

Richard M Higashi

List of Publications by Year in descending order

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87
papers

6,734
citations

76196

40
h-index

64668

79
g-index

94
all docs

94
docs citations

94
times ranked

8994
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Glucose-Independent Glutamine Metabolism via TCA Cycling for Proliferation and Survival in B Cells. <i>Cell Metabolism</i> , 2012, 15, 110-121. | 7.2 | 923 |
| 2 | The Metabolic Profile of Tumors Depends on Both the Responsible Genetic Lesion and Tissue Type. <i>Cell Metabolism</i> , 2012, 15, 157-170. | 7.2 | 553 |
| 3 | Targeting Lactate Dehydrogenase-A Inhibits Tumorigenesis and Tumor Progression in Mouse Models of Lung Cancer and Impacts Tumor-Initiating Cells. <i>Cell Metabolism</i> , 2014, 19, 795-809. | 7.2 | 411 |
| 4 | Pyruvate carboxylase is critical for non-small-cell lung cancer proliferation. <i>Journal of Clinical Investigation</i> , 2015, 125, 687-698. | 3.9 | 407 |
| 5 | Altered regulation of metabolic pathways in human lung cancer discerned by ¹³ C stable isotope-resolved metabolomics (SIRM). <i>Molecular Cancer</i> , 2009, 8, 41. | 7.9 | 369 |
| 6 | Nitric oxide orchestrates metabolic rewiring in M1 macrophages by targeting aconitase 2 and pyruvate dehydrogenase. <i>Nature Communications</i> , 2020, 11, 698. | 5.8 | 232 |
| 7 | An obligatory role for neurotensin in high-fat-diet-induced obesity. <i>Nature</i> , 2016, 533, 411-415. | 13.7 | 202 |
| 8 | Selenium biotransformations into proteinaceous forms by foodweb organisms of selenium-laden drainage waters in California. <i>Aquatic Toxicology</i> , 2002, 57, 65-84. | 1.9 | 192 |
| 9 | Stable isotope-resolved metabolomics and applications for drug development. , 2012, 133, 366-391. | | 186 |
| 10 | Comprehensive chemical profiling of gramineous plant root exudates using high-resolution NMR and MS. <i>Phytochemistry</i> , 2001, 57, 209-221. | 1.4 | 173 |
| 11 | Combined use of ¹ H-NMR and GC-MS for metabolite monitoring and in vivo ¹ H-NMR assignments. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 1986, 882, 154-167. | 1.1 | 149 |
| 12 | Comprehensive Analysis of Organic Ligands in Whole Root Exudates Using Nuclear Magnetic Resonance and Gas Chromatography-Mass Spectrometry. <i>Analytical Biochemistry</i> , 1997, 251, 57-68. | 1.1 | 132 |
| 13 | Dectin-1 Activation by a Natural Product β -Glucan Converts Immunosuppressive Macrophages into an M1-like Phenotype. <i>Journal of Immunology</i> , 2015, 195, 5055-5065. | 0.4 | 129 |
| 14 | Isotopomer-Based Metabolomic Analysis by NMR and Mass Spectrometry. <i>Methods in Cell Biology</i> , 2008, 84, 541-588. | 0.5 | 109 |
| 15 | Stable isotope resolved metabolomics of lung cancer in a SCID mouse model. <i>Metabolomics</i> , 2011, 7, 257-269. | 1.4 | 98 |
| 16 | Selenium Biotransformations by a Euryhaline Microalga Isolated from a Saline Evaporation Pond. <i>Environmental Science & Technology</i> , 1997, 31, 569-576. | 4.6 | 82 |
| 17 | Stable Isotope-Resolved Metabolomics (SIRM) in Cancer Research with Clinical Application to NonSmall Cell Lung Cancer. <i>OMICS A Journal of Integrative Biology</i> , 2011, 15, 173-182. | 1.0 | 82 |
| 18 | Exploring cancer metabolism using stable isotope-resolved metabolomics (SIRM). <i>Journal of Biological Chemistry</i> , 2017, 292, 11601-11609. | 1.6 | 80 |

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|----|--|-----|-----------|
| 19 | Isotopomer analysis of lipid biosynthesis by high resolution mass spectrometry and NMR. <i>Analytica Chimica Acta</i> , 2009, 651, 201-208. | 2.6 | 79 |
| 20 | Noninvasive liquid diet delivery of stable isotopes into mouse models for deep metabolic network tracing. <i>Nature Communications</i> , 2017, 8, 1646. | 5.8 | 74 |
| 21 | A novel deconvolution method for modeling UDP-N-acetyl-D-glucosamine biosynthetic pathways based on ¹³ C mass isotopologue profiles under non-steady-state conditions. <i>BMC Biology</i> , 2011, 9, 37. | 1.7 | 73 |
| 22 | Knockdown of Malic Enzyme 2 Suppresses Lung Tumor Growth, Induces Differentiation and Impacts PI3K/AKT Signaling. <i>Scientific Reports</i> , 2014, 4, 5414. | 1.6 | 73 |
| 23 | Exosomal lipids for classifying early and late stage non-small cell lung cancer. <i>Analytica Chimica Acta</i> , 2018, 1037, 256-264. | 2.6 | 72 |
| 24 | Acute loss of iron-sulfur clusters results in metabolic reprogramming and generation of lipid droplets in mammalian cells. <i>Journal of Biological Chemistry</i> , 2018, 293, 8297-8311. | 1.6 | 70 |
| 25 | Anaerobic nitrate and ammonium metabolism in flood-tolerant rice coleoptiles. <i>Journal of Experimental Botany</i> , 1997, 48, 1655-1666. | 2.4 | 67 |
| 26 | Chronic Effects of Dietary Selenium on Juvenile Sacramento Splittail (<i>Pogonichthys macrolepidotus</i>). <i>Environmental Science & Technology</i> , 2004, 38, 6085-6093. | 4.6 | 64 |
| 27 | Rhabdomyosarcoma cells show an energy producing anabolic metabolic phenotype compared with primary myocytes. <i>Molecular Cancer</i> , 2008, 7, 79. | 7.9 | 61 |
| 28 | De novo synthesis of serine and glycine fuels purine nucleotide biosynthesis in human lung cancer tissues. <i>Journal of Biological Chemistry</i> , 2019, 294, 13464-13477. | 1.6 | 58 |
| 29 | An in vivo ¹ H and ³¹ P NMR investigation of the effect of nitrate on hypoxic metabolism in maize roots. <i>Archives of Biochemistry and Biophysics</i> , 1988, 266, 592-606. | 1.4 | 57 |
| 30 | Metabolomics-edited transcriptomics analysis of Se anticancer action in human lung cancer cells. <i>Metabolomics</i> , 2006, 1, 325-339. | 1.4 | 57 |
| 31 | Stable isotope-resolved metabolomic analysis of lithium effects on glial-neuronal metabolism and interactions. <i>Metabolomics</i> , 2010, 6, 165-179. | 1.4 | 57 |
| 32 | Integrating Metabolomics and Transcriptomics for Probing Se Anticancer Mechanisms. <i>Drug Metabolism Reviews</i> , 2006, 38, 707-732. | 1.5 | 56 |
| 33 | High information throughput analysis of nucleotides and their isotopically enriched isotopologues by direct-infusion FTICR-MS. <i>Metabolomics</i> , 2012, 8, 930-939. | 1.4 | 52 |
| 34 | Distinctly perturbed metabolic networks underlie differential tumor tissue damages induced by immune modulator β ² -glucan in a two-case ex vivo non-small-cell lung cancer study. <i>Journal of Physical Education and Sports Management</i> , 2016, 2, a000893. | 0.5 | 52 |
| 35 | Chemical Characterization of a Chelator-Treated Soil Humate by Solution-State Multinuclear Two-Dimensional NMR with FTIR and Pyrolysis-GCMS. <i>Environmental Science & Technology</i> , 2000, 34, 1636-1646. | 4.6 | 49 |
| 36 | Preconcentration and Analysis of Trace Volatile Carbonyl Compounds. <i>Analytical Chemistry</i> , 2012, 84, 1288-1293. | 3.2 | 48 |

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|----|---|-----|-----------|
| 37 | Biotransformations of Selenium Oxyanion by Filamentous Cyanophyte-Dominated Mat Cultured from Agricultural Drainage Waters. <i>Environmental Science & Technology</i> , 1998, 32, 3185-3193. | 4.6 | 47 |
| 38 | Synthesis and structure characterization of selenium metabolites. <i>Analyst, The</i> , 1998, 123, 875-884. | 1.7 | 46 |
| 39 | Probing the metabolic phenotype of breast cancer cells by multiple tracer stable isotope resolved metabolomics. <i>Metabolic Engineering</i> , 2017, 43, 125-136. | 3.6 | 45 |
| 40 | Metabolic reprogramming in tumors: Contributions of the tumor microenvironment. <i>Genes and Diseases</i> , 2020, 7, 185-198. | 1.5 | 45 |
| 41 | Prospects for clinical cancer metabolomics using stable isotope tracers. <i>Experimental and Molecular Pathology</i> , 2009, 86, 165-173. | 0.9 | 42 |
| 42 | Stable Isotope-Labeled Tracers for Metabolic Pathway Elucidation by GC-MS and FT-MS. <i>Methods in Molecular Biology</i> , 2014, 1198, 147-167. | 0.4 | 42 |
| 43 | Stable Isotope Resolved Metabolomics Studies in ex vivo Tissue Slices. <i>Bio-protocol</i> , 2016, 6, . | 0.2 | 42 |
| 44 | Stable isotope-assisted metabolomics in cancer research. <i>IUBMB Life</i> , 2008, 60, 124-129. | 1.5 | 40 |
| 45 | Chloroformate derivatization for tracing the fate of Amino acids in cells and tissues by multiple stable isotope resolved metabolomics (mSIRM). <i>Analytica Chimica Acta</i> , 2017, 976, 63-73. | 2.6 | 37 |
| 46 | Monitoring of hypoxic metabolism in superfused plant tissues by in vivo ¹ H NMR. <i>Archives of Biochemistry and Biophysics</i> , 1986, 251, 674-687. | 1.4 | 34 |
| 47 | Metabolic reprogramming and Notch activity distinguish between non-small cell lung cancer subtypes. <i>British Journal of Cancer</i> , 2019, 121, 51-64. | 2.9 | 33 |
| 48 | A microfabricated preconcentration device for breath analysis. <i>Sensors and Actuators B: Chemical</i> , 2013, 180, 130-136. | 4.0 | 31 |
| 49 | The promise of metabolomics in cancer molecular therapeutics. <i>Current Opinion in Molecular Therapeutics</i> , 2004, 6, 584-92. | 2.8 | 31 |
| 50 | A carbonyl capture approach for profiling oxidized metabolites in cell extracts. <i>Metabolomics</i> , 2012, 8, 989-996. | 1.4 | 30 |
| 51 | Sublethal effects of pentachlorophenol in the abalone (<i>haliotis rufescens</i>) as measured by in vivo ³¹ P NMR spectroscopy. <i>Journal of Biochemical Toxicology</i> , 1991, 6, 45-56. | 0.5 | 29 |
| 52 | A novel microreactor approach for analysis of ketones and aldehydes in breath. <i>Analyst, The</i> , 2011, 136, 4662. | 1.7 | 29 |
| 53 | NMR and MS-based Stable Isotope-Resolved Metabolomics and applications in cancer metabolism. <i>TrAC - Trends in Analytical Chemistry</i> , 2019, 120, 115322. | 5.8 | 29 |
| 54 | Hypoxia does not affect rate of ATP synthesis and energy metabolism in rice shoot tips as measured by ³¹ P NMR in vivo. <i>Archives of Biochemistry and Biophysics</i> , 1992, 294, 314-318. | 1.4 | 28 |

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|----|---|-----|-----------|
| 55 | Metabolic acidosis and the importance of balanced equations. <i>Metabolomics</i> , 2009, 5, 163-165. | 1.4 | 27 |
| 56 | Emergence and recovery response of phosphate metabolites and intracellular pH in intact <i>Mytilus edulis</i> as examined in situ by in vivo ³¹ P-NMR. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 1991, 1092, 39-47. | 1.9 | 25 |
| 57 | Association of desferrioxamine with humic substances and their interaction with cadmium(II) as studied by pyrolysis-gas chromatography-mass spectrometry and nuclear magnetic resonance spectroscopy. <i>Analyst, The</i> , 1998, 123, 911-918. | 1.7 | 25 |
| 58 | Metabolic profiling identifies lung tumor responsiveness to erlotinib. <i>Experimental and Molecular Pathology</i> , 2009, 87, 83-86. | 0.9 | 25 |
| 59 | An electrophoretic profiling method for thiol-rich phytochelatins and metallothioneins. <i>Phytochemical Analysis</i> , 2004, 15, 175-183. | 1.2 | 24 |
| 60 | Preclinical models for interrogating drug action in human cancers using Stable Isotope Resolved Metabolomics (SIRM). <i>Metabolomics</i> , 2016, 12, 1. | 1.4 | 24 |
| 61 | Blockade of 6-phosphogluconate dehydrogenase generates CD8+ effector T cells with enhanced anti-tumor function. <i>Cell Reports</i> , 2021, 34, 108831. | 2.9 | 23 |
| 62 | Monitoring of metabolic responses of intact <i>Haliotis</i> (abalones) under salinity stress by ³¹ P surface probe localized NMR. <i>The Journal of Experimental Zoology</i> , 1989, 249, 350-356. | 1.4 | 22 |
| 63 | Chemoselective detection and discrimination of carbonyl-containing compounds in metabolite mixtures by ¹ H-detected ¹⁵ N nuclear magnetic resonance. <i>Magnetic Resonance in Chemistry</i> , 2015, 53, 337-343. | 1.1 | 22 |
| 64 | Profiling thiol metabolites and quantification of cellular glutathione using FT-ICR-MS spectrometry. <i>Analytical and Bioanalytical Chemistry</i> , 2014, 406, 4371-4379. | 1.9 | 21 |
| 65 | Quantitative profiling of carbonyl metabolites directly in crude biological extracts using chemoselective tagging and nanoESI-FTMS. <i>Analyst, The</i> , 2018, 143, 311-322. | 1.7 | 20 |
| 66 | Title is missing!. <i>Aquatic Ecology</i> , 2000, 34, 413-420. | 0.7 | 17 |
| 67 | Innate immune activation by checkpoint inhibition in human patient-derived lung cancer tissues. <i>ELife</i> , 2021, 10, . | 2.8 | 17 |
| 68 | 6-Phosphogluconate dehydrogenase (6PGD), a key checkpoint in reprogramming of regulatory T cells metabolism and function. <i>ELife</i> , 2021, 10, . | 2.8 | 17 |
| 69 | Reproducible nuclear magnetic resonance surface coil fabrication by combining computer-aided-design and a photoresist process. <i>Analytical Chemistry</i> , 1989, 61, 636-638. | 3.2 | 16 |
| 70 | Inhibition of Anaplerotic Glutaminolysis Underlies Selenite Toxicity in Human Lung Cancer. <i>Proteomics</i> , 2019, 19, e1800486. | 1.3 | 15 |
| 71 | New methods to identify high peak density artifacts in Fourier transform mass spectra and to mitigate their effects on high-throughput metabolomic data analysis. <i>Metabolomics</i> , 2018, 14, 125. | 1.4 | 14 |
| 72 | Sorption-desorption behavior of phenanthrene elucidated by pyrolysis-gas chromatography-mass spectrometry studies of soil organic matter. <i>Environmental Toxicology and Chemistry</i> , 1999, 18, 1710-1719. | 2.2 | 11 |

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|----|---|-----|-----------|
| 73 | Temperature dependence of arginine kinase reaction in the tail muscle of live <i>Sycionia ingentis</i> as measured in vivo by ³¹ P-NMR driven saturation transfer. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 1992, 1135, 44-49. | 1.9 | 9 |
| 74 | Applications of chromatography-ultra high-resolution MS for stable isotope-resolved metabolomics (SIRM) reconstruction of metabolic networks. <i>TrAC - Trends in Analytical Chemistry</i> , 2020, 123, 115676. | 5.8 | 9 |
| 75 | Resolving Metabolic Heterogeneity in Experimental Models of the Tumor Microenvironment from a Stable Isotope Resolved Metabolomics Perspective. <i>Metabolites</i> , 2020, 10, 249. | 1.3 | 9 |
| 76 | NMR Methods for Determining Lipid Turnover via Stable Isotope Resolved Metabolomics. <i>Metabolites</i> , 2021, 11, 202. | 1.3 | 9 |
| 77 | An Ion Chromatography-“Ultrahigh-Resolution-MS ¹ /Data-Independent High-Resolution MS ² Method for Stable Isotope-Resolved Metabolomics Reconstruction of Central Metabolic Networks. <i>Analytical Chemistry</i> , 2021, 93, 2749-2757. | 3.2 | 9 |
| 78 | Improved segmented-scan spectral stitching for stable isotope resolved metabolomics (SIRM) by ultra-high-resolution Fourier transform mass spectrometry. <i>Analytica Chimica Acta</i> , 2019, 1080, 104-115. | 2.6 | 5 |
| 79 | Energy and Fermentation Metabolism in Hypoxic Rice Coleoptiles “ A Multinuclear NMR Approach. , 1993, , 333-352. | | 5 |
| 80 | Selenium toxicity to survival and reproduction of Collembola and Enchytraeids in a sandy loam soil. <i>Environmental Toxicology and Chemistry</i> , 2018, 37, 846-853. | 2.2 | 4 |
| 81 | Rapid analysis of S-adenosylmethionine (SAM) and S-adenosylhomocysteine (SAH) isotopologues in stable isotope-resolved metabolomics (SIRM) using direct infusion nanoelectrospray ultra-high-resolution Fourier transform mass spectrometry (DI-nESI-UHR-FTMS). <i>Analytica Chimica Acta</i> , 2021, 1181, 338873. | 2.6 | 4 |
| 82 | Genotypic Influence on Metal Ion Mobilization and Sequestration via Metal Ion Ligand Production by Wheat. <i>ACS Symposium Series</i> , 2000, , 417-431. | 0.5 | 3 |
| 83 | ¹³ C-Tracer Studies of Soil Humic Substructures That Reduce Heavy Metal Leaching. <i>ACS Symposium Series</i> , 2005, , 138-157. | 0.5 | 3 |
| 84 | Software Supporting a Workflow of Quantitative Dynamic Flux Maps Estimation in Central Metabolism from SIRM Experimental Data. <i>Methods in Molecular Biology</i> , 2020, 2088, 271-298. | 0.4 | 3 |
| 85 | Differential Abundance Analysis with Bayes Shrinkage Estimation of Variance (DASEV) for Zero-Inflated Proteomic and Metabolomic Data. <i>Scientific Reports</i> , 2020, 10, 876. | 1.6 | 2 |
| 86 | Quantification of Isotopologues of Amino Acids by Multiplexed Stable Isotope-Resolved Metabolomics Using Ultrahigh-Resolution Mass Spectrometry Coupled with Direct Infusion. <i>Methods in Molecular Biology</i> , 2019, 2030, 57-68. | 0.4 | 2 |
| 87 | Introduction to Metabolomics. <i>Methods in Pharmacology and Toxicology</i> , 2012, , 1-6. | 0.1 | 0 |