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## Supplemental information

### Oral Hsp90 inhibitor SNX-5422 attenuates SARS-CoV-2

#### replication and dampens inflammation in airway cells

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SNX-5422 (µM)

## Figure S1. SNX-5422 dampens SARS-CoV-2 protein expression in lung epithelial cells, Related to Figure 1.

Calu-3 cells were infected with SARS-CoV-2 strain USA-WA1/2020 and treated with either 0.1% DMSO (drug-vehicle) or indicated concentration of SNX-5422 reconstituted in DMSO. After 48 hr post-infection (pi), **(A)** cells were immunostained for SARS-CoV-2 nucleocapsid protein (NP) (green). Nuclei was counterstained (blue) prior to imaging. **(B)** Immunofluorescent images were quantified to evaluate proportions of SARS-CoV-2-NP+ cells. Each symbol and color represent an independent experiment and each data point represents an independent quantified image field. Medians of data points are reported as grey bars. Dotted line represents detection cut off, which is the mean+3 standard deviation (SD) of the percentage of NP+ cells in uninfected controls. Image quantification was performed using Fiji as described in the method section. Two-sided p value was computed using Welch's two-sample t test and statistical significance was evaluated at the 0.05 alpha level. \*:  $p \le 0.05$ ; \*\*:  $p \le 0.01$ ; \*\*\* $p \le 0.001$ .

#### PCA of gene expression



# Figure S2. Sequencing read counts altered upon SNX-5422 treatment of human TBE cells, Related to Figure 2.

Principal component analysis (PCA) of gene expression counts in human TBE cells treated with 0.1% DMSO (circles) or 1µM SNX-5422. (triangles). Each donor is indicated by a single color and 3 biological replicates from each donor are plotted. Red and blue oval symbols represent SNX-5422 and DMSO-treated clusters, respectively.

## Table S1. Human Tracheobronchial cell (TBE) donor information, Related to Figure 2.

Donor	Age	Sex <sup>a</sup>	Race <sup>b</sup>	Smoking status <sup>c</sup>	Lung disease <sup>d</sup>
TBE-20	13	М	С	NS	N
TBE-22	35	М	С	NS	N
TBE-11581	33	F	С	NS	N

<sup>a</sup>M: Male; F: Female <sup>b</sup>C: Caucasian

<sup>°</sup>NS: Nonsmoker

<sup>d</sup>N: None identified