

Agent	Parameter name	Description	Default Value	Units
CTL	r_ctlspeed	Speed of CTL (straight line speed). For the High E:T runs where the surveillance rate (k) was slow, CTL speed was reduced by a factor of ~40.	0.125 (efficient) 0.003 (inefficient)	$\mu\text{m s}^{-1}$
	r_ctlpersist	Persistence length of CTL straight line movement (note: interrupted whenever the CTL scans a cell)	25	μm
	t_ctlscan	Time spent scanning cells to determine if infected	5.0	s
	t_ctlhandle	Time spent handling an infected cell before it is lysed	30	min
	CHEMOTAXIS_PC	Percentage chance of CTL heading towards nearest infected cell when choosing a new direction	0.0	-
Virion	r_vinfect [§]	Chance (per second) that an infected cell will infect a susceptible cell anywhere on the grid	1.74e-05	s^{-1}
	r_vspeed [Ⓒ]	Virion straight line speed	1	$\mu\text{m s}^{-1}$
	r_vinfect [Ⓒ]	Infection chance of the virion on encounter with susceptible cell (100%)	1	-
	r_death	Virion clearance rate (half life of ~4 hours)	4.63e-05	s^{-1}
Infected cells	r_ideath	Infected cell death rate, mostly due to viral cytotoxicity (half life of ~1.4 days).	5.79e-06	s^{-1}
	r_vproduction [Ⓒ]	Production rate of 'virions' from an infected cell (~1.5 virions/day)	1.75e-05	virions s^{-1}
(Non-)Susceptible cells	nc_spacing	Spacing between (non-)susceptible cells when initialising the simulator	0	μm
	nc_susceptiblepc	Percentage of cells which are susceptible when initialising the simulator	25	(%)
	nc_totalcount	Total number of (non-)susceptible cells to place during simulator initialisation	100000	-

Supplementary Table 1: List of parameters and values for runs of the pathogen-host simulator. Legend. [§]: for the sparse model of infection only; [Ⓒ]: for the cluster model of infection only.