughput analysis of immune reactivity towards gluten and non-gluten wheat proteins.

Advantages

Compact, low-cost, high-throughput assay

Potential to standardize research efforts across multiple institutions

Microarray design allows for flexibility to include different varieties of wheat, controls, or specific peptides to stay up-to-date with on-going research

Institution

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