

Publications
Alanna Schepartz

1. Substituent Effect on the Electrochemical Oxidation of Arylmethyl Anions. 3. Effect of Methyl Substitution on Diarylmethyl Anions. S. Bank, A. Schepartz, P. Giammateo, J. Zubieto, *J. Org. Chem.* **1983**, *48*, 3458-3464.
2. Hydrolysis of an Amide in a Carboxypeptidase Model Using Co(III) and Bifunctional Catalysts. A. Schepartz & R. Breslow, *J. Am. Chem. Soc.* **1987**, *109*, 1814-1826.
3. On the Mechanism of Peptide Cleavage by Carboxypeptidase A and Related Enzymes. R. Breslow & A. Schepartz, *Chem. Lett.* **1987**, 1-4.
4. Self-Assembling Ionophores. A. Schepartz & J.P. McDevitt, *J. Am. Chem. Soc.* **1989**, *111*, 5976-5977.
5. Site-Specific Cleavage of the Protein Calmodulin Using a Trifluoperazine-Based Affinity Reagent. A. Schepartz & B. Cuenoud, *J. Am. Chem. Soc.* **1990**, *112*, 3247-3249.
6. Synthesis of α -BOC- ϵ -EDTA-Lysine Tribenzyl Ester. An Amino Acid Analog Suitable for Solid Phase Peptide Synthesis. B. Cuenoud & A. Schepartz, *Tetrahedron* **1991**, *47*, 2535-2542.
7. Tethered Oligonucleotide Probes. A Strategy for the Recognition of Structured RNA. P. Richardson & A. Schepartz, *J. Am. Chem. Soc.* **1991**, *113*, 5109-5111.
8. Polyether Tethered Oligonucleotide Probes. S.T. Cload & A. Schepartz, *J. Am. Chem. Soc.* **1991**, *113*, 6324-6326.
9. A General Scheme for Incorporating Nonnatural Functionality into Peptides. B. Cuenoud & A. Schepartz, *Tetrahedron Lett.* **1991**, *32*, 3325-3328.
10. Binding of alkali-metal cations by self-assembling ionophore complexes of Nickel(II). M.W. Jones, N. Gupta, A. Schepartz & H. Thorpe, *Inorg. Chem.* **1992**, *31*, 1308-1310.
11. A New Strategy for Directed Protein Cleavage. B. Cuenoud, T. Tarasow & A. Schepartz, *Tetrahedron Lett.* **1992**, *33*, 895-898.
12. Conformation-Dependent Cleavage of Staphylococcal Nuclease with a Disulfide-Linked Iron Chelate. M. Ermacora, J.M. Delfino, B. Cuenoud, A. Schepartz & R.O. Fox, *Proc. Natl. Acad. Sci. USA* **1992**, *89*, 6383-6387.
13. Protein-Cleavage Mapping: A New Tool for Drug Discovery and Protein Folding Studies. M. Hayward & A. Schepartz, in *Perspectives in Medicinal Chemistry*, B. Testa, E. Kyburz, W. Fuhrer, R. Giger, Eds., Verlag: Basel, **1993**, p. 501-512.
14. Design of a Metallo-bZIP Peptide that Discriminates Between CRE and AP1 Target Sites: Selection Against AP1. B. Cuenoud & A. Schepartz, *Proc. Natl. Acad. Sci. USA* **1993**, *90*, 1154-1159.
15. Altered Specificity of DNA-Binding Proteins with Transition Metal Dimerization Domains. B. Cuenoud & A. Schepartz, *Science* **1993**, *259*, 510-513.
16. Kinetic and Thermodynamic Analysis of RNA Binding by Tethered Oligonucleotide Probes: Alternative Structures and Conformational Changes. S.T. Cload, P.L. Richardson, Y. Huang & A. Schepartz, *J. Am. Chem. Soc.* **1993**, *115*, 5005-5014.
17. Selection of Structure-Specific Inhibitors of the HIV Rev-Rev Response Element Complex. S.T. Cload & A. Schepartz, *J. Am. Chem. Soc.* **1994**, *116*, 437-443.

18. DNA Targets for Certain bZIP Proteins Distinguished by an Intrinsic Bend. D.N. Paoletta, C.R. Palmer & A. Schepartz, *Science* **1994**, *264*, 1130-1133.
19. Mapping RNA Regions in Eukaryotic Ribosomes that are Accessible to Methidiumpropyl- EDTA•Fe(II) and EDTA•Fe(II). H. Han, A. Schepartz, M. Pellegrini & P.B. Dervan, *Biochemistry* **1994**, *33*, 9831-9844.
20. Distribution of Labor Among bZIP Segments in the Control of DNA Affinity and Specificity. S.J. Metallo & A. Schepartz, *Chem. Biol.* **1994**, *1*, 143-151.
21. A Uniquely Modified RNA: Introduction of a Single RNA Cleavage Agent into the M1 Ribozyme. P.L. Richardson, M.L. Gross, R.D. Smith, K.J. Light-Wahl, R.D. Smith & A. Schepartz, *Bio. Med. Chem. Lett.* **1994**, *4*, 2133-2138.
22. Mechanistic Studies on the Formation of bZIP•DNA Interfaces: A Simple Example of Supramolecular Stereochemistry. D.N. Paoletta, C.R. Palmer, S.J. Metallo & A. Schepartz, in *Supramolecular Stereochemistry*, J. Siegel, Ed. NATO Adv. Ser. **1995**, 83-90.
23. Peptide Models of bZIP Proteins: Quantitative Analysis of DNA Affinity and Specificity. S.J. Metallo & A. Schepartz, *Tech. Protein Chem.* **1995**, *6*, 385-391.
24. Nonspecific DNA Bending and the Specificity of Protein•DNA Interactions. A. Schepartz, *Science* **1995**, *269*, 988-989.
25. Convenient Syntheses of Bifunctional Metal Chelates. M. H. Hayward, J. C. Adrian, Jr. & A. Schepartz, *J. Org. Chem.* **1995**, *60*, 3924-3927.
26. Mechanism of DNA Binding Enhancement by the HTLV-I Transactivator Tax. A.M. Baranger, C.R. Palmer, M.K. Hamm, H. A. Giebler, A. Brauweiler, J.K. Nyborg, & A. Schepartz, *Nature* **1995**, *376*, 606-608.
27. DNA Bending and Binding by Metallo-Peptide Models of bZIP Proteins. C.R. Palmer, L.S. Sloan, J.C. Adrian, Jr., B. Cuenoud, D.N. Paoletta & A. Schepartz, *J. Am. Chem. Soc.* **1995**, *117*, 8899-8907.
28. Studies on the Formation of Protein•DNA Interfaces: DNA Specificity and Straightening by CREB. M.K. Hamm & A. Schepartz, *Bio. Med. Chem. Lett.* **1995**, *5*, 1621-1626.
29. Conformation of Tax-response elements in the human T-cell leukemia virus type I promoter. J.M. Cox, L.S. Sloan & A. Schepartz, *Chem. Biol.* **1995**, *2*, 819-826.
30. Triplex Tethered Oligonucleotide Probes. A.C. Moses & A. Schepartz, *J. Am. Chem. Soc.* **1996**, *118*, 10896-10897.
31. Certain bZIP Proteins Bind DNA Sequentially as Monomers and Dimerize on the DNA. S.J. Metallo & A. Schepartz, *Nat. Str. Biol.* **1997**, *4*, 115-117.
32. Inhibition of Rev•RRE Complexation by Triplex Tethered Oligonucleotide Probes. A.C. Moses, S.W. Huang & A. Schepartz, *Bioorg. Med. Chem.* **1997**, *5*, 1123-1129.
33. Electrostatic Mechanism for DNA Bending by bZIP Proteins. D.N. Paoletta, Y. Liu & A. Schepartz, *Biochemistry* **1997**, *36*, 10033-10038.
34. Bidirectional Binding of the TATA box binding protein to the TATA Box. J.M. Cox, M.H. Hayward, J.F. Sanchez, L.D. Gegnas, S. van der Zee, J.H. Dennis, P.B. Sigler, & A. Schepartz, *Proc. Natl. Acad. Sci. USA* **1997**, *94*, 13475-13480.
35. The role of a basic amino acid cluster in target site selection and nonspecific binding of bZIP peptides to DNA. S.J. Metallo, D.N. Paoletta, & A. Schepartz, *Nucl. Acids Res.* **1997**, *25*, 2967- 2972.

36. Kinetics and Mechanism of RNA Binding by Triplex Tethered Oligonucleotide Probes. A.C. Moses & A. Schepartz, *J. Am. Chem. Soc.* **1997**, *119*, 11591-11597.
37. Evidence for Induced DNA bending by the yeast zinc cluster protein PUT3. P. Hoffmann & A. Schepartz, *Bio. Med. Chem. Lett.* **1997**, *7*, 2049-2054.
38. Mechanism of DNA Binding Enhancement by the Hepatitis B Virus Protein X. C.R. Palmer, L.D. Gegnas, A. Schepartz, *Biochemistry* **1997**, *36*, 15349-15355.
39. Sequence determinants of the intrinsic bend in the cyclic AMP response element. L.S. Sloan & A. Schepartz, *Biochemistry* **1998**, *37*, 7113-7118.
40. Preinitiation complex assembly: Potentially a bumpy path. J.M. Cox, A.R. Kays, J.F. Sanchez & A. Schepartz, *Curr. Op. Chem. Biol.* **1998**, *2*, 11-17.
41. At the chemistry-biology interface. A. Schepartz & P.S. Kim, *Curr. Op. Chem. Biol.* **1998**, *2*, 9- 10.
42. Polarity of transcription on Pol II and archaeal promoters: where is the "one-way sign" and how is it read? F.T. Tsai, O. Littlefield, P.F. Kosa, J. M. Cox, A. Schepartz & P.B. Sigler, *Cold Spring Harb. Symp. Quant. Biol.* **1998**, *63*, 53-61.
43. Highly specific DNA recognition by a designed, miniature protein. N.J. Zondlo & A. Schepartz, *J. Am. Chem. Soc.* **1999**, *121*, 6938-6939. **Highlight:** *Nature* **1999** (<https://doi.org/10.1038/news990812-3>)
44. DNA specificity enhanced by sequential binding of protein monomers. J.J. Kohler, S.J. Metallo, T.L. Schneider & A. Schepartz, *Proc. Natl. Acad. Sci. USA* **1999**, *96*, 11735-11739.
45. Gene Regulation: Protein escorts to the transcription ball. J.W. Chin, J.J. Kohler, T.L. Schneider & A. Schepartz, *Curr. Biol.* **1999**, *9*, R929-R932.
46. Virtually unidirectional binding of TBP to the AdMLP TATA box within quaternary complex with TFIIA and TFIIB. A.R. Kays & A. Schepartz, *Chem. Biol.* **2000**, *7*, 601-610.
47. Hepatitis B virus X protein activates transcription by bypassing CREB phosphorylation, not by stabilizing bZIP-DNA complexes. M.K. Pflum, D. Hall, T.L. Schneider, & A. Schepartz, *Biochemistry* **2001**, *40*, 693-703.
48. Concerted evolution of structure and function in a miniature protein. J.W. Chin & A. Schepartz, *J. Am. Chem. Soc.* **2001**, *123*, 2929-2930. **Highlight:** *Science* **2001**, *291*, 2049.
49. Kinetic studies of Fos•Jun•DNA complex formation: DNA binding prior to dimerization. J.J. Kohler & A. Schepartz, *Biochemistry* **2001**, *40*, 130-142.
50. Kinetic Preference for Oriented DNA Binding by the Yeast TATA-Binding Protein TBP. Y. Liu & A. Schepartz, *Biochemistry* **2001**, *40*, 6257-6266.
51. A Roller Coaster Ride of Thrills. A. Schepartz, *Chem. Eng. News* **2001**, 125th Anniversary Issue, *79*, 164.
52. Hepatitis B Virus protein pX enhances monomer assembly pathway of bZIP•DNA complexes. T.L. Schneider & A. Schepartz, *Biochemistry* **2001**, *40*, 2835-2843.
53. Methodology for optimizing functional miniature proteins based on avian pancreatic polypeptide using phage display. J.W. Chin, R.M. Grotfeld, M.A. Fabian & A. Schepartz, *Bioorg. Med. Chem. Lett.* **2001**, *11*, 1501-1505.
54. Effects of nucleic acids and polyanions on dimer formation and DNA binding by dimeric transcription factors. J.J. Kohler & A. Schepartz, *Bioorg. Med. Chem.* **2001**, *9*, 2435-2443.

55. Design and evolution of a miniature Bcl-2 binding protein. J.W. Chin & A. Schepartz, *Angew. Chem. Int. Ed. Eng.* **2001**, *40*, 3806-3809. **Highlight:** *Science* **2001**, *291*, 2049.
56. Electrostatic Control of Half-Site Spacing Preferences by the cyclic AMP Response Element Binding Protein CREB. J.K. Montclare, L.S. Sloan & A. Schepartz, *Nucl. Acids Res.* **2001**, *29*, 3311-3319.
57. Gal4-VP16 and Gal4-AH increase the orientational and axial specificity of TATA box recognition by TATA box binding protein. A.R. Kays & A. Schepartz, *Biochemistry* **2002**, *41*, 3147-3155. **Highlight:** Faculty of 1000.
58. A View to a Kill: Ligands for Bcl-2 family proteins. S.E. Rutledge, J.W. Chin & A. Schepartz, *Curr. Op. Chem. Biol.* **2002**, *6*, 479-485.
59. Miniature Homeodomains: High specificity without an N-terminal arm. J.K. Montclare & A. Schepartz, *J. Am. Chem. Soc.* **2003**, *125*, 3416-3417.
60. Helix macrodipole control of β^3 -peptide 14-helix stability in water. S.A. Hart, A.B.F. Bahadoor, E.E. Matthews, & A. Schepartz, *J. Am. Chem. Soc.* **2003**, *125*, 4022-4023.
61. Molecular recognition of protein surfaces: High affinity ligands for the CBP KIX domain. S.E. Rutledge, H. M. Volkman & A. Schepartz, *J. Am. Chem. Soc.* **2003**, *125*, 14336-14347.
62. High affinity, paralog-specific recognition of the Mena EVH1 domain by a miniature protein. D. Golemi-Kotra, R. Mahaffy, M.J. Footer, J.H. Holtzman, T.D. Pollard, J.A. Theriot & A. Schepartz, *J. Am. Chem. Soc.* **2004**, *126*, 4-5.
63. Helical β -peptide inhibitors of the p53-hDM2 interaction. J.A. Kritzer, J.D. Lear, M. Hodsdon & A. Schepartz, *J. Am. Chem. Soc.* **2004**, *126*, 9468-9469.
64. Relationship between side chain structure and 14-helix stability of β^3 -peptides in water. J.A. Kritzer, J. Tirado-Rives, S.A. Hart, J.D. Lear, W.L. Jorgensen, & A. Schepartz, *J. Am. Chem. Soc.* **2005**, *127*, 167-178.
65. Paralog-selective ligands for Bcl-2 proteins. A.C. Gemperli, S.E. Rutledge, A. Maranda & A. Schepartz, *J. Am. Chem. Soc.* **2005**, *127*, 1596-1597.
66. Binding mode and transcriptional activation potential of high affinity ligands for the CBP KIX domain. H.M. Volkman, S.E. Rutledge, and A. Schepartz, *J. Am. Chem. Soc.* **2005**, *127*, 4649- 4658.
67. β -peptide inhibitors of protein-protein interactions. J.A. Kritzer, O.M. Stephens, D.A. Guerracino, S.K. Reznik & A. Schepartz, *Bio. Med. Chem.* **2005**, *15*, 11-16.
68. Lanthanide-mediated phosphoester hydrolysis and phosphate elimination from phosphopeptides. N.W. Luedtke & A. Schepartz, *Chem. Comm.* **2005**, *45*, 5426-5428.
69. Solution Structure of a β -peptide Ligand for hDM2. J.A. Kritzer, M.E. Hodsdon & A. Schepartz, *J. Am. Chem. Soc.* **2005**, *127*, 4118-4119.
70. Relationship between folding and function in a sequence-specific miniature DNA-binding protein. L. Yang & A. Schepartz, *Biochemistry* **2005**, *44*, 7469-7478.
71. Increasing the kinase specificity of K252a by protein surface recognition. T.L. Schneider, R.S. Mathew, K.P. Rice, K. Tamaki, J.L. Wood & A. Schepartz, *Org. Lett.* **2005**, *7*, 1695-1698.
72. Inhibiting HIV Fusion with a β -Peptide Foldamer. O.M. Stephens, S. Kim, B.D. Welch, M.E. Hodsdon, M.S. Kay & A. Schepartz, *J. Am. Chem. Soc.* **2005**, *127*, 13126-13127.

73. A Rapid Library Screen for Tailoring β -peptide Structure and Function. J.A. Kritzer, N.W. Luedtke, E. Harker, & A Schepartz, *J. Am. Chem. Soc.* **2005**, *127*, 14584-14585.
Highlight: Faculty of 1000.
74. Miniature protein inhibitors of the p53•hDM2 interaction. J.A. Kritzer, R. Zutshi, M. Cheah, F.A. Ran, R. Webman, T.M. Wonjirad & A. Schepartz, *ChemBioChem* **2006**, *7*, 29-31.
75. Relationship between salt-bridge identity and 14-helix stability of β° -peptides in aqueous buffer. D.A. Guerracino, H.R. Chiang, T.N. Banks, J.D. Lear, M.E. Hodsdon & A. Schepartz, *Org Lett.* **2006**, *8*, 807-810.
76. Toward β -amino acid proteins: A cooperatively folded β -peptide quaternary Structure. J.X. Qiu, E.J. Petersson, E.E. Matthews & A. Schepartz, *J. Am. Chem. Soc.* **2006**, *128*, 11338-11339.
77. Encodable activators of Src family kinases. C.D. Zellefrow, J.S. Griffiths, S. Saha, A.M. Hodges, J.L. Goodman, J. Paulk, J.A. Kritzer & A. Schepartz, *J. Am. Chem. Soc.* **2006**, *128*, 16506-16507.
78. High resolution structure of a β -peptide bundle. D.S. Daniels, E.J. Petersson, J.X. Qiu, & A. Schepartz, *J. Am. Chem. Soc.* **2007**, *129*, 1532-1533. **Highlight:** *Chem. Eng. News* **2007**, *85*, 7; **Highlight:** *Chem. Eng. News* **2007**, *85*, 13-19; **Highlight:** Faculty of 1000 Biology.
79. Biophysical characterization of a β -peptide bundle: Comparison to natural proteins. E.J. Petersson, C. Craig, D.S. Daniels, J.X. Qiu, & A. Schepartz, *J. Am. Chem. Soc.* **2007**, *129*, 5344-5345.
80. Surveying polypeptide and protein domain conformation and association with FlAsH and ReAsH. N. Luedtke, R. Dexter, D. Fried & A. Schepartz, *Nat. Chem. Biol.* **2007**, *3*, 779-784. **Highlight:** *Science* **2007**, *318*, 1217; **Highlight:** *Nat. Methods* **2008**, *5*, 6-7
81. Miniature protein ligands for EVH1 domains: Interplay between affinity, specificity, and cell motility. J.H. Holtzman, D. Golemi-Kotra, K. Woronowicz & A. Schepartz, *Biochemistry* **2007**, *46*, 13541-13553.
82. Engineering a monomeric miniature protein. A.M. Hodges & A. Schepartz, *J. Am. Chem. Soc.* **2007**, *129*, 11024-11025.
83. Intrinsically cell-permeable miniature proteins based on a minimal cationic PPII motif. D.S. Daniels & A. Schepartz, *J. Am. Chem. Soc.* **2007**, *129*, 14578-14579. **Highlight:** *Chem. Eng. News* **2007**, *85*, 43; **Highlight:** Faculty of 1000 Biology.
84. Biophysical and structural characterization of a robust octameric β -peptide bundle. J.L. Goodman, D.S. Daniels, J.X. Qiu, E.J. Petersson & A. Schepartz, *J. Am. Chem. Soc.* **2007**, *129*, 14746-14751.
85. Sophistication of foldamer form and function in vitro and in vivo. A.D. Bautista, C.J. Craig, E.A. Harker, & A. Schepartz, *Curr. Op. Chem. Biol.* **2007**, *11*, 685-692.
86. Toward β -amino acid proteins: Design, synthesis, and characterization of a fifteen kilodalton β -peptide tetramer. E.J. Petersson & A. Schepartz, *J. Am. Chem. Soc.* **2008**, *130*, 821-823.
87. Minimally cationic cell-permeable miniature proteins via alpha-helical arginine display. B. Smith, D.S. Daniels, A. Coplin, G. Jordan, & L. McGregor, & A. Schepartz, *J. Am. Chem. Soc.* **2008**, *130*, 2948-2949.

88. Tetrameric β^3 -peptide bundles. J.L. Goodman, M.A. Molski, J. Qui, & A. Schepartz, *ChemBioChem* **2008**, *9*, 1576-1578.
89. Selective recognition of protein tetraserine motifs with a cell-permeable, pro-fluorescent bis- boronic acid. T.L. Halo, J. Appelbaum, E.M. Hobert, D.M. Balkin, & A. Schepartz, *J. Am. Chem. Soc.* **2009**, *131*, 438-439. **Highlight:** Faculty of 1000 Biology.
90. β -peptides with improved affinity for hDM2 and hDMX. E.A. Harker, D.S. Daniels, D.A. Guaracino & A. Schepartz, *Bioorg. Med. Chem.* **2009**, *17*, 2038-2046.
91. Identification of a β^3 -peptide HIV fusion inhibitor with improved potency in live cells. A.D. Bautista, O.M. Stephens, L. Wang, R.A. Domaoal, K.S. Anderson, & A. Schepartz, *Bioorg. Med. Chem. Lett.* **2009**, *19*, 3736-3738.
92. Cell-permeable β -peptide inhibitors of p53•hDM2 complexation. E.A. Harker & A. Schepartz, *ChemBioChem* **2009**, *10*, 990-993.
93. In silico improvement of β^3 -peptide inhibitors of p53•hDM2 and p53•hDMX. J. Michel, E.A. Harker, J. Tirado-Rives, W.L. Jorgensen, & A. Schepartz, *J. Am. Chem. Soc.* **2009**, *131*, 6356-6357. **Highlight:** *Nature Chem.* **2009** (doi:10.1038/nchem.243).
94. Bipartite tetracysteine display requires site flexibility for ReAsH coordination. J.L. Goodman, D.B. Fried, & A. Schepartz, *ChemBioChem* **2009**, *10*, 1644-1647.
95. Bridged β^3 -peptide inhibitors of p53-hDM2 complexation: Correlation between affinity and cell permeability. A.D. Bautista, J.S. Appelbaum, C.J. Craig, J. Michel, & A. Schepartz, *J. Am. Chem. Soc.* **2010**, *132*, 2904-2906.
96. β -Peptide bundles with fluorous cores. M.A. Molski, J.L. Goodman, C.J. Craig, H. Meng, K. Kumar, & A. Schepartz, *J. Am. Chem. Soc.* **2010**, *132*, 3658-3659.
97. Visualizing tyrosine kinase activity with bipartite tetracysteine display. S. Ray-Saha & A. Schepartz, *ChemBioChem* **2010**, *11*, 2089-2091.
98. Direct visualization of protein association in living cells with complex-edited electron microscopy. R.J. Dexter & A. Schepartz, *Angew. Chem. Int. Ed.* **2010**, *49*, 7952-7954.
99. Enhancing β^3 -peptide bundle stability by design. C.J. Craig, J.L. Goodman, & A. Schepartz, *ChemBioChem* **2011**, *12*, 1035-1038.
100. Surveying protein structure and function using bis-arsenical small molecules. R.A. Scheck & A. Schepartz, *Acc. Chem. Res.* **2011**, *44*, 654-665.
101. Molecular imaging: *sine labore nihil*. A. Schepartz & R.L. Gonzalez Jr., *Curr. Opin. Chem. Biol.* **2011**, *15*, 749-751.
102. Visualizing protein partnerships in living cells and organisms. M.A. Lowder, J.S. Appelbaum, E.M. Hobert, & A. Schepartz, *Curr. Opin. Chem. Biol.* **2011**, *15*, 781-788.
103. Rewiring kinase specificity with a synthetic adaptor protein. E.M. Hobert & A. Schepartz, *J. Am. Chem. Soc.* **2012**, *134*, 3976-3978. **Highlight:** *Angew. Chem.* **2012** (doi: 10.1002/anie.201203345)
104. Relationship between sidechain branching and stoichiometry in β^3 -peptide bundles. P.S. Wang, C.J. Craig, & A. Schepartz, *Tetrahedron* **2012**, *68*, 4342-4345.
105. Bipartite tetracysteine display reveals allosteric control of ligand-specific EGFR activation. R.A. Scheck, M.A. Lowder, J.S. Appelbaum, & A. Schepartz, *ACS Chem. Bio.* **2012**, *7*, 1367- 1376. **Highlight:** Faculty of 1000.

106. Arginine topology controls escape of minimally cationic proteins from early endosomes to the cytoplasm. J.S. Appelbaum, J.M. LaRochelle, B.A. Smith, D.M. Balkin, J.M. Holub, & A. Schepartz, *Chem. Bio.* **2012**, *19*, 819-830.
107. Remodeling a β -peptide bundle. M.A. Molski, J.L. Goodman, F-C. Chou, D. Baker, R. Das, & A. Schepartz, *RSC Chem. Sci.* **2013**, *4*, 319-324.
108. A β -boronopeptide bundle of known structure as a vehicle for polyol recognition. M.S. Melicher, J. Chu, A.S. Walker, S.J. Miller, R.H.G. Baxter, & A. Schepartz, *Org. Lett.* **2013**, *15*, 5048-5051.
109. Supramolecular chemistry for biology, materials and medicine. A. Schepartz, & S. C. Zimmerman, *Isr. J. Chemistry* **2013**, *53*, 495-496.
110. Effective molarity redux: Proximity as a guiding force in chemistry and biology. E. M. Hobert, A.E. Doerner, A.S. Walker, & A. Schepartz, *Isr. J. Chem* **2013**, *53*, 567-576.
111. A β -peptide agonist of the GLP-1 receptor, a class B GPCR. E.V. Denton, C.J. Craig, R.L. Pongratz, J.S. Appelbaum, A.E. Doerner, A. Narayanan, G.I. Shulman, G.W. Cline, & A. Schepartz, *Org. Lett.* **2013**, *15*, 5318-5321.
112. Combined lewis acid and bronsted acid-mediated reactivity of glycosyl trichloroacetimidate donors. N.D. Gould, C.L. Allen, B.C. Nam, A. Schepartz, & S.J. Miller, *Carbohydr. Res.* **2013**, *382*, 36-42.
113. Improved assays for determining the cytosolic access of peptides, proteins, and their mimetics. J.M. Holub, J.R. LaRochelle, J.S. Appelbaum, & A. Schepartz, *Biochemistry* **2013**, *52*, 9036- 9046.
114. Design and high-resolution structure of a β^3 -peptide bundle catalyst. P.S.P. Wang, J.B. Nguyen, & A. Schepartz, *J. Am. Chem. Soc.* **2014**, *136*, 6810-6813.
115. Chemistry and the BRAIN initiative. A.M. Andrews, A. Schepartz, J.V. Sweedler, & P.S. Weiss, *J. Am. Chem. Soc.* **2014**, *136*, 1-2.
116. Super-resolution imaging of the Golgi in live cells with a bio-orthogonal ceramide probe. R.S. Erdmann, H. Takakura, A.D. Thompson, F. Rivera-Molina, E.S. Allgeyer, J. Bewersdorf, D.K. Toomre, & A. Schepartz, *Angew. Chem. Int. Ed. Engl.* **2014**, *53*, 10242-6.
Highlight: Chosen as a "Hot Paper".
117. Hochaufgelöste Visualisierung des Golgi-Apparats in lebenden Zellen mit einem bioorthogonalen Ceramid. R.S. Erdmann, H. Takakura, A.D. Thompson, F. Rivera-Molina, E.S. Allgeyer, J. Bewersdorf, D.K. Toomre, & A. Schepartz, *Angew. Chem. Weinheim. Bergstr. Gpaer.* **2014**, *126*, 10407-12.
118. Interactions of AsCy3 with cysteine-rich peptides. S.C. Alexander & A. Schepartz, *Org. Lett.* **2014**, *16*, 3824-3827.
119. Inhibiting epidermal growth factor receptor at a distance. J.K. Sinclair, E.V. Denton, & A. Schepartz, *J. Am. Chem. Soc.* **2014**, *136*, 11232-11235. **Highlight:** F1000 Prime;
Highlight: SciBX
(<http://www.nature.com/scibx/journal/v7/n35/full/scibx.2014.1036.html>)
120. Influence of macrocyclization on allosteric, juxtamembrane-derived, stapled peptide inhibitors of the epidermal growth factor receptor (EGFR). J.K. Sinclair & A. Schepartz, *Org. Lett.* **2014**, *16*, 4916-9.
121. Positive allostery in metal ion binding by a cooperatively folded β -peptide bundle. J.P. Miller, M.S. Melicher, & A. Schepartz, *J. Am. Chem. Soc.* **2014**, *136*, 14726-9.

122. Fluorescence correlation spectroscopy reveals highly efficient cytosolic delivery of certain penta-arg proteins and stapled peptides. J.R. LaRochelle, G.B. Cobb, A. Steinauer, E. Rhoades, & A. Schepartz, *J. Am. Chem. Soc.* **2015**, *137*, 2536-41.
123. Structural differences between wild-type and double mutant EGFR modulated by third-generation kinase inhibitors. M.A. Lowder, A.E. Doerner, & A. Schepartz, *J. Am. Chem. Soc.* **2015**, *137*, 6456-9. **Highlight:** SciTechDaily (<http://scitechdaily.com/drug-resistant-egfr-may-have-achilles-heel/>)
124. Growth factor identity is encoded by discrete coiled-coil rotamers in the EGFR juxtamembrane region. A. Doerner, R. Scheck, & A. Schepartz, *Chem. Biol.* **2015**, *22*, 776-784. **Highlight:** Dialing in EGFR Signaling, *Chem. Biol.* **2015**, *22*, 687.
125. Improved carbohydrate recognition in water with an electrostatically enhanced β -peptide bundle. M.S. Melicher, A.S. Walker, J. Shen, S.J. Miller, & A. Schepartz, *Org. Lett.* **2015**, *17*, 4718-21.
126. Discovery and characterization of a peptide that enhances endosomal escape of delivered proteins *in vitro* and *in vivo*. M. Li, Y. Tao, Y. Shu, J.R. LaRochelle, A. Steinauer, D. Thompson, A. Schepartz, Z.-Y. Chen, & D. Liu, *J. Am. Chem. Soc.* **2015**, *137*, 14084-93.
127. Two-colour live-cell nanoscale imaging of intracellular targets. F. Bottanelli, E.B. Kromann, E.S. Allgeyer, R.S. Erdmann, S.W. Baguley, G. Sirinakis, A. Schepartz, D. Baddeley, D.K. Toomre, J.E. Rothman, & J. Bewersdorf, *Nat. Commun.* **2016**, *7*, 10778. **Highlight:** F1000 Prime.
128. Aqueous glycosylation of unprotected sucrose employing glycosyl fluorides in the presence of calcium ion and trimethylamine. G. Pelletier, A. Zwicker, C. Allen, A. Schepartz, & S. Miller, *J. Am. Chem. Soc.* **2016**, *138*, 3175–3182.
129. *In vivo* biosynthesis of a β -amino acid-containing protein. C. Melo Czekster, W.E. Robertson, A.S. Walker, D. Söll, & A. Schepartz, *J. Am. Chem. Soc.* **2016**, *138*, 5194-7.
130. β -peptide bundles: design. Build. Analyze. Biosynthesize. P.S. Wang & A. Schepartz, *Chem. Commun.* **2016**, *52*, 7420-32.
131. Rotamer-restricted fluorogenicity of the bis-arsenical ReAsH. A.S. Walker, P.R. Rablen, & A. Schepartz, *J. Am. Chem. Soc.* **2016**, *138*, 7143-50. **Highlight:** Chosen for cover image.
132. Building on 50 years of excellence where chemistry meets life science. A. Schepartz, *Biochemistry* **2016**, *55*, 4997.
133. A novel physiological role for ARF1 in the formation of bi-directional tubules from the Golgi. F. Bottanelli, N. Kilian, A.M. Ernst, F. Molina-Rivera, L.K. Schroeder, E.B. Kromann, M.D. Lessard, R.S. Erdmann, A. Schepartz, D. Baddeley, J. Bewersdorf, D. Toomre, & J.E. Rothman, *Mol. Biol. Cell.* **2017**, *28*, 1676-1687.
134. STED imaging of Golgi dynamics with CerSiR: a two-component, photostable, high-density lipid probe for live cells. R.S. Erdmann, D. Toomre, & A. Schepartz, *Super-Resolution Microscopy: Methods and Protocols.* **2017**, 65-78.
135. Long time-lapse nanoscopy with spontaneously blinking membrane probes, H. Takakura, Y. Zhang, R.S. Erdmann, A.D. Thompson, Y. Lin, B. McNellis, F. Rivera-Molina, S.N. Uno, M. Kamiya, Y. Urano, J.E. Rothman, J. Bewersdorf, A. Schepartz, & D. Toomre, *Nat. Biotechnol.* **2017**, *35*, 773-780. **Highlight:** Nanoscopic imaging that lasts, *Nat Methods* **2017**, *14*, 833.

136. Long-term live-cell STED nanoscopy of primary and cultured cells with the plasma membrane HIDE probe Dil-SiR. A.D. Thompson, M.H. Omar, F. Rivera-Molina, Z. Xi, A.J. Koleske, D. Toomre, & A. Schepartz, *Angew. Chem.* **2017**, *56*, 10408-10412.
137. The ecstasy and agony of assay interference compounds. C. Aldrich, C. Bertozzi, G.I. Georg, L. Kiessling, C. Lindsley, D. Liotta, K.M. Merz, Jr., A. Schepartz & S. Wang. *J. Med. Chem.* **2017**, *60*, 2165-2178.
138. HIDE Probes: A New Toolkit for Visualizing Organelle Dynamics, Longer and at Super- Resolution. A. D Thompson, J. Bewersdorf, D. Toomre, & A. Schepartz, *Biochemistry* **2017**, *56*, 5194-5201.
139. Ronald Breslow (1931-2017). A. Schepartz, R. Bergman, R.H. Grubbs, *Angew. Chem. Int. Ed.* **2017**, *57*, 37.
140. Unique arginine array improves cytosolic localization of hydrocarbon-stapled peptides. K. Quach, J. LaRochelle, X-H. Li, E. Rhoades, A. Schepartz, *Bioorg Med Chem* **2018**, *26*, 1197- 1202.
141. Foldamers wave to the ribosome. A. Schepartz, *Nat. Chem.* **2018**, *10*, 377-379.
142. Rapid Phenolic *O*-Glycosylation of Small Molecules and Complex Unprotected Peptides in Aqueous Solvent, T.J. Wadzinski, A. Steinauer, L. Hie, G. Pelletier, A. Schepartz & S.J. Miller, *Nat. Chem.* **2018**, *10*, 644-652. **Highlight:** Hitting the sweet spot, *Nat Chem* **2018**, *10*, 644-652; **Highlight:** Stop Ignoring the Sugars, *In the Pipeline* (<http://blogs.sciencemag.org/pipeline/archives/2018/05/07/stop-ignoring-the-sugars>)
143. Mechanism of allosteric coupling into and through the plasma membrane by EGFR. J.K.L. Sinclair, A.S. Walker, A.E. Doerner, & A. Schepartz, *Cell Chem. Biol.* **2018**, 857-870.
144. Introducing the Future of Biochemistry. A. Schepartz. *Biochemistry* **2018**, *57*, 1-8.
145. Fluorescence correlation spectroscopy reveals efficient cytosolic delivery of protein cargo by cell-permeant miniature proteins. R.F. Wissner, A. Steinauer, S.L. Knox, A.D. Thompson, & A. Schepartz, *ACS Cent Sci* **2018**, *4*, 1379-1393.
146. HOPS-dependent endosomal fusion required for efficient cytosolic delivery of therapeutic peptides and small proteins. A. Steinauer, J.R. LaRochelle, R.F. Wissner, S. Berry, & A. Schepartz, *Proc Natl Acad Sci USA* **2019**, *116*, 512-521.
147. Pushing the limits of solid-phase synthesis with continuous flow. A.J. Mijalis, A. Steinauer, A. Schepartz, & B.L. Pentalute, *Science of Synthesis: Flow Chemistry*, Section 12, **2018**.
148. Synthesis and Biological Evaluation of an Indazole-Based Selective Protein Arginine Deiminase 4 (PAD4) Inhibitor. C. Tjin, R. Wissner, H. Jamali, A. Schepartz, & J. Ellman, *ACS Med Chem Lett* **2018**, *9*, 1013-1018.
149. Special Issue on Discovering New Tools. A. Schepartz. *Biochemistry* **2018**, *57*, 4605-4606.
150. Labeling Strategies Matter for Super-Resolution Microscopy: A Comparison between Halo- and SNAP-Tags. R.S. Erdmann, S.W. Baguley, J.H. Richens, R.F. Wissner, Z. Xi, E.S. Allgeyer, S. Zhong, A.D. Thompson, N. Lowe, R. Butler, J. Bewersdorf, J.E. Rothman, D. St Johnston, A. Schepartz, & D. Toomre, *Cell Chem Biol* **2019**, *26*, 584-592.
151. Targeted editing and evolution of engineered ribosomes *in vivo* by filtered editing. F. Radford, S.D. Elliott, A. Schepartz, & F.J. Isaacs, *Nat Commun.* **2022**, *13*, Article number: 180. **Highlight:** Targeting repetitive sequences for gene editing, *Ce3E*

News (<https://cen.acs.org/biological-chemistry/gene-editing/Targeting-repetitive-sequences-gene-editing/100/web/2022/01>)

152. Endosome motility defects revealed at super-resolution in live cells using HIDE probes. A. Gupta, F. Rivera-Molina, Z. Xi, D. Toomre, & A. Schepartz, *Nat. Chem. Bio.* **2020**, *16*, 408- 414. **Highlight:** *Science* **2020**, *370*, 1053.
153. GEM-NET: Lessons in multi-institution teamwork using collaboration software. S.G. Gaffney, O. Ad, S. Smaga, Z. Zhang, A. Schepartz, & J.P. Townsend, *ACS Cent. Sci.* **2019**, *5*, 1159-1169.
154. Two-color nanoscopy of organelles for extended times with HIDE probes. L. Chu, J. Tyson, J.E. Shaw, F. Rivera-Molina, A.J. Koleske, A. Schepartz, & D.K. Toomre, *Nat Commun.* **2020**, *11*, 4271.
155. Translation of diverse aramid- and 1,3-dicarbonyl-peptides by wild type ribosomes *in vitro*. O. Ad, K. Hoffmann, A. Cairns, A. Featherston, S.J. Miller, D. Söll, & A. Schepartz, *ACS Cent. Sci.* **2019**, *5*, 1289-1294.
156. Defects in the assembly of ribosomes selected for β -amino acid incorporation. F.R. Ward, Z.L. Watson, O. Ad, A. Schepartz, & J.H.D. Cate, *Biochemistry* **2019**, *58*, 4494.
157. Dan Kahne: 2019 Gordon Hammes Lectureship. A. Schepartz, *Biochemistry* **2019**, *58*, 3407.
158. Welcome New Executive Editor, Squire Booker. A. Schepartz, *Biochemistry* **2019**, *58*, 5099.
159. Initiation of Protein Synthesis with Non-Canonical Amino Acids In Vivo. J.M. Tharp, O. Ad, K. Amikura, F.R. Ward, E.M. Garcia, J.H. Cate, A. Schepartz, & D. Söll, *Angew. Chem.* **2020**, *59*, 3122-3126.
160. Introducing *Future of Biochemistry 2020: The Asia-Pacific Issue*. A. Schepartz, *Biochemistry* **2020**, *59*, 1-7.
161. Endosome motility defects revealed at super-resolution in live cells using HIDE probes. A. Gupta, F. Rivera-Molina, Z. Xi, D. Toomre, & A. Schepartz, *Nature Chem Bio* **2020**, *16*, 408-414. **Highlight:** Lighting up endosomes, *Science* **2020**, *368*, 279.
162. Quantification of protein delivery in live cells using fluorescence correlation spectroscopy. S.L. Knox, A. Steinauer, G. Alpha-Cobb, A. Trexler, E. Rhoades, and A. Schepartz, *Meth. Enzymol.* **2020**, *641*, 477-505.
163. Confronting Racism in Chemistry Journals. C.J. Burrows *et al.*, *ACS Appl. Mater. Interfaces* **2020**, *12*, 28925–28927.
164. Welcome New Executive Editor, Bryan Roth. A. Schepartz, *Biochemistry* **2020**, *59*, 2121.
165. RNA sectors and allosteric function within the ribosome. A.S. Walker, W.P. Russ, R. Ranganathan, & A. Schepartz, *Proc. Natl. Acad. Sci. USA* **2020**, *117*, 19879-19887.
166. Structure of the Bacterial Ribosome at 2 Å Resolution. Z.L. Watson, F.R. Ward, R. Méheust, O. Ad, A. Schepartz, J.F. Banfield, & J.H.D. Cate, *eLife* **2020**, *9*, e60482.
167. Discrete coiled coil rotamers form within the EGFRvIII juxtamembrane domain. D. Mozumdar, A. Doerner, J. Zhang, D. Rafizadeh & A. Schepartz, *Biochemistry* **2020**, *59*, 3965- 3972.
168. Allosteric Inhibition of the Epidermal Growth Factor Receptor. J. Sinclair, W. Robertson, D. Mozumdar, K. Quach, & A. Schepartz, *Biochemistry* **2021**, *60*, 500-512.

169. Genetic Encoding of Three Distinct Noncanonical Amino Acids Using Reprogrammed Initiator and Nonsense Codons. J. Tharp, O. Vargas-Rodriguez, A. Schepartz, & D. Soll, *ACS Chem Biol* **2021**, *16*, 766-774.
170. Cytosolic delivery of argininosuccinate synthetase using a cell-permeant miniature protein. S.L. Knox, R. Wissner, S. Piszkiewicz, & A. Schepartz, *ACS Cent. Sci.* **2021**, *7*, 641–649.
171. Initiating protein synthesis with noncanonical monomers in vitro and in vivo. J.M. Tharp, J.A. Walker, D. Söll, & A. Schepartz, *Meth. Enzymol.* **2021**, *656*, 495-519.
172. Extremely bright, near-IR emitting spontaneously blinking fluorophores enable ratiometric multicolor nanoscopy in live cells. J. Tyson, K. Hu, S. Zheng, P. Kidd, N. Dadina, L. Chu, D. Toomre, J. Bewersdorf, & A. Schepartz, *ACS Cent. Sci.* **2021**, *7*, 1419–1426. **Highlight:** Chosen for cover image.
173. Genetic code expansion in the engineered organism Vmax H2: high yield and exceptional fidelity. S. Santiago González, O. Ad, B. Shah, Z. Zhang, X. Zhang, A. Chatterjee, & A. Schepartz, *ACS Cent. Sci.* **2021**, *7*, 1500–1507.
174. Imaging organelle membranes in live cells at the nanoscale with lipid-based fluorescent probes. N. Dadina, J. Tyson, S. Zheng, L. Lesiak, & A. Schepartz, *Curr. Opin. Chem. Biol.* **2021**, *65*, 154-162.
175. Bioorthogonal, fluorogenic targeting of voltage-sensitive fluorophores for visualizing membrane potential dynamics in cellular organelles. P. Klier, A. Gest, J Martin, R. Roo, M. Navarro, L. Lesiak, P. Deal, N. Dadina, J. Tyson, A. Schepartz, & E. Miller, *ACS Cent. Sci.* **2022**, *144*, 12138-12146.
176. Redirecting RiPP Biosynthetic Enzymes to Proteins and Backbone-Modified Substrates. J. A. Walker, N. Hamlish, A. Tytla, D. D. Brauer, M.B. Francis, & A. Schepartz, *ACS Cent. Sci.* **2022**, *8*, 473-483. **Highlight:** Chosen for cover image.
177. Suppression of p53 response by targeting p53-Mediator binding with a stapled peptide. B. Allen, K. Quach, T. Jones, C. Levandowski, C. Ebmeier, J. Rubin, T. Read, R. Dowell, A. Schepartz & D. Taatjes, *Cell Reports* **2022**, *39*, 110630.
178. Atomistic simulations of the *E. coli* ribosome provide selection criteria for translationally active substrates. Z. Watson, I. Knudson, F.R. Ward, S.J. Miller, J.H. Cate, A. Schepartz & A. M. Abramyan, *Nat. Chem.*, **2023**, 913-921. **Highlight:** *Nat. Chem.* **2023**, *15*, 892–893.
179. Dose-dependent nuclear delivery and transcriptional repression with a cell-penetrant MeCP2. X. Zhang, M. Zoltek, D. Mozumdar & A. Schepartz, *ACS Cent. Sci.* **2023**, *9*, 277-288.
180. Expanding the substrate scope of PylRS enzymes to include non- α -amino acids in vitro and in vivo. R. Fricke, C.V. Swenson, L.T. Roe, N. Hamlish, B. Shah, Z. Zhang, E. Ficareta, O. Ad, S. Smaga, C.L. Gee, A. Chatterjee & A. Schepartz, *Nat. Chem.* **2023**, *15*, 960–971. **Highlight:** *Nature* **2023**, *618*, 874; *Nat. Chem. Biol.* **2023**, *19*, 791.
181. Aminobenzoic Acid Derivatives Obstruct Induced Fit in the Catalytic Center of the Ribosome. C. Majumdar, J.A. Walker, M.B. Francis, A. Schepartz & J.H.D. Cate, *ACS Cent. Sci.* **2023**, *9*, 1160–1169.

182. Long-term, super-resolution HIDE imaging of the inner mitochondrial membrane in live cells with a cell-permeant lipid probe. S. Zheng, N. Dadina, D. Mozumdar, L. Lesiak, K. Martinez, E. Miller, & A. Schepartz, *Nat. Chem. Biol.* **2024**, *20*, 83–92.
183. A Bright, Photostable Dye that Enables Multicolor, Time Lapse, and Super Resolution Imaging of Acidic Organelles. L. Lesiak, N. Dadina, S. Zheng, M. Schelvis, & A. Schepartz, *ACS Cent. Sci.* **2023**, *10*, 19–27.
184. Backbone extension acyl rearrangements enable cellular synthesis of proteins with internal β 2-peptide linkages. L.T. Roe, C.K. Schissel, T.L. Dover, B. Shah, N.X. Hamlish, S. Zheng, D.A. Dilworth, N. Wong, Z. Zhang, A. Chatterjee, M.B. Francis, S.J. Miller, & A. Schepartz, *Nat. Chem. Biol.* **2025**, in press.
185. Incorporation of multiple β^2 -backbones into a protein *in vivo* using an orthogonal aminoacyl-tRNA synthetase. N. Hamlish, A. Abramyan & A. Schepartz, *ACS Cent. Sci.* **2024**, *10*, 1044–1053.
186. High yield, low magnesium flexizyme reactions in a water-ice eutectic phase. J.A. Davisson, J.L. Alejo, M. Blank, E.M. Kalb, A. Prasad, I.J. Knudson, A. Schepartz, A.E. Engelhart & K.P. Adamala, *bioRxiv*, **2023**.
187. A translation-independent directed evolution strategy to engineer aminoacyl-tRNA synthetases. C. Soni, N. Prywes, M. Hall, D.F. Savage, A. Schepartz, & A. Chatterjee, *ACS Cent. Sci.* **2024**, *10*, 1211–1220.
188. Long-term super-resolution inner mitochondrial membrane imaging with a lipid probe. S. Zheng, N. Dadina, D. Mozumdar, L. Lesiak, K.N. Martinez, E.W. Miller, & A. Schepartz, *Nat. Chem. Biol.* **2024**, *1*, 83–92.
189. MAO–SiR is a tool for visualizing the inner workings of mitochondria. N. Dadina & A. Schepartz, *Nat. Chem. Biol.* **2024**, *20*, 15–16.
190. Minimization of the *E. coli* ribosome, aided and optimized by community science. T. Tangpradabkul, M. Z. Palo, J. Townley, K.B. Hsu, Eterna Participants, S. Smaga, R. Das & A. Schepartz, *Nucleic Acids Res.* **2024**, *52*, 1027–1042.
191. β -amino acids reduce ternary complex stability and alter the translation elongation mechanism. F.A. Cruz Navarrete, W.C. Griffin, Y-C. Chan, M.I. Martin, J.L. Alejo, S. Kundhavai Natchiar, I. Knudson, R.B. Altman, A. Schepartz, S. Miller, & S. C. Blanchard, *ACS Cent. Sci.* **2024**, *10*, 1262–1275.
192. HOPS-Dependent Endosomal Escape Demands Protein Unfolding. M. Zoltek, A. Vázquez, X. Zhang, N. Dadina, L. Lesiak, & A. Schepartz, *ACS Cent. Sci.* **2024**, *10*, 4, 860–870.
193. Requirements for efficient endosomal escape by designed mini-proteins. J. Giudice, D. D. Brauer, M. Zoltek, A. L. Vázquez Maldonado, M. Kelly, & A. Schepartz, *Nat Chem* **2025**, in press.
194. Chemo-ribosomal synthesis of atropisomeric and macrocyclic peptides with embedded quinolines. I.J. Knudson, T.L. Dover, D.A. Dilworth, C. Paloutzian, H. Cho, A. Schepartz, & S.J. Miller, *Nat Chem* **2025**, in press.
195. Nonenzymatic, prebiotic aminoacylation couples chirality of RNA and protein. J.A. Davisson, E.M. Kalb, I.J. Knudson, A. Schepartz, A.E. Engelhart, & K. Adamala, *bioRxiv*, **2024**. <https://doi.org/10.1101/2024.07.29.605638>

196. Thioesters support efficient protein biosynthesis by the ribosome. A. Kent, J. Robins, I. Knudson, J. Vance, A. Solivan, N. Hamlish, K. Fitzgerald, A. Schepartz, S. Miller, & J. Cate, *ACS Cent. Sci.* **2025**, *11*, 404–412. **Highlight:** Promiscuity in Nature Extends to Central Protein Biosynthetic Machinery, *ACS Cent. Sci.* **2025**. (<https://pubs.acs.org/doi/10.1021/acscentsci.5c00387>)
197. Hastened Fusion-Dependent Endosomal Escape Improves Activity of Delivered Enzyme Cargo. Vázquez-Maldonado, A.; Chen, T.; Rodriquez, D.; Zoltek, M.; Schepartz, A., *ACS Cent. Sci.* **2025**, *11*, 474-482.
198. Peptide Backbone Editing via Post-Translational O to C Acyl Shift. Schissel, C. K.; Roberts-Mataric, H.; Garcia, I. J.; Kang, H.; Mowzoon-Mogharrabi, R.; Francis, M. B.; Schepartz, A., *J. Am. Chem. Soc.* **2025**, *147*, 6503–6513. <https://pubs.acs.org/doi/10.1021/jacs.4c14103>. **Highlight:** Feature article in *Ce3EN* **2025** “A sequence-independent way to edit protein backbones”; **Highlight:** Feature article in APS 2025 “Backbone Editing” (<https://americanpeptidesociety.org/aps-news/backbone-editing/>)
199. Direct and quantitative analysis of tRNA acylation using intact tRNA liquid chromatography–mass spectrometry. Fricke, R.; Knudson, I. J.; Swenson, C. V.; Smaga, S.; Schepartz, A. *Nat Protocol* **2025**, *20*, 1246–1274.
200. Packaged delivery of CRISPR-Cas9 ribonucleoproteins accelerates genome editing. Karp, H.; Zoltek, M.; Wasko, K. M.; Vazquez, A. L.; Brim, J.; Ngo, W.; Schepartz, A.; Doudna, J. *Nucl. Acids Res.* **2025**, in press.
201. Monitoring monomer-specific acyl-tRNA levels in cells with PARTI. Pressimone, M. A.; Schissel, C. K.; Goss, I. H.; Swenson, C. V.; Schepartz, A., *Nucl. Acids Res.* **2025**, *53*, gkaf327. **Highlight:** Selected as a “Breakthrough Publication”.
202. Sporadic distribution of a new archaeal genetic code with all TAG codons as pyrrolysine. Kivenson, V.; Peters, S. L.; Borrel, G.; Kivenson, A.; Roe, L. T.; Hamlish, N. X.; Fadhloui, K.; Schepartz, A.; Gribaldo, S.; Hettich, R. L.; Banfield, J. F., *bioRxiv* **2024**. <https://doi.org/10.1101/2024.09.30.615893>.
203. Further Confirmation of the Structure of 3'-(2-Pyridylidithio)-3'-deoxyadenosine and 3'-Thio-3'-deoxyadenosine: Synthetic Convergence with Cordycepin. T. Dover; J. Robins; B. Mercado; A. Schepartz; S. Miller. *J. Org. Chem.* **2025**, in press.
204. *Escherichia coli* ribosomes support translation of (*R*)- and (*S*)- β^2 -hydroxyacids in vitro: a structural and biochemical study. C. Majumdar; A.D. Kent; N.X. Hamlish; C. Zhu; K.A. Fitzgerald; A. Schepartz; J.H.D. Cate. *ChemRxiv* **2025**; doi:10.26434/chemrxiv-2025-d1896
205. Backbone extension acyl rearrangements edit cellular proteins to install β , γ , and δ backbones. L.T. Roe & A. Schepartz. *Nat Chem Biol* **2025**, in press.
206. Purification of post-transcriptionally modified tRNAs for enhanced cell-free translation systems. E.M. Kalb, J.L. Alejo, L. Dias-Fields, I. Knudson, J. A. Davisson, E. Maldonado, K. Chatrakun, S. Lin, A. Schepartz, S. Zhang, S. Blanchard, A.E. Engelhart, K.P. Adamala, *bioRxiv* **2025**. doi: <https://doi.org/10.1101/2025.06.10.658963>