

Review of: "The Rural-Urban Divide: Insights from Immuno-Genetic Profiles and Implications for Health"

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Potential competing interests: No potential competing interests to declare.

This study investigates health disparities among rural and urban populations in eastern Sudan, focusing on genetic, environmental, and geographical factors. Findings indicate deviations from the Hardy-Weinberg equilibrium in rural samples, with increased heterozygosity. Notably, rural populations consistently exhibit overexpression of cytokines associated with immune response, as identified through specific gene arrays. Additionally, differences in IgE levels, suggestive of parasitic infections, further differentiate between rural and urban groups. Here are my comments:

1. Some sentences are quite complex and may be challenging for readers to understand easily. Simplifying the language where possible can improve clarity. For example, the sentence "During its biological history, the human species was under continuous challenge by infectious agents" could be simplified for clarity.
2. Some sentences contain unnecessary repetition or redundancy, which could be condensed to improve conciseness without sacrificing clarity.
3. Define and explain some technical terms like "host-parasite interactions," "gene expression profiles," and "immune responses".
4. In the method section, the rationale for selecting specific SNPs could be clarified.
5. In the Discussion section, provide a definition for some terms used like "CD4 T-Helper 2 activity" and "epigenetic determinants".
6. Offering clear suggestions for where future research should focus and outlining public health initiatives would enhance the conclusion and give a straightforward plan for advancing understanding in the field.