Cerno Bioscience Announces Most Significant Upgrade of MassWorks[™] Software Product

Norwalk, CT., (November 12, 2013) – Cerno Bioscience has today announced a new version of its flagship MassWorks software product. More than any previous improvements and enhancements, the new Version 4 adds DirectRead[™] data support for three high resolution MS systems: Thermo Orbitrap or FT ICR MS, Agilent TOF, and Waters TOF, while expanding unit mass resolution direct support to Agilent MassHunter and Advion CMS. For the first time, MassWorks now enables elemental composition determination in the absence of an observable monoisotope peak or in the presence of larger-than-usual mass errors. In addition, a fully automated calibration feature, AutoCal[™], is now available for out-of-box accurate mass analysis with GC/MS. Most importantly, the unique ion mixture analysis now handles up to a dozen or more mutually overlapping ions for their accurate quantitation, expanding applications from small molecules to large molecules or biologics and extending its best-in-class formula identification capability to accurate quantitative analysis.

MassWorks won the Most Innovative Product Award at PittCon 2006 for enabling routine formula determination on an otherwise conventional quadrupole MS with up to 100x improvement in mass accuracy through a novel and patented MS calibration algorithm. Important new features have since been added to this innovative software including sCLIPS[™] and Spectral Accuracy, a proven companion concept to mass accuracy published in a front cover feature article in Analytical Chemistry (<u>http://www.cernobioscience.com/resources/ac100888b.pdf</u>). sCLIPS introduced the concept of Spectral Accuracy to TOF, qTOF, Orbitrap, FT ICR MS, and other high resolution systems and has been shown to eliminate up to 95% of the incorrect formula candidates obtained through accurate mass alone, the details of which can be seen at <u>http://www.cernobioscience.com/sclips.html</u> through a user publication in JASMS.

Dr. Ming Gu, VP for Research at Cerno Bioscience, comments: "With the feature article coverage in a leading journal, MassWorks product has established itself as the most credible and best approach to elemental composition determination, at either unit mass or high resolution, and has won over many hundreds of customers around the world, including a Nobel Prize winning organization. Version 4 represents the most significant upgrade since its debut, which would open new application areas such as hydrogen-deuterium exchange (HDX MS) for protein conformation, accurate quantitation of low level deamination or deamidation impurities in oligo or protein/peptide based biopharmaceuticals, and analysis of the often challenging organometallic compounds."

For more details and other new features in MassWorks 4.0, please visit <u>http://www.cernobioscience.com/support.html</u>.

For more information on Cerno Bioscience and MassWorks, please email info@cernobioscience.com, call +1 203-312-1150, or visit <u>www.cernobioscience.com</u>.

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About Cerno Bioscience Products

Cerno Bioscience's MassWorks family of software products performs post-acquisition MS calibration, formula determination, and mixture quantitation through either CLIPS at unit mass resolution or sCLIPS at higher resolution. It supports all major MS vendor data formats directly and works with all MS instruments including GC/MS, LC/MS, TOF, qTOF, and FT MS. Cerno Bioscience products are used in major R&D labs for pharmaceuticals, food, beverages, flavors, fragrances, natural products, environmental analysis, forensics, fine chemicals and petrochemicals. For more information, please visit: <u>http://www.cernobioscience.com/products.html</u>.

About Cerno Bioscience

Cerno is dedicated to the practical application of modern mathematical techniques to Mass Spectrometry for the purpose of improving the quality, accuracy and reliability of MS analysis. These techniques can be used to dramatically improve the amount of information obtainable from and reduce the amount of time required of many MS experiments. Cerno's technologies are proprietary and protected through numerous patents granted and submitted world-wide. For more information on Cerno MS technologies, applications, or products, please visit our Web site: www.cernobioscience.com.

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