Rainer Lehmann

List of Publications by Year
in descending order

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116 papers	5,850 citations	71061 41 h-index	79644 73 g-index
116 all docs	116 docs citations	116 times ranked	9527 citing authors

#	Article	IF	Citations
1	Hypoxia-Inducible Factor-1 Is Central to Cardioprotection. Circulation, 2008, 118, 166-175.	1.6	372
2	Preanalytical Aspects and Sample Quality Assessment in Metabolomics Studies of Human Blood. Clinical Chemistry, 2013, 59, 833-845.	1.5	225
3	Relationship of Serum Trimethylamine N-Oxide (TMAO) Levels with early Atherosclerosis in Humans. Scientific Reports, 2016, 6, 26745.	1.6	224
4	Effects of pre-analytical processes on blood samples used in metabolomics studies. Analytical and Bioanalytical Chemistry, 2015, 407, 4879-4892.	1.9	209
5	Metabonomic fingerprints of fasting plasma and spot urine reveal human pre-diabetic metabolic traits. Metabolomics, 2010, 6, 362-374.	1.4	181
6	Practical Approach for the Identification and Isomer Elucidation of Biomarkers Detected in a Metabonomic Study for the Discovery of Individuals at Risk for Diabetes by Integrating the Chromatographic and Mass Spectrometric Information. Analytical Chemistry, 2008, 80, 1280-1289.	3.2	178
7	Simultaneous extraction of metabolome and lipidome with methyl tert-butyl ether from a single small tissue sample for ultra-high performance liquid chromatography/mass spectrometry. Journal of Chromatography A, 2013, 1298, 9-16.	1.8	173
8	Use of High-Affinity Cell Wall-Binding Domains of Bacteriophage Endolysins for Immobilization and Separation of Bacterial Cells. Applied and Environmental Microbiology, 2007, 73, 1992-2000.	1.4	153
9	Changes of the plasma metabolome during an oral glucose tolerance test: is there more than glucose to look at?. American Journal of Physiology - Endocrinology and Metabolism, 2009, 296, E384-E393.	1.8	143
10	Liquid chromatographyâ€“mass spectrometry in metabolomics research: Mass analyzers in ultra high pressure liquid chromatography coupling. Journal of Chromatography A, 2013, 1292, 51-65.	1.8	139
11	Molecular mechanism of diabetic nephropathy. Clinica Chimica Acta, 2000, 297, 135-144.	0.5	132
12	Medium Chain Acylcarnitines Dominate the Metabolite Pattern in Humans under Moderate Intensity Exercise and Support Lipid Oxidation. PLoS ONE, 2010, 5, e11519.	1.1	118
13	How Insulin Receptor Substrate Proteins Regulate the Metabolic Capacity of the Liver - Implications for Health and Disease. Current Medicinal Chemistry, 2008, 15, 1316-1329.	1.2	115
14	Direct Cross-talk of Interleukin-6 and Insulin Signal Transduction via Insulin Receptor Substrate-1 in Skeletal Muscle Cells. Journal of Biological Chemistry, 2006, 281, 7060-7067.	1.6	113
15	Hepatic Lipid Composition and Stearoyl-Coenzyme A Desaturase 1 mRNA Expression Can Be Estimated from Plasma VLDL Fatty Acid Ratios. Clinical Chemistry, 2009, 55, 2113-2120.	1.5	113
16	Protein Kinase C-Î¶-induced Phosphorylation of Ser318 in Insulin Receptor Substrate-1 (IRS-1) Attenuates the Interaction with the Insulin Receptor and the Tyrosine Phosphorylation of IRS-1. Journal of Biological Chemistry, 2004, 279, 25157-25163.	1.6	108
17	Auditory closed-loop stimulation of EEG slow oscillations strengthens sleep and signs of its immune-supportive function. Nature Communications, 2017, 8, 1984.	5.8	101
18	Circulating Lysophosphatidylcholines Are Markers of a Metabolically Benign Nonalcoholic Fatty Liver. Diabetes Care, 2013, 36, 2331-2338.	4.3	100

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19	In Situ Synthesis of Magnetic Multiwalled Carbon Nanotube Composites for the Clean-up of (Fluoro)Quinolones from Human Plasma Prior to Ultrahigh Pressure Liquid Chromatography Analysis. Analytical Chemistry, 2010, 82, 2743-2752.	3.2	98
20	Exercise-Induced Secretion of FGF21 and Follistatin Are Blocked by Pancreatic Clamp and Impaired in Type 2 Diabetes. Journal of Clinical Endocrinology and Metabolism, 2016, 101, 2816-2825.	1.8	86
21	Leptin downâ€regulates insulin action through phosphorylation of serineâ€318 in insulin receptor substrate 1. FASEB Journal, 2006, 20, 1206-1208.	0.2	84
22	Novel, fully automatic hydrophilic interaction/reversed-phase column-switching high-performance liquid chromatographic system for the complementary analysis of polar and apolar compounds in complex samples. Journal of Chromatography A, 2008, 1204, 28-34.	1.8	82
23	Retention Time Prediction Improves Identification in Nontargeted Lipidomics Approaches. Analytical Chemistry, 2015, 87, 7698-7704.	3.2	80
24	Acute regulation of metabolic genes and insulin receptor substrates in the liver of mice by one single bout of treadmill exercise. Journal of Physiology, 2009, 587, 241-252.	1.3	79
25	Type 2 diabetes alters metabolic and transcriptional signatures of glucose and amino acid metabolism during exercise and recovery. Diabetologia, 2015, 58, 1845-1854.	2.9	79
26	Metabonomics Study on the Effects of the Ginsenoside Rg3 in a Î²-Cyclodextrin-Based Formulation on Tumor-Bearing Rats by a Fully Automatic Hydrophilic Interaction/Reversed-Phase Column-Switching HPLCâ^'ESI-MS Approach. Analytical Chemistry, 2008, 80, 4680-4688.	3.2	74
27	Automated Label-free Quantification of Metabolites from Liquid Chromatographyâ€“Mass Spectrometry Data. Molecular and Cellular Proteomics, 2014, 13, 348-359.	2.5	74
28	Cathepsin G, and Not the Asparagine-Specific Endoprotease, Controls the Processing of Myelin Basic Protein in Lysosomes from Human B Lymphocytes. Journal of Immunology, 2004, 172, 5495-5503.	0.4	73
29	Evidence for a Novel TGF-Â1-Independent Mechanism of Fibronectin Production in Mesangial Cells Overexpressing Glucose Transporters. Diabetes, 2003, 52, 527-535.	0.3	68
30	Divergent Roles of IRS (Insulin Receptor Substrate) 1 and 2 in Liver and Skeletal Muscle. Current Medicinal Chemistry, 2017, 24, 1827-1852.	1.2	67
31	High Hepatic SCD1 Activity Is Associated with Low Liver Fat Content in Healthy Subjects under a Lipogenic Diet. Journal of Clinical Endocrinology and Metabolism, 2012, 97, E2288-E2292.	1.8	66
32	Insulin Sensitivity Is Reflected by Characteristic Metabolic Fingerprints - A Fourier Transform Mass Spectrometric Non-Targeted Metabolomics Approach. PLoS ONE, 2010, 5, e13317.	1.1	58
33	Phosphorylation of Vasodilator-Stimulated Phosphoprotein Prevents Platelet-Neutrophil Complex Formation and Dampens Myocardial Ischemia-Reperfusion Injury. Circulation, 2011, 123, 2579-2590.	1.6	55
34	Interplay and Effects of Temporal Changes in the Phosphorylation State of Serine-302, -307, and -318 of Insulin Receptor Substrate-1 on Insulin Action in Skeletal Muscle Cells. Molecular Endocrinology, 2008, 22, 2729-2740.	3.7	54
35	Serum or plasma, what is the difference? Investigations to facilitate the sample material selection decision making process for metabolomics studies and beyond. Analytica Chimica Acta, 2018, 1037, 293-300.	2.6	54
36	Capillary electrophoresis in clinical chemistry. Biomedical Applications, 1997, 697, 3-35.	1.7	53

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37	The lipid profile of brown adipose tissue is sex-specific in mice. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2014, 1841, 1563-1570.	1.2	52
38	The secretome of the working human skeletal muscleâ€"A promising opportunity to combat the metabolic disaster?. Proteomics - Clinical Applications, 2014, 8, 5-18.	0.8	51
39	Nontargeted Modification-Specific Metabolomics Study Based on Liquid Chromatographyâ€"High-Resolution Mass Spectrometry. Analytical Chemistry, 2014, 86, 9146-9153.	3.2	50
40	Lipidomics Analysis Reveals Efficient Storage of Hepatic Triacylglycerides Enriched in Unsaturated Fatty Acids after One Bout of Exercise in Mice. PLoS ONE, 2010, 5, e13318.	1.1	49
41	Metabolic Signatures of Cultured Human Adipocytes from Metabolically Healthy versus Unhealthy Obese Individuals. PLoS ONE, 2014, 9, e93148.	1.1	47
42	Release of lysophospholipid â€˜find-meâ€™ signals during apoptosis requires the ATP-binding cassette transporter A1. Autoimmunity, 2012, 45, 568-573.	1.2	45
43	Integrated enrichment analysis and pathway-centered visualization of metabolomics, proteomics, transcriptomics, and genomics data by using the InCroMAP software. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2014, 966, 77-82.	1.2	44
44	The Diabetes Risk Phenotype of Young Women With Recent Gestational Diabetes. Journal of Clinical Endocrinology and Metabolism, 2015, 100, E910-E918.	1.8	44
45	Evaluation of Stress Responses to Interval Training at Low and Moderate Altitudes. Medicine and Science in Sports and Exercise, 2003, 35, 263-269.	0.2	41
46	The Application of Chromatography-Mass Spectrometry: Methods to Metabonomics. Chromatographia, 2009, 69, 23-32.	0.7	41
47	Stable Isotope-Assisted Lipidomics Combined with Nontargeted Isotopomer Filtering, a Tool to Unravel the Complex Dynamics of Lipid Metabolism. Analytical Chemistry, 2013, 85, 4651-4657.	3.2	41
48	Solutions for Low and High Accuracy Mass Spectrometric Data Matching: A Data-Driven Annotation Strategy in Nontargeted Metabolomics. Analytical Chemistry, 2015, 87, 8917-8924.	3.2	41
49	Circulating Omentin as a Novel Biomarker for Colorectal Cancer Risk: Data from the EPICâ€"Potsdam Cohort Study. Cancer Research, 2016, 76, 3862-3871.	0.4	41
50	The Phosphorylation of Ser318 of Insulin Receptor Substrate 1 Is Not per se Inhibitory in Skeletal Muscle Cells but Is Necessary to Trigger the Attenuation of the Insulin-stimulated Signal. Journal of Biological Chemistry, 2005, 280, 37393-37399.	1.6	38
51	Lysophosphatidylcholines activate PPARÎ´ and protect human skeletal muscle cells from lipotoxicity. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2016, 1861, 1980-1992.	1.2	38
52	Insulin-induced stimulation of JNK and the PI 3-kinase/mTOR pathway leads to phosphorylation of serine 318 of IRS-1 in C2C12 myotubes. Biochemical and Biophysical Research Communications, 2005, 335, 819-825.	1.0	37
53	Human Prostate Cancer Is Characterized by an Increase in Urea Cycle Metabolites. Cancers, 2020, 12, 1814.	1.7	37
54	Phosphorylation of Ser357 of Rat Insulin Receptor Substrate-1 Mediates Adverse Effects of Protein Kinase C-Î´ on Insulin Action in Skeletal Muscle Cells. Journal of Biological Chemistry, 2008, 283, 11226-11233.	1.6	35

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55	Purity matters: A workflow for the valid high-resolution lipid profiling of mitochondria from cell culture samples. Scientific Reports, 2016, 6, 21107.	1.6	35
56	Insulin Glulisine: Insulin Receptor Signaling Characteristics In Vivo. Diabetes, 2005, 54, 361-366.	0.3	34
57	Overexpression of glutamine:fructose-6-phosphate-amidotransferase induces transforming growth factor-Î²1 synthesis in NIH-3T3 fibroblasts. FEBS Letters, 2001, 488, 95-99.	1.3	33
58	Capillary electrophoresis of human serum proteins and apolipoproteins. Electrophoresis, 1995, 16, 998-1001.	1.3	32
59	Insulin-induced serine phosphorylation of IRS-2 via ERK1/2 and mTOR: studies on the function of Ser⁶⁷⁵and Ser⁹⁰⁷. American Journal of Physiology - Endocrinology and Metabolism, 2011, 300, E824-E836.	1.8	32
60	Leptin levels in humans are acutely suppressed by isoproterenol despite acipimox-induced inhibition of lipolysis, but not by free fatty acids. Metabolism: Clinical and Experimental, 2000, 49, 335-339.	1.5	31
61	Propofol Related Infusion Syndrome. Critical Care Medicine, 2018, 46, e91-e94.	0.4	30
62	Quality Control of Serum and Plasma by Quantification of (4E,14Z)-Sphingadienine-C18-1-Phosphate Uncovers Common Preanalytical Errors During Handling of Whole Blood. Clinical Chemistry, 2018, 64, 810-819.	1.5	30
63	Simultaneous, quantitative analysis of UDP-N-acetylglucosamine, UDP-N-acetylgalactosamine, UDP-glucose and UDP-galactose in human peripheral blood cells, muscle biopsies and cultured mesangial cells by capillary zone electrophoresis. Electrophoresis, 2000, 21, 3010-3015.	1.3	29
64	Alkaline liquid chromatography/electrospray ionization skimmer collision-induced dissociation mass spectrometry for phosphopeptide screening. Rapid Communications in Mass Spectrometry, 2001, 15, 2324-2333.	0.7	29
65	Linking bioenergetic function of mitochondria to tissue-specific molecular fingerprints. American Journal of Physiology - Endocrinology and Metabolism, 2019, 317, E374-E387.	1.8	29
66	Identification of an in vitro insulin receptor substrate-1 phosphorylation site by negative-ion Î¼LC/ES-API-CID-MS hybrid scan technique. Journal of the American Society for Mass Spectrometry, 2003, 14, 401-405.	1.2	27
67	Phosphorylation of Serine 1137/1138 of Mouse Insulin Receptor Substrate (IRS) 2 Regulates cAMP-dependent Binding to 14-3-3 Proteins and IRS2 Protein Degradation. Journal of Biological Chemistry, 2013, 288, 16403-16415.	1.6	27
68	Production and Release of Acylcarnitines by Primary Myotubes Reflect the Differences in Fasting Fat Oxidation of the Donors. Journal of Clinical Endocrinology and Metabolism, 2013, 98, E1137-E1142.	1.8	27
69	Muscle-Liver Substrate Fluxes in Exercising Humans and Potential Effects on Hepatic Metabolism. Journal of Clinical Endocrinology and Metabolism, 2020, 105, 1196-1209.	1.8	27
70	Liquid chromatography-based determination of urinary free and total N(epsilon)-(carboxymethyl)lysine excretion in normal and diabetic subjects. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2003, 794, 273-280.	1.2	26
71	Androgen receptor overexpression in prostate cancer in type 2 diabetes. Molecular Metabolism, 2018, 8, 158-166.	3.0	22
72	Phosphorylation of vasodilator-stimulated phosphoprotein contributes to myocardial ischemic preconditioning. Basic Research in Cardiology, 2018, 113, 11.	2.5	20

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73	From bedside to benchâ€"practical considerations to avoid pre-analytical pitfalls and assess sample quality for high-resolution metabolomics and lipidomics analyses of body fluids. Analytical and Bioanalytical Chemistry, 2021, 413, 5567-5585.	1.9	20
74	Screening and identification of familial defective apolipoprotein B-100 in clinical samples by capillary gel electrophoresis. Journal of Chromatography A, 1996, 744, 187-194.	1.8	17
75	Clinical and non-targeted metabolomic profiling of homozygous carriers of Transcription Factor 7-like 2 variant rs7903146. Scientific Reports, 2014, 4, 5296.	1.6	17
76	Muscle and liver-specific alterations in lipid and acylcarnitine metabolism after a single bout of exercise in mice. Scientific Reports, 2016, 6, 22218.	1.6	17
77	Which is the urine sample material of choice for metabolomics-driven biomarker studies?. Analytica Chimica Acta, 2020, 1105, 120-127.	2.6	17
78	Enforced expression of protein kinase C in skeletal muscle causes physical inactivity, fatty liver and insulin resistance in the brain. Journal of Cellular and Molecular Medicine, 2010, 14, 903-913.	1.6	16
79	Capillary electrophoresis, a rapid and sensitive method for routine analysis of apolipoprotein A-I in clinical samples. Journal of Chromatography A, 1995, 717, 25-31.	1.8	15
80	1H NMR-based metabolite profiling workflow to reduce inter-sample chemical shift variations in urine samples for improved biomarker discovery. Analytical and Bioanalytical Chemistry, 2016, 408, 4683-4691.	1.9	15
81	Comprehensive Profiling by Nonâ€targeted Stable Isotope Tracing Capillary Electrophoresisâ€Mass Spectrometry: A New Tool Complementing Metabolomic Analyses of Polar Metabolites. Chemistry - A European Journal, 2019, 25, 5427-5432.	1.7	15
82	Metabolomic Characteristics of Fatty Pancreas. Experimental and Clinical Endocrinology and Diabetes, 2020, 128, 804-810.	0.6	14
83	Capillary electrophoresis in biochemical and clinical laboratories. Journal of Chromatography A, 1998, 807, 135-149.	1.8	12
84	Identification of the Amino Acids 300â€"600 of IRS-2 as 14-3-3 Binding Region with the Importance of IGF-1/Insulin-Regulated Phosphorylation of Ser-573. PLoS ONE, 2012, 7, e43296.	1.1	12
85	Preanalytics: what can metabolomics learn from clinical chemistry?. Bioanalysis, 2015, 7, 927-930.	0.6	12
86	Analysis of the deletion/insertion polymorphism of the angiotensin I-converting enzyme gene by capillary electrophoresis. Clinica Chimica Acta, 1996, 248, 197-203.	0.5	11
87	Novel Hemoglobin Variant [Î²66(E10) Lysâ†'Asn], with Decreased Oxygen Affinity, Causes Falsely Low Hemoglobin A1c Values by HPLC. Clinical Chemistry, 2003, 49, 1412-1415.	1.5	11
88	Diagnostic Accuracy of a Novel Chromogenic Direct Thrombin Inhibitor Assay: Clinical Experiences for Dabigatran Monitoring. Thrombosis and Haemostasis, 2017, 117, 2369-2375.	1.8	11
89	Genetic variation in TCF7L2 rs7903146 and history of GDM negatively and independently impact on diabetes-associated metabolic traits. Diabetes Research and Clinical Practice, 2018, 146, 251-257.	1.1	11
90	Exercise prevents fatty liver by modifying the compensatory response of mitochondrial metabolism to excess substrate availability. Molecular Metabolism, 2021, 54, 101359.	3.0	11

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91	Development and precise characterization of phospho-site-specific antibody of Ser357 of IRS-1: Elimination of cross reactivity with adjacent Ser358. Biochemical and Biophysical Research Communications, 2008, 376, 26-31.	1.0	10
92	The Uncoordinated-5 Homolog B (UNC5B) Receptor Increases Myocardial Ischemia-Reperfusion Injury. PLoS ONE, 2013, 8, e69477.	1.1	10
93	Mass-spectrometric multi-omics linked to function â€“ State-of-the-art investigations of mitochondria in systems medicine. TrAC - Trends in Analytical Chemistry, 2019, 119, 115635.	5.8	10
94	Independent component analysis in non-hypothesis driven metabolomics: Improvement of pattern discovery and simplification of biological data interpretation demonstrated with plasma samples of exercising humans. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2012, 910, 156-162.	1.2	9
95	Sensitivity improvement in hydrophilic interaction chromatography negative mode electrospray ionization mass spectrometry using 2-(2-methoxyethoxy)ethanol as a post-column modifier for non-targeted metabolomics. Journal of Chromatography A, 2014, 1361, 209-216.	1.8	9
96	Hemostatic alterations linked to body fat distribution, fatty liver, and insulin resistance. Molecular Metabolism, 2021, 53, 101262.	3.0	9
97	Lifestyle Intervention Improves Prothrombotic Coagulation Profile in Individuals at High Risk for Type 2 Diabetes. Journal of Clinical Endocrinology and Metabolism, 2021, 106, e3198-e3207.	1.8	8
98	Partitioning-Defective Protein 6 Regulates Insulin-Dependent Glycogen Synthesis via Atypical Protein Kinase C. Molecular Endocrinology, 2004, 18, 1287-1300.	3.7	7
99	Nasal insulin administration does not affect hepatic glucose production at systemic fasting insulin levels. Diabetes, Obesity and Metabolism, 2019, 21, 993-1000.	2.2	7
100	Characterization of natural peptides from bovine tissue using capillary electrophoresis, high performance liquid chromatography, matrix-assisted laser desorption ionization, and Edman degradation. Electrophoresis, 1996, 17, 518-522.	1.3	6
101	Diabetes Subphenotypes and Metabolomics: The Key to Discovering Laboratory Markers for Personalized Medicine?. Clinical Chemistry, 2013, 59, 1294-1296.	1.5	6
102	Monitoring of low dabigatran concentrations: diagnostic performance at clinically relevant decision thresholds. Journal of Thrombosis and Thrombolysis, 2020, 49, 457-467.	1.0	6
103	Investigation of a capillary electrophoretic approach for direct quantification of apolipoprotein A-I in serum. Electrophoresis, 2003, 24, 1422-1428.	1.3	4
104	Inferring Disease-Related Metabolite Dependencies with a Bayesian Optimization Algorithm. Lecture Notes in Computer Science, 2012, , 62-73.	1.0	4
105	Comparison of the metabolome in urine prior and eight weeks after radical prostatectomy uncovers pathologic and molecular features of prostate cancer. Journal of Pharmaceutical and Biomedical Analysis, 2021, 205, 114288.	1.4	3
106	Wrapper- and Ensemble-Based Feature Subset Selection Methods for Biomarker Discovery in Targeted Metabolomics. Lecture Notes in Computer Science, 2011, , 121-132.	1.0	3
107	Investigating the Role of Mitochondria in Type 2 Diabetes â€“ Lessons from Lipidomics and Proteomics Studies of Skeletal Muscle and Liver. Advances in Experimental Medicine and Biology, 2019, 1158, 143-182.	0.8	3
108	Advances in Reverse Transcription Polymerase Chain Reaction Analysis of Cellular mRNA Levels of Transforming Growth Factor-Î²1 by Capillary Electrophoresis with Laser-Induced Fluorescence Detection. Clinical Chemistry and Laboratory Medicine, 1999, 37, 527-32.	1.4	2

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109	Association Between Urinary Catecholamine Excretion and Urine Volume. Hormone and Metabolic Research, 2019, 51, 531-538.	0.7	2
110	Identification and regulation of the xenometabolite derivatives cis- and trans-3,4-methylene-heptanoylcarnitine in plasma and skeletal muscle of exercising humans. American Journal of Physiology - Endocrinology and Metabolism, 2020, 318, E701-E709.	1.8	2
111	Protein kinase C-Î¶ phosphorylates serine/threonine residues at the C-terminal binding motif of the tyrosine phosphatase SHP-2 of insulin receptor substrate 1. Signal Transduction, 2002, 2, 40-45.	0.7	1
112	Pre-analytics in biomedical metabolomics. , 2020, , 33-56.		1
113	Diagnostic Performance of Sex-Specific Modified Metabolite Patterns in Urine for Screening of Prediabetes. Frontiers in Endocrinology, 0, 13, .	1.5	1
114	Capillary Electrophoresis in the Analysis of the Deletion/Insertion Polymorphism of the Angiotensin I-Converting Enzyme Gene. Clinical Chemistry, 1998, 44, 1582a-1583.	1.5	0
115	Lipoprotein Analysis. , 2001, , 113-144.		0
116	Running without IL-6. Medicine and Science in Sports and Exercise, 2008, 40, S192.	0.2	0