

| Figure    | Description                                            | Biological replicates (donors) | n (independent experiments) | Normality test    | Passed normality test (alpha=0.05)? | Test                            | Post hoc test                     | Factor                                   | F (DFn, DFd)                         | P value            | Comments                    |
|-----------|--------------------------------------------------------|--------------------------------|-----------------------------|-------------------|-------------------------------------|---------------------------------|-----------------------------------|------------------------------------------|--------------------------------------|--------------------|-----------------------------|
| 1C        | H3N2-TCP, CD4+ and CD8+                                | 4                              | 10                          | NA                | NA                                  | Repeated-measures two-way ANOVA | Šidák's multiple comparisons test | Enrichment                               | F (1, 18) = 114.2                    | P<0.0001           |                             |
|           | H1N1-TCP, CD4+ and CD8+                                | 4                              | 11                          | NA                | NA                                  | Repeated-measures two-way ANOVA | Šidák's multiple comparisons test | Enrichment                               | F (1, 20) = 20.55                    | P=0.0002           |                             |
| 1D        | Cell count, H3N2-TCPs                                  | 4                              | 10                          | NA                | NA                                  | NA                              | NA                                | NA                                       | NA                                   | NA                 |                             |
|           | Cell count, H1N1-TCPs                                  | 4                              | 10                          | NA                | NA                                  | NA                              | NA                                | NA                                       | NA                                   | NA                 |                             |
|           | Fold Expansion, H3N2-TCP                               | 4                              | 8                           | NA                | NA                                  | NA                              | NA                                | NA                                       | NA                                   | NA                 |                             |
|           | Fold Expansion, H1N1-TCP                               | 4                              | 8                           | NA                | NA                                  | NA                              | NA                                | NA                                       | NA                                   | NA                 |                             |
|           | Viability, H3N2-TCP                                    | 4                              | 13                          | NA                | NA                                  | NA                              | NA                                | NA                                       | NA                                   | NA                 |                             |
|           | Viability, H1N1-TCP                                    | 4                              | 13                          | NA                | NA                                  | NA                              | NA                                | NA                                       | NA                                   | NA                 |                             |
|           | Glucose, H3N2-TCP                                      | 2                              | 7                           | NA                | NA                                  | NA                              | NA                                | NA                                       | NA                                   | NA                 |                             |
|           | Glucose, H1N1-TCP                                      | 2                              | 7                           | NA                | NA                                  | NA                              | NA                                | NA                                       | NA                                   | NA                 |                             |
|           | Lactate, H3N2-TCP                                      | 2                              | 6                           | NA                | NA                                  | NA                              | NA                                | NA                                       | NA                                   | NA                 |                             |
| 1E        | Lactate, H1N1-TCP                                      | 2                              | 6                           | NA                | NA                                  | NA                              | NA                                | NA                                       | NA                                   | NA                 |                             |
|           | T cell phenotype, H3N2-TCP                             | 6                              | 17                          | NA                | NA                                  | NA                              | NA                                | NA                                       | NA                                   | NA                 |                             |
| 2B        | T cell phenotype, H1N1-TCP                             | 4                              | 13                          | NA                | NA                                  | NA                              | NA                                | NA                                       | NA                                   | NA                 |                             |
|           | INy, H3N2-TCP, CD4 and CD8                             | 6                              | 17                          | NA                | NA                                  | Mixed-effects analysis          | Šidák's multiple comparisons test | Time                                     | F (1.259, 59.19) = 13.31             | P= 0.0002          | 1 missing value             |
|           | INy, H1N1-TCP, CD4 and CD8                             | 4                              | 13                          | NA                | NA                                  | Repeated-measures two-way ANOVA | Šidák's multiple comparisons test | Time                                     | F (1.207, 28.98) = 8.031             | P=0.0058           |                             |
|           | Cytokines, GrzB and activation markers, H3N2-TCP, CD4+ | 6                              | 17                          | NA                | NA                                  | Mixed-effects analysis          | Šidák's multiple comparisons test | Time                                     | F (1, 75) = 22.96                    | <0.0001            | 1 missing value             |
|           | Cytokines, GrzB and activation markers, H3N2-TCP, CD8+ | 6                              | 17                          | NA                | NA                                  | Mixed-effects analysis          | Šidák's multiple comparisons test | Time                                     | F (1, 75) = 0.07363                  | P= 0.7869          | 1 missing value             |
|           | Cytokines, GrzB and activation markers, H1N1-TCP, CD4+ | 4                              | 13                          | NA                | NA                                  | Repeated-measures two-way ANOVA | Šidák's multiple comparisons test | Time                                     | F (1, 60) = 5.342                    | P=0.0243           |                             |
|           | Cytokines, GrzB and activation markers, H1N1-TCP, CD8+ | 4                              | 13                          | NA                | NA                                  | Repeated-measures two-way ANOVA | Šidák's multiple comparisons test | Time                                     | F (1, 60) = 4.678                    | P=0.0345           |                             |
| 2D        | TCP killing, H3N2-TCP                                  | 6                              | 16                          | NA                | NA                                  | Two-way ANOVA                   | Fisher's LSD test                 | Effector-to-target (E:T) ratio; TCP type | F (1, 50) = 5.546; F (1, 50) = 8.516 | P=0.0225; P=0.0053 |                             |
|           | TCP killing, H1N1-TCP                                  | 4                              | 11                          | NA                | NA                                  |                                 |                                   |                                          |                                      |                    |                             |
| 5A        | Pre-scan, Caspase 3/7, MOI 1                           | 1                              | 2                           | Shapiro-Wilk test | No                                  | Kruskal-Wallis test             | Dunn's multiple comparisons test  | Conditions                               | H(5) = 305.3                         | P<0.0001           | Total number of values 1141 |
|           | Pre-scan, Caspase 3/7, MOI 10                          | 1                              | 2                           | Shapiro-Wilk test | No                                  | Kruskal-Wallis test             | Dunn's multiple comparisons test  | Conditions                               | H(5) = 501.8                         | P<0.0001           | Total number of values 1189 |
| 5C        | Re-scan, Lung cells, Caspase 3/7, MOI 1                | 1                              | 2                           | Shapiro-Wilk test | No                                  | Kruskal-Wallis test             | Dunn's multiple comparisons test  | Conditions                               | H(5) = 196.7                         | P<0.0001           | Total number of values 947  |
|           | Re-scan, Lung cells, Caspase 3/7, MOI 10               | 1                              | 2                           | Shapiro-Wilk test | No                                  | Kruskal-Wallis test             | Dunn's multiple comparisons test  | Conditions                               | H(5) = 167.4                         | P<0.0001           | Total number of values 961  |
|           | Re-scan, T cells, Caspase 3/7, MOI 1                   | 1                              | 2                           | Shapiro-Wilk test | No                                  | Kruskal-Wallis test             | Dunn's multiple comparisons test  | Conditions                               | H(5) = 816.14                        | P<0.0001           | Total number of values 992  |
|           | Re-scan, T cells, Caspase 3/7, MOI 10                  | 1                              | 2                           | Shapiro-Wilk test | No                                  | Kruskal-Wallis test             | Dunn's multiple comparisons test  | Conditions                               | H(5) = 764.1                         | P<0.0001           | Total number of values 892  |
| Suppl. 8A | Pre-scan, Caspase 3/7, MOI 1, Experiment 1             | 1                              | 1                           | Shapiro-Wilk test | No                                  | Kruskal-Wallis test             | Dunn's multiple comparisons test  | Conditions                               | H(5) = 177.88                        | P<0.0001           | Total number of values 644  |
|           | Pre-scan, Caspase 3/7, MOI 1, Experiment 2             | 1                              | 1                           | Shapiro-Wilk test | No                                  | Kruskal-Wallis test             | Dunn's multiple comparisons test  | Conditions                               | H(5) = 204.7                         | P<0.0001           | Total number of values 497  |
|           | Pre-scan, Caspase 3/7, MOI 10, Experiment 1            | 1                              | 1                           | Shapiro-Wilk test | No                                  | Kruskal-Wallis test             | Dunn's multiple comparisons test  | Conditions                               | H(5) = 211.0                         | P<0.0001           | Total number of values 631  |
|           | Pre-scan, Caspase 3/7, MOI 10, Experiment 2            | 1                              | 1                           | Shapiro-Wilk test | No                                  | Kruskal-Wallis test             | Dunn's multiple comparisons test  | Conditions                               | H(5) = 304.8                         | P<0.0001           | Total number of values 558  |
| Suppl. 9A | Re-scan, Lung cells, Caspase 3/7, MOI 1, Experiment 1  | 1                              | 1                           | Shapiro-Wilk test | No                                  | Kruskal-Wallis test             | Dunn's multiple comparisons test  | Conditions                               | H(5) = 155.7                         | P<0.0001           | Total number of values 524  |
|           | Re-scan, Lung cells, Caspase 3/7, MOI 1, Experiment 2  | 1                              | 1                           | Shapiro-Wilk test | No                                  | Kruskal-Wallis test             | Dunn's multiple comparisons test  | Conditions                               | H(5) = 85.01                         | P<0.0001           | Total number of values 423  |
|           | Re-scan, Lung cells, Caspase 3/7, MOI 10, Experiment 1 | 1                              | 1                           | Shapiro-Wilk test | No                                  | Kruskal-Wallis test             | Dunn's multiple comparisons test  | Conditions                               | H(5) = 157.5                         | P<0.0001           | Total number of values 500  |
|           | Re-scan, Lung cells, Caspase 3/7, MOI 10, Experiment 2 | 1                              | 1                           | Shapiro-Wilk test | No                                  | Kruskal-Wallis test             | Dunn's multiple comparisons test  | Conditions                               | H(5) = 78.47                         | P<0.0001           | Total number of values 461  |
| Suppl. 9C | Re-scan, T cells, Caspase 3/7, MOI 1, Experiment 1     | 1                              | 1                           | Shapiro-Wilk test | No                                  | Kruskal-Wallis test             | Dunn's multiple comparisons test  | Conditions                               | H(5) = 406.9                         | P<0.0001           | Total number of values 495  |
|           | Re-scan, T cells, Caspase 3/7, MOI 1, Experiment 2     | 1                              | 1                           | Shapiro-Wilk test | No                                  | Kruskal-Wallis test             | Dunn's multiple comparisons test  | Conditions                               | H(5) = 408.7                         | P<0.0001           | Total number of values 497  |
|           | Re-scan, T cells, Caspase 3/7, MOI 10, Experiment 1    | 1                              | 1                           | Shapiro-Wilk test | No                                  | Kruskal-Wallis test             | Dunn's multiple comparisons test  | Conditions                               | H(5) = 325.1                         | P<0.0001           | Total number of values 425  |
|           | Re-scan, T cells, Caspase 3/7, MOI 10, Experiment 2    | 1                              | 1                           | Shapiro-Wilk test | No                                  | Kruskal-Wallis test             | Dunn's multiple comparisons test  | Conditions                               | H(5) = 436.3                         | P<0.0001           | Total number of values 467  |