$$
\begin{aligned}
\frac{dL(t)}{dt} &= -a_L(L(t)) + R_L(P(t)) + B_L(A_p) \\
\frac{dP(t)}{dt} &= -a_P(P(t)) + R_P(L(t)) + B_P \frac{A_L}{1 + D_P(I_P(t))} \\
\frac{dIp(t)}{dt} &= -a_{IP} Ip(t) + B_{IP}(P(t))
\end{aligned}
$$