The Matlab code for applicable conditions of the SMM and SDM models (Figure 6.a)

```
F=0:4:200;
PN1=(B+C.*CMN)./(2.*C);
PR1=(2.*D.*PN1-(A+E).*QM+U.*QM.*((CMN-NM.*QM).*QM+CRM-F1-F2.*QM))./(2.*D+U.*QM.^2);
PRR1=(D*(PN1-PR1)./(U*QM))-((A+E)./U);
I1=(PN1-CMN).*(-C.*PN1+B)+(QM.*(PR1-CMN+NM.*QM)-(PRR1+CRM)+F1+F2.*QM).*(A+U.*PRR1+E)-CM1-CM2-CM3-CR1-CR2+0.*F;
I2=0.*F;
I=I1;
PN2=(B+C.*CMN)./(2.*C);
PR2=(2.*D.*PN2-(A+E).*QD+U.*QD.*((CMN-NM.*QD).*QD+F-F1-F2.*QD))./(2.*D+U.*QD.^2);
PRR2=D.*(PN2-PR2)./(U.*QD)-(A+E)./U;
II1=(PN2-CMN).*(-C.*PN2+B)+(QD.*(PR2-CMN+NM.*QD)-(PRR2+F)+F1+F2.*QD).*(A+U.*PRR2+E)-CM1-CM3-CR1-CR2;
II2=(F-CRD).*(A+U.*PRR2+E)-CD1;
II=II1+II2;
```

```
set(gcf,'color','white')

plot(F,I1,' k-. ','LineWidth',2.5)

hold on

plot(F,I2,' b:','LineWidth',2.5)

plot(F,II1,'c.','LineWidth',2.5)

plot(F,II2,'m-.','LineWidth',2.5)

plot(F,II,'k-','LineWidth',2.5)
```