Medical Xpress

Human organ chip research shows a malaria drug treatment could save babies' lives

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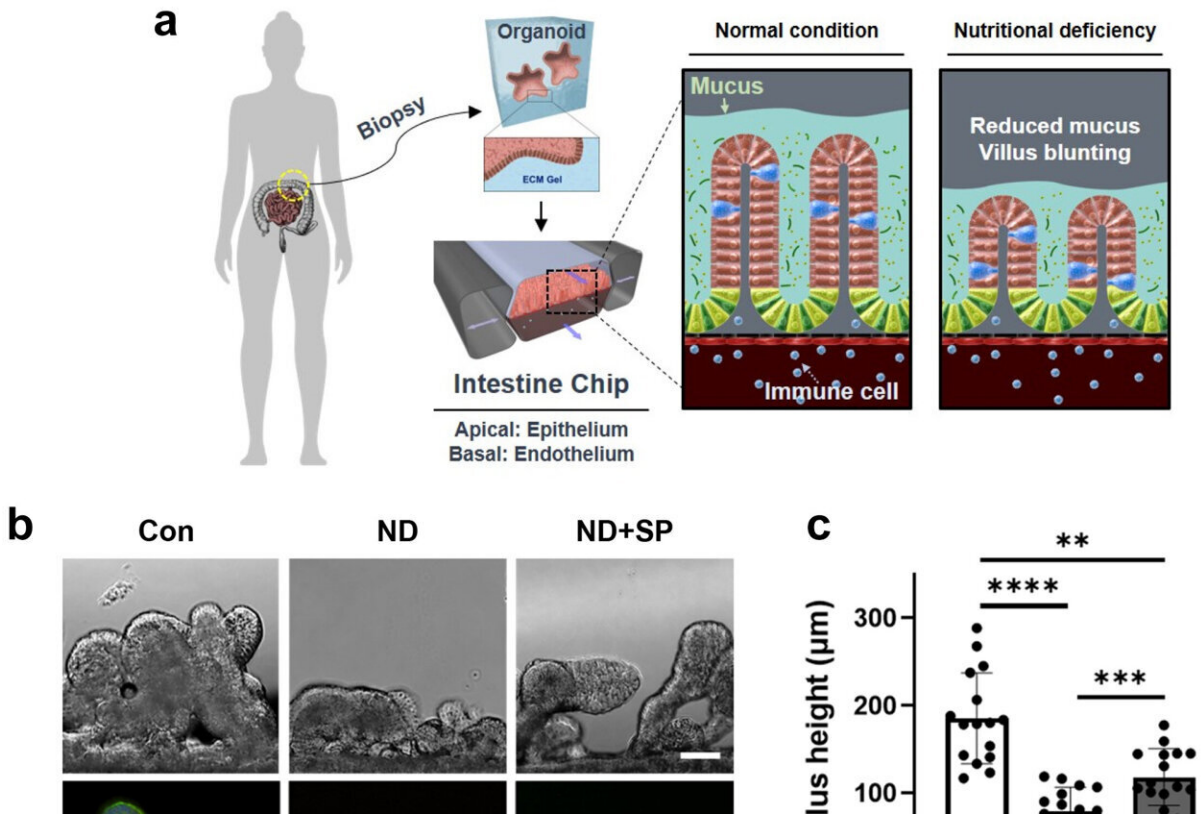

Effect of nutritional deficiency and SP treatment on adult female Intestine Chip. (a) A schematic cross-sectional view of the duodenal organoid-derived Intestine Chip showing the apical (epithelium) and basal (endothelium) microchannels. The sulfadoxine-pyrimethamine (SP) drug combination was applied to the apical channel and the human peripheral blood mononuclear cells (PBMCs) were applied to the basal channel. (b) DIC and immunofluorescence imaging of cross-sectioned Intestine Chips showing villus-like structures, green: phalloidin, yellow: ZO-1, blue: Hoechst 33342. Scale bar = 50 µm. (c) Differences in villus-

like structure height between normal (Con), nutrient-deficient (ND), and SP-treated ND (ND + SP) Intestine Chips. **p