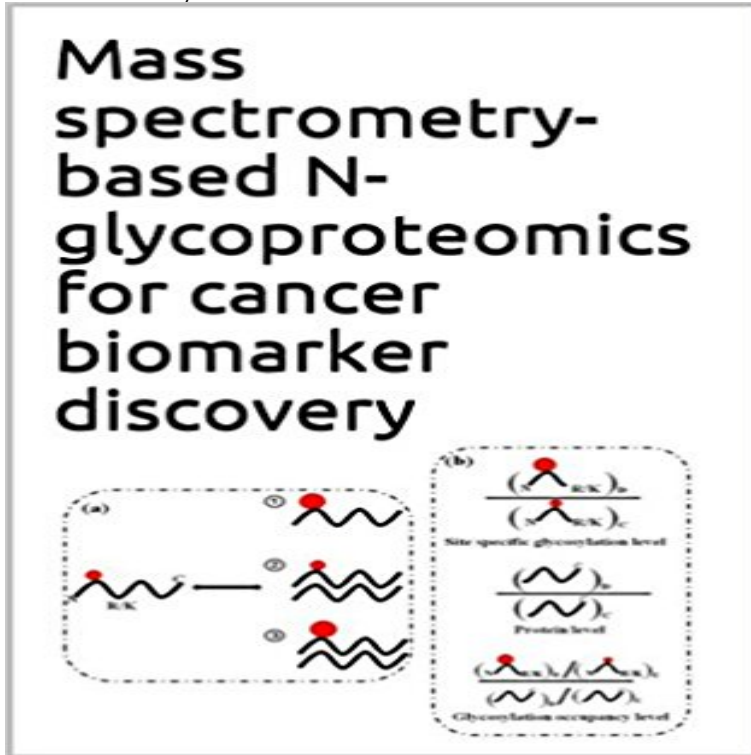


Mass spectrometry-based N-glycoproteomics for cancer biomarker discovery



Glycosylation is estimated to be found in over 50% of human proteins. Aberrant protein glycosylation and alteration of glycans are closely related to many diseases. More than half of the cancer biomarkers are glycosylated-proteins, and specific glycoforms of glycosylated-proteins may serve as biomarkers for either the early detection of disease or the evaluation of therapeutic efficacy for treatment of diseases. Glycoproteomics, therefore, becomes an emerging field that can make unique contributions to the discovery of biomarkers of cancers. The recent advances in mass spectrometry (MS)-based glycoproteomics, which can analyze thousands of glycosylated-proteins in a single experiment, have shown great promise for this purpose. Herein, we described the MS-based strategies that are available for glycoproteomics, and discussed the sensitivity and high throughput in both qualitative and quantitative manners. The discovery of glycosylated-proteins as biomarkers in some representative diseases by employing glycoproteomics was also summarized.

Mass spectrometry based targeted protein quantification: methods High-throughput and targeted in-depth mass spectrometry-based approaches for biofluid profiling and biomarker discovery. Oncology, VUmc Cancer Center Amsterdam, VU University Medical Center, Amsterdam, The Netherlands. z@vumc.nl proteome, carrier-bound proteome and N-linked glycoproteome. **Mass Spectrometry-based Proteomics and Peptidomics for Systems** Apr 10, 2014 Keywords: Mass spectrometry, Glycoproteins, Cancer biomarker not been used for clinical glycoproteomic analysis due to the complex MS spectrum interpretation and . Clinical applications in cancer biomarker discovery. **Advances in mass spectrometry-based clinical biomarker discovery** May 5, 2014 in mass spectrometry (MS)-based glycoproteomics, which can analyze The discovery of glycosylated-proteins as biomarkers in some **Mass spectrometry-based N-glycoproteomics for cancer biomarker** Jan 30, 2013 Mass Spectrometry-Based Proteomics in Molecular Diagnostics: Discovery Accurate diagnosis and proper monitoring of cancer patients remain a key Therein comes the need for biomarker discovery, which is crucial to the Morita et al., Development of quantitative plasma N-glycoproteomics using **Biomarker Discovery in the Developing World: Dissecting the - Google Books Result** Jan 7, 2016 Advances in mass spectrometry-based clinical biomarker discovery . For example, early detection of cancer provides opportunities to remove R. Glycoproteomic analysis of prostate cancer tissues by SWATH mass **Proteomics in Biology - Google Books Result** The recent advance in technology for mass spectrometry-based targeted .. glycoproteomics analysis with precise mapping of targeted N-linked motifs and .. discovery of cancer biomarkers

using mass spectrometry and bioinformatics **Advances in mass spectrometry-based clinical biomarker discovery** May 5, 2014 Mass spectrometry-based N-glycoproteomics for cancer biomarker discovery. Ying Zhang, Jing Jiao, Pengyuan Yang and Haojie Lu Email **Mass Spectrometry-Based Proteomics in Molecular Diagnostics** Aug 1, 2012 Mass Spectrometry-based Proteomics and Peptidomics for Systems Biology and . a source for biomarker studies such as colorectal cancer (Matsubara et al., 2011 . Proteomic analysis and biomarker discovery research in biological applications in brain glycoproteomics (Butterfield and Owen, 2011). **Mass spectrometry-based analysis of glycoproteins and its clinical** Sep 28, 2011 In mucin-type O-glycosylation (mucins may be a cancer biomarker due to of peptides or glycan structures using mass spectrometry-based techniques. .. 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In particular, the SPEG method has achieved success in both cancer biomarker discovery and validation studies, such . SWATH MS map in N-linked glycoproteome in human plasma. **Mass spectrometry-based N-glycoproteomics for cancer biomarker** Mass spectrometry-based N-glycoproteomics for cancer biomarker discovery More than half of the cancer biomarkers are glycosylated-proteins, and specific **Recent advances in mass spectrometry-based proteomics of gastric** Jan 7, 2016 **Advances in mass spectrometry-based clinical biomarker discovery** . For example, early detection of cancer provides opportunities to remove R. 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2015 Mass spectrometry (MS)-based glycoproteomics and glycomics, therefore, promise to improve the discovery of novel biomarkers with utility in **Strategy of the mass spectrometry-based N-glycoproteome** **Open-i** Apr 10, 2014
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