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1 $PROBLEM PROJECT singledose oral nonlinear elimination ;DATE 8/6/2004 PROGRAMMER:XXXX
2 ;UNITS: Time=hour, Concentration=ug/ml
3 ;Vmax = ug/hr, Km = ug/ml ,Volume = L
4 ;Dose = 10,100 or 1000mg
5
6 $DATA oralnonlinestCOR_par.csv IGNORE=C
7
8 $INPUT ID TIME CONC=DV AMT CMT DOSE MDV
9
10 $SUBROUTINE ADVAN6 TRANS1 TOL=3
11
12 $MODEL
13 COMP = DEPOT
14 COMP = CENTRAL
15
16 $PK
17 VMAX = THETA(1)*EXP(ETA(1)) ;maximum rate of elimination
18 KM = THETA(2)*EXP(ETA(2)) ;conc at 50% Vmax
19 V = THETA(3)*EXP(ETA(3)) ;Volume of distribution in L
20 KA = THETA(4)*EXP(ETA(4)) ;Absorption rate constant
21 S2 = V
22
23
24 $DES
25 DADT(1) = -KA*A(1)
26 DADT(2) = -(VMAX*(A(2)/S2))/(KM+(A(2)/S2))+KA*A(1) ;Vmax units in ug/hr
27
28 $ERROR
29 IPRED=F
30 Y=F+F*ERR(1)+ERR(2)
31
32
33 $THETA (0.01,10) ;POPVmax
34 $THETA (1,20) ;POPkm
35 $THETA (1,5) ;POPV/F
36 $THETA (0.01,3) ;POPka
37
38
39 $OMEGA 0.04 ;BSVVMAX
40 $OMEGA 0.00, FIX ;BSVKM
41 $OMEGA 0.09 ;BSVV/F
42 $OMEGA 0.09 ;BSVKA
43
44
45 $SIGMA 0.025 ;ERRCV
46 $SIGMA 0.1 ;ERRSD
47
48 $ESTIMATION METHOD=0 MAXEVAL=9990 PRINT=10 POSTHOC
49 $COVARIANCE MATRIX=S
50
51 $TABLE ID TIME IPRED DOSE
52 NOPRINT ONEHEADER FILE=oralnonlinest_par.fit
53
```