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(71) Applicants: **INDIANA UNIVERSITY RESEARCH AND TECHNOLOGY CORPORATION** [US/US]; 351 West 10th Street, Indianapolis, Indiana 46202 (US). **TEXAS TECH UNIVERSITY SYSTEM** [US/US]; Texas Tech University, Box 42007, Lubbock, Texas 79409-2007 (US).

(72) Inventors: **TANG, Haixu**; 3003 Daniel Street, Bloomington, Indiana 47401 (US). **MECHREF, Yehia S.**; 3911 East Tamarron Court, Bloomington, Indiana 47408 (US).

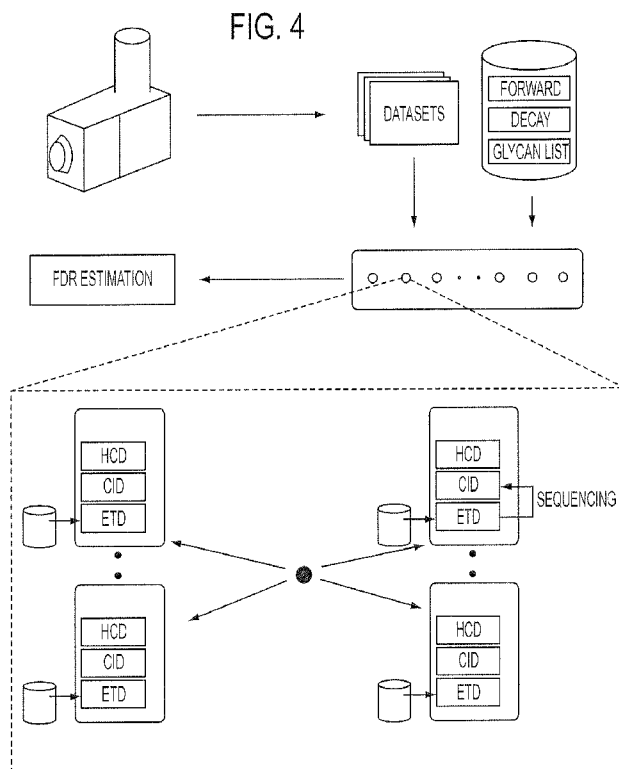
(74) Agents: **ADDISON, Bradford G.** et al.; BARNES & THORNBURG LLP, 11 South Meridian Street, Indianapolis, Indiana 46204 (US).

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(54) Title: IDENTIFICATION AND QUANTIFICATION OF INTACT GLYCOPEPTIDES IN COMPLEX SAMPLES



(57) Abstract: Illustrative embodiments of methods and apparatus for identifying one or more intact glycopeptides in a sample are disclosed. According to one illustrative embodiment, a method may comprise receiving data representing a plurality of mass spectra obtained from mass spectrometry of the sample, scoring data representing each of the plurality of mass spectra against data associated with target glycopeptides, and identifying one or more intact glycopeptides in the sample based at least in part on the scoring of the data representing each of the plurality of mass spectra.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61K 49/00; G01N 24/00; G10D 58/44; H01J 49/00 (2013.01)

USPC - 424/9.1, 436/173, 43, 63, 86; 250/282, 281; 422/50; 702/19, 22, 27

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Micropatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); USPTO Web Page; DialogPRO; Google Scholar; Elsevier Science Direct; 'mass spectrometry,' 'tandem MS,' glycopeptide, 'N-linked glycans,' 'O-linked glycans,' 'CID,' 'HCD,' 'EDT,' fragmentation, 'decoy molecules,' 'false detection,' 'complex samples,' 'cancer diagnosis,' processor

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y --- A	US 2006/0120961 A1 (SCHNEIDER, L et al.) June 8, 2006; paragraphs [0006], [0009], [0034], [0040]-[0042], [0046], [0062], [0075], [0082], [0104], [0108], [0112], [0116], [0117], [0128], [0168]	1-12, 14-16, 17/1-12, 17/14-16, 18/17/1-12, 18/17/14-16, 19/1-12, 19/14-16, 20/1-12, 20/14-16, 21/20/1-12, 21/20/14-16 ----- 13, 17/13, 18/17/13, 19/13, 20/13, 21/20/13
Y --- A	US 2008/0118932 A1 (TOLER, KN et al.) May 22, 2008; paragraphs [0018], [0019], [0021], [0023], [0025], [0033], [0035], [0051], [0088], [0097], [0158], [0168], [0170], [0172]; Claim 39	1-12, 14-16, 17/1-12, 17/14-16, 18/1-12, 18/17/14-16, 19/1-12, 19/14-16, 20/1-12, 20/14-16, 21/20/1-12, 21/20/14-16 ----- 13, 17/13, 18/17/13, 19/13, 20/13, 21/20/13
Y --- A	US 2011/0136160 A1 (SANCHEZ, JC et al.) June 9, 2011; paragraphs [0002], [0044], [0059], [0061], [0062], [0109], [0112]	7-12, 17/7-12, 18/1-12, 18/17/14-16, 19/7-12, 20/7-12, 21/20/7-12 ----- 13, 17/13, 18/17/13, 19/13, 20/13, 21/20/13

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Authorized officer:

Shane Thomas

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y.	US 2012/0107858 A1 (YOO, JS et al.) May 3, 2012; paragraphs [0002], [0015], [0017], [0023], [0053], [0082]	16, 17/16, 18/17/16, 19/16, 20/16, 21/20/16
Y	US 2011/0295521 A1 (SATULOVSKY, JE et al.) December 1, 2011; paragraphs [0002], [0019], [0034], [0095], [0096] [0100], [0105]	19/1-12, 19/14-16, 20/1-12, 20/14-16, 21/20/1-12, 21/20/14-16