**Matlab implementation of the model Eqs. (20)-(22),(26)-(30):**

clear all;

clear global all;

alpha = 1;

KD1 = 0.01;

KD2 = 0.01;

RtotA0 = 10;

RtotB0 = 100;

C = exp([-19:0.1:8]);

a = (1+C/KD2).\*(C/(alpha\*KD1\*KD2));

b = (C\*(RtotA0 - RtotB0))/(alpha\*KD1\*KD2) + (1+C/KD2).\*(1+C/KD1);

d = -RtotB0\*(1+C/KD1);

RB = (-b+sqrt(b.^2-4.\*a.\*d))./(2\*a);

RA = RtotA0 ./ (1 + C/KD1 + (RB.\*C)/(alpha\*KD1\*KD2) );

RCA = (C.\*RA)/KD1;

RCB = (C.\*RB)/KD2;

RCAB = (C.\*RA.\*RB)/(alpha\*KD1\*KD2);

Ctot = C + RCA + RCB + RCAB;

figure(11);

semilogx(Ctot,RCAB,'black','LineWidth',2); xlabel('C\_{tot}','Fontsize',14);

ylabel('RC\_{AB}','Fontsize',14); hold on;

xlim([1,10^3]);