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Association of Alzheimer Disease Susceptibility Variants and Gene Expression in the Human Brain—Reply

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In Reply

We appreciate the interest of Jiang et al and the research community in our work examining genetic overlap between Alzheimer disease (AD) and autoimmune disease. As we noted in our article,¹ given the extensive linkage disequilibrium structure of regions, such as the *HLA* on chromosome 6, additional work certainly needs to be done, not only with gene expression but also in deciphering the causal variants that influence AD pathogenesis. Indeed, studies to identify additional genes whose expression in the brain may be influenced by rs2516049 and rs12570088 (and variants in linkage disequilibrium with these) will be critical for elucidating the relevance of associated single-nucleotide variants with underlying AD biology.

As highlighted in the Editorial on our article by Potter,² our identification of clear genetic links between AD and immune-related disorders suggests additional approaches for investigating AD pathogenesis and developing therapeutic interventions. Focusing gene expression studies on specific cell types that play the largest role in inflammation and immune response may provide additional insight into the role of these pathways in AD and mechanisms by which we can treat disease.

References

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