All the files described in this document can be found in Results\_atac\_human\_col. To run integration use the following procedure:

1) Run Human\_estimate\_cor to produce the correlation matrix between all features.

2) Run Pick\_features.ipynd to pick 60k features with the highest in magnitude Pearson correlation.

3) Run Human\_make\_data to load pre-process and save PBMC data.

4)Run SCRaPL\_atac\_human to sample parameters of interest.

5)Run Col\_prts to aggregate samples form different chunks.

6)Sample latent space from the model using Gen\_dat.

7)Run Seurat\_my\_data\_int to perform integration on SCRaPL preprocessed data.

8)Run Seurat\_hum to perform integration.