

## Corrections

In *PLoS Biology*, volume 1, issue 1:

The Roles of APC and Axin Derived from Experimental and Theoretical Analysis of the Wnt Pathway

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DOI: 10.1371/journal.pbio.0000010

Table 1: In the legend, the words *fluxes* and *flux* appeared without the *f*.

Table 3: In the legend, the word *coefficients* appeared without the *f*. In the table, some numbers in the section “Binding, dissociation” were marked with a  $\pm$  sign that should have been a  $\mp$ .

Table 4: In the legend, the word *coefficients* appeared without the *f*.

Please see the corrected legends and table below.

**Table 1.** Numeric Values of Input Quantities of the Model for the Reference State

The data are grouped into concentrations of pathway components, dissociation constants of protein complexes, concentration ratios, fluxes and flux ratios, and characteristic times of selected processes. Experimental evidence for these data is discussed in the text. From these data, the following rates and rate constants are calculated:  $v_{12} = 0.42 \text{ nM} \cdot \text{min}^{-1}$  (rate of  $\beta$ -catenin synthesis),  $v_{14} = 8.2 \cdot 10^{-5} \cdot \text{nM} \cdot \text{min}^{-1}$  (rate of axin synthesis),  $k_4 = 0.27 \text{ min}^{-1}$ ,  $k_5 = 0.13 \text{ min}^{-1}$ ,  $k_6 = 9.1 \cdot 10^{-2} \text{ nM}^{-1} \cdot \text{min}^{-1}$ ,  $k_{-6} = 0.91 \cdot \text{nM}^{-1} \cdot \text{min}^{-1}$ ,  $k_9 = 210 \text{ min}^{-1}$ ,  $k_{10} = 210 \text{ min}^{-1}$ ,  $k_{11} = 0.42 \text{ min}^{-1}$ ,  $k_{13} = 2.6 \cdot 10^{-4} \text{ min}^{-1}$ ,  $k_{15} = 0.17 \cdot \text{min}^{-1}$ . See Table S2, found at <http://dx.doi.org/10.1371/journal.pbio.0000010.t002>, for more precise numbers used in the calculations.

**Bold:** Measured values, *Italics:* Estimated values.

DOI: 10.1371/journal.pbio.0000010.t001

**Table 3.** Control Coefficients for the Total Concentrations of  $\beta$ -Catenin and Axin and Parameters Quantifying the Sensitivity and the Robustness of the Wnt/ $\beta$ -Catenin Pathway

Parameter of step $j$	$C_j^{\beta\text{cat}}$	$C_j^{\text{axin}}$
Kinase/phosphatase module	$k_4$	−0.89
	$k_5$	0.89
$\beta$ -catenin module	$k_9$	−0.89
	$k_{10}$	$-(10^{-5})$
	$k_{11}$	−0.03
	$v_{12}$	0.93
	$k_{13}$	−0.01
Axin module	$v_{14}$	−0.89
	$k_{15}$	0.89
Binding, dissociation	$k_6, k_{-6}$	$\mp 0.89$
	$k_7, k_{-7}$	$\mp 0.89$
	$k_8, k_{-8}$	$\mp 0.89$
	$k_{16}, k_{-16}$	$\pm 0.11$
	$k_{17}, k_{-17}$	$\pm 0.08$
$\sigma$	0.66	0.44
$\rho$	0.60	0.70

The control coefficients (Equation 7) were obtained by numerical determination of the response to a change of the rate constants of all steps by 1%. Using relative changes of rate constants less than 1% does not lead to a significant improvement of the precision of the  $C$  values. Coefficients are given for the reference state. Horizontal lines separate the coefficients for distinct modules of the pathway. The last block contains the coefficients for parameters that enter the systems equations as binding rate constants  $k_{ij}$  and dissociation rate constants  $k_{-ij}$  via dissociation constants  $K_j = k_{-ij} / k_{ij}$ . The upper signs of these coefficients refer to changes in  $k_{ij}$  and the lower sign to changes in  $k_{-ij}$ . The sum of the control coefficients in each column is zero. Additional summation rules hold true for the rate constants within each module as well as for the two rate constants of each binding equilibrium. The standard deviation  $\sigma$  of the concentration control coefficients and the robustness  $\rho$  for  $\beta$ -catenin and axin are calculated by applying Equations (8) and (9).

DOI: 10.1371/journal.pbio.0000010.t003



## Corrections

**Table 4.** Concentration Control Coefficients for the Total Concentrations of  $\beta$ -Catenin and Axin Relative to Changes in the Concentrations of Pathway Components

The control coefficients were obtained by numerical determination of the response to a change of total concentrations by 1%. Coefficients are given for the reference state and for the standard stimulated state.

DOI:10.1371/journal.pbio.0000010.t004

The full text XML and HTML versions of the article have been corrected online. This correction note may be found online at DOI: 10.1371/journal.pbio.0020089.