

Example of Non-linear regression

Name	Equation
Asymptotic functions	
Michaelis–Menten	$y = \frac{ax}{1 + bx}$
2-parameter asymptotic exponential	$y = a(1 - e^{-bx})$
3-parameter asymptotic exponential	$y = a - be^{-cx}$
S-shaped functions	
2-parameter logistic	$y = \frac{e^{a+bx}}{1 + e^{a+bx}}$
3-parameter logistic	$y = \frac{a}{1 + be^{-cx}}$
4-parameter logistic	$y = a + \frac{b - a}{1 + e^{(c-x)/d}}$
Weibull	$y = a - be^{-(cx^d)}$
Gompertz	$y = ae^{-be^{-cx}}$
Humped curves	
Ricker curve	$y = axe^{-bx}$
First-order compartment	$y = k \exp(-\exp(a)x) - \exp(-\exp(b)x)$
Bell-shaped	$y = a \exp(- bx ^2)$
Biexponential	$y = ae^{bx} - ce^{-dx}$