Parameters of the in silico model described in Equations (1), (2) and (3) and in Table 3 as well as their description and values.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\mu$</td>
<td>0.029</td>
<td>$\text{h}^{-1}$</td>
<td>Effective growth rate of bacilli inside mice</td>
<td>Bru&amp;Cardona (2010)</td>
</tr>
<tr>
<td>$a_{IR}$</td>
<td>500</td>
<td>bacilli per unit of IR</td>
<td>Bacilli that enter non replicative state because of the action of a lymphocyte</td>
<td>Fitted to experimental data</td>
</tr>
<tr>
<td>$B_{\text{IRmax}}$</td>
<td>$2\times10^6$</td>
<td>bacilli/ml</td>
<td>Maximum bacterial load per unit of volume</td>
<td>Estimated from experimental data</td>
</tr>
<tr>
<td>$V_l$</td>
<td>0.50</td>
<td>mL</td>
<td>Effective volume of lungs</td>
<td>Estimated from Treuting et al 2012</td>
</tr>
<tr>
<td>$V_s$</td>
<td>0.75</td>
<td>mL</td>
<td>Effective volume of spleen</td>
<td>Estimated from Treuting et al 2012</td>
</tr>
<tr>
<td>$V_{ln}$</td>
<td>0.10</td>
<td>mL</td>
<td>Effective volume of lymph nodes</td>
<td>Estimated from Treuting et al 2012</td>
</tr>
<tr>
<td>$\zeta_{s\rightarrow l}$</td>
<td>$1.4 \times 10^2 \cdot N(l,2.5)^{1,0}$</td>
<td>bacilli</td>
<td>Bacilli that flow from spleen to lungs</td>
<td>Random distributed (normal distribution)</td>
</tr>
<tr>
<td>$\zeta_{s\rightarrow ln}$</td>
<td>$0.1 \times 10^2 \cdot N(l,2.5)^{1,0}$</td>
<td>bacilli</td>
<td>Bacilli that flow from spleen to lymph node</td>
<td>Random distributed (normal distribution)</td>
</tr>
<tr>
<td>$\zeta_{l\rightarrow ln}$</td>
<td>$N(l,2.5)^{1,0}$</td>
<td>bacilli</td>
<td>Bacilli that flow from lungs to lymph node</td>
<td>Random distributed (normal distribution)</td>
</tr>
<tr>
<td>$\zeta_{ln\rightarrow s}$</td>
<td>$N(l,2.5)^{1,0}$</td>
<td>bacilli</td>
<td>Bacilli that flow from lymph node to spleen</td>
<td>Random distributed (normal distribution)</td>
</tr>
<tr>
<td>$T_{\text{lyses}}$</td>
<td>Random between 3 and 5 days</td>
<td></td>
<td>Time interval between the infection of a macrophage and its lyses</td>
<td>Lee et al 2006</td>
</tr>
<tr>
<td>$T_{\text{delay}}$</td>
<td>2.6 days</td>
<td></td>
<td>Time between activation of specific immune response in lymphatic organs and its lyses</td>
<td>Deduced from experimental data (see text)</td>
</tr>
<tr>
<td>$V_l$</td>
<td>100</td>
<td>IR units per hour</td>
<td>Production of specific lymphocytes in spleen during an hour</td>
<td>Fitted to experimental data</td>
</tr>
<tr>
<td>$V_{s}$</td>
<td>1000</td>
<td>IR units per hour</td>
<td>Production of specific lymphocytes in lymph node during an hour</td>
<td>Fitted to experimental data</td>
</tr>
<tr>
<td>$\omega$</td>
<td>0.23</td>
<td>$\text{h}^{-1}$</td>
<td>Extinction rate of specific lymphocytes</td>
<td>Bru and Cardona (2010)</td>
</tr>
<tr>
<td>$B_{\text{IRthres}}$</td>
<td>3500 Bacilli</td>
<td></td>
<td>Minimum threshold of bacilli to trigger the specific immune response in lymphatic organs</td>
<td>Deduced from experimental data (see text)</td>
</tr>
<tr>
<td>$F_{\text{blood}}$</td>
<td>17 mL/min</td>
<td></td>
<td>Volume of blood that comes out from the left ventricle of mice heart in a minute</td>
<td>Estimated from Treuting et al 2012</td>
</tr>
<tr>
<td>$Q_s$</td>
<td>1.0</td>
<td>-</td>
<td>Fraction of blood that comes out from mice heart and enters lungs</td>
<td>Estimated (see text)</td>
</tr>
<tr>
<td>$Q_s$</td>
<td>0.30</td>
<td>-</td>
<td>Fraction of blood that comes out from mice heart and enters spleen</td>
<td>Estimated (see text)</td>
</tr>
<tr>
<td>$Q_{ln}$</td>
<td>0.01</td>
<td>-</td>
<td>Fraction of blood that comes out from mice heart and enters lymph node</td>
<td>Estimated (see text)</td>
</tr>
</tbody>
</table>

$^{a}$ $I_\text{q}$ is a Bernoulli with parameter $q$.

$^{b}$ $N(l,\mu,\sigma)$ is a Normal around the mean $\mu$ and with deviation $\sigma$, truncated between $m$ and $n$. 