

Elements:

- depot compartment: Ad
- central compartment: Ac, V
- linear elimination, k
- 1st order absorption, ka

MDL/PharmML

Vocabulary for PK
models

Automatic
translation
(always
possible)

System of
ODEs

Expert knowledge
(solution doesn't
always exist)

Analytic
solution

$$\begin{aligned}\frac{dAd}{dt} &= -ka Ad \\ \frac{dAc}{dt} &= ka Ad - k Ac \\ C &= Ac/V\end{aligned}$$

$$C(t) = \frac{D}{V} \frac{k}{ka - k} (\exp(-k^*t) - \exp(-ka^*t))$$

PREDPP
library

Mapping to
tool-specific
libraries

Monolix
library

Monolix
PK macros

other target
tool libraries