

# Malarial Model

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**1. Introduction****2. ODE Model**

$$\frac{dx_1}{dt} = -\frac{p_1 x_1 x_3}{V} \quad (1)$$

$$+ p_3 x_2 \quad (2)$$

$$+ 2p_7 x_1 \quad (3)$$

$$- p_7 x_1 \quad (4)$$

$$\frac{dx_2}{dt} = \frac{p_1 x_1 x_3}{V} \quad (5)$$

$$+ \frac{p_2 x_4 x_2}{V} \quad (6)$$

$$- \frac{p_2 x_4 x_2}{V} \quad (7)$$

$$- p_3 x_2 \quad (8)$$

$$- p_8 x_2 \quad (9)$$

$$\frac{dx_3}{dt} = \frac{p_1 x_1 x_3}{V} \quad (10)$$

$$- \frac{p_2 x_4 x_2}{V} \quad (11)$$

$$- p_4 x_3 \quad (12)$$

$$+ \frac{-\frac{1}{10} p_5 10 x_3 2 x_5}{V} \quad (13)$$

$$- p_9 x_3 \quad (14)$$

$$(15)$$