1.

$$\dot{T_L} = -\underbrace{[\alpha_1(\frac{TNF^h}{\eta^h(M)(TNF)+TNF^h})(\frac{IFN^h}{\eta^h(M)(IFN)+IFN^h})(\frac{\eta^h(M)(IL10)}{\eta^h(M)(IL10)+IL10^h})]T_L M}_{\text{Fagocitosis}} - \underbrace{\alpha_2 T_L C_N}_{\text{Infección}}$$

$$-\underbrace{[\mu_1(\frac{TNF^h}{\eta^h(T_L)(TNF)+TNF^h})(\frac{IFN^h}{\eta^h(T_L)(IFN)+IFN^h})(\frac{\eta^h(T_L)(IL10)}{\eta^h(T_L)(IL10)+IL10^h})]T_L}_{\text{Muerte del parásito}}$$

2.

$$\dot{M} = \underbrace{[\nu_2(\frac{TNF^h}{\eta^h(M)(TNF)+TNF^h})(\frac{\eta^h(M)(IL10)}{\eta^h(M)(IL10)+IL10^h})](M-M0)}_{\text{Proliferación}}$$

$$-\underbrace{[\alpha_1(\frac{TNF^h}{\eta^h(M)(TNF)+TNF^h})(\frac{IFN^h}{\eta^h(M)(IFN)+IFN^h})(\frac{\eta^h(M)(IL10)}{\eta^h(M)(IL10)+IL10^h})]T_L M}_{\text{Fagocitosis}}$$

$$\underbrace{-[\mu_2(\frac{IFN^h}{\eta^h(M)(IFN)+IFN^h})(\frac{\eta^h(M)(IL10)}{\eta^h(M)(IL10)+IL10^h})]M}_{\text{Muerte de Macrófago}}$$

3.

$$\dot{C_N} = -\underbrace{\alpha_2 T_L C_N}_{\text{Infección}} - \underbrace{[\mu_3(\frac{IFN^h}{\eta^h(C_N)(IFN)+IFN^h})(\frac{\eta^h(C_N)(IL10)}{\eta^h(C_N)(IL10)+IL10^h})]C_N}_{\text{Muerte de cardiomiocito}}$$

4.

$$\dot{T_i} = \underbrace{\alpha_2 T_L C_N}_{\text{Infección}} + \underbrace{\alpha_1(\frac{TNF^h}{\eta^h(M)(TNF)+TNF^h})(\frac{IFN^h}{\eta^h(M)(IFN)+IFN^h})(\frac{\eta^h(M)(IL10)}{\eta^h(M)(IL10)+IL10^h})]T_L M}_{\text{Fagocitosis}}$$

$$-\underbrace{[\mu_4(\frac{TNF^h}{\eta^h(M)(TNF)+TNF^h})(\frac{IFN^h}{\eta^h(M)(IFN)+IFN^h})(\frac{\eta^h(M)(IL10)}{\eta^h(M)(IL10)+IL10^h})]T_i}_{\text{Muerte de parásito}}$$

$$+\underbrace{[(\frac{TNF^h}{\eta^h(T_i)(TNF)+TNF^h})(\frac{IFN^h}{\eta^h(T_i)(IFN)+IFN^h})(\frac{\eta^h(T_i)(IL10)}{\eta^h(T_i)(IL10)+IL10^h})(\alpha_3+\alpha_4)]T_i}_{\text{Replicación intracelular}}$$

5.

$$\dot{M_i} = +\underbrace{[\alpha_1(\frac{TNF^h}{\eta^h(T_L)(TNF)+TNF^h})(\frac{IFN^h}{\eta^h(M)(IFN)+IFN^h})(\frac{\eta^h(T_L)(IL10)}{\eta^h(T_L)(IL10)+IL10^h})]T_L M}_{\text{Fagocitosis}}$$

$$\underbrace{-[\mu_5(\frac{IFN^h}{\eta^h(M)(IFN)+IFN^h})(\frac{\eta^h(M)(IL10)}{\eta^h(M)(IL10)+IL10^h}]M_i}_{\text{Muerte de macrófago infectado}}$$

6.

$$\dot{C}_i = + \underbrace{\alpha_2 T_L C_N}_{\text{Infección}} - \underbrace{[\mu_6(\frac{TNF^h}{\eta^h(C_i)(TNF) + TNF^h})(\frac{IFN^h}{\eta^h(C_i)(IFN) + IFN^h})(\frac{\eta^h(C_I)(IL10)}{\eta^h(C_i)(IL10) + IL10^h})]C_i}_{\text{Muerte de cardiomiocito infectado}}$$

7.

$$\dot{TNF} = \underbrace{[\alpha_5(\frac{\eta^h(TNF)(IL10)}{\eta^h(TNF)(IL10) + IL10^h})]M_i}_{\text{Secreción}} - \underbrace{\mu_7(TNF - qTNF)}_{\text{Degradación}}$$

8.

$$\dot{IFN} = \underbrace{[\alpha_6(\frac{\eta^h(IFN)(IL10)}{\eta^h(IFN)(IL10) + IL10^h})]C_i}_{\text{Secreción}} - \underbrace{\mu_8(IFN - qIFN)}_{\text{Degradación}}$$

9.

$$\dot{IL10} = \underbrace{\alpha 7}_{\text{Secreción}} - \underbrace{\mu_9(IL10 - qIL10)}_{\text{Degradación}}$$