Gluten Sensitivity and the Nervous System: Autism and GS

ICDS 2013
Pre Conference Workshop on Gluten Sensitivity
Sunday September 22, 2013
Sheraton Chicago Hotel and Towers

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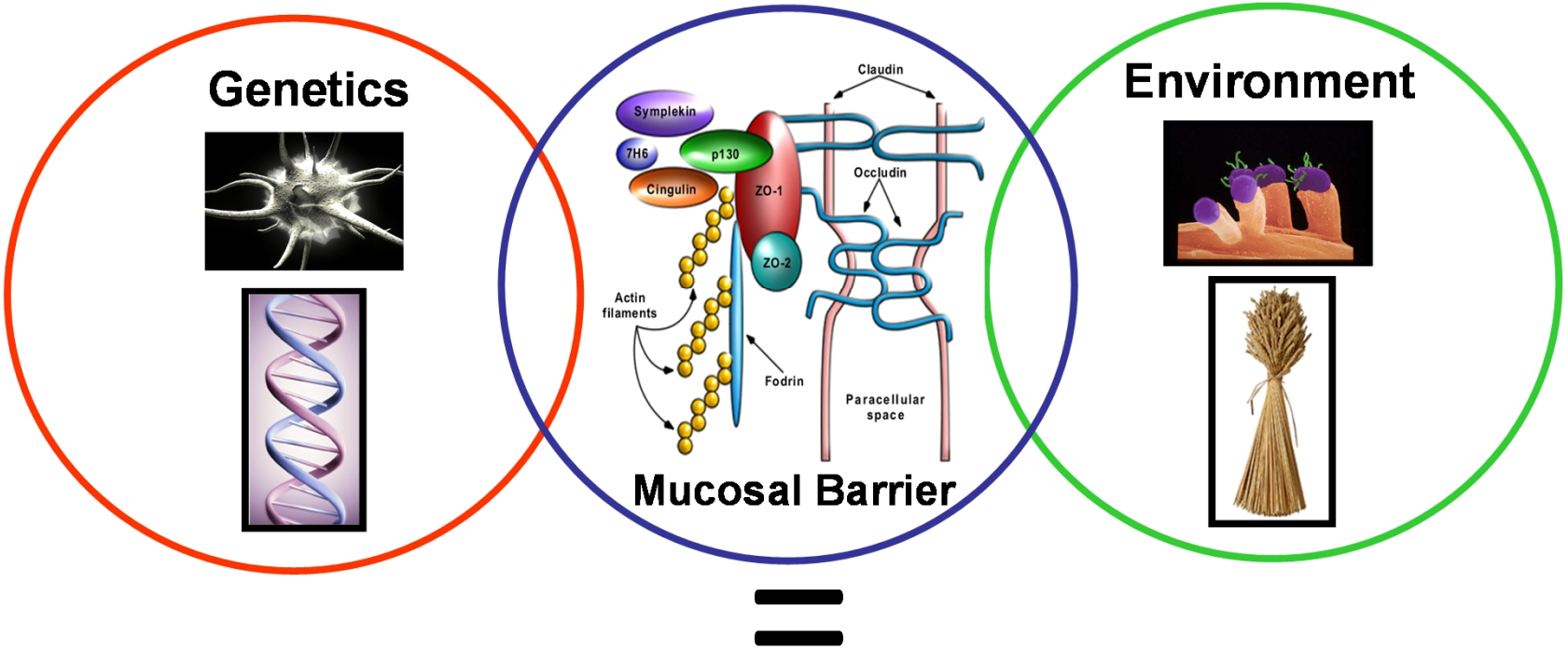
Second University of Naples
Mucosal Biology and Immunology Research Center
And Center for Celiac Research
Massachusetts General Hospital for Children

ASD Pathogenesis



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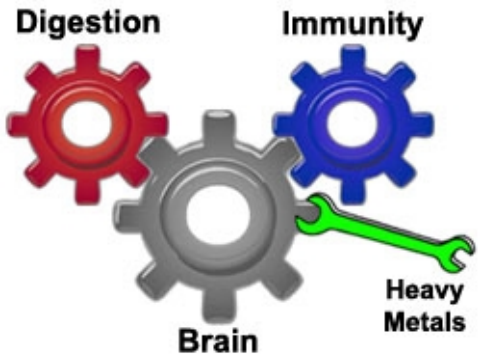
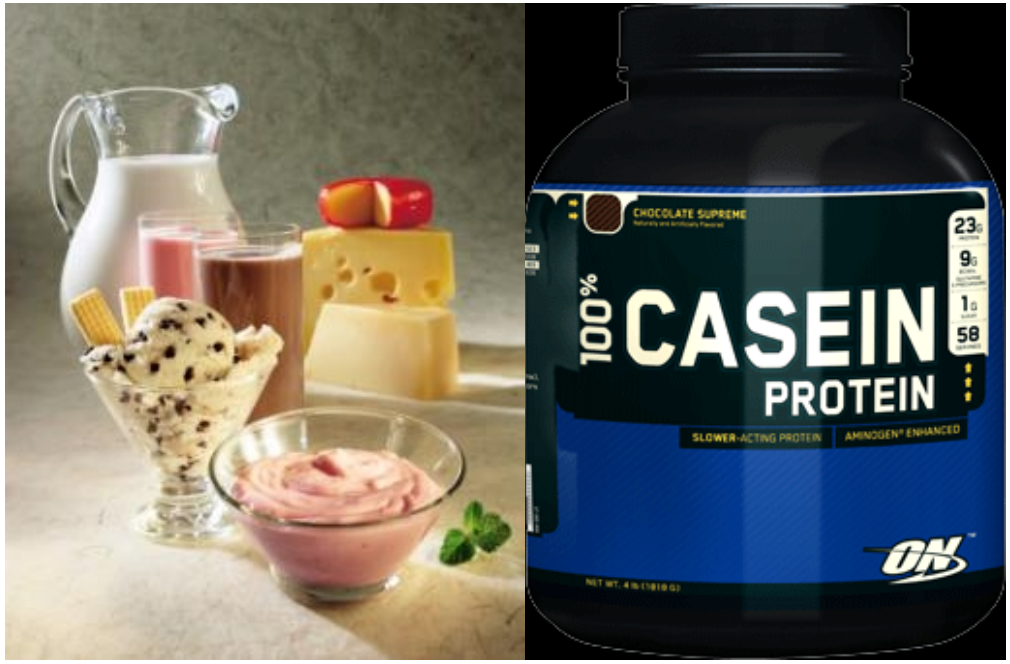
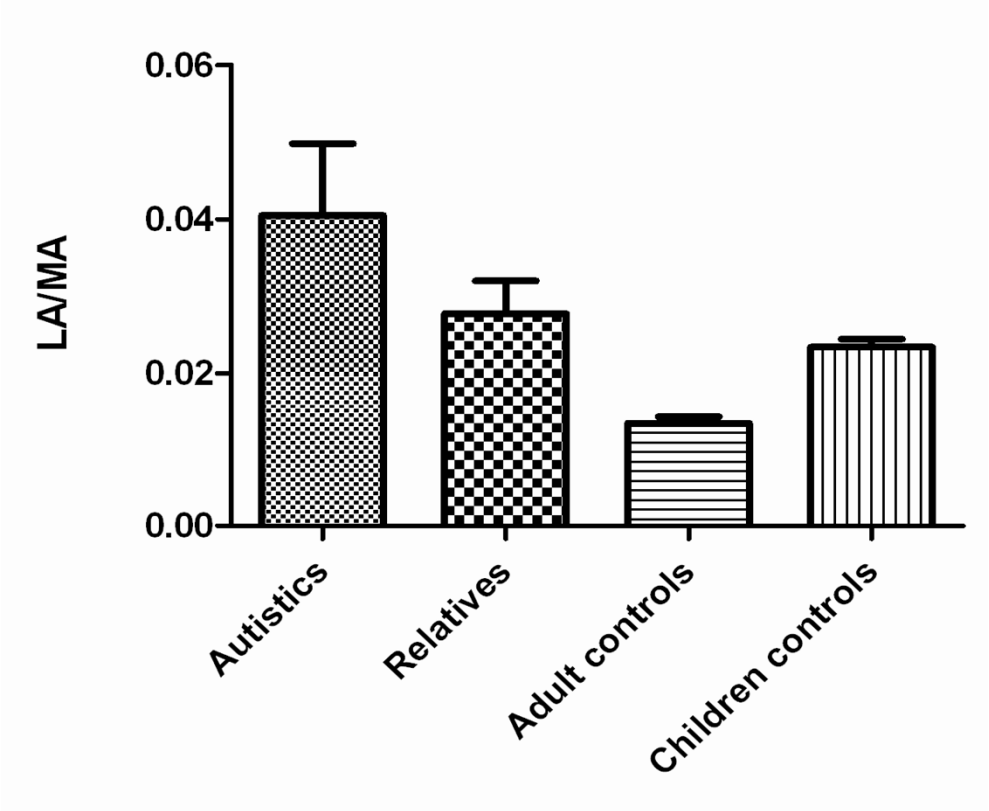


Environmental Triggers:
Gluten and Casein



A Subgroup of Children Affected by ASD Have Increased Gut Permeability That is Corrected by a Gluten-Free and Casein-Free Diet



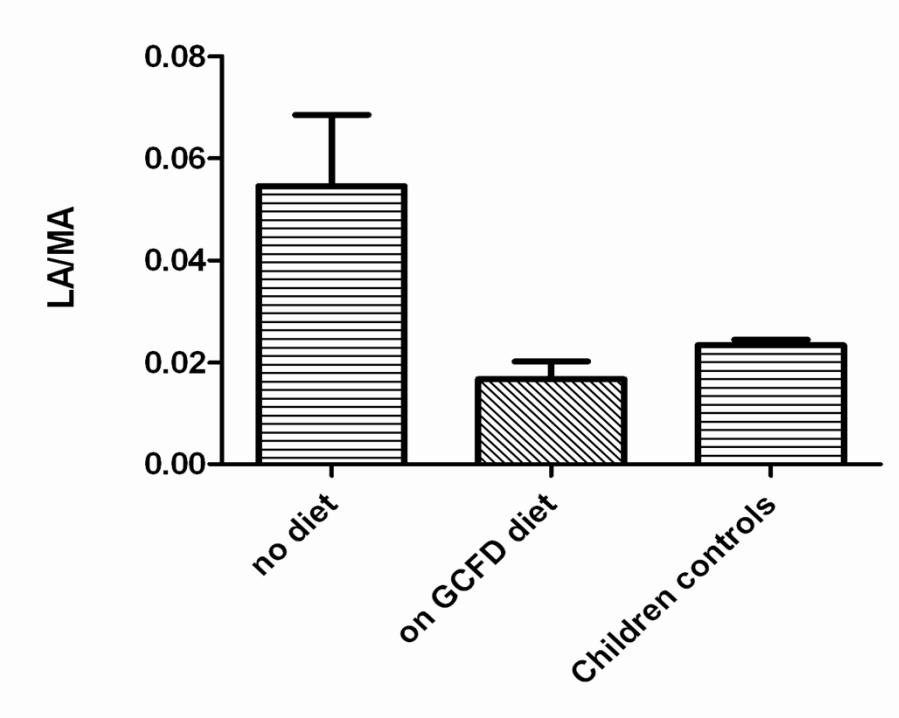


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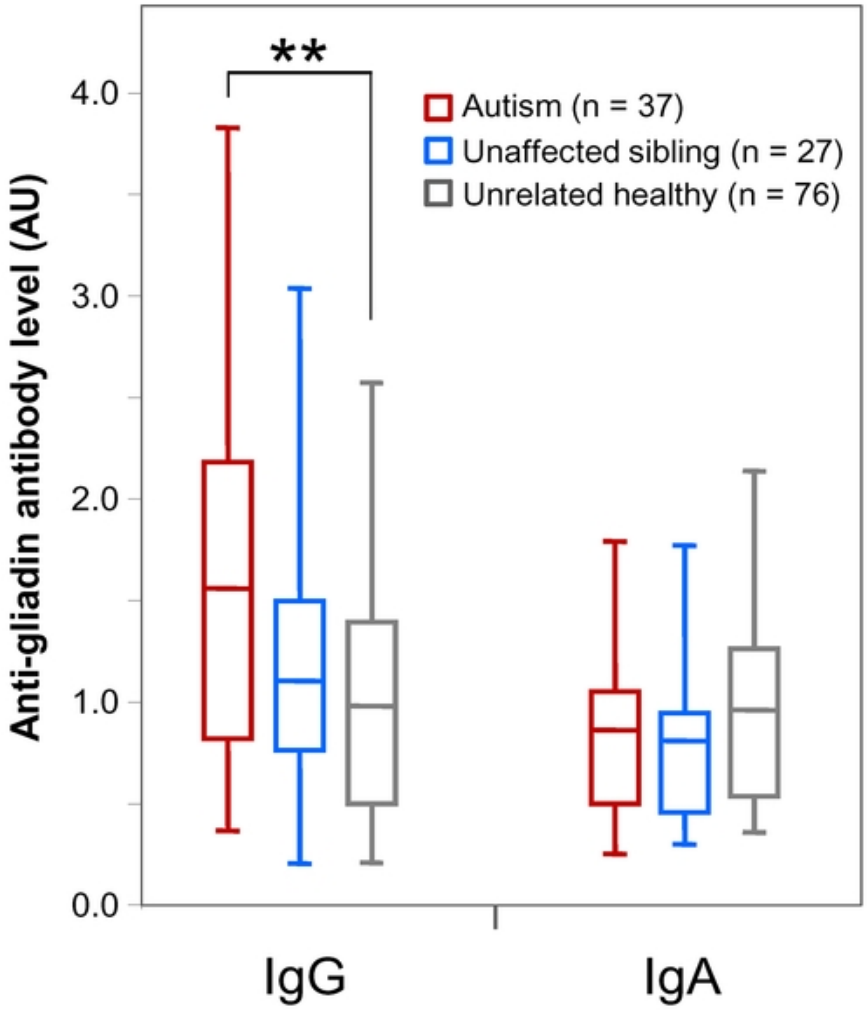
Figure 2. Comparison of levels of IgG and IgA antibody to gliadin in children with autism, their unaffected siblings, and unrelated healthy controls.



Lau NM, Green PHR, Taylor AK, Hellberg D, et al. (2013) Markers of Celiac Disease and Gluten Sensitivity in Children with Autism. PLoS ONE 8(6): e66155. doi:10.1371/journal.pone.0066155
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Research Article

Antibodies against Food Antigens in Patients with Autistic Spectrum Disorders

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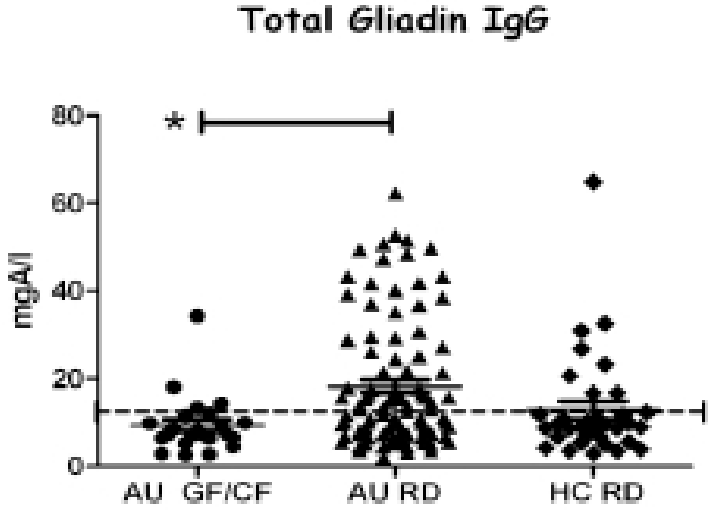
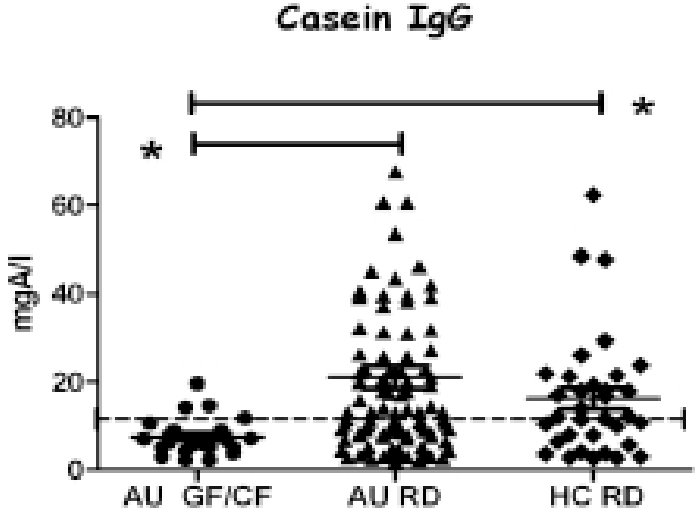
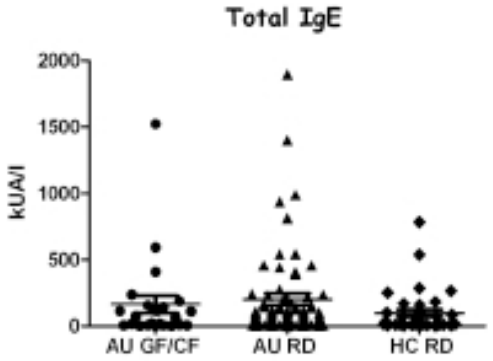
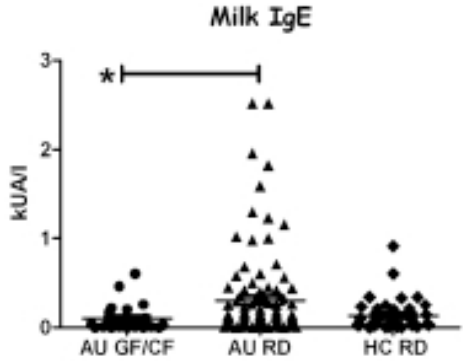
Purpose. Immune system of some autistic patients could be abnormally triggered by gluten/casein assumption. The prevalence of antibodies to gliadin and milk proteins in autistic children with paired/impaired intestinal permeability and under dietary regimen either regular or restricted is reported. *Methods*. 162 ASDs and 44 healthy children were investigated for intestinal permeability, tissue-transglutaminase (tTG), anti-endomysium antibodies (EMA)-IgA, and total mucosal IgA to exclude celiac disease; HLA-DQ2/-DQ8 haplotypes; total systemic antibodies (IgA, IgG, and IgE); specific systemic antibodies: α-gliadin (AGA-IgA and IgG), deamidated–gliadin-peptide (DGP-IgA and IgG), total specific gliadin IgG (all fractions: α, β, γ, and ω), β-lactoglobulin IgG, α-lactalbumin IgG, casein IgG; and milk IgE, casein IgE, gluten IgE, -lactoglobulin IgE, and α-lactalbumin IgE. *Results*. AGA-IgG and DPG-IgG titers resulted to be higher in ASDs compared to controls and are only partially influenced by diet regimen. Casein IgG titers resulted to be more frequently and significantly higher in ASDs than in controls. Intestinal permeability was increased in 25.6% of ASDs compared to 2.3% of healthy children. Systemic antibodies production was not influenced by paired/impaired intestinal permeability. *Conclusions*. Immune system of a subgroup of ASDs is triggered by gluten and casein; this could be related

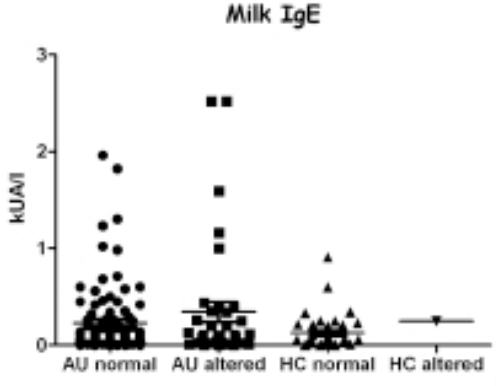
Impact of the GF/CF Diet on anti Total anti-Gliadin and anti-Casein Antibodies and on Total IgE and anti-Milk IgE In Autistic children(AU) and Healthy Children (NC) and Impact of Gut Permeability on Milk IgE











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