I read about the Society for industrial and applied mathematics Industry award given to Richard Allen for his work on mathematical representations of pathophysiology in the Sars-cov-2 pandemic. An equation used in the models $\frac{CTL}{dt} = \alpha_{\mathrm{CTL}}\mathrm{DC}[1 + a_{\mathrm{IFN}\beta}][1 + a_{\mathrm{IL}12} + a_{\mathrm{IFN}\gamma}][a_{\mathrm{IL}10}/\mathrm{TGF}\beta] - \beta_{\mathrm{CTL}}\mathrm{CTL} - k_{tr(\mathrm{CTL})}\mathrm{CTL}$ [1], I think implemented [2] in Matlab on line 376 in the file covid19_dxdt.m.

[1] Richard Allen, A Prototype QSP Model of the Immune Response to SARS-CoV-2 for Community Development, 2021. https://ascpt.onlinelibrary.wiley.com/doi/epdf/10.1002/psp4.12574.

[2] Richard Allen, A Prototype QSP Model of the Immune Response to SARS-COV-2 for Community Development, 2020. https://github.com/openPfizer/covid19-immune-model/.