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# Joshua J. Coon

Professor of Biomolecular Chemistry and Chemistry  
University of Wisconsin-Madison

Thomas and Margaret Pyle Chair at the Morgridge Institute for Research

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## EDUCATION/TRAINING

INSTITUTION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Central Michigan University	B.S.	1994-1998	Chemistry
University of Florida	Ph.D.	1998-2002	Chemistry (WW Harrison)
University of Virginia	Postdoctoral	2003-2005	Chemistry (DF Hunt)

## PROFESSIONAL EXPERIENCE

2003 – 2005 NIH-NRSA Postdoctoral Fellow, University of Virginia  
2005 – 2009 Assistant Professor of Chemistry and Biomolecular Chemistry, UW-Madison  
2009 – 2012 Associate Professor of Chemistry and Biomolecular Chemistry, UW-Madison  
2012 – Present Professor of Biomolecular Chemistry and Chemistry, UW-Madison  
2015 – Present Director, Laboratory for Biomolecular Mass Spectrometry, UW-Madison  
2016 – Present Director, National Center for Quantitative Biology of Complex Systems (NIH Center)  
2017 – Present Thomas and Margaret Pyle Chair at the Morgridge Institute for Research

## PUBLICATIONS – citation count from Google Scholar on 19 November 2025

H-Index = 97

Total peer-reviewed publications = 399

Total citations = 38,248

Top-cited paper = 3,188

## HONORS

2003 Ruth L. Kirchstein Individual National Research Service Award (NIH-NRSA)  
2006 "Tomorrow's PI", *Genome Technology*  
2007 Research Award, *American Society of Mass Spectrometry*  
2007 **Beckman Young Investigator**  
2007 Eli Lilly and Company Young Investigator  
2008 NSF CAREER Award  
2009 **Ken Standing Award**, *University of Manitoba*  
2010 **Pittsburgh Conference Achievement Award**, *Society for Analytical Chemists of Pittsburgh*  
2010 Philip R. Certain Dean's Distinguished Faculty Award, *University of Wisconsin-Madison*  
2011 **Arthur F. Findeis Young Analytical Scientist Award**, *American Chemical Society*  
2012 **Biemann Medal**, *American Society of Mass Spectrometry*  
2014 H.I. Romnes Faculty Fellow, *University of Wisconsin-Madison*  
2017 Thomas and Margaret Pyle Chair, *Morgridge Institute for Research*  
2018 Ride Scholar, *The Ride University of Wisconsin-Madison*  
2018 F.C. Donders Chair, *Utrecht University*  
2018 **Discovery in Proteomic Sciences Award**, *Human Proteome Organization*  
2020 Kellett Mid-Career Award, *University of Wisconsin-Madison*  
2023 **Chemical Instrumentation Award**, *American Chemical Society*  
2024 **Distinguished Achievement in Proteomic Sciences**, *Human Proteome Organization*  
2025 **Donald F. Hunt Distinguished Contribution**, *US Human Proteome Organization*  
2025 Vilas Distinguished Achievement Professor, *University of Wisconsin-Madison*  
2026 **Outstanding Achievements in Mass Spectrometry**, *Eastern Analytical Symposium*

## EXTRAMURAL ACTIVITIES

2005 – Present Consultant, Thermo Fisher Mass Spectrometry Division  
2009 Consultant, Sciencetech Corporation  
2010 – 2013 Consultant, Promega Corporation

2013 – 2016 Consultant, Thermo Fisher Biochemical Division  
 2014 Advisory Board Member, UCLA External Proteomics  
 2017 – 2020 Editorial Advisory Board, *Molecular & Cellular Proteomics*  
 2017 – 2021 Board Member, US Human Proteome Organization  
 2017 – 2023 Consultant, Mayo Clinic Endocrinology, Diabetes and Metabolism  
 2017 – 2024 Scientific Advisory Board member, 908 Devices  
 2021 Golden Arrow Merger Corporation  
 2022 – 2023 External Advisory Board, Washington University Mass Spectrometry Center  
 2022 – Present Scientific Advisory Board Member, Seer  
 2022 – Present Editorial Advisory Board, *Analytical Chemistry*  
 2023 Expert Witness, Goodwin Proctor  
 2024 Consultant, VantAI  
 2024 – Present Founder, CeleramAb, Inc.  
 2025 – Present Expert Witness, Quinn and Emmanuel Trial Lawyers  
 2025 Expert Witness, Boulton Wade Tennant LLP

## PEER-REVIEWED PUBLICATIONS

### 2002

- 1) **Coon JJ**, McHale KJ, Harrison WW. *Atmospheric Pressure Laser Desorption/Chemical Ionization Mass Spectrometry: A New Ionization Method Based on Existing Themes*. Rapid Communications in Mass Spectrometry, **2002**, 16 (7): 681-685. 11921247. Citation count [89]
- 2) **Coon JJ**, Harrison WW. *Laser Desorption-Atmospheric Pressure Chemical Ionization Mass Spectrometry For The Analysis Of Peptides From Aqueous Solutions*. Analytical Chemistry, **2002**, 74 (21): 5600-5605. 12433094. Citation count [72]
- 3) **Coon JJ**, Steele HA, Laipis PJ, Harrison WW. *Laser Desorption-Atmospheric Pressure Chemical Ionization: A Novel Ion Source For The Direct Coupling Of Polyacrylamide Gel Electrophoresis To Mass Spectrometry*. Journal of Mass Spectrometry, **2002**, 37 (11): 1163-1167. 12447894. Citation count [32]

### 2003

- 4) **Coon JJ**, Steele HA, Laipis PJ, Harrison WW. *Direct Atmospheric Pressure Coupling Of Polyacrylamide Gel Electrophoresis To Mass Spectrometry For Rapid Protein Sequence Analysis*. Journal of Proteome Research, **2003**, 2 (6): 610-617. 14692454. Citation count [14]

### 2004

- 5) Yue G, Balchunas CJ, Jeffrey E, **Coon JJ**, Landers JP, Ferrance JP. *Phosphopeptide Enrichment on A Microchip Integrated With Mass Spectrometry*. Special Publication-Royal Society of Chemistry, **2004**, 297: 291-293. Citation count [1]
- 6) Syka JEP, **Coon JJ**, Schroeder MJ, Shabanowitz J, Hunt DF. *Peptide and Protein Sequence Analysis Using Electron Transfer Dissociation Mass Spectrometry*. Proceedings of the National Academy of Sciences of the United States of America, **2004**, 101 (26): 9528-9533. 470779. Citation count [3157]
- 7) Schroeder MJ, Shabanowitz J, Schwartz JC, Hunt DF, **Coon JJ**. *A Neutral Loss Activation Method For Improved Phosphopeptide Sequence Analysis By Quadrupole Ion Trap Mass Spectrometry*. Analytical Chemistry, **2004**, 76 (13): 3590-3598. 15228329. Citation count [454]
- 8) **Coon JJ**, Syka JEP, Schwartz JC, Shabanowitz J, Hunt DF. *Anion Dependence In The Partitioning Between Proton And Electron Transfer In Ion/Ion Reactions*. International Journal of Mass Spectrometry, **2004**, 236 (1): 33-42. Citation count [259]

### 2005

- 9) **Coon JJ**, Syka JEP, Shabanowitz J, Hunt DF. *Tandem Mass Spectrometry for Peptide And Protein Sequence Analysis*. Biotechniques, **2005**, 38 (4): 519-523. 15884666. Citation count [162]
- 10) **Coon JJ**, Shabanowitz J, Hunt DF, Syka JEP. *Electron Transfer Dissociation of Peptide Anions*. Journal

of the American Society for Mass Spectrometry, **2005**, 16 (6): 880-882. Citation count [298]

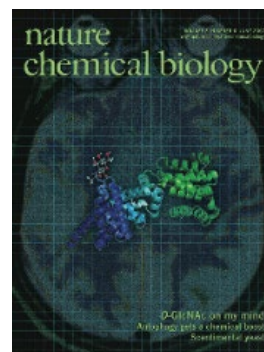
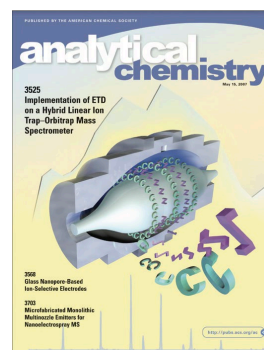
- 11) **Coon JJ**, Ueberheide B, Syka JEP, Dryhurst DD, Ausio J, Shabanowitz J, Hunt DF. *Protein Identification Using Sequential Ion/Ion Reactions and Tandem Mass Spectrometry*. Proceedings of the National Academy of Sciences of the United States of America, **2005**, 102 (27): 9463-9468. 1172258. Citation count [572]

## 2006

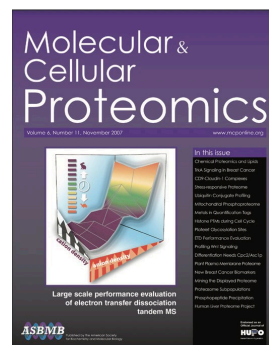
- 12) Yue GE, Roper MG, Balchunas C, Pulsipher A, **Coon JJ**, Shabanowitz J, Hunt DF, Landers JP, Ferrance JP. *Protein Digestion and Phosphopeptide Enrichment on A Glass Microchip*. Analytica Chimica Acta. **2006**, 564 (1): 116-122. 17723369. Citation count [42]
- 13) Good DM, **Coon JJ**. *Advancing Proteomics With Ion/Ion Chemistry*. Biotechniques, **2006**, 40 (6): 783-789. 16774122. Citation count [58]
- 14) Mikesch LM, Ueberheide B, Chi A, **Coon JJ**, Syka JEP, Shabanowitz J, Hunt DF. *The Utility Of ETD Mass Spectrometry In Proteomic Analysis*. Biochimica et Biophysica Acta, **2006**, 1764 (12): 1811-1822. 1853258. Citation count [698]

## 2007

- 15) Swaney DL, McAlister GC, Wirtala M, Schwartz JC, Syka JEP, **Coon JJ**. *Supplemental Activation Method For High Efficiency Electron Transfer Dissociation Of Doubly Protonated Peptide Precursors*. Analytical Chemistry, **2007**, 79 (2): 477-485. 2522365. Citation count [440]
- 16) Mischak H, Apweiler R, Banks RE, Conaway M, **Coon JJ**, Dominiczak A, Ehrich JHH, Fliser D, Girolami M, Hermjakob H, Hochstrasser D, Jankowskii J, Julian BA, Kolch W, Massy ZA, Neusuess C, Novak J, Peter K, Rossing K, Schanstra J, Semmes OJ, Theodorescu D, Thongboonkerd V, Weissinger EM, Van Eyk JE, Yamamoto T. *Clinical Proteomics: A Need To Define The Field And To Begin To Set Adequate Standards*. Proteomics Clinical Applications, **2007**, 1 (2): 148-156. 21136664. Citation count [364]
- 17) Chi AC, Huttenhower CA, Geer LY, **Coon JJ**, Syka JEP, Bai DL, Shabanowitz J, Burke DJ, Troyanskaya OG, Hunt DF. *Analysis Of Phosphorylation Sites On Proteins From Saccharo Myces Cerevisiae By Electron Transfer Dissociation (ETD) Mass Spectrometry*. Proceedings of the National Academy of Sciences, **2007**, 104 (7): 2193-2198. 1892997. Citation count [699]
- 18) McAlister GC, Phanstiel D, Good DM, Berggren WT, **Coon JJ**. *Implementation Of Electron Transfer Dissociation On A Hybrid Linear Ion Trap-Orbitrap Mass Spectrometer*. Analytical Chemistry, **2007**, 79 (10): 3525-3534. 2662514. Citation count [207] \*featured on the journal cover\*
- 19) Khidekel N, Ficarro SB, Clark PM, Bryan MC, Swaney DL, Rexach JE, Sun YE, **Coon JJ**, Peters EC, Hsieh-Wilson LC. *Probing the Dynamics Of O-GlcnaC Glycosylation In The Brain Using Quantitative Proteomics*. Nature Chemical Biology, **2007**, 3 (6): 339-348. 17496889. Citation count [403] \*featured on the journal cover\*
- 20) Williams DK, McAlister GC, Good DM, **Coon JJ**, Muddiman DC. *Dual Electropray Ion Source for Electron-Transfer Dissociation On A Hybrid Linear Ion Trap-Orbitrap Mass Spectrometer*. Analytical Chemistry, **2007**, 79 (20): 7916-7919. 2681229. Citation count [43]



- 21) Good DM, Thongboonkerd V, Novak J, Bascands JL, Schanstra J, **Coon JJ**, Dominiczak A, Mischak H. *Body Fluid Proteomics for Biomarker Discovery: Lessons From The Past Hold The Key To Success In The Future*. Journal of Proteome Research, **2007**, 6 (12): 4549-4555. 17970587. Citation count [315]
- 22) Good DM, Wirtala M, McAlister GC, **Coon JJ**. *Performance Characteristics of Electron Transfer Dissociation Mass Spectrometry*. Molecular & Cellular Proteomics, **2007**, 6 (11): 1942-1951. 17673454. Citation count [449] \*featured on the journal cover\*
- 23) Julian BA, Wittke S, Novak J, Good DM, **Coon JJ**, Kellmann M, Zürbig P, Schiffer E, Haubitz M, Moldoveanu Z, Calcatera SM, Wyatt RM, Sýkora J, Sladkova E, Hes O, Mischak H, McGuire BM. *Electrophoretic Methods For Analysis Of Urinary Polypeptides In Iga Associated Renal Diseases*. Electrophoresis, **2007**, 28 (23): 4469-4483. 18004714. Citation count [105]
- 24) Lecchi S, Nelson CJ, Allen KE, Swaney DL, Thompson KL, **Coon JJ**, Sussman MR, Slayman CW. *Tandem Phosphorylation of Ser-911 And Thr-912 At the C Terminus of Yeast Plasma-Membrane H+-Atpase Leads To Glucose-Dependent Activation*. Journal of Biological Chemistry, **2007**, 282 (49): 35471-35481.17932035. Citation count [151]



## 2008

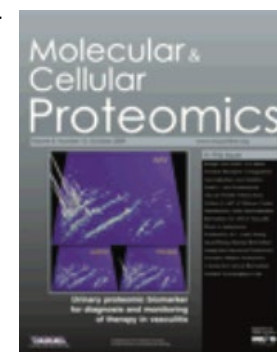
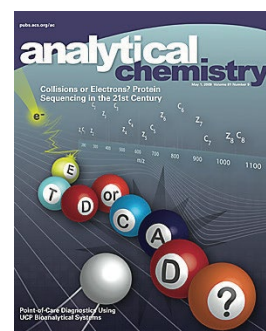
- 25) Zimmerli LU, Schiffer E, Zürbig P, Good DM, Kellmann M, Mouis L, Pitt AR, **Coon JJ**, Schmieler RE, Peter KH, Mischak H, Kolch W, Delles C, Dominiczak AF. *Urinary Proteomic Biomarkers in Coronary Artery Disease*. Molecular & Cellular Proteomics, **2008**, 7 (2): 290-298. 17951555. Citation count [270]
- 26) Phanstiel D, Brumbaugh J, Berggren WT, Conard K, Feng X, Levenstein ME, McAlister GC, Thomson JA, **Coon JJ**. *Mass Spectrometry Identifies and Quantifies 74 Unique Histone H4 Isoforms in Differentiating Human Embryonic Stem Cells*. Proceedings of the National Academy of Sciences, **2008**, 105 (11): 4093-4098. 2393763. Citation count [203]
- 27) Theodorescu D, Schiffer E, Bauer HW, Douwes F, Eichhorn F, Polley R, Schmidt T, Schofer W, Zurbig P, Good DM, **Coon JJ**, Mischak H. *Discovery and Validation of Urinary Biomarkers for Prostate Cancer*. Proteomics Clinical Applications, **2008**, 2 (4): 556-570. 2744126. Citation count [178]
- 28) Hubler SL, Jue A, Keith J, McAlister GC, Craciun G, **Coon JJ**. *Valence Parity Renders Z-Type Ions Chemically Distinct*. Journal of the American Chemical Society, **2008**, 130 (20): 6388-6394. 2681230. Citation count [32]
- 29) Rossing K, Mischak H, Dakna M, Zürbig P, Novak J, Julian BA, Good DM, **Coon JJ**, Tarnow L, Rossing P. *Urinary Proteomics in Diabetes And CKD*. Journal of the American Society of Nephrology, **2008**, 19 (7): 1283–1290. 2440301. Citation count [338]
- 30) **Coon JJ**, Zürbig P, Dakna M, Dominiczak AF, Decramer S, Fliser D, Frommberger M, Golovko I, Good DM, Herget-Rosenthal S, Jankowski J, Julian BA, Kellmann Kolch W, Massy Z, Novak J, Rossing K, Schanstra JP, Schiffer E, Theodorescu D, Vanholder R, Weissinger EM, Mischak H, Schmitt-Kopplin P. *CE-MS Analysis Of The Human Urinary Proteome For Biomarker Discovery And Disease Diagnostics*. Proteomics Clinical Applications, **2008**, 2 (7-8): 964-973. 2815342. Citation count [248]
- 31) McAlister GC, Berggren WT, Griep-Raming J, Horning S, Makarov A, Phanstiel D, Stafford GC, Swaney DL, Syka JEP, **Coon JJ**. *A Proteomics Grade Electron Transfer Dissociation-Enabled Hybrid Linear Ion Trap-Orbitrap Mass Spectrometer*. Journal of Proteome Research, **2008**, 7 (8): 3127-3136. 2601597. Citation count [165]
- 32) Phanstiel D, Zhang Y, Marto JA, **Coon JJ**. *Peptide and Protein Quantification Using Itraq With Electron Transfer Dissociation*. Journal of the American Society for Mass Spectrometry, **2008**, 19 (9): 1255-1262. 2562465. Citation count [76] \*featured on the journal cover\*
- 33) Brumbaugh JB, Phanstiel D, **Coon JJ**. *Unraveling the Histone's Potential: A Proteomics Perspective*. Epigenetics, **2008**, 3 (5): 254-257. 2662511. Citation count [14]
- 34) Frey BL, Krusemark CJ, Ledvina AR, McAlister GC, **Coon JJ**, Belshaw PJ, Smith LM. *Ion-Ion Reactions*

*With Fixed-Charge Modified Proteins To Produce Ions In A Single, Very High Charge State.* International Journal of Mass Spectrometry, **2008**, 276 (2-3): 136-143. 2598753. Citation count [27]

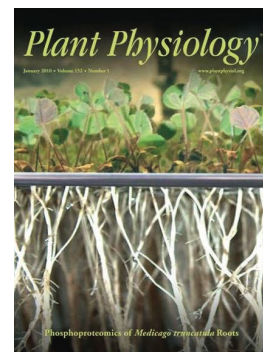
- 35) McAlister GC, Kiessel SEB, **Coon JJ.** *In Vacuo Formation of Peptide-Metal Coordination Complexes.* International Journal of Mass Spectrometry, **2008**, 276 (2-3): 149-152. 2677728. Citation count [3]
- 36) Swaney DL, McAlister GC, **Coon JJ.** *Decision Tree-Driven Tandem Mass Spectrometry for Shotgun Proteomics.* Nature Methods, **2008**, 5 (11): 959-964. 2597439. Citation count [387]

## 2009

- 37) Good DM, **Coon JJ.** *Mass Spectrometric Analysis of Body Fluids for Biomarker Discovery.* Neuroproteomics, **2009**, 566: 277-291. 20058178. Citation count [2]
- 38) Phanstiel D, Unwin R, McAlister GC, **Coon JJ.** *Peptide Quantification Using 8-Plex Isobaric Tags And Electron Transfer Dissociation Tandem Mass Spectrometry.* Analytical Chemistry, **2009**, 81 (4): 1693-1698. 2681235. Citation count [82]
- 39) Swaney DL, Wenger CD, Thomson JA, **Coon JJ.** *Human Embryonic Stem Cell Phosphoproteome Revealed by Electron Transfer Dissociation Tandem Mass Spectrometry.* Proceedings of the National Academy of Sciences, **2009**, 106 (4): 995-1000. 2633571. Citation count [227]
- 40) Zürbig P, Decramer S, Dakna M, Jantos J, Good DM, **Coon JJ**, Mischak H, Bascands JL, Schanstra JP. *The Human Urinary Proteome Reveals High Similarity Between Kidney Aging and Chronic Kidney Disease.* Proteomics, **2009**, 9 (8): 2108-2117. 2768386. Citation count [112]
- 41) **Coon JJ.** *Collisions or Electrons? Protein Sequence Analysis in the 21st Century.* Analytical Chemistry, **2009**, 81 (9): 3208-3215. 2714553. Citation count [176]  
\*featured on the journal cover\*
- 42) Sadygov RG, Good DM, Swaney DL, **Coon JJ.** *A New Probabilistic Database Search Algorithm For ETD Spectra.* Journal of Proteome Research, **2009**, 8 (6): 3198-3205. 2730765. Citation count [40]
- 43) McGivern JV, Swaney DL, **Coon JJ**, Sheets MD. *Toward Defining the Phosphoproteome Of Xenopus Laevis Embryos.* Developmental Dynamics, **2009**, 238 (6): 1433-1443. 2865133. Citation count [23]
- 44) Good DM, Wenger CD, McAlister GC, Bai DL, Hunt DF, **Coon JJ.** *Post-Acquisition ETD Spectral Processing for Increased Peptide Identifications.* Journal of the American Society for Mass Spectrometry, **2009**, 20 (8): 1435-1440. 2716440. Citation count [78]
- 45) Pekar Second T, Blethrow JD, Schwartz JC, Merrihew GE, MacCoss MJ, Swaney DL, Russell JD, **Coon JJ**, Zabrouskov V. *Dual-Pressure Linear Ion Trap Mass Spectrometer Improving the Analysis of Complex Protein Mixtures.* Analytical Chemistry, **2009**, 81 (18): 7757-7765. 2810160. Citation count [203]
- 46) Mischak H, **Coon JJ**, Novak J, Weissinger EM, Schanstra J, Dominiczak AF. *Capillary Electrophoresis–Mass Spectrometry as a Powerful Tool in Biomarker Discovery And Clinical Diagnosis: An Update of Recent Developments.* Mass Spectrometry Reviews, **2009**, 28 (5): 703-724. 2720435. Citation count [230]
- 47) Duellman SJ, Thompson KL, **Coon JJ**, Burgess RR. *Phosphorylation Sites Of Epstein-Barr Virus EBNA1 Regulate Its Function.* Journal of General Virology, **2009**, 90 (9): 2251-2259. 2786306. Citation count [39]
- 48) Gardner MW, Smith SI, Ledvina AR, Madsen JA, **Coon JJ**, Schwartz JC, Stafford GC Jr, Brodbelt JS. *Infrared Multiphoton Dissociation of Peptide Cations in A Dual Pressure Linear Ion Trap Mass Spectrometer.* Analytical Chemistry, **2009**, 81 (19): 8109-8118. 2774747. Citation count [52]
- 49) Madsen JA, Gardner MW, Smith SI, Ledvina AR, **Coon JJ**, Schwartz JC, Stafford GC Jr, Brodbelt JS. *Top-Down Protein Fragmentation by Infrared Multiphoton Dissociation in A Dual Pressure Linear Ion Trap.* Analytical Chemistry, **2009**, 81 (21): 8677-8686. 19785447. Citation count [42]

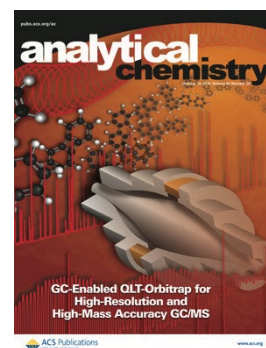


- 50) Haubitz M, Good DM, Woywodt A, Haller H, Rupprecht H, Theodorescu D, Dakna M, **Coon JJ**, Mischak H. *Identification and Validation of Urinary Biomarkers for Differential Diagnosis and Evaluation of Therapeutic Intervention in Anti-neutrophil Cytoplasmic Antibody-associated Vasculitis*. Molecular & Cellular Proteomics, **2009**, 8 (10): 2296-2307. 2758757. Citation count [127] \*featured on the journal cover\*
- 51) Ledvina AR, McAlister GC, Gardener MW, Smith SI, Madsen JA, Schwartz JC, Stafford GC Jr, Syka JEP, Brodbelt JS, **Coon JJ**. *Infrared Photoactivation Reduces Peptide Folding and Hydrogen-Atom Migration Following ETD Tandem Mass Spectrometry*. Angewandte Chemie, **2009**, 121: 8526-8528. 2788484. Citation count [119]

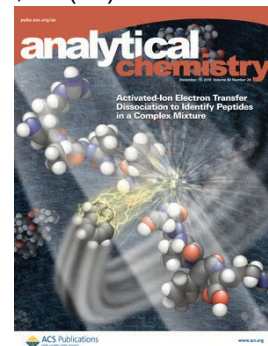


## 2010

- 52) Grimsrud PA, den Os D, Wenger CD, Swaney DL, Schwartz D, Sussman MR, Ané JM, **Coon JJ**. *Large-Scale Phosphoprotein Analysis in Medicago Truncatula Roots Provides Insight Into In Vivo Kinase Activity in Legumes*. Plant Physiology, **2010**, 152 (1): 19-28. 2799343. Citation count [148] \*featured on the journal cover\*
- 53) McAlister GC, Phanstiel DH, Wenger CD, Lee MV, **Coon JJ**. *Analysis of Tandem Mass Spectra By FTMS For Improved Large-Scale Proteomics With Superior Protein Quantification*. Analytical Chemistry, **2010**, 82 (1): 316-322. 2800853. Citation count [59]
- 54) Good DM, Wenger CD, **Coon JJ**. *The Effect of Interfering Ions On Search Algorithm Performance For Electron-Transfer Dissociation Data*. Proteomics, **2010**, 10 (1): 164-167. 2801774. Citation count [46]
- 55) Grimsrud PA, Swaney DL, Wenger CD, Beauchene NA, **Coon JJ**. *Phosphoproteomics For the Masses*. ACS Chemical Biology, **2010**, 5 (1): 105-119. 2810156. Citation count [216]
- 56) Swaney DL, Wenger CD, **Coon JJ**. *Value Of Using Multiple Proteases For Large-Scale Mass Spectrometry-Based Proteomics*. Journal of Proteome Research, **2010**, 9 (3): 1323-1329. 2833215. Citation count [569]
- 57) Wenger CD, McAlister GC, Xia Q, **Coon JJ**. *Sub-part-per-million Precursor and Product Mass Accuracy for High-throughput Proteomics on an Electron Transfer Dissociation-enabled (ETD) Orbitrap Mass Spectrometer*. Molecular & Cellular Proteomics, **2010**, 9 (5): 754-763. 2871411. Citation count [40]
- 58) Mischak H, Allmaier G, Apweiler R, Attwood T, Baumann M, Benigni A, Bennett SE, Bischoff R, Bongcam-Rudloff E, Capasso G, **Coon JJ**, D'Haese P, Dominiczak AF, Dakna M, Dihazi H, Ehrich JH, Fernandez-Llama P, Filser D, Frokiaer J, Garin J, Girolami M, Hancock WS, Haubitz M, Hochstrasser D, Holman RR, Ioannidis JPA, Jankowski J, Julian BA, Klein JB, Kolch W, Luider T, Massy Z, Mattes WB, Molina F, Monsarrat B, Novak J, Peter K, Rossing P, Sánchez-Carbayo M, Schanstra JP, Semmes OJ, Spasovski G, Theodorescu D, Thongboonkerd V, Vanholder R, Veenstra TD, Weissinger E, Yamamoto T, Vlahou A. *Recommendations for Biomarker Identification and Qualification in Clinical Proteomics*. Science Translational Medicine, **2010**, 2 (46): 1-6. 2073968. Citation count [347]
- 59) Peterson AC, McAlister GC, Quarmby S, Griep-Raming J, **Coon JJ**. *Development and Characterization of a GC-Enabled QLT-Orbitrap for High Resolution and High Mass Accuracy GC/MS*. Analytical Chemistry, **2010**, 82 (20): 8618-8628. 20815337. Citation count [68] \*featured on the journal cover\*



- 60) Good DM, Zürgbig P, Argiles A, Bauer HW, Behrens G, **Coon JJ**, Dakna M, Decramer S, Delles C, Dominiczak AF, Ehrich JH, Eitner F, Fliser D, Frommberger M, Ganser A, Girolami MA, Golovko I, Gwinner W, Haubitz M, Herget-Rosenthal S, Jankowski J, Jahn H, Jerums G, Julian BA, Kellmann M, Kliem V, Kolch W, Krolewski A, Luppi M, Massy Z, Melter M, Neusüss C, Novak J, Peter K, Rossing K, Rupprecht H, Schanstra JP, Schiffer E, Stolzenburg J, Tarnow L, Theodorescu D, Thongboonkerd V, Vanholder R, Weissinger EM, Mischak H, Schmitt-Kopplin P. *Naturally Occurring Human Urinary Peptides for Use in Diagnosis of Chronic Kidney Disease*. Molecular & Cellular Proteomics, **2010**, 9 (11): 2424-2437. 2984241. Citation count [586]
- 61) Ledvina AR, Beauchene NA, McAlister GC, Syka JEP, Schwartz JC, Griep-Raming J, Westphall MS, **Coon JJ**. *Activated-Ion Electron Transfer Dissociation Improves the Ability of Electron Transfer Dissociation to Identify Peptides in a Complex Mixture*. Analytical Chemistry, **2010**, 82 (24): 10068–10074. 3005528. Citation count [81] \*featured on the journal cover\*
- 62) Xia Q, Good DM, Wenger CD, **Coon JJ**. *Intellinsity: A Tool for Visualization and Analysis Of Liquid Chromatography/Tandem Mass Spectrometry Sampling Events*. Rapid Communications in Mass Spectrometry, **2010**, 24 (21): 3217-3218. 20941771. Citation count [0]



## 2011

- 63) Lee MV, Topper SA, Hubler SL, Hose J, Wenger CD, **Coon JJ**, Gasch A. *A Dynamic Model Of Proteome Changes Reveals New Roles For Transcript Alteration In Yeast*. Molecular Systems Biology, **2011**, 7: 514. 3159980. Citation count [340]
- 64) Xia Q, Lee MV, Rose CM, Marsh AJ, Hubler SL, Wenger CW, **Coon JJ**. *Characterization and Diagnostic Value of Amino Acid Side Chain Neutral Losses Following Electron-Transfer Dissociation*. Journal of the American Society for Mass Spectrometry, **2011**, 22 (2): 255–264. 3074364. Citation count [47]
- 65) Russell JD, Hilger RT, Lador DT, Tervo MA, Scalf M, Shortreed MR, **Coon JJ**, Smith LM. *Parallel Detection of Intrinsic Fluorescence from Peptides and Proteins for Quantitation during Mass Spectrometric Analysis*. Analytical Chemistry, **2011**, 83 (6): 2187–2193. 3056920. Citation count [22]
- 66) Wenger CD, Phanstiel DH, Lee MV, Bailey DJ, **Coon JJ**. *COMPASS: A Suite of Pre- And Post-Search Proteomics Software Tools for OMSSA*. Proteomics, **2011**, 11 (6): 1064–1074. 3049964. Citation count [188]
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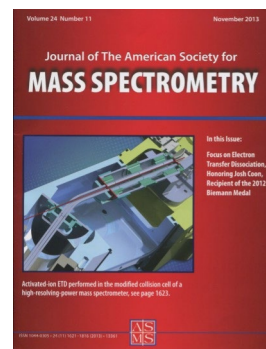
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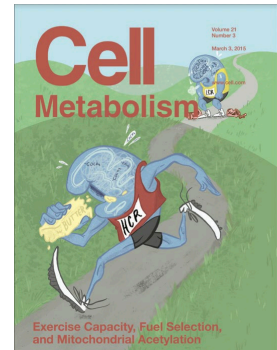
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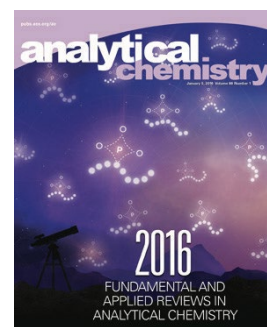


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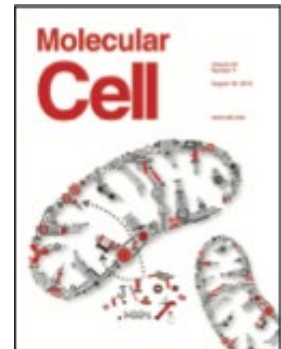
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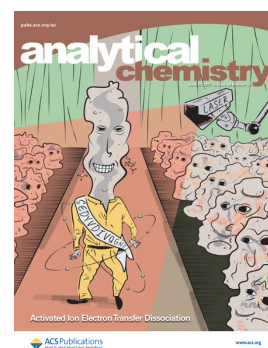
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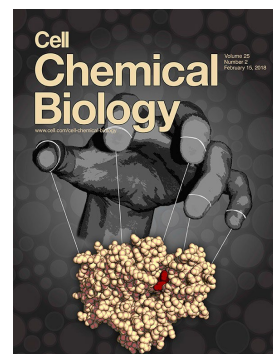
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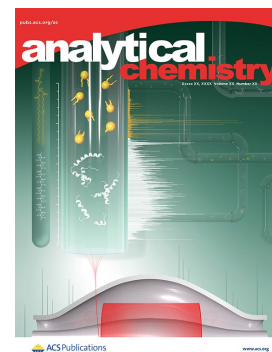
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- 388) Davidson JW, Jain R, Kizzar T, Geoghegan G, Nesbitt DJ, Cavanagh A, Abe A, Nyame K, Hunger A, Chao X, James I, Walesewicz H, Baldwin DA, Wade G, Michorowska S, Verma R, Schueler K, Hinkovska-Galcheva V, Shishkova E, Ding W-X, **Coon JJ**, Shayman JA, Abu-Remaih M, Simcox JA. *Hepatic lipid remodeling in cold exposure uncovers direct regulation of bis (monoacylglycerol) phosphate lipids by phospholipase A2 group XV*. *Cell Metabolism*. **2025**, 37(6); 1413-1425. Citation count [4]
- 389) Sullivan OM, Nesbitt DJ, Schaack GA, Feltman EM, Nipper T, Kongsomros S, Reed SG, Nelson SL, King CR, Shishkova E, **Coon JJ**, Mehle A. *IFIT3 RNA-binding activity promotes influenza A virus infection and translation efficiency*. *Journal of Virology*. **2025**, e00286-25. Citation count [2]
- 390) Sharma S, Prathigudupu V, Cable C, Serrano LR, Nerella S, Chen A, Valenzuela CL, Tsukui T, Kim J, Willenbring H, Mattis AN, Zaro B, **Coon JJ**, Beresis R, Degrado WH, Christenson S, Jo H, Chen JY. *Resolving Fibrosis by Stimulating HSC-Dependent Extracellular Matrix Remodeling*. *Science Translational Medicine*. **2025** 17 (813), 9470
- 391) Aranguiz K, Horianopoulos LC, Elkin L, Aba KS, Jordahl D, Overmyer KA, Wrobel RL, **Coon JJ**, Shiu SH, Rokas A, Hittinger CT. *Machine learning reveals genes impacting oxidative stress resistance across yeasts*. *Nature Communications*. **2025**, 16 (1), 5866. Citation count [1]
- 392) Pataky MW, Heppelmann CJ, Sevits KJ, Asokan AK, Kumar AP, Klaus KA, Dasari S, Kunz HE, Strub MD, Robinson MM, Coon JJ, Lanza IR, Adams CM, Nair KR. *Aerobic and resistance exercise-regulated phosphoproteome and acetylproteome modifications in human skeletal muscle*. *Nature Communications*. **2025**, 16 (1), 5700. Citation count [2]
- 393) Lancaster NM, Chen LY, Zhao B, Anderson BJ, Probasco MD, Demichev V, Polasky DA, Nesvizhskii AI, Overmyer KA, Quarmby ST, **Coon JJ**. *SynchroSep-MS: Parallel LC Separations for Multiplexed Proteomics*. *Journal of the American Society for Mass Spectrometry*. **2025**, 36 (9), 1979-1987. Citation count [0]
- 394) Mertz KL, Serrano LR, Sinitcyn P, **Coon JJ**. *Dynamic Quadrupole Selection to Associate Precursor Masses with MS/MS Products in Data-Independent Acquisition*. *Journal of the American Society for Mass Spectrometry*. **2025**, 36 (9), 1869-1976. Citation count [0]
- 395) Summers MF, Haubold MK, Morgenstern M, Shepherd P, Larsen CIS, Bartz AE, Thirumoorthy G, Kirchdoerfer RN, **Coon JJ**, Mehta KP, Majumder K. *Adeno-Associated Virus 2 (AAV2)-induced RPA exhaustion generates cellular DNA damage and restricts viral gene expression*. *Plos Pathogens*. **2025**, 21 (8), e1013142. Citation count [0]
- 396) Sharma S, Prathigudupu V, Cable C, Serrano LR, Nerella S, Chen A, Hassan G, Lakins J, Valenzuela CL, Tsukui T, Ramamoorthim R, Kim JJ, Willenbring H, Mattis AN, Volk RF, Zaro BW, **Coon JJ**, Beresis R, DeGrado WF, Weaver VM, Christenson SA, Jo H, Chen JY. *Resolving fibrosis by stimulating HSC-dependent extracellular matrix degradation*. *Science Translational Medicine*. **2025**. 17 (813) eads9470. Citation count [0]
- 397) Vazquez JR, Trujillo E, Wenger Z, Botts M, **Coon JJ**, Amador-Noguez D. *Physiological and metabolic responses of *Zymomonas mobilis* to lignocellulosic hydrolysate*. *Microbiology Spectrum*. **2025**. 13 (10), e00610-25. Citation count [0]

- 398) Duxbury KR, Zhang L, Muelhbauer LK, Hayes M, **Coon JJ**, Padi M, Romero-Masters JC. *MmuPV1 E7 promotes phenotypes associated with "high-risk" HPV infection in mouse keratinocytes*. Journal of Virology. **2025**. 10/30, e01097-25. Citation count [0]
- 399) Von Bank H, Geoghegan G, Daniel Nesbitt D, James I, Kotulkar, M Jain R, Shishkova S, Hurtado-Thiele M, Kirsch C, Chevalier A, Scheuler K, Attie A, Keller MP, Apte U, **Coon JJ**, Simcox J. *HNF4a regulates acyl chain remodeling and ether lipid accumulation in hepatic steatosis*. BioRxiv. **2025**, in press.

## INVITED SEMINARS AND CONFERENCE LECTURES

- 2004** Central Michigan University; Mt. Pleasant, MI – Dept. of Chemistry – March
- 2005** Dartmouth College; Hanover, NH – Norris Cotton Cancer Center – November  
 Dartmouth College; Hanover, NH – Dept. of Chemistry – January  
 Indiana University; Bloomington, IN – Dept. of Chemistry – November  
 University of Wisconsin; Madison, WI – Dept. of Chemistry – November  
 University of Chicago; Chicago, IL – Institute for Biophysical Dynamics – January  
 University of Wisconsin; Madison, WI – Dept. of Pathology – August  
 University of Wisconsin; Madison, WI – Dept. of Biomolecular Chemistry – September  
 Thermo Electron Proteomics Seminar Series; St. Louis, MO – October
- 2006** Advion Biosciences User Forum; Seattle, WA – June  
 Advion Biosciences Webinar; the Ether – June  
 Thermo Electron User Forum; Prague, Czech Republic – August  
 Thermo Electron Proteomics Seminar Series; Indianapolis, IN – September  
 Madison Mass Spectrometry Discussion Group; Madison, WI – October  
 Midwest Mass Spectrometry Discussion Group; St. Louis, MO – October
- 2007** Northern Illinois University; DeKalb, IL – Dept. of Chemistry – January  
 WiCell Seminar Series; Madison, WI – January  
 Genome Center of Wisconsin Technology Forum; Madison, WI – March  
 \*Thermo Fisher Proteomics Seminar Series; Chicago, IL – April  
 Thermo Fisher Proteomics Seminar Series; Cincinnati, OH – April  
 \*Thermo Fisher Proteomics Seminar Series; Pittsburgh, PA – April  
 Human Proteomics Symposium; Madison, WI – June  
 Advion Biosciences User Forum; Indianapolis, IN – June  
 Thermo Fisher User Forum; Indianapolis, IN – June  
 ASMS Ion Trap Interest Group Speaker; Indianapolis, IN – June  
 ASMS Fourier Transform MS Interest Group Speaker; Indianapolis, IN – June  
 Chicago Biomedical Consortium Proteomics and Informatics Workshop; Chicago, IL – August  
 University of Alabama; Birmingham, AL – Dept. of Microbiology – October  
 Heartland Mass Spectrometry Workshop – Osage Beach, MO – October  
 Johns Hopkins University; Baltimore, MD – Dept. of Biological Chemistry – November  
 Baltimore-Washington Mass Spectrometry Discussion Group – November  
 Medical College of Wisconsin, Milwaukee, WI – Dept. of Biochemistry – November  
 \*Thermo Scientific Proteomic Seminar Series; Boston, MA – December
- 2008** University of California Los Angeles: Los Angeles, CA – Dept. of Biochemistry – January  
 University of Texas – San Antonio; San Antonio, TX – Dept. of Biochemistry – January  
 University of Texas Health Science Center, San Antonio, TX – Dept. of Biochemistry January  
 Texas Tech University; Lubbock, TX – Dept. of Chemistry – January  
 Institute for Systems Biology; Seattle, WA – February  
 University of Wisconsin; Madison, WI – Dept. of Chemistry – February  
 Plenary Lecturer, Thermo Scientific User Forum at the ASMS meeting; Denver, CO – June  
 University of Washington; Seattle, WA – Dept. of Anesthesiology – June  
 University of Washington; Seattle, WA – Dept. of Genome Sciences – September  
 Eli Lilly and Company; Indianapolis, IN – October  
 \*Thermo Scientific Proteomics Seminar Series; Europe – October-November

Montreal Mass Spectrometry Discussion Group; Montreal, Canada – December  
University of Montreal; Montreal, Canada – Dept. of Chemistry – December

- 2009** University of Florida; Gainesville, FL – Dept. of Chemistry – February  
NIH Proteomics Interest Group; Bethesda, MD – February  
Genome Center of Wisconsin; Madison, WI – February  
Children’s Hospital Boston, Harvard Medical School; Boston, MA – March  
7<sup>th</sup> Annual North American FT MS Conference; Key West, FL – April  
University of Wisconsin; Madison, WI – Dept. of Biomolecular Chemistry – May  
University of Wisconsin; Madison, WI – Dept. of Chemistry – May  
Academia Sinica; Taipei, Taiwan – August  
Chang Gung University; Taipei, Taiwan – August  
Boston Mass Spectrometry Discussion Group; Boston, MA – October  
\*Thermo Scientific Proteomics Seminar Series; Research Triangle Park, NC – November  
\*Thermo Scientific Proteomics Seminar Series; Gaithersburg, MD – November  
University of Illinois; Urbana, IL – Dept. of Chemistry – November  
Grinnell College; Grinnell, IA – Dept. of Chemistry – November
- 2010** California Institute of Technology; Pasadena, CA – Dept. of Biology – February  
\*ASMS Ion Trap Interest Group; Salt Lake City, UT – May  
\*ASMS Protein Quantitation Workshop; Salt Lake City, UT – May  
University of Illinois; Chicago, IL – August  
Chicago Biomedical Consortium; Chicago, IL – August  
University of Texas; Austin, TX – Depts. of Chemistry and Biochemistry – September  
Society for Analytical Chemists of Pittsburgh; Pittsburgh, PA – September  
Indiana University; Bloomington, IN – Dept. of Chemistry – November
- 2011** University of Tennessee; Knoxville, TN – January  
University of North Carolina; Chapel Hill, NC – Dept. of Chemistry – April  
Glaxo-Smith-Kline Pharmaceuticals; Raleigh, NC – April  
Triangle Area Mass Spectrometry Discussion Group; Raleigh, NC – April  
\*Thermo Scientific Symposium on POPs Analysis; Niagara-on-the-Lake, Ontario, CA – May  
University of California; San Francisco, CA – Dept. of Pharmaceutical Chemistry – May  
University of Texas; Austin, TX – Depts. of Chemistry and Biochemistry – July  
Wisconsin Human Proteomics Symposium; Madison, WI – August  
University of Michigan; Ann Arbor, MI – Dept. of Chemistry – September  
NIH Common Fund Workshop 2011; Bethesda, MD – September  
University of Notre Dame; South Bend, IN – Dept. of Chemistry – October  
4<sup>th</sup> Workshop on Human Embryonic Stem Cell Research; Bethesda, MD – October  
ACS Regional Symposium; St. Louis, MO – October  
University of Georgia; Athens, GA – Dept. of Chemistry – November
- 2012** Florida State University; Tallahassee, FL – January  
Uppcon; Charleston, SC – February  
US HUPO; San Francisco, CA – March  
Pittcon; Orlando, FL – March  
Institute of Molecular Biotechnology Practical Proteomics Workshop; Vienna, Austria – August  
Midwestern Universities Analytical Chemistry Conference; Madison, WI – September  
19<sup>th</sup> International Mass Spectrometry Conference; Kyoto, Japan – September  
Delaware Valley Mass Spectrometry Discussion Group; Philadelphia, PA – October  
ASMS Fall Workshop on Mass Spectrometry; Boston, MA – November
- 2013** Colorado Biological Mass Spectrometry Society; Denver, CO – January  
Progress Meeting of the Netherlands Proteomics Centre; Utrecht, Netherlands – February  
Chicago Mass Spectrometry Discussion Group; Chicago, IL – April  
University of Wisconsin; Madison, WI – Dept. of Chemistry - September  
\*Thermo Scientific User’s Meeting; Somerset, NJ – October  
Thermo Scientific User’s Meeting; Boston, MA – October  
St. Olaf College; Northfield, MN – Dept. of Chemistry – November

- 2014** Washington University – Dept. of Chemistry; St. Louis, MO – February  
 Midwest Mass Spectrometry Discussion Group; St. Louis, MO – February  
 Massachusetts General Hospital/Harvard Medical School; Boston, MA – March  
 \*FT-MS User Meeting at ASMS; Baltimore, MD - June  
 ASMS Short Course; Baltimore, MD – June  
 Abbvie; North Chicago, IL - August  
 11<sup>th</sup> International Symposium on MS in Health and Life Sciences; San Francisco, CA - August  
 Thermo Scientific User’s Meeting; Bethesda, MD – November
- 2015** \*12<sup>th</sup> Uppsala Conference on ECD and ETD; Lake Arrowhead, CA - March  
 Keystone Symposia – The Human Proteome – Stockholm, SE - April  
 \*10<sup>th</sup> North American FT-MS Conference; Key West, FL - April  
 McArdle 75<sup>th</sup> Anniversary Symposium on Cancer; Madison, WI – May  
 Michigan Mass Spectrometry Discussion Group; Detroit, MI - May  
 Thermo Scientific User’s Meeting; St. Louis, MO – June  
 Chicago Biomedical Consortium; Chicago, IL – August  
 Wisconsin Human Proteomics Symposium; Madison, WI – August  
 \*NIH Glycosciences Common Fund Workshop 2016; Bethesda, MD – August  
 University of Wisconsin Metabolism Workshop; Madison, WI - September  
 \*Thermo Scientific Northeast User’s Meeting; Somerset, NJ – October  
 Thermo Scientific Northeast User’s Meeting; Boston, MA – October  
 WID Systems Biology Seminar Series; Madison, WI - November  
 Human Quantitative Dynamics Workshop – Bethesda, MD - December
- 2016** Association for Biomedical Research Facilities (ABRF) 2016; Ft. Lauderdale, FL - February  
 HPLC 2016 Symposium; San Francisco, CA – June  
 Thermo Fisher Scientific; San Jose, CA - August  
 \*NIH Glycosciences Common Fund Workshop 2016; Bethesda, MD – August  
 UW Integrated Program in Biochemistry; Madison, WI - September  
 Dana-Farber Cancer Institute; Boston, MA - September  
 Cambridge Cancer Proteomics Meeting; Cambridge, UK - October
- 2017** Keystone Symposia – Omics Strategies to Study the Proteome – Breckenridge, CO – January  
 US Human Proteome Organization; San Diego, CA – March  
 Keynote Speaker, 11<sup>th</sup> European Proteomics Summer School; South Tirol, Italy – August  
 12<sup>th</sup> International Symposium on MS in Health and Life Sciences; San Francisco, CA –August  
 NIH Glycosciences Common Fund Workshop 2017; Bethesda, MD – August  
 Michigan State University; Lansing, MI – Department of Chemistry – September  
 Thermo Scientific User’s Meeting; Bethesda, MD – October  
 6<sup>th</sup> Annual Mayo Clinic Individualizing Medicine Conference; Rochester, MN – October
- 2018** Pittcon; Orlando, FL – February  
 International Isotope Symposium; Prague, Czech Republic – June  
 Keynote Speaker, 10<sup>th</sup> Summer School in Computational Proteomics; Barcelona, Spain – July  
 9<sup>th</sup> EMBL Conference, From Functional Genomics to Systems Biology; Heidelberg, Germany – November
- 2019** QBI Mass Spectrometry Symposium, New Technology for Proteomics; University of California, San Francisco – February  
 HUPO 2019, Capturing Site-Specific Heterogeneity with Large-Scale N-Glycoproteome Analysis; Bethesda, Maryland – March  
 Novo Nordisk Foundation Center for Protein Research – April  
 Keystone Symposia on Proteomics and its Application to Translational and Precision Medicine, Comprehensive Tissue Proteomics; Stockholm, Sweden – April  
 Wisconsin-Madison Genomics Seminar Series – October  
 Northwestern University, Evanston IL – Department of Biochemistry and Molecular Genetics Retreat  
 Keynote Speaker – October  
 Washington University; St. Louis, MO – Department of Cell Biology and Physiology – October

- Princeton University; Princeton NJ – Guest speaker for QCB Seminar Series – November
- 2020** University of North Carolina, Chapel Hill, NC –Analytical Chemistry Seminar Series – February  
 Duke University; Durham, NC – Molecular Physiology Institute – February  
 University of Florida, Gainesville, FL –Analytical Chemistry Seminar – February  
 Purdue University, West Lafayette, IN – Analytical Seminar – April  
 Merck Vaccine Analytical Research & Development group, West Point, PA – October  
 UW-Madison Food Research Institute, Madison, WI – November  
 Mass Spectrometry & Advances in the Clinical Lab – November  
 Cornell University Division of Nutritional Sciences, Ithaca, NY – December
- 2021** Eli Lilly Seminar, Peptides and Oligonucleotides, New Mass Spectrometry Technology for Protein and RNA Sequencing – May  
 \*Nebraska Center for Integrated Biomolecular Communication, University of Nebraska-Lincoln, Argonaut Software – May (Brademan)  
 Max Quant Summer School – June  
 Thermo Fisher Scientific Innovation Summit, Advancing Lipidomics with Intelligent Data Acquisition Strategies – June  
 Cambridge Isotope Laboratories Isotope Days – June  
 British Society for Proteome Research Interact 2021, New Mass Spectrometry Technology for Proteome Analysis, United Kingdom – July  
 ASMS, Cryogenic Soft Landing Native Protein Complexes – November  
 Stable Isotopes in Mass Spectrometry 'Omics Webinar Series – December
- 2022** Frontiers in Native MS and Single Molecule Imaging, Oxford, UK – August  
 University of California, Irvine, CA – Department of Molecular Biology and Biochemistry – October  
 Washington University, St. Louis, MO – Department of Biochemistry – November  
 National Center for Protein Sciences, Webinar Series, Beijing – November  
 Texas A&M, College Station, TX – Frontiers in Chemistry Lecture Series – November
- 2023** ASMS Sanibel Conference, St. Petersburg, FL – January  
 Annual Conference of US HUPO, Chicago, IL – March  
 Advancing Mass Spectrometry for Biophysics and Structural Biology, Austin, TX – July  
 American Chemical Society Conference – August  
 University of Colorado Seminar, Boulder – August  
 Frontiers in Native MS and Single Molecule Imaging, Madison, WI – October  
 Single Cell Proteomics and High Resolution Biomolecules Imaging Mass Spectrometry in AD/ADRD – October  
 Nature Webcast—Highlighting phosphoproteomics on the Orbitrap Astral MS – December
- 2024** NIH Seminar, Washington DC – February  
 Rapid Protein Mapping without Chromatography for Lilly – March  
 MS SME Meeting, New Technology for Rapid Peptide Mapping (with Lloyd Smith) – April  
 Protein Metrics North America User Group Meeting – April  
 Great Lakes Bioenergy Research Center Annual Retreat – May  
 RISE (STEM Internship for High School Students) – July  
 HPLC Denver, CO - July  
 Lab Meeting of Dr. Brian Fox – July  
 Wisconsin Human Proteome Symposium – July  
 Keynote speaker, CASSS Mass Spectrometry Symposium, Washington DC – September  
 Protein Society MS + M webinar – October  
 Thermo Fisher Users Group – October  
 Morgridge Institute for Research Annual Retreat – October  
 NIA workshop on CryoEM and Protein Polymorphism, Washington DC – October  
 HUPO World Congress, Dresden, Germany – October  
 XIII Proteomics Virtual Workshop – November  
 NAM Consortium – December
- 2025** US HUPO, Philadelphia PA – February

PittConn, Boston MA – February  
Vanderbilt University Seminar – April  
American Society of Mass Spectrometry, Baltimore MD – June  
Washington University, St. Louis - July  
Frontiers in Native MS and Single Molecule Imaging, Utrecht Netherlands – October  
University of Utah – October  
Brigham Young University – October  
Mayo Clinic (Rochester) – October

**2026** Structures, Energetics and Reaction Dynamics of Gaseous Ions Gordon Research Conference – February  
University of California-Los Angeles - October

\*denotes lectures given by my students/other lab members

## US PATENTS & TRADEMARKS

- (1) **Coon JJ**, Harrison WW. *Methods and Devices for Laser Desorption Chemical Ionization*. W.O. Patent 2,004,030,024 (2004); U.S. Patent 6,838,663 (**2005**).
- (2) **Coon JJ**. *Method for Coupling Laser Desorption to Ion Trap Mass Spectrometers*. U.S. Patent 6,878,933 (**2005**).
- (3) Hunt DF, **Coon JJ**, Syka JEP, Marto JA. *Electron Transfer Dissociation for Biopolymer Sequence Mass Spectrometric Analysis*. W.O. Patent 2,005,090,978 (2005); U.S. Patent 7,534,622 (**2009**); E.P. Patent 1,723,416 (2010).
- (4) Hunt JF, **Coon JJ**, Syka JEP. *Simultaneous Sequence Analysis of Amino- and Carboxy-Termini*. W.O. Patent 2,006,042,187 (2006); U.S. Patent 7,749,769 (**2010**).
- (5) Schwartz JC, Syka JEP, Huhmer A, **Coon JJ**. *Data-Dependent Selection of Dissociation Type In a Mass Spectrometer*. E.P. Patent 2,062,284 (2007); W.O. Patent 2,008,025,014 (2008); U.S. Patent 8,168,943 (**2012**).
- (6) Smith LM, Shortreed M, Frey B, Phillips MF, **Coon JJ**, Lamos SM, Krusemark CJ, Belshaw PJ, Patel M, Kelleher NL, Jue A. *Ionizable Isotopic Labeling Reagents for Relative Quantification By Mass Spectrometry*. W.O. Patent 2,007,109,292 (2007); U.S. Patent 7,982,070 (**2011**).
- (7) **Coon JJ**, Craciun G, Hubler S. *Methods for Processing Tandem Mass Spectral Data for Protein Sequence Analysis*. W.O. Patent 2,009,073,505 (**2009**).
- (8) Smith LM, Shortreed M, Frey B, Krusemark C, Jue A, Lamos S, Belshaw P, Kelleher NL, **Coon JJ**. *Labeling Peptides with Tertiary Amines and Other Basic Functional Groups for Improved Mass Spectrometric Analysis*. U.S. Patent 7,982,070 (**2011**).
- (9) Russell JD, **Coon JJ**, Hilger R, Smith LM, Lador DT, Shortreed M, Scalf M. *Integrated Electrospray Ionization Emitter and Detection Cell for Parallel Measurements by Fluorescence and Mass Spectrometry*. U.S. Patent 20,120,223,225 (**2012**).
- (10) **Coon JJ**, Westphall MS, McAlister G, Bailey D. *Precursor Selection Using an Artificial Intelligence Algorithm Increases Proteomic Sample Coverage and Reproducibility*. U.S. Patent 20,120,261,568 (**2012**).
- (11) **Coon JJ**, Phanstiel DH, Wenger CD. *Mass Spectrometry Data Acquisition Mode for Obtaining More Reliable Protein Quantitation*. D.E. Patent 102,011,017,084 (2011); U.S. Patent 8,455,818 (**2013**).
- (12) Frey BL, Jue AL, Krusemark CJ, Smith LM, **Coon JJ**. *Labeling Peptides with Tertiary Amines and Other Basic Functional Groups For Improved Mass Spectrometric Analysis*. U.S. Patent 8,592,216 (**2013**).
- (13) **Coon JJ**, Westphall MS. *Gas-Phase Purification for Accurate Isobaric Tag-Based Quantification*. U.S. Patent 20,130,084,645 (**2013**).

- (14) **Coon JJ**, Phanstiel D, McAlister G. *Probability-Based Mass Spectrometry Data Acquisition*. U.S. Patent 8,530,831 (2013).
- (15) Hunt DF, **Coon JJ**, Syka JEP, Marto JA. *Electron Transfer Dissociation for Biopolymer Sequence Analysis*. U.S. Patent 8,692,187 (2014).
- (16) **Coon JJ**, Westphall MS, Hebert AS. *Calibration Methods and Reagents for High Resolution Mass Spectrometry*. U.S. Patent Application 61,983,230 (2014).
- (17) Donohue T, Stenzel-Lemke R, **Coon JJ**, Peterson A, Westphall M. *Microbial Synthesis of Novel Methylated or Furan-Containing Fatty Acids*. U.S. Patent Application P140318 (2014).
- (18) **Coon JJ**, McAlister GC. *Method to Perform Beam-Type Collision-Activated Dissociation In the Pre-Existing Ion Injection Pathway of a Mass Spectrometer*. U.S. Patent 8,742,333 (2014).
- (19) **Coon JJ**, Westphall MS, McAlister G, Bailey D. *Precursor Selection Using an Artificial Intelligence Algorithm Increases Proteomic Sample Coverage and Reproducibility*. U.S. Patent 9,040,903 (2015).
- (20) Kwiecien NW, Bailey DJ, Westphall MS, **Coon JJ**. *High Mass Accuracy Filtering for Improved Spectral Matching of High-Resolution Gas Chromatography-Mass Spectrometry Data Against Unit-Resolution Reference Databases*. U.S. Patent Application 14671199 (2015).
- (21) Lemke RAS, Donohue TJ, **Coon JJ**, Peterson C, Westphal MS. *Enzymes for Producing Non-Straight-Chain Fatty Acids*. U.S. Patent Application 14755213 (2015).
- (22) Stahl SS, **Coon JJ**, Rahimi A, Ulbrich A. *Selective C-O Bond Cleavage Of Oxidized Lignin and Lignin-Type Materials Into Simple Aromatic Compounds*. U.S. Patent 9,359,391 (2016).
- (23) **Coon JJ**, Herbert A. *Neutron Encoded Mass Tags for Analyte Quantification*. U.S. Patent 9,366,678 (2016).
- (24) Russell JD, **Coon JJ**, Hilger RT, Smith LM, Lador DT, Shortreed MR, Scalf MA. *Integrated Electrospray Ionization Emitter and Detection Cell for Parallel Measurements by Fluorescence and Mass Spectrometry*. U.S. Patent 9,620,348 (2017).
- (25) **Coon JJ**, Westphall MS, Bailey, DJ. *Identification of Related Peptides for Mass Spectrometry Processing*. U.S. Patent 9,625,470 B2 (2017).
- (26) **Coon JJ**, Westphall MS. *Gas-Phase Purification for Accurate Isobaric Tag-Based Quantification*. U.S. Patent 9,698,001 (2017).
- (27) Kwiecien NW, Westphall MS, **Coon JJ**. *Web-Based Data Upload and Visualization Platform Enabling Creation of Code-Free Exploration of MS-Based Omics Data*. US Patent App. 16/049,419. (2019)
- (28) **Coon JJ**, Riley N, Westphall MS. *Implementation of Continuous Wave Carbon Dioxide Infrared Laser on a Quadrupole-Orbitrap-Linear Ion Trap Hybrid Mass Spectrometer System*. Patent Application Filed 15/936,288 (2018).
- (29) **Coon JJ**, Westphall MS. *Gas Phase Sample Preparation for Cryo-Electron Microscopy*. Patent Issued, Patent number 11525760 (2022).
- (30) **Coon JJ**, Westphall MS. *Retractable ion guide, grid holder, and technology for removal of cryogenic sample from vacuum*. Patent Application Filed, P200355US02 (2022).
- (31) **Coon JJ**, Westphall MS, Miller IM, Smith LM. *Toilet, testing, and monitoring systems*. Patent Application Filed, P200202US02 (2022).
- (32) **Coon JJ**, Westphall MS. *Surface hydration with an ion beam*. US Patent App. 18/178,205 (2023).
- (33) Meyer J, **Coon JJ**, Hebert A, Cranney C. *Quantitative shotgun proteome analysis by direct infusion*. US Patent App. 17/741,277 (2022).
- (34) **Coon JJ**, Westphall MS, Salome A, Lee K, Jean Lodge, Grant T. *A Modified Ultra-High Mass Range (UHMR) Hybrid Quadrupole-Orbitrap for Matrix Landing Experiments*. Patent Application Filed, P220282US01 (2022).

- (35) **Coon JJ**, Westphall MS, Lee K, Salome A, Grant T. *Matrices for preservation of biomolecules in vacuum*. Patent Application Filed, P220041US02 (2022).
- (36) **Coon JJ**, Westphall MS, Lee K, Salome A, Grant T. *Matrices for soft landing and TEM imaging by negative staining*. Patent Disclosure, P220322 (2022).
- (37) **Coon JJ**, Hebert A. *High Throughput Infusion Peptide Mapping*, Patent Disclosure, P230059 (2022).
- (38) **Coon JJ**, Muehlbauer L, Overmyer K, Jen A, Zhu Y. *Bead-enabled, efficient, and rapid multi-omic sample preparation for mass spectrometry analysis*. US Patent App. 18/327,714 (2024).
- (39) **Coon JJ**, Westphall MS, Grant T, Mertz K, Hemme C, Salome A, Quarmby S. *Methods for Improving Cryogenic Soft Landing by Restoring Native Molecular Structure*. Patent Application Filed (2024).
- (40) **Coon JJ**, Marx H. *Method to map protein landscapes*. US Patent 12,061,204 (2024).
- (41) **Coon JJ**, Westphall MS. *Freezing and jacketing gas-phase biomolecules with amorphous ice for electron microscopy*. US Patent App. 18/261,267 (2024).
- (42) **Coon JJ**, Westphall M, Grant T. *Cryogenic Soft Landing Improves Structural Preservation of Protein Complexes*. Patent Disclosure, P240025 (2023).
- (43) **Coon JJ**, Westphall M, Mertz K, Grant T, Hemme C, Salome A, Quarmby S. *Thaw, Hydrate, and Refreeze Soft Landed Particles to Restore Native Molecular Structure*. Patent Disclosure, P240222 (2024).
- (44) **Coon JJ**, Harer M, Condit P, Overmyer K, Nightingale N. *Urinary Metabolites of Acute Kidney Injury in Premature Neonates*. Filed, P240274 (2024).
- (45) **Coon JJ**, Austin Salome A, Wenger C, Mertz K. *Deamidation Determination Using Direct Infusion Mass Spectrometry*. Filed, P250067 (2024).
- (46) **Coon JJ**, Chlystek J, Salome A, Lancaster N, Quarmby S. *Artifact Reduction in Mass Spectrometry Analysis*. File Opened, P250216US01 (2025).

**SERVICE AND COLLABORATION**

Through the campus-wide collaboration we engage in I have come to know many faculty on our campus. During the late fall and spring, I typically receive requests to meet with approximately two faculty candidates per week. These candidates come from departments all across campus and their hosts want them to know about the first-rate mass spectrometry capability that will be available to them should they come here. I do my best to meet with all of these candidates and to get engaged in subsequent recruiting visits should be assistance be necessary. Below is a list of the project collaborators located here at UW-Madison that we have published from 2014-2019.

**2014-2019 Project Collaborators**

From 2014-2019 we have published ~ 150 manuscripts. 106 of these have been collaborative and, of those, 89 involve University of Wisconsin Principal Investigators. I expect this number is even higher in the past five years but have not had time to do the full summary for this time period.

*College of Agricultural and Life Sciences (23)*

Jean-Michel Ane	Bacteriology	Tom Prolla	Genetics
Alan Attie	Biochemistry	John Ralph	Biochemistry
Jason Cantor	Biochemistry	Scott Rankin	Food Science
Natalia DeLeon Gatti	Agronomy	Federico Rey	Bacteriology
Hector DeLuca	Biochemistry	Troy Runge	Biological Systems Eng.
David Eide	Nutritional Sciences	Alessandro Senes	Biochemistry
Rick Eisenstein	Food Science	Judi Simcox	Biochemistry
Chris Hittinger	Genetics	Michael Sussman	Biochemistry
Sean Kaeppler	Agronomy	Ophelia Venturelli	Biochemistry

Judith Kimble	Biochemistry	Jue Wang	Bacteriology
Robert Landick	Biochemistry	Marv Wickens	Biochemistry
John Markley	Biochemistry		

*School of Medicine and Public Health (42)*

Rozalyn Anderson	Geriatrics & Adult Dev	Laura Knoll	Medical Microbiology
Anjon Audhya	Biomolecular Chemistry	Paul Lambert	Oncology
Barbara Bendlin	Geriatrics & Adult Dev	Dudley Lamming	Endocrinology
Emery Bresnick	Cell & Regenerative Biology	Peter Lewis	Biomolecular Chemistry
Mark Burkard	Hematology-Oncology	Andrew Mehle	Medical Microbiology
Edwin Chapman	Neuroscience	Matthew Merrins	Biomolecular Chemistry
Ricki Coleman	Cell & Regenerative Biology	Shigeki Miyamoto	Oncology
Mark Craven	Biostatistics	Deane Mosher	Biomolecular Chemistry
Vincent Cryns	Endocrinology	Jeniel Nett	Medical Microbiology
John Denu	Biomolecular Chemistry	Irene Ong	Carbone Cancer Center
Colin Dewey	Biostatistics	Jon Odorico	Surgery
Corinne Engelman	Population Health Sciences	Luigi Puglielli	Geriatrics
Feyza Engin	Biomolecular Chemistry	Thomas Raife	Pathology
Audrey Gasch	Genetics	Mohun Ramratnam	Cardiology
Mathew Harer	Pediatrics	Subhojit Roy	Pathology
Christina Hull	Biomolecular Chemistry	Christine Seroogy	Pediatrics
Akihiro Ikeda	Medical Genetics	Stefan Schieke	Dermatology
Nizar Jarjour	Pulmonary Medicine	Miriam Shelef	Rheumatology
Sundez Keles	Biostatistics	Judith Smith	Pediatrics
Christina Kendzioriski	Biostatistics	David Wassarman	Genetics
Patricia Kiley	Biomolecular Chemistry	Wei Xu	Oncology

*College of Engineering (4)*

Randolph Ashton	Biomedical Engineering	Brian Pflieger	Chemical and Biological
James Dumesic	Chemical and Biological	John Yin	Chemical and Biological

*School of Veterinary Medicine (3)*

Troy Hornberger	Comparative Biosciences	Marulasiddappa Suresh	Pathobiological Sciences
Peter Muir	Surgical Sciences		

*College of Letters and Sciences (4)*

David Baum	Botany	Shannon Stahl	Chemistry
Judith Burstyn	Chemistry	Lloyd Smith	Chemistry

*Wisconsin Energy Institute (4)*

Tim Donohue	Heidi Kaeppler		
Daniel Noguera	Daniel Amador-Noguez		

*School of Pharmacy (2)*

Lingjun Li	Kerri Schueler
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*Morgridge Institute for Research (5)*

Anthony Gitter, David Pagliarini, Brad Schwartz, James Thomson, Paul Ahlquist

**UW LETTERS OF SUPPORT FOR GRANT APPLICATIONS (2014-2019)**

I am frequently asked to provide letters of support to colleagues for their grant applications. I am happy to do this and have written nearly 200 such letters in the past ten years. These are listed below and indicate the broad impact of our research and technology on campus research.

<i># Letters UW Collaborator/PI</i>	<i>Funding Mechanism</i>	<i>UW Department</i>
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*College of Agricultural and Life Sciences (21)*

1	Aseem Ansari	NSF	Biochemistry
5	Alan Attie	NIH R01, UW2020	Biochemistry
1	Hamid Eghbalania	NIH U2c	Biochemistry
2	David Eide	NIH R01, NIH R35	Nutritional Sciences
1	Rick Eisenstein	NIH R01	Nutritional Sciences
3	Audrey Gasch	NIH	Genetics
1	Kim Huggler	NIH F31	Biochemistry
1	Erin Ostrem Loss (Venturelli)	NIH R32	Post doc, Biochemistry
3	Federico Rey/Barbara Bendlin	WPP, Bright Fndt, Internal	Bacteriology
2	Ophelia Venturelli	UW 2020, UW Microbiome	Biochemistry
1	Eric Yen	Instrument purchase	Nutritional Sciences

*College of Letters and Science (4)*

2	David Baum	NASA	Botany
1	Samuel Gellman	Research Support	Chemistry
1	Laura Kiessling	NIH	Chemistry

*School of Medicine and Public Health (59)*

1	Rozalyn Anderson	Center of Excellence	Medicine
1	Anjon Audhya	Commitment to Collaborate	Biomolecular Chemistry
2	Emery Bresnick	NIH R01	Cell and Regenerative Biology
2	Mark Burkhard	NIH R01	Hematology/Oncology
4	Vince Cryns	DoD, V Foundation, WPP	Endocrinology
1	John Denu	NIH R21	Biomolecular Chemistry
1	Inca Dieterich	NRSA F31	Neuroscience Training Program
1	Feyza Engin	NIH R01	Biomolecular Chemistry
4	Catherine Fox	NIH R21, et al.	Biomolecular Chemistry
1	Andrew Garfoot	Pilot data	Medical Microbiology & Immunology
2	Daniel Greenspan	NIH R21, NIH R01	Cell and Regenerative Biology
1	Melissa Harrison	Commitment to Collaborate	Biomolecular Chemistry
1	Akihiro Ikeda	NIH R21	McPherson Eye Research Institute
2	Nizar Jarjour	NIH R01, EOS Program	Pulmonary Medicine
1	Sterling Johnson	NIH	WI Alzheimer's Disease Research Ct
10	Dudley Lamming	DoD, VA, ICTR, Pew, ADA	Medicine
1	Aiping Liu	NIH K99/R00	Surgery
1	Matthew Merrins	NIH R01	Biomolecular Chemistry
1	Shigeki Miyamoto	NIH R01	Oncology
1	Anne Moseley	NIH S10	Pediatrics
1	Jeniell Nett	Doris Duke award	Infectious Disease
1	Irene Ong	Hartwell Foundation	Biostatistics and Medical Information
1	Luigi Puglielli	NIH R01	Medicine and Neuroscience
1	Ali Rahimi	Investigator position	Geriatrics and Adult Development
1	Mohun Ramratnam	CDA-2	Cardiology
1	Alan Rapraeger	NIH R01	Human Oncology
2	Tim Rhoads (R. Anderson)	NIH Mentored career	Post doc, Geriatrics & Adult Dev
2	Subhojit Roy	ADRC renewal	Anatomic Pathology
1	Christine Seroogy	WPP	Pediatrics
3	Michael Sheets	Research Support	Biomolecular Chemistry
1	Miriam Shelef	Research Support	Medicine
3	Judith Smith	NIH R21, NIH R01	Pediatrics
1	Xinyu Zhao	NIH	Neuroscience

*Morgridge Institute for Research (7)*

2	Jason Cantor	NCI K22, ACS Research Grant	
1	Zachary Kemmerer	Am Heart Assoc	
2	Natalie Niemi (Pagliarini)	NIH K01	Post doc
1	David Pagliarini	NIH R35	
1	John Yin	NIAID R21	

## UW LETTERS OF SUPPORT FOR GRANT APPLICATIONS (2020-2025)

# Letters	UW Collaborator/PI	Funding Mechanism	UW Department
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### *College of Agricultural and Life Sciences (16)*

1	Bradley Bolling	NIH Instrument	Food Science
2	Snehal Chaudhari	NIH Katz	Biochemistry
1	Michael Cox	DoD Tei-Rex	Biochemistry
3	Katrina Forest	NSF, USDA Instrument	Bacteriology
3	Audrey Gasch	NIH R01	Genetics
1	Jo Handelsman	Research Forward	WID, Plant Pathology
2	Colin MacDiarmid	NIH R01	Nutritional Sciences
3	Elizabeth Wright	NIH R01	Biochemistry

### *College of Letters and Science and College of Engineering (3)*

2	Ive Hermans	DoD	Chemistry
1	Shannon Stahl	DoE	Chemistry
1	John Yin	NIH R01	Engineering

### *School of Medicine and Public Health (48)*

5	Rozalyn Anderson	NIH R01, WiSNC	Geriatrics and Gerontology
1	Sanjay Asthana	ADRC	Geriatrics and Gerontology
2	Anjon Audhya	NIH R01, R21	Biomolecular Chemistry
3	Dawn Bellt Davis	NIH P30, Instrument	Endocrinology
1	Anita Bhattacharyya	NIH R01	Cell and Regenerative Biology
7	Emery Bresnick	NIH R01, R21, Evans	Cell and Regenerative Biology
2	Jeffrey Dilworth	MDA	Cell and Regenerative Biology
11	Andrea Galmozzi	NIH R21, R01, R35, ICTR	Biomolecular Chemistry
1	Matthew Harer	WPP	Pediatrics
1	Gaelen Hess	NIH R21	Biomolecular Chemistry
1	James Keck	NIH R01	Biomolecular Chemistry
2	Laura Knoll	NIH R01, R21	Medical Microbiology & Immunology
1	Kinjal Majuder	NIH R35	Oncology
1	Kristen Malecki	CEECR	Population Health Sciences
1	Irene Ong	WPP	Biostatistics and Medical Informatics
2	Michael Perouansky	NIH R01	Anesthesiology
1	Luigi Puglielli	NIH R01	Geriatrics and Gerontology
1	James Romero-Masters	NIH R01	Oncology
1	Sushmita Roy	Romnes Fellowship	Biostatistics and Medical Informatics 11
1	Nasia Safdar	Research Forward	Medical Microbiology
1	Michael Sheets	NIH R01	Biomolecular Chemistry
1	Robert Striker	ICTR, Lilly Foundation	Medical Microbiology

### *Morgridge Institute for Research (5)*

4	Jason Cantor	NIH R01, R21, ACS Research Grant	
1	Anthony Gitter	NSF	

## PROMOTION REVIEWING

I am frequently asked to provide reviews of candidates undergoing promotion at their home institutions. Below is a list of letters I have provided to various departments over the past ten years.

- Biochemistry, **University of Wisconsin-Madison**, 2014
- Biochemistry and Physics, **University of North Carolina-Chapel Hill**, 2015
- Chemistry and Biochemistry, **University of Notre Dame**, 2015
- Chemistry, **Vanderbilt University**, 2015
- Chemistry, **University of Missouri**, 2015
- Urological Surgery, **University of Kansas**, 2015
- Chemistry, **Wayne State University**, 2015
- Genome Sciences, **University of Washington**, 2015
- Anatomy and Neurobiology, **Virginia Commonwealth University**, 2015
- School of Medicine, **University of Pennsylvania**, 2016
- Biochemistry, **University of Wisconsin-Madison**, 2016
- **Genentech**, San Francisco, 2016
- Biological Chemistry, **University of California-Los Angeles**, 2016
- Chemistry, **University of Wyoming**, 2017
- Chemical and Systems Biology, **Stanford University**, 2017
- Medical and Human Sciences, **The University of Manchester**, 2017
- Biostatistics and Medical Informatics, **University of Wisconsin-Madison**, 2017
- Chemistry, **University of Tennessee-Knoxville**, 2017
- Horticulture and Landscape Architecture, **Colorado State University**, 2018
- Molecular and Systems Biology, **Dartmouth College**, 2018
- Radiology, **Stanford University**, 2018
- Biochemistry, **University of Wisconsin-Madison**, 2019
- Molecular Cellular & Developmental Biology, **University of Colorado-Boulder**, 2019
- Computational Systems Biochemistry, **Max Planck Institute of Biochemistry**, 2019
- Chemistry and Biochemistry, **University of Oklahoma**, 2019
- Biostatistics and Medical Informatics, **University of Wisconsin-Madison**, 2020
- Chemistry, **Michigan State University**, 2020
- Cell Biology, **University of South Florida**, 2022
- Chemistry and Chemical Biology, **Renneslaer Polytechnic University**, 2022
- Chemistry, **Texas A&M University**, 2023
- Chemistry, **Yale University**, 2023
- Chemistry, **Georgetown University**, 2024
- Chemistry and Chemical Biology, **Indiana University-Indianapolis**, 2024
- Chemistry and Biochemistry, **Auburn University**, 2024
- Chemistry, **Florida State University**, 2024
- Chemistry, **University of California-Los Angeles**, 2025
- Chemistry, **Yale University**, 2025
- Bacteriology, **University of Wisconsin-Madison**. 2025

## TEACHING

### Graduate Teaching Assistant in Chemistry (University of Florida)

Discussion Instructor: "General Chemistry"  
Laboratory Instructor: "Instrumental Analysis"  
Laboratory Instructor: "Quantitative Analysis"

### Assistant Professor of Chemistry (University of Wisconsin)

Fall 2005	CHEM 327
Spring 2006	CHEM 327
Fall 2006	CHEM 327
Spring 2007	CHEM 630/BMOLCHEM 675

Fall 2007           CHEM 327  
Fall 2008           CHEM 329

Taught CHEM 329: “Fundamentals of Analytical Science” (for chemistry majors).  
Taught CHEM 327: “Fundamentals of Analytical Science” (for non-majors).  
Developed/Taught CHEM 630/BMOLCHEM 675: “Methods and Technologies for Protein Characterization.”

#### **Associate Professor of Chemistry (University of Wisconsin)**

Spring 2009           CHEM 630/BMOLCHEM 675  
Fall 2009           CHEM 329  
Fall 2010           CHEM 625  
Spring 2011           CHEM 630/BMOLCHEM 675

Taught CHEM 329: “Fundamentals of Analytical Science” (for chemistry majors).  
Developed/Taught CHEM 630/BMOLCHEM 675: “Methods and Technologies for Protein Characterization.”  
Developed/Taught CHEM 625: “Separations in Chemical Analysis.”

#### **Professor of Biomolecular Chemistry and Chemistry (University of Wisconsin)**

Spring 2013           CHEM 630/BMOLCHEM 675  
Spring 2015           CHEM 627/BMOLCHEM 627  
Fall 2021           CHEM 668, BIOPHYSICAL SPECTROSCOPY  
  
Ongoing           BIOCHEM 729, frequent guest instructor fall and spring  
Ongoing           BIOCHEM 701, guest instructor fall

#### **Annual North American Mass Spectrometry Summer School (NAMSSS).**

Recognizing a general shortage of training opportunities for early career researchers and non-experts eager to learn more about MS and quantitative technologies, and with the support of funding from the NIH and NSF, I created an annual mass spectrometry summer school. The overarching objective for this event is to lower the barrier to entry by educating any interested members of the biomedical research community on the fundamentals of biological mass spectrometry. **We explain how MS works and how it can be leveraged in their research.**

We broadly advertise this training opportunity on the NCQBCS website, during presentations, and in a promotional flyer emailed to hundreds of contacts in adjacent research fields, former and current collaborators, and department heads at U.S. institutions. Through our website all prospective participants are required to submit an application that includes demographic questions, a letter of recommendation, and a brief statement of intent.

The program holistically covers theoretical and applied topics in quantitative biological MS taught by more than a dozen of world-leading experts in their respective fields. Lecture and workshop topics include high-performance mass analyzers, sample preparation, experimental design, data analysis, and live MS demonstrations. There is no charge to participate, and the event has nearly a 100% attendance rate.

Our first annual NAMSSS event was held from August 6–9, 2018 at the Wisconsin Institutes for Discovery on the UW–Madison campus. We received 300 applications – more than twice our anticipated pool. Based on the application strength and with a commitment to diversity we selected 150 individuals – the maximum we could accommodate – to join the event. These participants hailed from 30 U.S. states and 15 countries.

Building on this success, our second annual NAMSSS took place on July 21–26, 2019. The NAMSSS program for 2019 is presented in **Figure 1**. We continued to offer an exciting program covering the MS hardware and methods upon which the NCQBCS is built. Guest instructors and Coon Laboratory staff engaged with the participants to answer questions about research challenges, possible solutions, and trouble-shooting. We added a three-hour workshop on manual tandem mass spectral interpretation. Encouraging self-driven competence and discovery, the students were taught how to derive a peptide

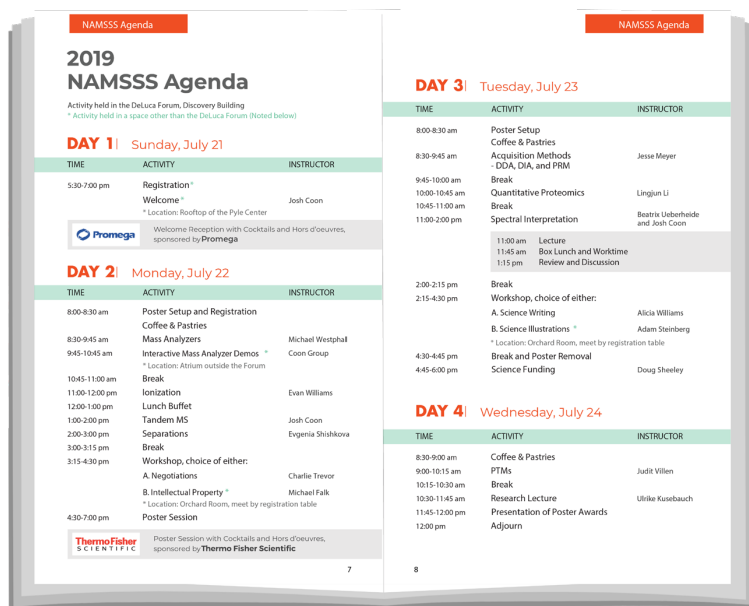
sequence and then given calculators and spectra to deduce on their own. Another highlight was a Science Funding discussion by Deputy Director of the National Institute of Dental and Craniofacial Research Dr. Doug Sheeley. Following the event Dr. Sheeley, who has served as the Acting Chief of the NIGMS Biotechnology Branch, wrote the following:

*“It was a pleasure to participate in such a wonderfully planned and executed course. I was floored by the size of the group and their level of participation. What an impressive commentary on the effectiveness of the center and the commitment of the faculty and staff.”*

To offer NAMSSS students the opportunity to engage in hands-on mass spectral data processing, in 2019 we partnered with developer of MaxQuant Juergen Cox to co-organize the annual MaxQuant Summer School in Madison immediately following NAMSSS. MaxQuant is a premier MS software tool for peptide and protein identification and quantitation. By holding the programs concurrently, we offered a full week of lectures and hands-on workshops, comprehensively covering every aspect of biological MS research

from operating the mass spectrometer to extracting biological insight from the collected data. In 2019, 124 students participated in NAMSSS, and 159 enrolled in the MaxQuant program. NAMSSS students came from 28 U.S. states and 13 foreign locations. Our student body was highly diverse and included graduate students, postdocs, university staff members, professors, and industry scientists.

Summer School for 2020 was cancelled due to Covid-19. We offered the program virtually in 2021 and had about 300 participants. Summer School returned to an in-person event in 2022, taking place June 20-23 at the Wisconsin Institute for Discovery. Attendees had the opportunity to actively participate by giving a flash talk (5-minute, one-slide presentations), attending a small group Q&A session with an expert, and sharing their ideas during a future technology discussion. The 2025 event will take place on July 21-24 at the Wisconsin Institute for Discovery.



**Figure 1. Program overview of 2<sup>nd</sup> Annual North American Mass Spectrometry Summer School.** The program was held jointly with the MaxQuant Summer School and altogether we trained nearly 300 students that week.

**COON LABORATORIES AND LABORATORY FOR BIOMOLECULAR MS PERSONNEL**

My trainees have achieved a remarkable placement record, with alumni securing leadership positions across the biomedical landscape. In academia, former trainees hold faculty appointments at premier research institutions including UCSF, Duke University, UNC-Chapel Hill, the University of Washington-Seattle, among others. In the commercial sector, the laboratory has established a robust talent pipeline to major instrument manufacturers, most notably Thermo Fisher Scientific, where alumni drive next-generation hardware development. Furthermore, graduates have assumed key scientific roles at leading biopharmaceutical companies such as Genentech, Pfizer, Eli Lilly, and AbbVie, while others have successfully founded biotechnology ventures or pivoted into high-level data science roles at technology giants like Microsoft.

<b>Staff (5)</b>	<b>Start Year</b>
Katherine Overmyer, Ph.D. – Scientist	2019
Scott Quarmby, Ph.D. – Scientist	2023
Mark Scalf, Ph.D. – Scientist	2025
Mitch Probasco B.S. – Scientist	2022
Heather Coon, M.S. – Lab Manager	2023

<b>Postdoctoral Students (3)</b>	
Marcel Morgenstern, Ph.D.	2022
Benton Anderson, Ph.D.	2023
Benjamin Chadwick, Ph.D.	2024

<b>Graduate Students (13)</b>		
Noah Lancaster	Analytical Chemistry	2021
Corinne Moss	Integrated Program in Biochemistry	2021
Annie Jen	Integrated Program in Biochemistry	2022
Margaret Robinson	Integrated Program in Biochemistry	2022
Daniel Nesbitt	Analytical Chemistry	2022
Salma Abou Elhassan	Integrated Program in Biochemistry	2022
William Biemers	Integrated Program in Biochemistry	2022
Li-Yu Chen	Analytical Chemistry	2023
Drew Jordahl	Cellular and Molecular Biology	2023
Jack Chlystek	Integrated Program in Biochemistry	2023
Dylan Forbes	Analytical Chemistry	2024
Zhimin Ma	Biophysics	2024
Ross Soens	Integrated Program in Biochemistry	2025

**STUDENTS WHO RECEIVED THEIR PH.D. IN THE LAB OF JOSHUA COON**

<b>#</b>	<b>Student</b>	<b>Start</b>	<b>Finish</b>
1	David Good	A-05	J-09
2	Graeme McAlister	A-05	O-09
3	Danielle Swaney	A-05	A-09
4	Justin Brumbaugh	N-06	N-11
5	Doug Phanstiel	A-06	D-10
6	Craig Wenger	D-08	A-11
7	Violet Lee	A-07	M-11
8	Aaron Ledvina	A-07	M-12
9	Jason Russell	A-07	J-12
10	Amelia Peterson	A-08	D-12
11	Alex Hebert	A-09	D-13
12	Derek Bailey	A-09	J-14
13	Anna Merrill	A-10	J-14
14	Chris Rose	A-10	A-14
15	Arne Ulbrich	A-11	D-15

16	Catie Minogue	A-10	A-15
17	Greg Potts	A-11	J-16
18	Alicia Richards	A-11	M-16
19	Nick Kwiecien	A-12	N-16
20	Emily Wilkerson	A-13	S-17
21	Evgenia Shishkova	A-13	D-17
22	Elyse Freiburger	A-13	F-17
23	Nicholas Riley	A-12	D-18
24	Matt Rush	A-13	J-18
25	Paul Hutchins	A-14	M-19
26	Erin Weisenhorn	A-14	M-19
27	Gary Wilson	A-15	M-20
28	Vanessa Linke	A-15	M-20
29	Dain Brademan	A-15	J-20
30	Anji Trujillo	A-15	M-21
31	Justin McKetney	A-16	M-21
32	Laura Muehlbauer	A-17	M-22
33	Yunyun Zhu	A-17	M-23
34	Trenton Peters-Clarke	A-18	M-23
35	Benton Anderson	A-18	M-23
36	Yuchen He	A-18	M-23
37	Lia Serrano	J-19	D-24
38	Austin Salome	A-20	M-25
39	Keaton Mertz	A-20	M-25

#### **POSTDOCTORAL SCHOLARS WHO RECEIVED TRAINING IN THE LAB OF JOSHUA COON**

- 1 Qiangwei Xia – CEO, CMP Scientific Corporation
- 2 Paul Grismrud – Assistant Professor, Department of Medicine, Duke University
- 3 Shane Hubler – Principal Data Scientist, Rhapsody Data
- 4 Tim Rhoads – Assistant Professor, Nutritional Sciences, UW-Madison
- 5 Harald Marx – Founder, Scive Inc.
- 6 Kevin Schauer – Product Manager, Thermo Fisher Scientific
- 7 Katherine Overmyer – PI, Morgridge Institute for Research
- 8 Jesse Meyer – Assistant Professor, Computational Biomedicine, Cedars-Sinai
- 9 Jean Lodge – Analytical Chemist, Eli Lilly & Company
- 10 Kenneth Lee – Assistant Professor, Chemistry, Brigham Young University
- 11 Dain Brademan – Senior Biostatistician, Stanford University
- 12 Pavel Sinitcyn – Assistant Professor, AI Technology for Life, Utrecht University

#### **Ph.D. THESIS COMMITTEES**

2015-2019	Yang Liu, Robert Landick lab, Department of Biochemistry
2015-2019	Caitlin Keller, Chemistry Program, Lingjun Li PI
2016-2020	Megan Dowdle, IPIB, Michael Sheets PI
2017-2021	Eddie Rashan, IPIB, David Pagliarini PI
2018-2022	Yusi Cui, Chemistry, Lingjun Li PI
2018-2022	Jonathan Tai, MSTP, David Pagliarini PI
2019-2023	Jake Melby, Chemistry, Ying Ge PI
2019-2023	Rachel Miller, Chemistry, Lloyd Smith PI
2019-2023	Peter Luong, MCP, Jon Audhya PI
2019-2023	Tao Wei, Cancer Biology, Paul Lambert PI
2019-2024	Allison Hollatz, IPIB, Catherine Fox PI
2020-2024	Kim Huggler, IPIB, Jason Cantor PI
2020-2024	Kasia Radziwon, Biophysics, Amy Weeks PI
2020-2024	Kyle Flickinger, IPIB, Jason Cantor PI
2020-2025	Clara Frazier, IPIB, Amy Weeks, PI

2020-2025	John Pavek, Chemistry, Lloyd Smith PI
2020-2025	Graham Delafield, Chemistry, Ying Ge PI
2020-2025	Eli Larson, Chemistry, Ying Ge PI
2020-2025	Gina Wade, IPIB, Judy Simcox PI
2021-	Lauren Fields, Chemistry, Lingjun Li PI
2021-	Andrea Hunger, IPIB, Judy Simcox PI
2021-	Ben Harding, Chad Rienstra PI
2021-	Guy Kunzmann, IPIB, Jason Cantor PI
2022-	Peter Ducos, Biophysics, Tim Grant PI
2022-	Peng-Kai Liu, Biophysics, Lingjun Li PI
2022-	Penghsuan Huang, Chemistry, Lingjun Li PI
2022-	Jingwei Zhang, Analytical Chemistry, Lingjun Li PI
2022-	Hsin-Ju Chan (Ruby), Chemistry, Ying Ge PI
2023-	Nick Arp, CMB and MD-PhD, Jing Fan PI
2023-	Colin Hemme, IPIB, Tim Grant PI
2023-	Austin Carr, Chemistry, Lloyd Smith PI
2023-	Edwin Laboy-Torres, Biophysics, Lloyd Smith PI
2024-	Thomas Kizzar, Biochemistry, Judy Simcox PI
2024-	Jack Williams, Biochemistry, Snehal Chaudhari PI
2024-	Conor Raymond, IPIB, Monica Neugebauer PI
2024-	Julia Hoffman, Chemistry, Lingjun Li PI
2025-	Cheng-Ruei Yang, Chemistry, Lloyd Smith PI
2025-	Jiarui Chen, Cellular and Molecular Pathology, Muhammed Murtaza PI
2025-	Caleb Leach, IPIB Graduate Student, Judith Simcox PI

## FACULTY MENTORING COMMITTEES

Dr. Daniel Amador Noguez  
 Dr. Amy Weeks  
 Dr. Andrea Galmozzi  
 Dr. Tim Grant

## SERVICE TO THE UNIVERSITY

2008-2015	Analytical Division Graduate Admissions Chair
2021-2024	Analytical Division Graduate Admissions Chair
2010-2013	Physical Sciences Divisional Committee
2012-2015	Office of Industrial Partnerships Advisory Board
2014	IPIB Student Faculty Liaison Committee
2014-2015	SMPH Tenure Track Promotions Committee
2015-2017	Chair of Analytical Division, Department of Chemistry
2015	Graduate Curriculum Committee, Department of Chemistry
2016	Biophysics Program Review (commissioned by the Graduate School)
2017	Large Grants Office Working Group, VCGRE
2009-present	Biotechnology Training Program Steering Committee
2017	UW 2020 grant reviewer
2019	Wisconsin Institute for Discovery Flux/Metabolomics Search Committee
2020	Medical Physics Chair Search Committee
2023	Metabolism Theme Lead Search Committee Chair (Morgridge Institute for Research)
2023-present	SMPH Basic Sciences Strategic Leadership Committee
2024-present	SMPH Conflict of Interest committee
2025	Research Forward Proposal Review Committee
2025	Metabolism Faculty Search Committee (Morgridge Institute for Research)
2025	Chemistry RISE THRIVE Faculty Search Committee
2025	Integrated Program in Biochemistry New Student Orientation Committee
2025	SMPH Strategic Planning Steering Committee

## EXTRAMURAL FUNDING

### **ACTIVE**

#### **Structure, Function and Regulation of the Proteome**

Major Goals: This project develops technologies and methods for studying the structure, function, and regulation of human proteins. Proteins, the ultimate effector molecules, perform nearly all cellular processes and therefore play essential roles in human health and disease. By providing an unprecedentedly comprehensive understanding of the proteome, our technology (in our hands and others') will accelerate the understanding of disease mechanisms and insight into therapeutic targets.

Status of Support: Awarded (Renewal)

Project Number: R35 GM118110

Name of PD/PI: Joshua Coon

Source of Support: NIH

Primary Place of Performance: University of Wisconsin-Madison

Project/Proposal Start and End Date: 06/2021 - 05/2026

Total Amount Requested (including Indirect Costs): \$4,494,122

Person Months (Calendar/Academic/Summer) per budget period.

Year	Person Months
9. 2025	5.8 cal mo
10. 2026	5.8 cal mo

#### **National Center for Quantitative Biology of Complex Systems**

Major Goals: The mission of the Center, now in its second cycle of support, is to develop next-generation protein measurement technologies to assimilate protein and protein post translational modification (PTM) data at a rate on par with gene- and transcript-level studies. These essential technologies will be developed in the context of a cadre of Driving Biomedical Projects.

Status of Support: Awarded (Renewal)

Project Number: P41 GM108538

Name of PD/PI: Joshua Coon

Source of Support: NIH

Primary Place of Performance: University of Wisconsin-Madison

Project/Proposal Start and End Date: 07/2021 - 06/2026

Total Amount Requested (including Indirect Costs): \$5,815,852

Person Months (Calendar/Academic/Summer) per budget period.

Year	Person Months
9. 2025	3.0 cal mo
10. 2026	3.0 cal mo

#### **Equipment Supplement: National Center for Quantitative Biology of Complex Systems**

Major Goals: Purchase a Seer robot to aid in the development of next-generation protein measurement technologies to assimilate protein and protein post translational modification (PTM) data at a rate on par with gene- and transcript-level studies.

Status of Support: Awarded

Project Number: Parent GM108538

Name of PD/PI: Joshua Coon

Source of Support: NIH

Primary Place of Performance: University of Wisconsin-Madison

Project/Proposal Start and End Date: 07/2024 - 06/2025

Direct Costs: \$243,000

Year	Person Months
1. 2025	0 cal mo

**Mass Spectrometry Core Facility: Great Lakes Bioenergy Research Center**

Major Goals: The mission of the Center is to develop sustainable alternatives to fuels and products currently derived from petroleum. The Coon lab is a core facility to the Center, processing samples and analyzing data for other PI's research. This work does not further or support the research portfolio of Dr. Coon.

Status of Support: Active

Project Number: DE-SC0018409

Name of PD/PI: Timothy Donohue

Source of Support: DoE

Primary Place of Performance: University of Wisconsin-Madison

Project/Proposal Start and End Date: 12/2024 - 11/2025

Total Award Amount (including Indirect Costs): \$366,509

Person Months (Calendar/Academic/Summer) per budget period.

Year	Person Months
7. 2025	0 cal mo

**PENDING**

**National Center for Quantitative Biology of Complex Systems (NCQBCS)**

Major Goals: The National Center for Quantitative Biology of Complex Systems (NCQBCS) develops, refines, and disseminates quantitative technologies for the analysis of proteins, lipids, and metabolites. These essential technologies are honed in the context of pressing biomedical problems broad in scientific scope and efficiently brought out of the Center through a robust community engagement platform and commercialization. The synergy across these activities ensures that the NCQBCS will fulfill its most critical mission: to empower all biomedical researchers to maximize biological insight through widespread access to enabling technologies.

Status of Support: Pending

Project Number: PAR-23-110 Biomedical Technology Optimization and Dissemination Center (RM1)

Name of PD/PI: Joshua Coon

Source of Support: NIH

Primary Place of Performance: University of Wisconsin-Madison

Project/Proposal Start and End Date: 05/2026 - 06/2031

Total Amount Requested (including Indirect Costs): \$7,801,869

Person Months (Calendar/Academic/Summer) per budget period.

Year	Person Months
	3.6 cal mo

**TDP-43 Biomarkers for Neurodegenerative Diseases: Discovery and Validation**

Major Goals: The Coon lab will apply existing mass spectrometry (MS) techniques to generate an in-depth analysis of TDP-43 proteinopathy and its downstream impact on circulating biofluids.

Status of Support: Pending

Project Number: PAR-25-332, Research on Current Topics in Alzheimer's Disease and Its Related Dementias

Name of PD/PI: Henrik Zetterberg (contact mPI) and Joshua Coon (mPI)

Source of Support: National Institute on Aging (NIH)

Primary Place of Performance: Morgridge Institute for Research

Project/Proposal Start and End Date: 04/2026 - 03/2031

Total Amount Requested (including Indirect Costs): \$22,199,058 (total budget for multiple PIs and collaborators across several institutions)

Person Months (Calendar/Academic/Summer) per budget period.

Year	Person Months
	1.2 cal mo