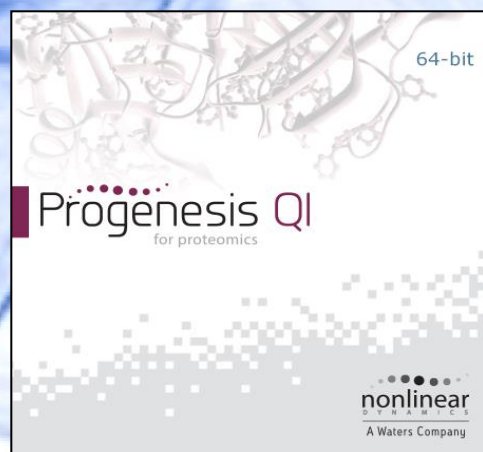
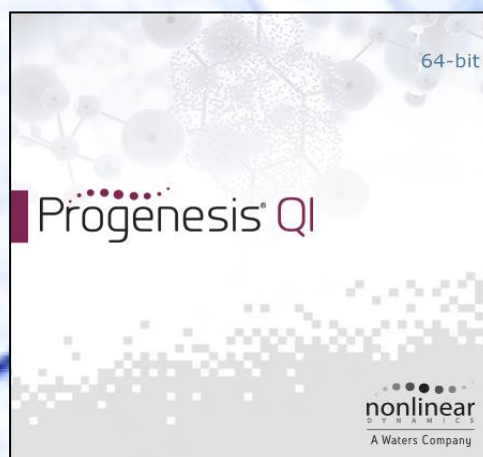


A TRANSOMICS PLATFORM FOR DISCOVERY RESEARCH



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A Common Platform for Metabolite & Protein Profiling in Unbiased Discovery

Mark A. McDowall Ph.D., Waters Corporation, Wilmslow, UK.

Paul N. Goulding, Ph.D., Nonlinear Dynamics, Newcastle UK.

Eric S.E. van Beelen, Ph.D., Waters S.A.S., Paris, FR.

Complementary metabolomic and proteomic studies can provide a three dimensional view of biological processes at the molecular level. Endogenous metabolite profiling and bottom-up protein profiling are conventionally performed with highly specific analytical systems.

We describe a novel discovery platform enabling a common workflow for bottom-up protein profiling or endogenous metabolite/lipid profiling in unbiased discovery research. This unique strategy is based on Ultra Performance Liquid Chromatography (UPLC), High Definition Mass Spectrometry (HDMS) and a coherent bioinformatics environment. Data Independent UPLC/HDMS acquisition provides unprecedented duty cycle, peak capacity and dynamic range to profile either metabolites/lipids or proteins in complex biological extracts. Progenesis QI, a novel bioinformatics software, developed in collaboration with Nonlinear Dynamics (Newcastle, UK), provides statistically powerful co-detection and intuitive data visualization for large studies and a common workflow for integrative TransOmics analysis. The utility of this platform will be demonstrated with a study of drug-mitigated obesity.