

# **Statistical Modelling and Experimental Design Strategies for Detecting Drug and Similar Compound Synergy**

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## **Abstract:**

The validity of biomedical and scientific research depends upon the accuracy of the statistical models and the efficiency of the experimental designs used by these researchers. Optimal design theory provides researchers with the means to select the “optimal” design for their experiment, in the sense of yielding a design that will require the fewest repetitions to yield accurate results, and the focus of this talk is to outline recent developments in modelling and design strategies for the detection of synergy for situations where the assumed nonlinear model function, initial parameter guesses, or error structure may not be completely known.