A glossary of Pharmacokinetic terms

Common terms and abbreviations

Ae	Amount of drug excreted unchanged in urine
AUC_{0-t}	The area under the plasma drug concentration–time curve up to time 't'
AUC_{0-last}	The area under the plasma drug concentration–time curve up to the last quantifiable time-point
$AUC_{0-\tau}$	The area under the plasma drug concentration–time curve over the dosing interval
$AUC_{0-\tau,ss}$	The area under the plasma drug concentration–time curve over the dosing interval τ at steady state
AUC_{0-inf}	The area under the plasma drug concentration–time curve to infinite time (sometimes given as $AUC_{0-\infty}$)
b	Blood
CI	Confidence interval
C_{last}	Last quantifiable plasma drug concentration
C_{max}	The maximum observed plasma concentration determined directly from the raw concentration–time data
$C_{max,ss}$	The maximum observed plasma concentration determined directly from the raw concentration–time data at steady state
C_t	Plasma concentration at time t
CL	Total body clearance following vascular administration of drug
CL_{int}	Enzyme catalysed removal of a drug by the eliminating organ. Higher the value the greater the capacity the organ has to metabolise the drug
CL/F	Total body clearance following extravascular administration
CL_{met}	Total metabolic clearance in the body
CL_r	Renal clearance
CYP	Cytochrome P450 enzyme
DDI	Drug drug interaction
ER	Extraction ratio, the fraction of drug removed across an eliminating organ
F	Bioavailability of a drug, can range from 0 to 100%
F_{abs}	Fraction of drug absorbed from an oral formulation into the gut wall
fu	Fraction of drug unbound
h	Hepatic
k	Rate constant
ka	Absorption rate constant (describes rate of drug input into the systemic circulation for a compound given extravascularly)
LLOQ	The lower limit of quantification for the bioanalytical assay (measured values of drug that fall below the LLOQ cannot be accurately measured with confidence and are generally reported as LLOQ rather than the measured value)
MRT	Mean residence time
NCA	Non-compartmental analysis
NONMEM	Non linear mixed effects modelling
PA_2	the negative logarithm to the base 10 of the molar concentration of antagonist that makes it necessary to double the concentration of agonist needed to elicit the original submaximal response
Phoenix™ WinNonlin®	PK software used to do non-compartmental analysis and compartmental PK and PK/PD modelling
Pgp	P-glycoprotein. An efflux transporter protein found in the

	epithelium of several tissues including gut, blood brain barrier and hepatocytes
PD	Pharmacodynamic
PK	Pharmacokinetic
POPPK	Population pharmacokinetics
Q	Blood flow
R_{ac}	The accumulation index; a measure of PK linearity upon multiple dosing
ss	steady state
$t_{1/2}$	The terminal half-life
t_{max}	The time of first occurrence of C_{max}
$t_{max,ss}$	The time of first occurrence of $C_{max,ss}$
V	Apparent volume of distribution following vascular administration of drug
Vss	Apparent volume of distribution at steady state
V/F	Apparent volume of distribution following extravascular administration
V_{ss}/F	Apparent volume of distribution at steady state following extravascular administration
λ_z	The terminal plasma elimination constant was estimated from the analysis of the terminal portion of the plasma concentration-time profile (sometimes given as ‘k’)
τ	Dosing interval