

PHARSIGHT[®] IVIVC Toolkit[™] for WinNonlin[®]

BENEFITS

- > Incrementally leverage your existing investment in WinNonlin
- > Powerful IVIVC exploration and development capability
- > Visualize the in vivo - in vitro relationship with new plotting features
- > Improve collaboration between Clinical Development and Formulation
- > Easy application of correlations to predict PK from new in vitro data

HIGHLIGHTS

- > Extends WinNonlin functionality
- > Enhanced deconvolution tools
- > New convolution tool
- > New plotting capability with Levy Plot
- > IVIVC Wizard automates analyses
- > Workflow and data management



For additional information contact the Pharsight sales department at 888-708-7444 (650-314-3800 outside U.S.). Or visit our web site at <http://www.pharsight.com>

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This information applies to the IVIVC Toolkit for WinNonlin (version 5.2.1)

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IVC 0408

The IVIVC Toolkit for WinNonlin is an optional add-on to WinNonlin that enables the use of WinNonlin for in vivo - in vitro correlations. The Toolkit brings enhanced deconvolution methods, numerical convolution, new plotting capability, and the "IVIVC Wizard" to pharmacokineticists and formulators.

DECONVOLUTION

Deconvolution is the process whereby, with defined pharmacokinetics, one can impute the necessary drug input rate that gives an observed plasma profile. The enhancements to the Deconvolution tool in the latest version of WinNonlin enable the user to deconvolve individual subjects using their unique pharmacokinetic profiles. Methods available for deconvolution include: Wagner-Nelson, Loo-Rieglerman, and numerical deconvolution.

CONVOLUTION

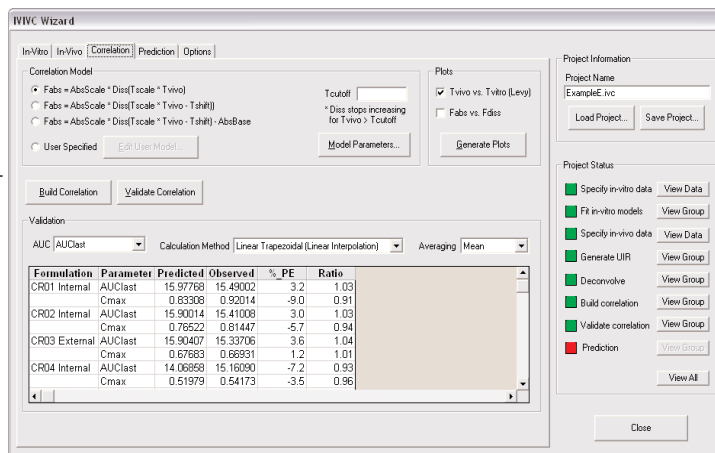
Convolution is the reverse process of deconvolution. Given a known response to a "unit" input (e.g. bolus injection) and a known input profile (e.g. absorption), convolution finds the response to the input. The convolution tool in the IVIVC Toolkit will compute output profiles from a collection of "Unit Impulse Response" (UIR) functions convolved with one or more inputs.

LEVY PLOT

A Levy Plot is an analysis chart that maps the in vitro dissolution and in vivo absorption times by fraction dissolved. That is, this plot compares the time taken to reach a certain fraction dissolved/absorbed between the in vivo and in vitro experiments. A Levy Plot allows one to assess the time scale difference between in vitro dissolution and in vivo absorption, and quickly determine if a correlation will be achievable.

IVIVC WIZARD

The IVIVC Wizard manages the multitude of data in a two-stage IVIVC workflow and helps the user efficiently track and move through the process. After mapping the dissolution and study data, the IVIVC Wizard automates the process of: fitting unit impulse responses; smoothing in vitro data; deconvolving absorption profiles; fitting a correlation model; convolving predicted absorption with subjects' unit impulse responses; and evaluating results. In addition, the IVIVC Wizard helps the user track the process through each stage and navigate and store the multitude of data that is involved. Users will appreciate the many options that the IVIVC Wizard provides for fitting unit impulse responses, smoothing dissolution profiles, and building custom IVIVC models.



USABILITY

Whether you are an experienced WinNonlin user looking to expand the program's capabilities, or a new WinNonlin user interested primarily in IVIVC, you will find WinNonlin and the IVIVC Toolkit very easy to use. The interface theme of analytical tools operating on a worksheet is familiar to most spreadsheet users. In addition, the dialog-guided tools and wizards in WinNonlin and the IVIVC Toolkit help simplify complicated processes and keep the user from getting lost in the details.