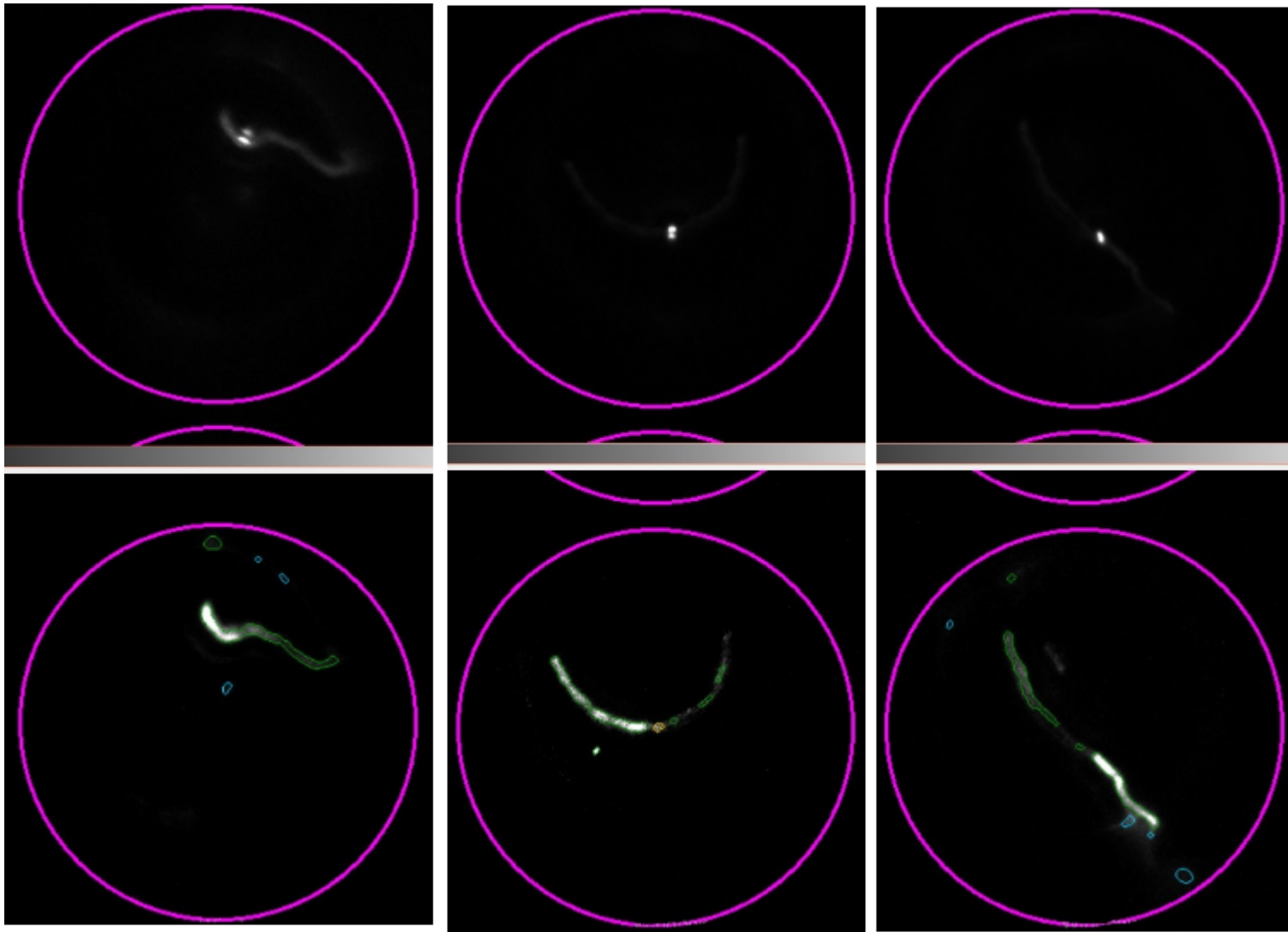
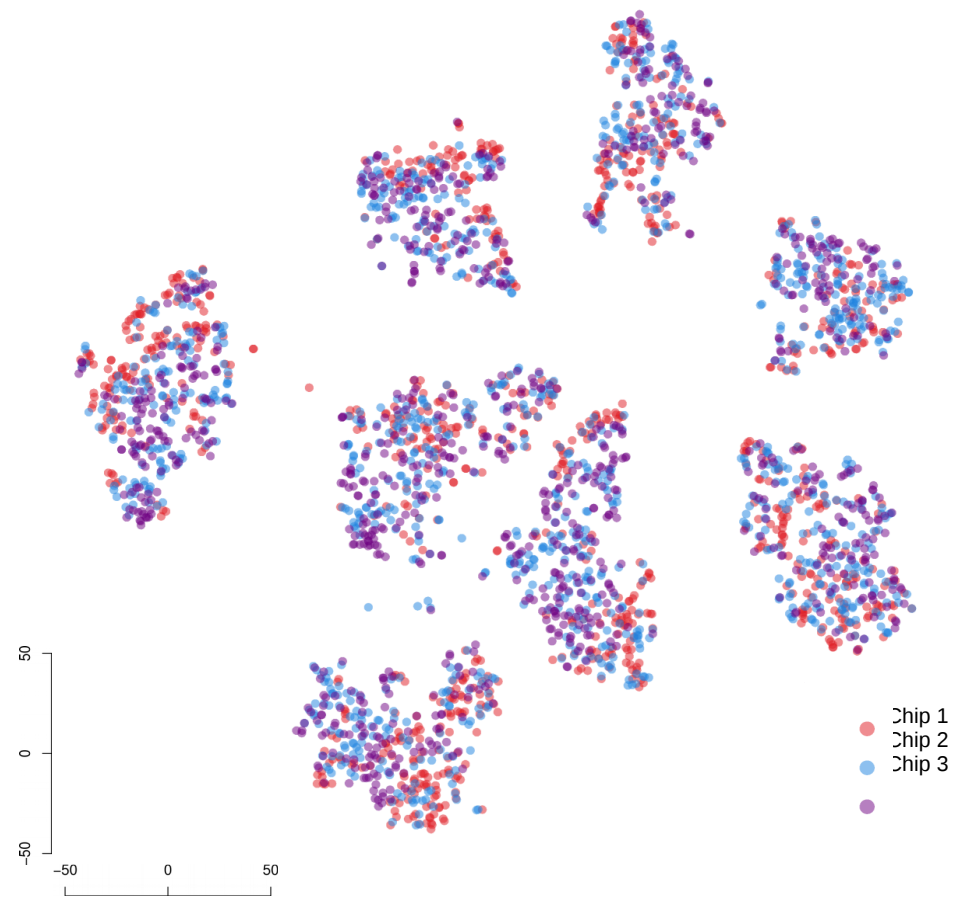


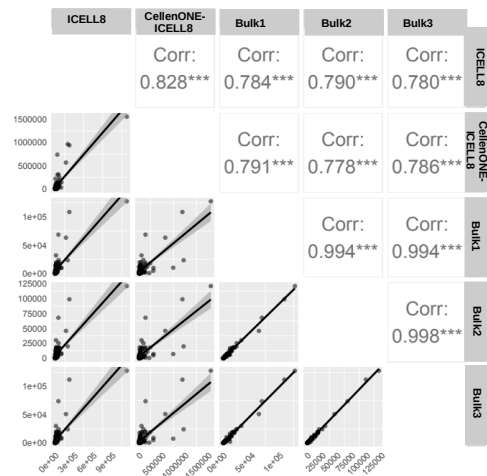


Supplementary Figure 1: dispensing of Schwann cells exhibiting axonic regrowing forms and sizing of 200-500 μm into a Takara ICELL8® 5,184 nano-well chip. Cells were fluorescent-labelled with live/dead stain, Hoechst 33342 and propidium iodide (NucBlue™ Cell Stain Reagent, Thermo Fisher Scientific). Living and single cells were visualized and selected using the CellSelect® Software (Takara Bio).

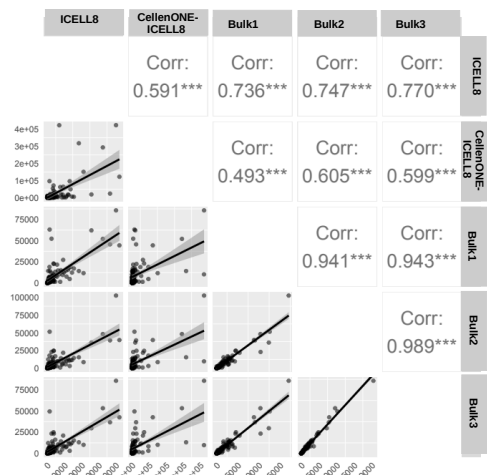


Supplementary Figure 2: t-SNE visualization of the three ICELL8® chips, showing how single cells from all 3 chips overlap with each other and showing no batch effect between them.

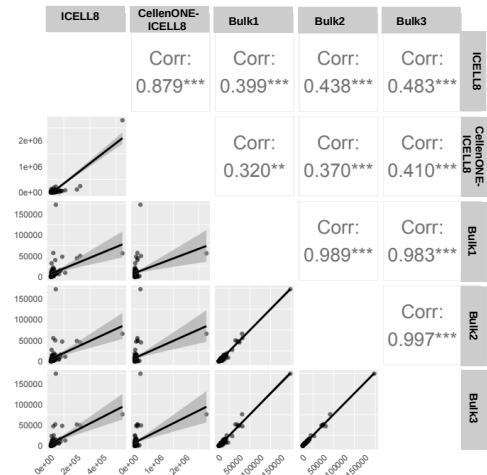
GOE486



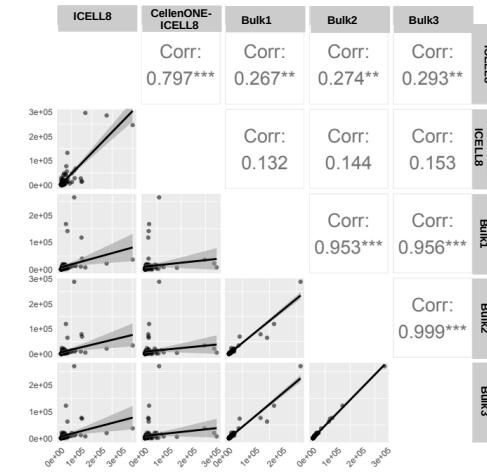
GOE615



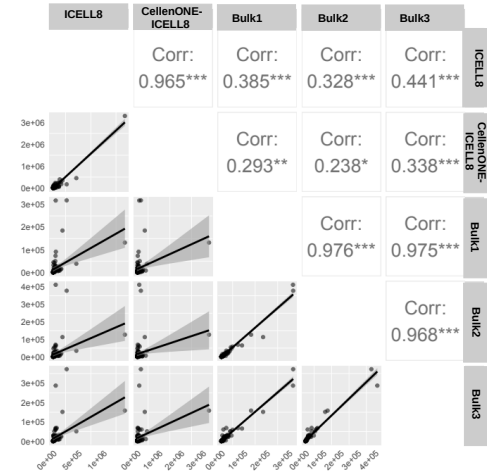
GOE1303



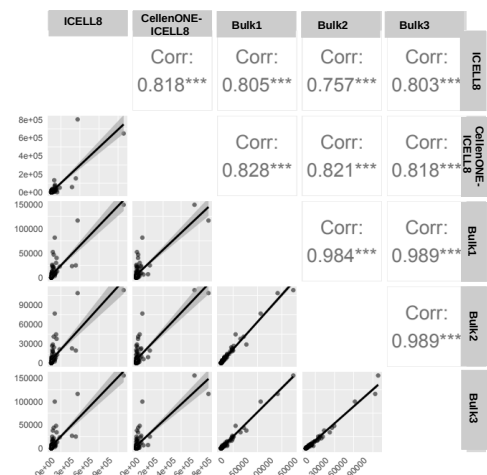
GOE800



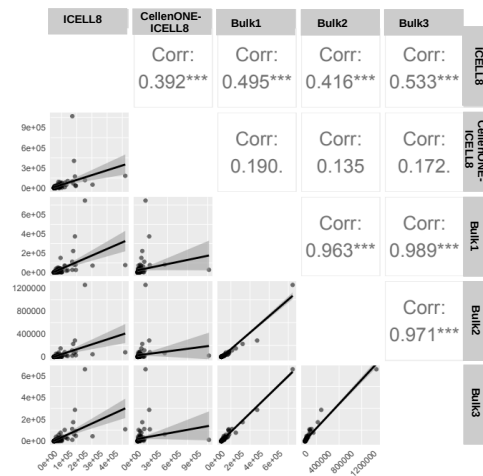
GOE1305



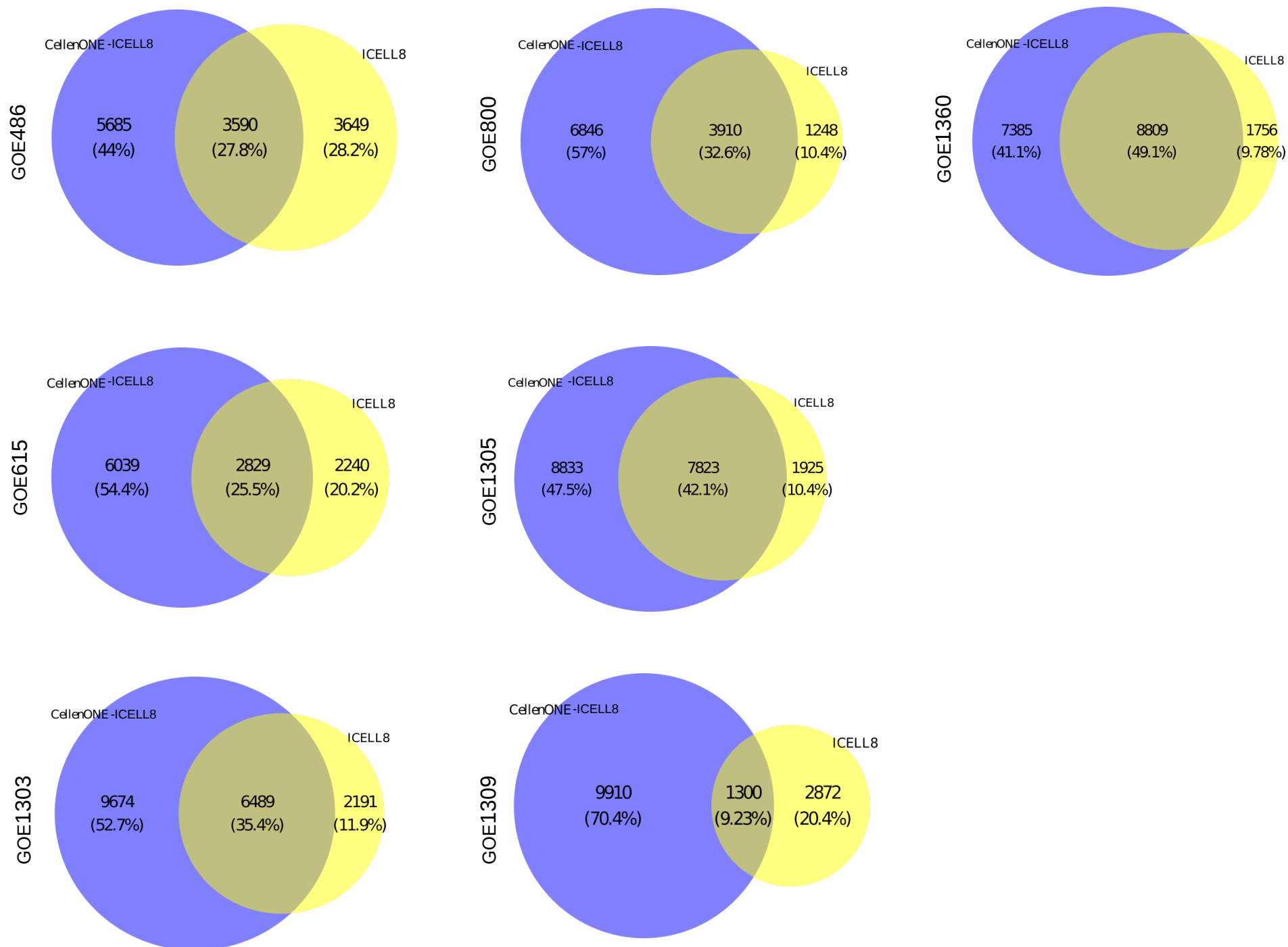
GOE1309



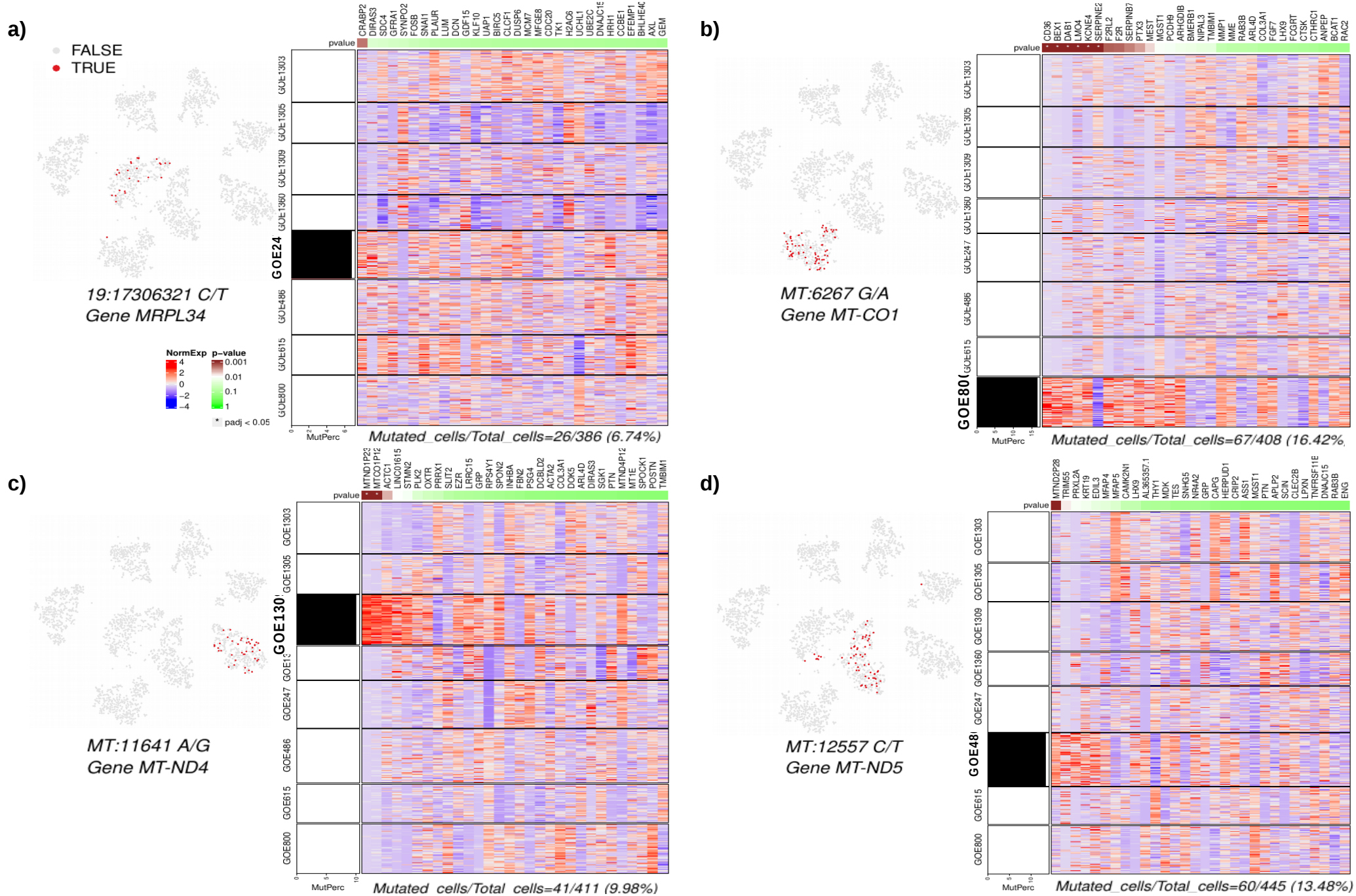
GOE1360



Supplementary Figure 3: Correlations of normalized expressions of the top 100 markers from samples in the scRNA-Seq platforms and bulk RNA-seq datasets, with the correlation coefficients indicated in the upper triangle.

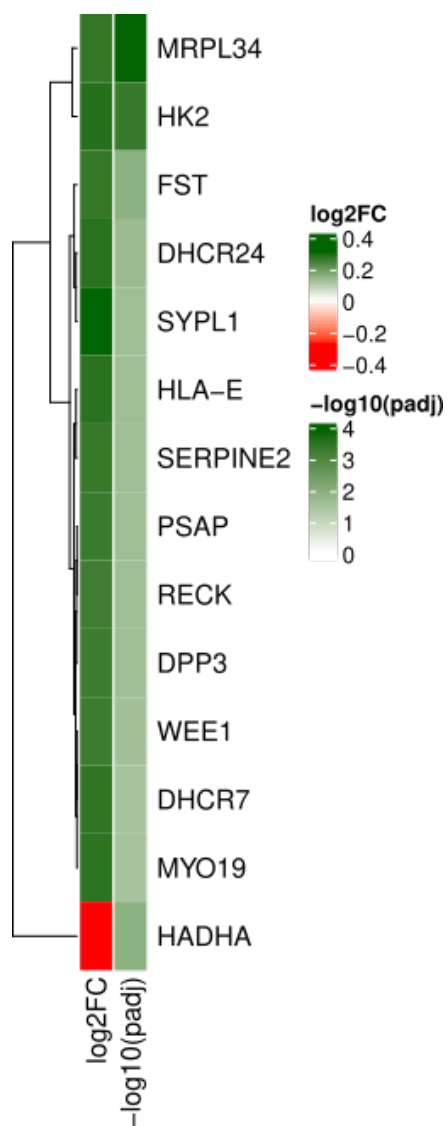


Supplementary Figure 4: Venn diagram of all significant markers detected for samples in both scRNA-Seq platforms.

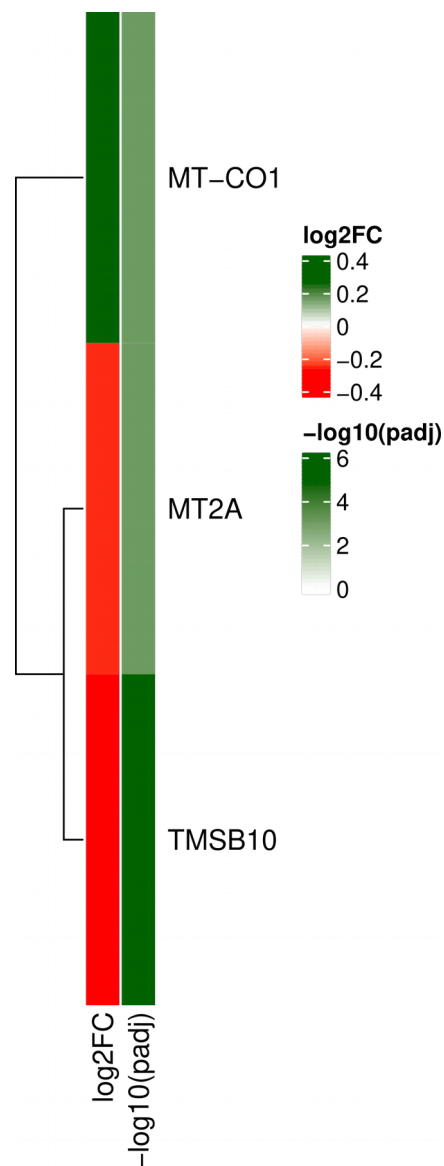


Supplementary Figure 5: Analysis of mutational heterogeneity for samples (a) GOE247, (b) GOE800, (c) GOE1309 and (d) GOE486. t-SNE plots show non-uniformly distributed variant-expressing cells in red. The heatmap displays the scaled, normalized gene expressions of the top 30 markers with highest adjusted p-values from the regression of the gene expressions to the mutation rate (p-values shown in top bar), and a bar graph on the left shows mutant cell fraction in each cluster labelled to the left of the heatmap.

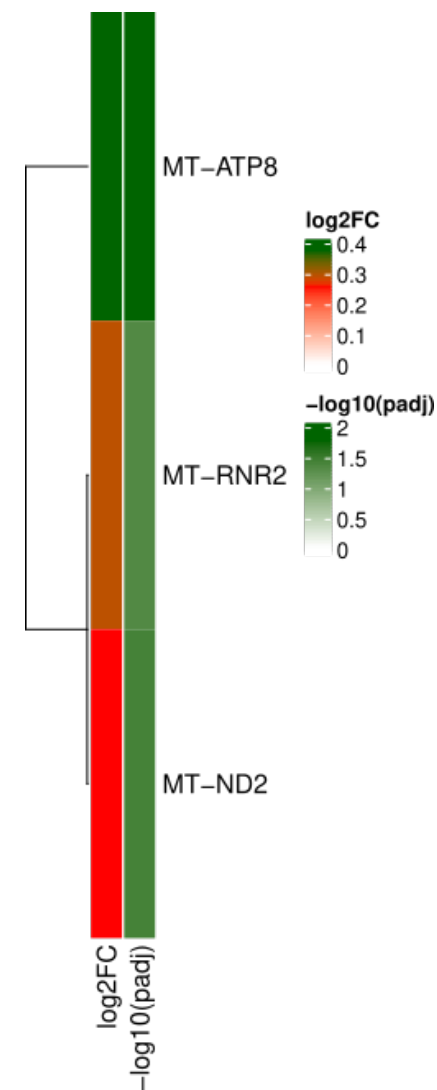
a)

MRPL34^{A74V}

b)

MT-CO1^{A122T}

c)

MT-ND5^{T74I}

Supplementary Figure 6: Variant-associated expression signatures in samples (a) GOE247, (b) GOE800 and (c) GOE486. Heatmaps showing $\log_2FC$ and $-\log_{10}$ of adjusted p-value for differentially expressed genes between mutant and non-mutant cells for (a) MRPL34^{A74V} variant in sample GOE247 (b) MT-CO1^{A122T} variant in sample GOE800 and (c) MT-ND5^{T74I} variant in sample GOE486.