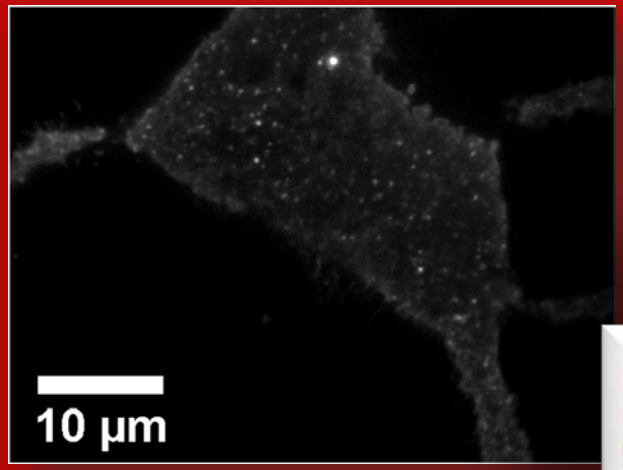
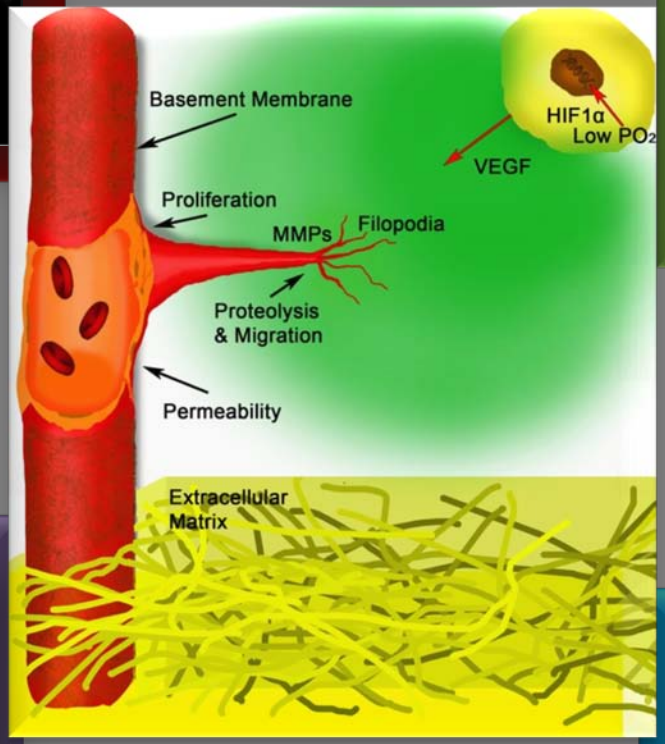
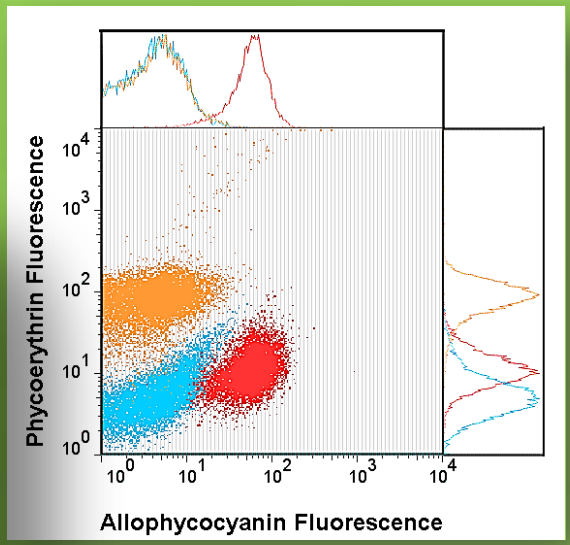
Biophotonics

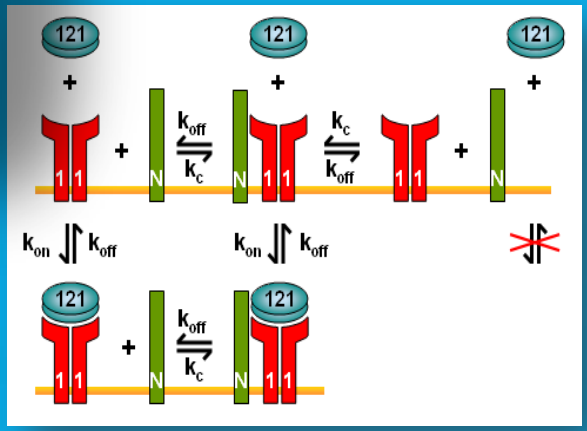






$$\frac{d[V_{121}]_B}{dt} = -c_{V121}[V_{121}]_B - k^B_{on,V121,R1}[V_{121}]_B[R_1]_{B,i} + k^B_{off,V121R1}[V_{121}R_1]_{B,i}$$
$$-k^B_{on,V121,R1N1}[V_{121}]_B[R_1N_1]_{B,i} + k^B_{off,V121R1N1}[V_{121}R_1N_1]_{B,i}$$
$$-k^B_{on,V121,R2}[V_{121}]_B[R_2]_{B,i} + k^B_{off,V121R2}[V_{121}R_2]_{B,i}$$
$$-k^B_{on,V121,A}[V_{121}]_B[A]_B + k^B_{off,V121A}[V_{121}A]_B$$
$$-\frac{k^{BN}_{pV}S_{NB}}{U_p}[V_{121}]_B + \left(\frac{k_L + k^{NB}_{pV}S_{NB}}{U_B}\right)\frac{[V_{121}]_N}{K_{AV,N}}$$

$$\frac{d[R_1]_{B,i}}{dt} = s^B_{R1} - k^B_{int,R1}[R_1]_{B,i} - k^B_{on,V165,R1}[V_{164}]_B[R_1]_{B,i} + k^B_{off,V165R1}[V_{165}R_1]_{B,i}$$
$$-k^B_{on,V121,R1}[V_{121}]_B[R_1]_{B,i} + k^B_{off,V121R1}[V_{121}R_1]_{B,i}$$
$$-k^B_{\epsilon,R1,N1}[N_1]_{B,i}[R_1]_{B,i} + k^B_{dissoc,R1N1}[R_NN_1]_{B,i}$$

$$\frac{d[R_2]_{B,i}}{dt} = s^B_{R2} - k^B_{int,R2}[R_2]_{B,i} - k^B_{on,V121,R2}[V_{121}]_B[R_2]_{B,i} + k^B_{off,V121R2}[V_{121}R_2]_{B,i}$$
$$-k^B_{on,V165,R2}[V_{165}]_B[R_2]_{B,i} + k^B_{off,V165R2}[V_{165}R_2]_{B,i}$$
$$-k^B_{\epsilon,V165N1,R2}[V_{165}N_1]_B[R_2]_{B,i} + k^B_{off,V165N1,R2}[R_2V_{165}N_1]_{B,i}$$

Systems Biology