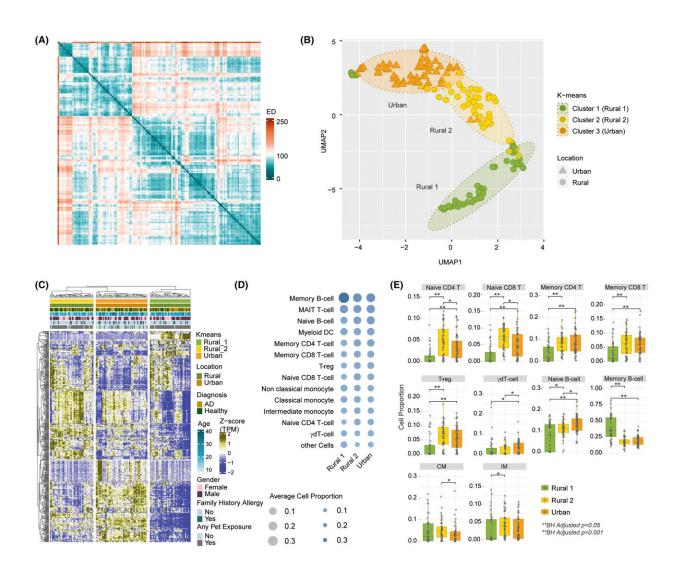


## **Rural environment supports children's immune systems**

August 3 2023



(A) Heatmap of sample—sample similarity based on Euclidean Distance (ED) metric created with top 5000 highly varying genes. Column and row are samples. Lower ED represents higher similarity between samples. The heatmap shows subpopulations in the cohort. (B) Three subpopulations identified using K-means



algorithm and top 5000 highly varying genes as input. The majority of Urban samples are in one cluster and Rural samples formed two separate clusters, named Rural 1 and Rural 2. (C) Expression pattern of top 500 highly varying genes among all the samples showing differences between the subpopulations identified. Column annotation shows the subpopulations and other clinical characteristics corresponding to each sample. (D) Digital cell quantification results. Bubble size and color gradient are relative to average cell proportions computed for samples in each subpopulation. (E) Box plot of cell types showed significant difference (adjusted p

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