# Adrian D Hegeman

List of Publications by Year
in descending order



| 86 | 4,616 | 87843 | 106281 |
|---|---|---|---|
| papers | citations | 38 h-index | 65 g-index |

| 89 | 89 | 89 | 6274 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Metabolite identification via the Madison Metabolomics Consortium Database. Nature Biotechnology, 2008, 26, 162-164. | 9.4 | 591 |
| 2 | The Radical SAM Superfamily. Critical Reviews in Biochemistry and Molecular Biology, 2008, 43, 63-88. | 2.3 | 487 |
| 3 | Enzymatic Reaction Mechanisms. , 2007, , . | | 184 |
| 4 | Identification of transcribed sequences in Arabidopsis thaliana by using high-resolution genome tiling arrays. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 4453-4458. | 3.3 | 147 |
| 5 | Free Radical Mechanisms in Enzymology. Chemical Reviews, 2006, 106, 3302-3316. | 23.0 | 130 |
| 6 | Structural Analysis of UDP-Sugar Binding to UDP-Galactose 4-Epimerase fromEscherichia coliâ€,â€¡. Biochemistry, 1997, 36, 6294-6304. | 1.2 | 115 |
| 7 | Implications of15N-metabolic labeling for automated peptide identification inArabidopsis thaliana. Proteomics, 2007, 7, 1279-1292. | 1.3 | 103 |
| 8 | Autophosphorylation and Subcellular Localization Dynamics of a Salt- and Water Deficit-Induced Calcium-Dependent Protein Kinase from Ice Plant. Plant Physiology, 2004, 135, 1430-1446. | 2.3 | 97 |
| 9 | Toward a Structural Understanding of the Dehydratase Mechanism. Structure, 2002, 10, 81-92. | 1.6 | 94 |
| 10 | Comparison of Full Versus Partial Metabolic Labeling for Quantitative Proteomics Analysis in Arabidopsis thaliana. Molecular and Cellular Proteomics, 2007, 6, 860-881. | 2.5 | 93 |
| 11 | Plant metabolomics--meeting the analytical challenges of comprehensive metabolite analysis. Briefings in Functional Genomics, 2010, 9, 139-148. | 1.3 | 92 |
| 12 | A Quantitative Analysis of Arabidopsis Plasma Membrane Using Trypsin-catalyzed 18O Labeling. Molecular and Cellular Proteomics, 2006, 5, 1382-1395. | 2.5 | 90 |
| 13 | Stable Isotope Assisted Assignment of Elemental Compositions for Metabolomics. Analytical Chemistry, 2007, 79, 6912-6921. | 3.2 | 90 |
| 14 | Seasonal pasture myopathy/atypical myopathy in <scp>N</scp>orth <scp>A</scp>merica associated with ingestion of hypoglycin <scp>A</scp> within seeds of the box elder tree. Equine Veterinary Journal, 2013, 45, 419-426. | 0.9 | 89 |
| 15 | A Transcriptome-Based Characterization of Habituation in Plant Tissue Culture. Plant Physiology, 2006, 140, 1255-1278. | 2.3 | 87 |
| 16 | Expression of mal is associated with urothelial differentiation in vitro: identification by differential display reverse-transcriptase polymerase chain reaction. Differentiation, 1997, 61, 177-185. | 1.0 | 86 |
| 17 | Genetic and environmental interactions determine plant defences against herbivores. Journal of Ecology, 2011, 99, 313-326. | 1.9 | 79 |
| 18 | A phyloproteomic characterization ofin vitro autophosphorylation in calcium-dependent protein kinases. Proteomics, 2006, 6, 3649-3664. | 1.3 | 75 |

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|---|---|---|---|
| 19 | Combinations of Abiotic Factors Differentially Alter Production of Plant Secondary Metabolites in Five Woody Plant Species in the Boreal-Temperate Transition Zone. Frontiers in Plant Science, 2018, 9, 1257. | 1.7 | 74 |
| 20 | Protocol: High-throughput and quantitative assays of auxin and auxin precursors from minute tissue samples. Plant Methods, 2012, 8, 31. | 1.9 | 70 |
| 21 | Cyanogenesis of Wild Lima Bean (Phaseolus lunatus L.) Is an Efficient Direct Defence in Nature. PLoS ONE, 2009, 4, e5450. | 1.1 | 69 |
| 22 | Metabolomics Reveals the Origins of Antimicrobial Plant Resins Collected by Honey Bees. PLoS ONE, 2013, 8, e77512. | 1.1 | 69 |
| 23 | Prediction of Error Associated with False-Positive Rate Determination for Peptide Identification in Large-Scale Proteomics Experiments Using a Combined Reverse and Forward Peptide Sequence Database Strategy. Journal of Proteome Research, 2007, 6, 392-398. | 1.8 | 67 |
| 24 | Neoglycopolymers produced by aqueous ring-opening metathesis polymerization: decreasing saccharide density increases activity. Journal of Molecular Catalysis A, 1997, 116, 209-216. | 4.8 | 65 |
| 25 | Recent advances in stable isotope-enabled mass spectrometry-based plant metabolomics. Current Opinion in Biotechnology, 2017, 43, 41-48. | 3.3 | 62 |
| 26 | An isotope labeling strategy for quantifying the degree of phosphorylation at multiple sites in proteins. Journal of the American Society for Mass Spectrometry, 2004, 15, 647-653. | 1.2 | 60 |
| 27 | Identification of genes expressed after noise exposure in the chick basilar papilla. Hearing Research, 1996, 96, 20-32. | 0.9 | 57 |
| 28 | A study on retention â€œprojectionâ€•as a supplementary means for compound identification by liquid chromatographyâ€“mass spectrometry capable of predicting retention with different gradients, flow rates, and instruments. Journal of Chromatography A, 2011, 1218, 6732-6741. | 1.8 | 53 |
| 29 | Hypoglycin A Concentrations in Seeds of Acer Pseudoplatanus Trees Growing on Atypical Myopathyâ€Affected and Control Pastures. Journal of Veterinary Internal Medicine, 2014, 28, 1289-1293. | 0.6 | 53 |
| 30 | Characterization of Enzymatic Processes by Rapid Mixâ˜Quench Mass Spectrometry:Â The Case of dTDP-glucose 4,6-Dehydrataseâ€. Biochemistry, 2000, 39, 13633-13640. | 1.2 | 52 |
| 31 | The Structure of NADH in the Enzyme dTDP-d-glucose Dehydratase (RmlB). Journal of the American Chemical Society, 2003, 125, 11872-11878. | 6.6 | 51 |
| 32 | Microscale analysis of amino acids using gas chromatographyâ€“mass spectrometry after methyl chloroformate derivatization. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2010, 878, 2199-2208. | 1.2 | 50 |
| 33 | In vitro interactions between Fusarium verticillioides and Ustilago maydis through real-time PCR and metabolic profiling. Fungal Genetics and Biology, 2011, 48, 874-885. | 0.9 | 50 |
| 34 | Retention projection enables accurate calculation of liquid chromatographic retention times across labs and methods. Journal of Chromatography A, 2015, 1412, 43-51. | 1.8 | 47 |
| 35 | Measuring the turnover rates of Arabidopsis proteins using deuterium oxide: an auxin signaling case study. Plant Journal, 2010, 63, 680-695. | 2.8 | 44 |
| 36 | Easy and accurate high-performance liquid chromatography retention prediction with different gradients, flow rates, and instruments by back-calculation of gradient and flow rate profiles. Journal of Chromatography A, 2011, 1218, 6742-6749. | 1.8 | 44 |

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| 37 | Evaluation of instrumental methods for the untargeted analysis of chemical stimuli of orange juice flavour. Flavour and Fragrance Journal, 2011, 26, 429-440. | 1.2 | 43 |
| 38 | Evaluating solvent extraction systems using metabolomics approaches. RSC Advances, 2014, 4, 26325-26334. | 1.7 | 43 |
| 39 | NEW BIOINFORMATICS RESOURCES FOR METABOLOMICS. , 2006, , . | | 43 |
| 40 | Probing Catalysis byEscherichia colidTDP-Glucose-4,6-dehydratase:Â Identification and Preliminary Characterization of Functional Amino Acid Residues at the Active Siteâ€. Biochemistry, 2001, 40, 6598-6610. | 1.2 | 40 |
| 41 | An automated growth enclosure for metabolic labeling of Arabidopsis thaliana with 13C-carbon dioxide - an in vivo labeling system for proteomics and metabolomics research. Proteome Science, 2011, 9, 9. | 0.7 | 37 |
| 42 | Proteome Scale-Protein Turnover Analysis Using High Resolution Mass Spectrometric Data from Stable-Isotope Labeled Plants. Journal of Proteome Research, 2016, 15, 851-867. | 1.8 | 33 |
| 43 | Van Krevelen diagram visualization of high resolution-mass spectrometry metabolomics data with OpenVanKrevelen. Metabolomics, 2018, 14, 48. | 1.4 | 31 |
| 44 | An extremely mild 3-aza-claisen reaction. 2. New conditions and the rearrangement of Î±-heteroatom substituted amides. Tetrahedron Letters, 1993, 34, 1453-1456. | 0.7 | 30 |
| 45 | Concerted and Stepwise Dehydration Mechanisms Observed in Wild-Type and MutatedEscherichia colidTDP-Glucose 4,6-Dehydrataseâ€. Biochemistry, 2002, 41, 2797-2804. | 1.2 | 30 |
| 46 | Discovery and validation of colonic tumor-associated proteins via metabolic labeling and stable isotopic dilution. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 17235-17240. | 3.3 | 30 |
| 47 | Chemical and Stereochemical Actions of UDPâ€“Galactose 4-Epimerase. Accounts of Chemical Research, 2013, 46, 1417-1426. | 7.6 | 30 |
| 48 | Measuring the Chemical and Cytotoxic Variability of Commercially Available Kava (Piper methysticum) Tj ETQq0 0 0 rgBT /Overlock 10 Tf | 1.1 | 30 |
| 49 | Dehydration Is Catalyzed by Glutamate-136 and Aspartic Acid-135 Active Site Residues inEscherichia colidTDP-Glucose 4,6-Dehydrataseâ€. Biochemistry, 2001, 40, 12497-12504. | 1.2 | 29 |
| 50 | A facile means for the identification of indolic compounds from plant tissues. Plant Journal, 2014, 79, 1065-1075. | 2.8 | 26 |
| 51 | Candidate Serum Biomarkers for Early Intestinal Cancer Using <sup>15</sup>N Metabolic Labeling and Quantitative Proteomics in the Apc<sup>Min/+</sup> Mouse. Journal of Proteome Research, 2013, 12, 4152-4166. | 1.8 | 25 |
| 52 | <scp>PELPIII</scp>: the class <scp>III</scp> pistilâ€specific extensinâ€like <scp>N</scp>icotiana tabacum proteins are essential for interspecific incompatibility. Plant Journal, 2013, 74, 805-814. | 2.8 | 25 |
| 53 | Analyzing plant defenses in nature. Plant Signaling and Behavior, 2009, 4, 743-745. | 1.2 | 23 |
| 54 | 3-Acyl dihydroflavonols from poplar resins collected by honey bees are active against the bee pathogens Paenibacillus larvae and Ascosphaera apis. Phytochemistry, 2017, 138, 83-92. | 1.4 | 23 |

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| 55 | Improve your Galaxy text life: The Query Tabular Tool. F1000Research, 2018, 7, 1604. | 0.8 | 21 |
| 56 | Enzymes as Parts in Need of Replacement â€“ and How to Extend Their Working Life. Trends in Plant Science, 2020, 25, 661-669. | 4.3 | 20 |
| 57 | Easy and accurate calculation of programmed temperature gas chromatographic retention times by back-calculation of temperature and hold-up time profiles. Journal of Chromatography A, 2012, 1263, 179-188. | 1.8 | 19 |
| 58 | Plant metabolomics for plant chemical responses to belowground community change by climate change. Journal of Plant Biology, 2014, 57, 137-149. | 0.9 | 16 |
| 59 | Convergent evolution of a blood-red nectar pigment in vertebrate-pollinated flowers. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, . | 3.3 | 15 |
| 60 | Crystal structure of At2g03760, a putative steroid sulfotransferase fromArabidopsis thaliana. Proteins: Structure, Function and Bioinformatics, 2004, 57, 854-857. | 1.5 | 14 |
| 61 | An improved method for fast and selective separation of carotenoids by LCâ€“MS. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2017, 1067, 34-37. | 1.2 | 14 |
| 62 | Genetic analysis of stilbenoid profiles in grapevine stems reveals a major mQTL hotspot on chromosome 18 associated with disease-resistance motifs. Horticulture Research, 2019, 6, 121. | 2.9 | 13 |
| 63 | Quantitative evaluation of IAA conjugate pools in Arabidopsis thaliana. Planta, 2015, 241, 539-548. | 1.6 | 12 |
| 64 | Metabolic signatures of Arabidopsis thaliana abiotic stress responses elucidate patterns in stress priming, acclimation, and recovery. Stress Biology, 2022, 2, 1. | 1.5 | 12 |
| 65 | The transmitting tissue of Nicotiana tabacum is not essential to pollen tube growth, and its ablation can reverse prezygotic interspecific barriers. Plant Reproduction, 2013, 26, 339-350. | 1.3 | 11 |
| 66 | Measuring relative utilization of aerobic glycolysis in breast cancer cells by positional isotopic discrimination. FEBS Letters, 2016, 590, 3179-3187. | 1.3 | 11 |
| 67 | Metabolic Patterns in Spirodela polyrhiza Revealed by 15N Stable Isotope Labeling of Amino Acids in Photoautotrophic, Heterotrophic, and Mixotrophic Growth Conditions. Frontiers in Chemistry, 2018, 6, 191. | 1.8 | 9 |
| 68 | Impact of esterified bacteriochlorophylls on the biogenesis of chlorosomes in Chloroflexus aurantiacus. Photosynthesis Research, 2014, 122, 69-86. | 1.6 | 8 |
| 69 | Direct detection of surface localized specialized metabolites from Glycyrrhiza lepidota (American) Tj ETQq1 1 0.784314 rgBT /Overloc | 1.6 | 8 |
| 70 | Sequence of the cDNA for the heart/muscle isoform of mouse cytochrome c oxidase subunit VIII. Biochimica Et Biophysica Acta Gene Regulatory Mechanisms, 1995, 1261, 311-314. | 2.4 | 7 |
| 71 | Crystal structure of the protein from gene At3g17210 of Arabidopsis thaliana. Proteins: Structure, Function and Bioinformatics, 2004, 57, 218-220. | 1.5 | 7 |
| 72 | Differential Accumulation and Degradation Of Anthocyanins In Red Norland Periderm is Dependent On Soil Type And Tuber Storage Duration. American Journal of Potato Research, 2014, 91, 696-705. | 0.5 | 7 |

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| 73 | Development of a Simple, Fast, and Accurate Method for the Direct Quantification of Selective Estrogen Receptor Modulators Using Stable Isotope Dilution Mass Spectrometry. Journal of Agricultural and Food Chemistry, 2013, 61, 7028-7037. | 2.4 | 6 |
| 74 | Regioselective solvent-phase deuteration of polyphenolic compounds informs their identification by mass spectrometry. Analytical Biochemistry, 2014, 452, 76-85. | 1.1 | 6 |
| 75 | Seasonal changes in metabolic profiles of galls and leaves of Rhus chinensis using gas chromatography mass spectrometry and liquid chromatography quadrupole time-of-flight mass spectrometry. Journal of Plant Biology, 2014, 57, 127-135. | 0.9 | 5 |
| 76 | Novel NMR and MS Approaches to Metabolomics. Methods in Pharmacology and Toxicology, 2012, , 199-230. | 0.1 | 4 |
| 77 | Clarifying the role of maples in atypical myopathy. Equine Veterinary Journal, 2014, 46, 135-136. | 0.9 | 4 |
| 78 | Extraction, purification, methylation and GCâ€“MS analysis of short-chain carboxylic acids for metabolic flux analysis. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2016, 1028, 165-174. | 1.2 | 4 |
| 79 | Leaf Spray Mass Spectrometry: A Rapid Ambient Ionization Technique to Directly Assess Metabolites from Plant Tissues. Journal of Visualized Experiments, 2018, , . | 0.2 | 4 |
| 80 | Cultivation of native plants for seed and biomass yield. Agronomy Journal, 2020, 112, 1815-1827. | 0.9 | 4 |
| 81 | Novel genes expressed in the chick otocyst during development: Identification using differential display of RNA. International Journal of Developmental Neuroscience, 1997, 15, 585-594. | 0.7 | 3 |
| 82 | Qualitative and Quantitative Screening of Amino Acids in Plant Tissues. Methods in Molecular Biology, 2012, 918, 165-178. | 0.4 | 3 |
| 83 | Inhibition of Ophiognomonia clavigignenti-juglandacearum by Juglans Species Bark Extracts. Plant Disease, 2015, 99, 401-408. | 0.7 | 3 |
| 84 | Chapter 20 Metabolic Labeling Approaches for the Relative Quantification of Proteins. Comprehensive Analytical Chemistry, 2008, , 479-530. | 0.7 | 2 |
| 85 | High Enrichment [ 13 C]â€Labeling of Plants Grown Hydroponically from Seed to Seed in a Controlled 13 Câ€Carbon Dioxide Atmosphere Enclosure. Current Protocols in Plant Biology, 2018, 3, e20069. | 2.8 | 2 |
| 86 | Targeted Deuteration of Polyphenolics for Their Qualitative and Quantitative Metabolomic Analysis in Plant-Derived Extracts. Methods in Molecular Biology, 2014, 1083, 17-29. | 0.4 | 2 |