Contextual information for the data excel for the MRes “Detecting and defining immunity to human cytomegalovirus (HCMV); combining QuantiFERON-CMV and flow cytometry”

* Each row represents all data drawn from the QuantiFERON-CMV assay, antibody assays and flow cytometry data for one healthy volunteer
* Columns B-H are results obtained at the University Hospital Southampton laboratory for CMV antibody and QuantiFERON-CMV assays. Columns I-BI are data obtained from the flow cytometry assay at Bournemouth university
* Terms *nil*, *mitogen/mito* and *CMV* refer to the corresponding test tube in the QuantiFERON-CMV kit.
Nil = negative control
Mitogen/mito = positive control, stimulating total CD8+ T cell response
CMV = CMV peptides stimulating a response to the CMV-specific CD8+ T cells
* All *liaison results* correspond to the QuantiFERON-CMV assay and are all reported in IU/mL. 10IU/mL is the upper limit of detection by Liaison
* The *CMV result* is either reactive or non-reactive, as interpreted by the manufacturers instruction in the methods section of the thesis
* Column I is the number of cells counted following white cell separation from red cells from a whole blood sample.
* Column J-M interpret the data from the flow cytometer. First, lymphocytes are identified and gated on the flow cytometer (column J) and the raw number of lymphocytes are calculated using the % lymphocytes (column J) from the number of cells counted in column I. Second, single cells are identified and gated for on the flow cytometer (column L), and the raw number of single lymphocytes are calculated by the % cells in the single gate (column L) from the number of lymphocytes (column K).
* Column M as the raw number of single and live lymphocytes per sample is used to work out number of cells for the remaining columns N-Q.
* Following gating of live single lymphocytes on the flow, cell subsets can then be highlighted for the surface and intracellular markers used in this study: CD4, CD8, CD45RA, CX3CR1, CCR7 and IFN-g.
* Number of CD4+ and CD8+ lymphocytes are calculated using the % of cells (Column N + O) from the absolute number of single live cells (Column M).
* Column R to Y look at the number of either CD4+ or CD8+ cells which are also positive for intracellular marker IFN-g in each of the 3 QuantiFERON-CMV tubes (nil, mitogen, CMV). IFN-g gates are set on CD4+ and CD8+ cells in each sample and the % refers to the % of cells quantified by the flow cytometer in each gate.
* Column Z is the interpretation of the flow cytometry assay being positive or negative for IFN-g detection by CD8+ cells in each sample
* Column AA – AX look at the phenotypes of CD8+ and CD4+ cells. Population subsets are either: naïve, Tem (t effector memory), Tcm (T central memory) and Temra (T effector memory re-expressing CD45RA). %’s refer to the % of cells quantified by the flow cytometer in each subset per sample.
* Column AY – BB look at the phenotype subsets of only the IFN-g+ CD8+ T cells in each sample. N/A excludes data for samples which had no IFN-g+ CD8+ T cells.
* Column BC – BH looks at the expression of surface marker CX3CR1 across CD4+ and CD8+ T cells. %’s refer to the % of cells quantified by the flow cytometer in each CX3CR1 gate.
* Column BI shows the expression of CX3CR1 in CD8+ IFN-g+ cells.