

ROBERT F. STANDAERT

CONTACT INFORMATION

Department of Chemistry
East Tennessee State University
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EDUCATION

Cornell University, Ithaca, NY	A.B.	1985	Chemistry
Yale University, New Haven, CT	S.M.	1988	Chemistry
Harvard University, Cambridge, MA	Ph.D.	1992	Chemistry

RESEARCH AND PROFESSIONAL EXPERIENCE

2018–present	Professor and Chair, Department of Chemistry, East Tennessee State University
2011–2018	Joint Faculty Associate Professor of Biochemistry & Cellular and Molecular Biology, University of Tennessee, Knoxville
2005–2018	Staff Scientist, Oak Ridge National Laboratory
2001–2005	Associate Professor of Chemistry, University of Illinois at Chicago
1995–2001	Assistant Professor of Chemistry, Texas A&M University
1992–1995	Postdoctoral Fellow, Harvard University (Prof. Stuart L. Schreiber)

RESEARCH INTERESTS

Biomembranes (neutron scattering; lipid domains; membrane models; isotopic labeling; molecular dynamics, lipidomics)
Secondary metabolism, metabolomics and microbial communication
Bioenergy, Biotechnology, Bioengineering, Biomedicine and Biosecurity
Synthetic Biology

AREAS OF EXPERTISE

Organic chemistry (synthesis; modeling/simulation; separations; mechanism; structural analysis by NMR, IR, mass and other spectroscopies; biosynthesis; peptides; surface modification; natural products; secondary metabolites)
Biochemistry (proteins; biophysics; bioconjugates; molecular interactions; assays)
Radiochemistry and stable isotope research (tagging, imaging, separations, analysis)
Exceptional breadth of knowledge across physical and life sciences

GRADUATE ADVISEES:

S. Chowdhury (Adesis, Inc.); M. D. Connolly (LBNL); L. P. Jayathilaka (UIC); M. Deb (U. Toledo); Z. Lai (Bristol Myers Squibb); S. B. Park (Seoul National U.); B. M. T. Reedy (Loyola Marymount College and United States Navy); D. T. Reeves (Vanderbilt U.); R. A. Riell (Break Through Multisport); S. E. R. Schiller (Foghorn Therapeutics); M. P. VanBrunt (Sony Biotechnology); Felix Adulley (Notre Dame), Enoch Asimbisa (U. Denver), Thomas Ntim (NCSU), Issaka Obuaba (Purdue University), Edward Offei (Stepan Company), Opeyemi Tade (UTK), John-Hayford Teye-Kau (Oklahoma State U.), Martin Tindi (U. Pennsylvania), Angela Zebede (ETSU)

POSTDOCTORAL ADVISEES:

S. M. Davern (ORNL); T. R. Quick (Knox County, TN, Schools); J. Yan (Chengdu Kanghong Pharmaceutical, PRC)

PEER-REVIEWED PUBLICATIONS

1. Scott, H. L.; Burns-Casamayor, V.; Dixon, A. C.; Standaert, R. F.; Stanley, C. B.; Stingaciu, L.-R.; Carrillo, J.-M. Y.; Sumpter, B. G.; Katsaras, J.; Qiang, W.; Heberle, F. A.; Mertz, B.; Ashkar, R.; Barrera, F. N. Neutron Spin Echo Shows pHLIP Is Capable of Retarding Membrane Thickness Fluctuations. *Biochim. Biophys. Acta, Biomembr.* **2024**, 1866 (7). <https://doi.org/10.1016/j.bbamem.2024.184349>.
2. Qian, S.; Nagy, G.; Zolnierczuk, P.; Mamontov, E.; Standaert, R. Nonstereotypical Distribution and Effect of Ergosterol in Lipid Membranes. *J. Phys. Chem. Lett.* **2024**, 15 (17), 4745–4752. <https://doi.org/10.1021/acs.jpcllett.4c00385>.
3. Morgan, J. M.; Jelenska, J.; Hensley, D. K.; Li, P.; Srijanto, B. R.; Retterer, S. T.; Standaert, R. F.; Morrell-Falvey, J. L.; Greenberg, J. T. Using Vertically Aligned Carbon Nanofiber Arrays on Rigid or Flexible Substrates for Delivery of Biomolecules and Dyes to Plants. *J. Visualized Exp.* **2023**, No. 197. <https://doi.org/10.3791/65602>.
4. Morgan, J. M.; Jelenska, J.; Hensley, D.; Retterer, S. T.; Morrell-Falvey, J. L.; Standaert, R. F.; Greenberg, J. T. An Efficient and Broadly Applicable Method for Transient Transformation of Plants Using Vertically Aligned Carbon Nanofiber Arrays. *Front. Plant Sci. (New Haven, CT, U. S.)* **2022**, 13. <https://doi.org/10.3389/fpls.2022.1051340>.
5. Mou, Z.; Eakes, J.; Cooper, C. J.; Foster, C. M.; Standaert, R. F.; Podar, M.; Doktycz, M. J.; Parks, J. M. Machine Learning-Based Prediction of Enzyme Substrate Scope: Application to Bacterial Nitrilases. *Proteins: Struct., Funct., Bioinf.* **2021**, 89 (3), 336–347. <https://doi.org/10.1002/prot.26019>.
6. Smith, M. D.; Pingali, S. V.; Elkins, J. G.; Bolmatov, D.; Standaert, R. F.; Nickels, J. D.; Urban, V. S.; Katsaras, J.; Davison, B. H.; Smith, J. C.; Petridis, L. Solvent-Induced Membrane Stress in Biofuel Production: Molecular Insights from Small-Angle Scattering and All-Atom Molecular Dynamics Simulations. *Green Chem.* **2020**, 22 (23). <https://doi.org/10.1039/d0gc01865a>.
7. Nickels, J. D.; Poudel, S.; Chatterjee, S.; Farmer, A.; Cordner, D.; Campagna, S. R.; Giannone, R. J.; Hettich, R. L.; Myles, D. A. A.; Standaert, R. F.; Katsaras, J.; Elkins, J. G. Impact of Fatty-Acid Labeling of *Bacillus Subtilis* Membranes on the Cellular Lipidome and Proteome. *Front. Microbiol.* **2020**, 11. <https://doi.org/10.3389/fmicb.2020.00914>.
8. Chakraborty, S.; Molugu, T. R.; Doktorova, M.; Heberle, F. A.; Scott, H. L.; Kelley, E. G.; Nagao, M.; Dzikovski, B. G.; Standaert, R. F.; Barrera, F. N.; Katsaras, J.; Khelashvili, G.; Brown, M. F.; Ashkar, R. Stiffening of Phosphocholine Membranes by Cholesterol. *Biophys. J.* **2020**, 118 (3), 86A-86A.
9. Chakraborty, S.; Doktorova, M.; Molugu, T. R.; Heberle, F. A.; Scott, H. L.; Dzikovski, B.; Nagao, M.; Stingaciu, L.-R.; Standaert, R. F.; Barrera, F. N.; Katsaras, J.; Khelashvili,

- G.; Brown, M. F.; Ashkar, R. How Cholesterol Stiffens Unsaturated Lipid Membranes. *Proc. Natl. Acad. Sci. U. S. A.* **2020**, *117* (36), 21896–21905. <https://doi.org/10.1073/pnas.2004807117>.
10. Pierce, J.; Crow, L.; Cuneo, M.; Edwards, M.; Herwig, K. W.; Jennings, A.; Jones, A.; Li, L.; Meilleur, F.; Myles, D. A. A.; Robertson, L.; Standaert, R.; Wonder, A.; Zhao, J. K. A Prototype System for Dynamically Polarized Neutron Protein Crystallography. *Nucl. Instrum. Methods Phys. Res., Sect. A* **2019**, *940*, 430–434. <https://doi.org/10.1016/j.nima.2019.06.023>.
 11. Patabadige, D. E. W.; Millet, L. J.; Aufrecht, J. A.; Shankles, P. G.; Standaert, R. F.; Retterer, S. T.; Doktycz, M. J. Label-Free Time- and Space-Resolved Exometabolite Sampling of Growing Plant Roots through Nanoporous Interfaces. *Sci. Rep.* **2019**, *9*. <https://doi.org/10.1038/s41598-019-46538-5>.
 12. Liu, F.; Abel, S. M.; Collins, L.; Srijanto, B. R.; Standaert, R.; Katsaras, J.; Collier, C. P. Geometry-Dependent Nonequilibrium Steady-State Diffusion and Adsorption of Lipid Vesicles in Micropillar Arrays. *Adv. Mater. Interfaces* **2019**, *6* (9). <https://doi.org/10.1002/admi.201900054>.
 13. Garcia, D. C.; Cheng, X.; Land, M. L.; Standaert, R. F.; Morrell-Falvey, J. L.; Doktycz, M. J. Computationally Guided Discovery and Experimental Validation of Indole-3-Acetic Acid Synthesis Pathways. *ACS Chem. Biol.* **2019**, *14* (12), 2867–2875. <https://doi.org/10.1021/acscchembio.9b00725>.
 14. Davern, S.; O’Neil, D.; Hallikainen, H.; O’Neil, K.; Allman, S.; Millet, L.; Retterer, S.; Doktycz, M.; Standaert, R.; Boll, R.; Van Cleve, S.; DePaoli, D.; Mirzadeh, S. Microfluidics-Based Separation of Actinium-225 from Radium-225 for Medical Applications. *Sep. Sci. Technol. (Philadelphia, PA, U. S.)* **2019**, *54* (12), 1994–2002. <https://doi.org/10.1080/01496395.2019.1614956>.
 15. Scott, H. L.; Ashkar, R.; Heberle, F. A.; Standaert, R. F.; Katsaras, J.; Barrera, F. N. Neutron Spin Echo Detects Effects of the pH-Low Insertion Peptide on Membrane Thickness Fluctuations. *Acta Crystallogr., Sect. A: Found. Adv.* **2018**, *74*, A296–A296. <https://doi.org/10.1107/S0108767318097040>.
 16. Garcia, D. C.; Mohr, B. P.; Dovgan, J. T.; Hurst, G. B.; Standaert, R. F.; Doktycz, M. J. Elucidating the Potential of Crude Cell Extracts for Producing Pyruvate from Glucose. *Synth. Biol. (Oxford, U. K.)* **2018**, *3* (1). <https://doi.org/10.1093/synbio/ysy006>.
 17. Doktorova, M.; Heberle, F. A.; Eicher, B.; Standaert, R. F.; Katsaras, J.; London, E.; Pabst, G.; Marquardt, D. Preparation of Asymmetric Phospholipid Vesicles for Use as Cell Membrane Models. *Nat. Protoc.* **2018**, *13* (9), 2086–2101. <https://doi.org/10.1038/s41596-018-0033-6>.
 18. Standaert, R. F.; Giannone, R. J.; Michener, J. K. Identification of Parallel and Divergent Optimization Solutions for Homologous Metabolic Enzymes. *Metab. Eng. Commun.* **2018**, *6*, 56–62. <https://doi.org/10.1016/j.meteno.2018.04.002>.

19. Estenson, K., Hurst, G. B., Standaert, R. F., Bible, A. N., Garcia, D., Chourey, K., Doktycz, M. J., Morrell-Falvey, J. L. Characterization of indole-3-acetic acid biosynthesis and the effects of this phytohormone on the proteome of the plant-associated microbe *Pantoea* sp. YR343. *J. Proteome Res.* **2018**, 17, 1361-1374.
<https://doi.org/10.1021/acs.jproteome.7b00708>.
20. Holfeltz, V. E., Campbell, E. L., Peterman, D. R., Standaert, R. F., Paulenova, A., Lumetta, G. J., Levitskaia, T. G. Effect of HEH[EHP] impurities on the ALSEP solvent extraction process. *Solvent Extr. Ion Exch.* **2018**, 36, 22-40.
<https://doi.org/10.1080/07366299.2017.1412111>.
21. Hurst, G. B.; Asano, K. G.; Doktycz, C. J.; Consoli, E. J.; Doktycz, W. L.; Foster, C. M.; Morrell-Falvey, J. L.; Standaert, R. F.; Doktycz, M. J. Proteomics-based tools for evaluation of cell-free protein synthesis. *Anal. Chem.* **2017**, 89, 11443-11451.
[dx.doi.org/10.1021/acs.analchem.7b02555](https://doi.org/10.1021/acs.analchem.7b02555)
22. Nickels, J. D.; Chatterjee, S.; Mostofian, B.; Stanley, C. B.; Ohl, M.; Zolnierczuk, P.; Schulz, R.; Myles, D. A. A.; Standaert, R. F.; Elkins, J. G.; Cheng, X.; Katsaras, J. *Bacillus subtilis* lipid extract, a branched-chain fatty acid model membrane. *J. Phys. Chem. Lett.* **2017**, 8, 4214–4217.
23. Li, L.; Shukla, S.; Meilleur, F.; Standaert, R. F.; Pierce, J.; Myles, D. A. A.; Cuneo, M. J. Neutron crystallographic studies of T4 lysozyme at cryogenic temperature. *Protein Sci.* **2017**.
24. Nickels, J. D.; Chatterjee, S.; Stanley, C. B.; Qian, S.; Cheng, X.; Myles, D. A. A.; Standaert, R. F.; Elkins, J. G.; Katsaras, J. The in vivo structure of biological membranes and evidence for lipid domains. *PLoS Biol.* **2017**, 15: e2002214.
25. Jelenska, J.; Davern, S. M.; Standaert, R. F.; Mirzadeh, S.; Greenberg, J. T. Flagellin peptide flg22 gains access to long-distance trafficking in *Arabidopsis* via its receptor, FLS2. *J. Exp. Bot.* **2017**, 68, 1769–1783.
26. Marquardt, D.; Heberle, F. A.; Greathouse, D. V.; Koeppe, R. E.; Standaert, R. F.; Van Oosten, B. J.; Harroun, T. A.; Kinnun, J. J.; Williams, J. A.; Wassall, S. R.; Katsaras, J. Lipid bilayer thickness determines cholesterol's location in model membranes. *Soft Matter* **2016**, 12, 9417–9428.
27. Chowdhury, S.; Standaert, R. F. Deoxygenation of unhindered alcohols via reductive dealkylation of derived phosphate esters. *J. Org. Chem.* **2016**, 81, 9957–9963.
28. Heberle, F. A.; Marquardt, D.; Doktorova, M.; Geier, B.; Standaert, R. F.; Heftberger, P.; Kollmitzer, B.; Nickels, J. D.; Dick, R. A.; Feigenson, G. W.; Katsaras, J.; London, E.; Pabst, G. Subnanometer structure of an asymmetric model membrane: interleaflet coupling influences co-main properties. *Langmuir* **2016**, 32, 5195-5200.
29. Davern, S. M.; McKnight, T. E.; Standaert, R. F.; Morrell-Falvey, J. L.; Shpak, E. D.; Kalluri, U. C.; Jelenska, J.; Greenberg, J. T.; Mirzadeh, S. Carbon nanofiber arrays: a novel tool for microdelivery of biomolecules to plants *PLoS One* **2016**, 11:e0153621
30. Wang, J.; Mojumder, D. K.; Yan, J.; Xie, A.; Standaert, R. F.; Qian, H. H.; Pepperberg, D. R.; Frishman, L. J. In vivo electroretinographic studies of the role of GABA_C receptors in retinal signal processing. *Exp. Eye Res.* **2015**, 139, 48-63.
31. Nickels, J. D.; Cheng, X. L.; Mostofian, B.; Stanley, C.; Lindner, B.; Heberle, F. A.; Perticaroli, S.; Feigenson, M.; Egami, T.; Standaert, R. F.; Smith, J. C.; Myles, D. A. A.;

- Ohl, M.; Katsaras, J. Mechanical properties of nanoscopic lipid domains. *J. Am. Chem. Soc.* **2015**, 137, 15772-15780.
32. Millet, L. J.; Lucheon, J. D.; Standaert, R. F.; Retterer, S. T.; Doktycz, M. J. Modular microfluidics for point-of-care protein purifications. *Lab Chip* **2015**, 15, 1799-1811.
33. Sangha, A. K.; Davison, B. H.; Standaert, R. F.; Davis, M.; Smith, J. C.; Parks, J. M. Chemical factors that control lignin polymerization. *J. Phys. Chem. B* **2014**, 118, 164-170.
34. Heberle, F. A.; Doktorova, M.; Goh, S. L.; Standaert, R. F.; Katsaras, J.; Feigenson, G. W. Hybrid and nonhybrid lipids exert common effects on membrane raft size and morphology. *J. Am. Chem. Soc.* **2013**, 135, 14932-14935.
35. Heberle, F. A.; Petruziolo, R. S.; Pan, J.; Drazba, P.; Kucerka, N.; Standaert, R. F.; Feigenson, G. W.; Katsaras, J. Bilayer thickness mismatch controls domain size in model membranes. *J. Am. Chem. Soc.* **2013**, 135, 6853-6859.
36. Tomanicek, S. J.; Standaert, R. F.; Weiss, K. L.; Ostermann, A.; Schrader, T. E.; Ng, J. D.; Coates, L. Neutron and X-ray crystal structures of a perdeuterated enzyme inhibitor complex reveal the catalytic proton network of the Toho-1 β -lactamase for the acylation reaction. *J. Biol. Chem.* **2013**, 288, 4715-4722.
37. Heberle, F. A.; Pan, J.; Standaert, R. F.; Drazba, P.; Kucerka, N.; Katsaras, J. Model-based approaches for the determination of lipid bilayer structure from small-angle neutron and X-ray scattering data. *Eur. Biophys. J.* **2012**, 41, 875-890.
38. Sangha, A. K.; Parks, J. M.; Standaert, R. F.; Ziebell, A.; Davis, M.; Smith, J. C. Radical coupling reactions in lignin synthesis: a density functional theory study. *J. Phys. Chem. B* **2012**, 116, 4760-4768.
39. Tschaplinski, T. J.; Standaert, R. F.; Engle, N. L.; Martin, M. Z.; Sangha, A. K.; Parks, J. M.; Smith, J. C.; Samuel, R.; Jiang, N.; Pu, Y.; Ragauskas, A. J.; Hamilton, C. Y.; Fu, C.; Wang, Z.-Y.; Davison, B. H.; Dixon, R. A.; Mielenz, J. R. Down-regulation of the caffeic acid *O*-methyltransferase gene in switchgrass reveals a novel monolignol analog. *Biotechnol. Biofuels* **2012**, 5.
40. Buchanan, R. L.; Baker, R. C.; Charlton, A. J.; Riviere, J. E.; Standaert, R. Pet food safety: a shared concern. *Br. J. Nutr.* **2011**, 106, S78-S84.
41. Xie, A.; Yan, J.; Yue, L.; Feng, F.; Mir, F.; Abdel-Halim, H.; Chebib, M.; Le Breton, G. C.; Standaert, R. F.; Qian, H.; Pepperberg, D. R. 2-Aminoethyl methylphosphonate, a potent and rapidly acting antagonist of GABA(A)- ρ 1 receptors. *Mol. Pharmacol.* **2011**, 80, 965-978.
42. Woodward, J. D., Kennel, S. J., Stuckey, A., Osborne, D. Wall, J. S., Rondinone, A. J., Standaert, R. F., Mirzadeh, S. (2011). LaPO₄ nanoparticles doped with actinium-225 that partially sequester daughter radionuclides. *Bioconj. Chem.* **22**, 766-776.
43. Greene, D. L., Boudreaux, P. R., Dean, D. J., Fulkerson, W., Gaddis, A. L., Graham, R. L., Graves, R. L., Hopson, J. L., Hughes, P., Lapsa, M. V., Mason, T. E., Standaert, R. F., Wilbanks, T. J., Zucker, A. (2010). The importance of advancing technology to U.S. energy goals. *Energy Pol.* **38**, 3886-3890.
44. Edwards, A.N., Fowlkes J.D., Owens E.T., Standaert R.F., Pelletier D.A., Hurst G.B., Doktycz M.J., Morrell-Falvey J.L. (2009). An *in vivo* imaging-based assay for detecting protein interactions over a wide range of binding affinities. *Anal. Biochem.* **395**, 166-177

45. Chowdhury, S., Muni, N. J., Greenwood, N. P. Pepperberg, D. R. and Standaert, R. F. (2007). Phosphonic acid analogs of GABA through reductive dealkylation of phosphonic diesters with lithium trialkylborohydrides. *Bioorg. Med. Chem. Lett.* **17**, 3745–3748.
46. Park, S. B. and Standaert, R. F. (2006). Abc Amino Acids: Design, Synthesis, and Properties of New Photoelastic Amino Acids. *J. Org. Chem.* **71**, 7952–7966
47. Fontes, M. R. M., Teh, T., Riell, R. D., Park, S. B., Standaert, R. F. and Kobe, B. (2005) Crystallization and preliminary X-ray diffraction analysis of importin- α complexed with NLS peptidomimetics. *Biochim. Biophys. Acta* **1750**, 9–13.
48. Vu, T. Q., Chowdhury, S., Muni, N. J., Qian, H., Standaert, R. F. and Pepperberg, D. R. (2005). Activation of membrane receptors by a neurotransmitter conjugate designed for surface attachment. *Biomaterials* **26**, 1895–1903.
49. Jayathilaka, L. P., Deb, M. and Standaert, R. F. (2004). Asymmetric synthesis and translational competence of L- α -(1-cyclobutenyl)glycine. *Org. Lett.* **6**, 3659–3662.
50. Nehilla, B. J., Popat, K. C., Vu, T. Q., Chowdhury, S., Standaert, R. F., Pepperberg, D. R. and Desai, T. (2004). Neurotransmitter analog tethered to a silicon platform for neuro-bioMEMS applications. *Biotechnol. Bioeng.* **87**, 669–674.
51. Park, S.B., Ho, T.H., Reedy, B.M.T, Connolly, M.D. & Standaert, R.F. (2003). A simple mimetic of a nuclear localization signal (NLS). *Org. Lett.*, **5**, 2437–2440.
52. Park, S.B. & Standaert, R.F. (2001). A photo-regulated ligand for the nuclear import receptor karyopherin α . *Bioorg. Med. Chem.* **9**, 3515–3523.
53. Kopytek, S.J., Standaert, R.F., Dyer, J. & Hu, J.C. (2000). Chemically induced dimerization of dihydrofolate reductase by a dimer of methotrexate. *Chem. Biol.* **7**, 313–321.
54. VanBrunt, M.P. & Standaert, R.F. (2000). A short total synthesis of furanomycin. *Org. Lett.* **2**, 705–708.
55. Connolly, M.D., Park, S.B., Reedy, B.M. & Standaert, R.F. (2000). A simple, solid-phase binding assay for the nuclear import receptor karyopherin α . Part I: Direct Binding. *Bioorg. Med. Chem. Lett.* **10**, 951–954.
56. Park, S.B., Reedy, B.M. & Standaert, R.F. (2000). A simple, solid-phase binding assay for the nuclear import receptor karyopherin α . Part 2: Competitive binding. *Bioorg. Med. Chem. Lett.* **10**, 955–956.
57. Park, S.B. & Standaert, R.F. (1999). α,α -Difluorophosphonomethyl azobenzene derivatives as photoregulated phosphoamino acid analogs. Part 1: design and synthesis. *Tetrahedron Lett.* **40**, 6557–6560.
58. Fenteany, G., Standaert, R.F., Lane, W.S., Choi, S., Corey, E.J. & Schreiber, S.L. (1995). Inhibition of proteasome activities and subunit-specific amino-terminal threonine modification by lactacystin. *Science* **268**, 726–731.
59. Galat, A., Lane, W. S., Standaert, R. F. & Schreiber, S. L. A Rapamycin-Selective 25-kDa Immunophilin. (1992) *Biochemistry* **31**, 2427–2434.
60. Van Duyne, G.D., Standaert, R.F., Karplus, P.A., Schreiber, S.L. & Clardy, J. (1991). Atomic structure of FKBP–FK506, an immunophilin-immunosuppressant complex. *Science* **252**, 839–842.

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61. Standaert, R. F., Galat, A., Verdine, G. L. & Schreiber, S. L. (1990) Molecular cloning and overexpression of the human FK506-binding protein FKBP. *Nature* **346**, 671–674.
62. Rosen, M. K., Standaert, R. F., Galat, A., Nakatsuka, M. & Schreiber, S. L. (1990) Inhibition of FKBP rotamase activity by immunosuppressant FK506: twisted amide surrogate. *Science* **248**, 863–866.

OTHER PUBLICATIONS AND PATENTS:

1. McKnight, T. E.; Graham, D. E.; Standaert, R. F.; Lewis, L. A.; Lewis, S. A. (2023). Composition for detecting alpha particle radiation and methods of use. U.S. Patent 11584919B2
2. Pan, J.; Cheng, X.; Heberle, F. A.; Mostofian, B.; Kucerka, N.; Drazba, P.; Standaert, R. F.; Katsaras, J. (2013). Backbone moiety of phospholipids determines cholesterol disposition. Abstracts of Papers, 245th ACS National Meeting, New Orleans, LA, April 7–11, PHYS-49
3. Heberle, F. A.; Petruzielo, R. S.; Pan, J.; Drazba, P.; Kucerka, N.; Standaert, R. F.; Feigenson, G. W.; Katsaras, J. Membrane RAFT mixtures investigated with small-angle neutron scattering (2013). Abstracts of Papers, 245th ACS National Meeting, New Orleans, LA, April 7–11, PHYS-419
4. Heberle, F. A.; Drazba, P.; Pan, J.; He, J.; Weiss, K. L.; O'Neill, H. M.; Katsaras, J.; Standaert, R. F. (2013). Sterol transfer rates measured by small-angle neutron scattering (SANS) and fluorescence resonance energy transfer (FRET). Abstracts of Papers, 245th ACS National Meeting, New Orleans, LA, April 7–11, PHYS-419
5. Sangha, A. K.; Parks, J. M.; Ziebell, A.; Davis, M.; Standaert, R. F.; Smith, J. C. (2012). Radical coupling reactions in lignin biosynthesis: A quantum chemical study. Abstracts of Papers, 243rd ACS National Meeting, San Diego, CA, March 25–29, CELL-105
6. Woodward, J. D.; Kennel, S. J.; Stuckey, A.; Osborne, D.; Wall, J.; Rondinone, A. J.; Standaert, R. F.; Mirzadeh, S. (2010). LaPO₄ nanoparticles doped with actinium-225 that partially sequester daughter radionuclides. Book of Abstracts, 240th ACS National Meeting, Boston, MA, August 22–26, NUCL-92.
7. Xie, A., Feng, F., Yan, J., Standaert, R.F. Pepperberg, D.R., Qian, H. (2009). Comparison of inhibitory mechanism for 2-aminoethyl methylphosphonate (2-AEMP) and TPMPA at GABA_C receptors. *Invest. Ophthalmol. Vis. Sci.* 50, ARVO E-Abstract 1016.
8. Wang, J., Xie, A., Yan, J., Standaert, R.F., Qian, H., Pepperberg, D.R. Frishman, L.J. (2009). *In vivo* effects of 2-AEMP analog of GABA, a GABA_C receptor antagonist, on dark-adapted mouse ERG. *Invest. Ophthalmol. Vis. Sci.* 50, ARVO E-Abstract 2179.
9. Jayathilaka, L.P., VanBrunt, M.P., and Standaert, R.F. (2006). Functional analogs of isoleucine for peptide and protein engineering. Book of Abstracts, 58th ACS Southeast Regional Meeting, Augusta, GA, November 1-4, Abstract 500.
10. Pepperberg, D.R., Vu, T.Q., Chowdhury, S., Standaert, R.F., Qian, H. (2004). GABA receptor activation by a tetherable analog of muscimol for application in a neuromodulating molecular device. *Invest. Ophthalmol. Vis. Sci.* 45, ARVO E-Abstract 4196.
11. Nehilla, B.J., Popat, K.C., Chowdhury, S., Standaert, R.F., Pepperberg D.R., and Desai, T.A. (2004). Assembly and Characterization of a Muscimol-Immobilized Silicon Surface. *Invest. Ophthalmol. Vis. Sci.* 45, ARVO E-Abstract 4194.
12. Schreiber, S.L., Standaert, R.F., Fenteany, G., and Jamison, T.F. (2003). Lactacystin analogs for diagnosis and treatment of proteasome-mediated disorders. U.S. Patent 6645999.

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