

CURRICULUM VITA, October, 2026

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Degrees: 1970, B.A., Douglass College,
Rutgers University, New Brunswick, NJ
1981, Ph.D. in Comparative Biochemistry,
University of California
Berkeley, California

EMPLOYMENT

1972-1975: Clinical and Research Radioimmunoassay Technician,
Clinical Assays, Cambridge, MA
1974-1975: Chemistry Tutor, University of Massachusetts, Boston, MA
1975-1980: Lab Assistant, Prof. Packer's Lab, Univ. of California,
Berkeley, CA
1976-1978: Teaching Assistant and Reader, Biomembrane Course,
University of California, Berkeley, CA
1982-1986: Postdoctoral Research Biologist with Prof. J.F. Nagle,
Carnegie Mellon University, Pittsburgh, PA
1986-1998: Research Biologist in Membrane Structure and Thermodynamics,
Carnegie Mellon University, Pittsburgh, PA
1998-2005: Senior Research Biologist, Carnegie Mellon University,
Pittsburgh, PA
2005-2008: Associate Research Professor, Biological Physics Group
Physics Department, Carnegie Mellon University, Pittsburgh, PA
2008-2016: Research Professor, Biological Physics Group
Physics Department, Carnegie Mellon University, Pittsburgh, PA
2016-now: Research Professor Emerita, Biological Physics Group
Physics Department, Carnegie Mellon University, Pittsburgh, PA
2012-now: Faculty member in the Molecular Biophysics & Structural Biology
Graduate Program at the University of Pittsburgh, Pittsburgh, PA

HONORS

1976-1977: Out-of-State Tuition Waiver, Univ. of California, Berkeley, CA
1976-1980: Graduate Grants-in-Aid, Univ. of California, Berkeley, CA
1978: Honor Students' Society, Univ. of California, Berkeley, CA
1985,1990: Samuel and Emma Winters Foundation Grant
1989: Who's Who in the East, 22nd ed.
1990,1997: World's Who's Who of Women, 10th and 14th eds.
1994: American Men and Women of Science, 18th ed.
1996: Who's Who in Science and Engineering, 3rd ed.
1997: Who's Who in Medicine and Healthcare, 1st ed.
2003: Avanti Award in Lipids, Biophysical Society
(with Prof. John Nagle)
2004: Chair-Elect, Membrane Structure and Assembly (MSAS)
Subgroup meeting, Biophysical Society
2005: Chair, MSAS Subgroup meeting at the Biophysical Society
meeting in Long Beach, California
2006: Who's Who in Science and Engineering, 9th ed.

2007: Who's Who in Science and Engineering, 10th ed.
 2007: Who's Who in Sciences Higher Education
 2009: Chair, Pittsburgh Diffraction Society nominating committee
 2009: Who's Who in America, 64th ed.
 2010: First Gluckstern Lecturer, Physics Dept., U. Mass., Amherst
 2010: 3rd Charles E. Kaufman Science Award, Pittsburgh Foundation
 2011: World Who's Who of Women, 15th ed.
 2014: Berkman Fund recipient, Carnegie Mellon University
 2018: World's Who's Who, Lifetime Achievement Award
 2019: Who's Who in America, 2019 edition
 Citations: H index = 56(Google Scholar), >17,000 citations total, ~700 citations/year

AFFILIATIONS

1978-now: Biophysical Society
 1982-now: Association for Women in Science, National organization
 2004-now: Association for Women in Science, Pittsburgh chapter
 1983-now: Sigma Xi, Carnegie Mellon University Chapter
 1990-1992: Sigma Xi, CMU Chapter Membership Secretary
 1993: Sigma Xi, CMU Chapter Vice President
 1994: Sigma Xi, CMU Chapter President
 1990-now: Pittsburgh Diffraction Society
 2006-17,19: American Chemical Society (ACS)
 2009-2026: American Physical Society (APS)
 2009-2017: American Association for the Advancement of Science (AAAS)

INVITED LECTURES

Nov., 1997: "Effect of DMSO on DPPC Phase Behavior", 33rd Japanese Conf. Calorimetry and Thermal Analysis, Okayama University, Okayama, Japan
 Nov., 1997: "Understanding the Vapor Pressure Paradox: Implications for Membrane Structure", Workshop on Structure and Thermodynamic Approaches in Lipid Membranes, Kyoto, Japan
 April, 1998: "The Importance and Structure of Lipids", Biomembrane Course of Prof. R. Epand, McMaster University, Ontario, CA
 June, 2000: "Lipid Bilayer Structure", CHESS User's Meeting, Cornell University, Ithaca, New York
 Feb., 2001: "Lipidat and Lipidag Databases", Workshop on Databases for Biophysicists, Biophysical Society, Boston, Massachusetts
 June, 2001: "New X-Ray Method to Determine Lipid Bilayer Structure and Interactions", ACS 75th Colloid and Surface Science Symposium, Pittsburgh, PA
 July, 2001: "Lipid Bilayer Structure - Gel and Fluid Phases", Hahn-Meitner Institute, Berlin, Germany "Fluctuations and Bragg Peak Shapes in Phospholipid Lamellar Phases", and "Interpretation of Scattering on Bilayers Under Grazing Incidence", Service Chimie Moléculaire, NEA, Saclay, France "Lipid Bilayer Structure - Gel and Fluid Phases", CNRS, Inst. Pharm. Biol. Structurale, Toulouse, France
 May, 2002: "Bilayer Structure of 18:0-22:6n3PC and 18:0-22:5n6PC Using X-ray Diffraction", International Society for the Study of Fatty Acids and Lipids (ISSFAL) 2002 - Dietary Fats and Health, Montreal, Canada
 Feb., 2003: "Effect of Unsaturation on Area/Lipid and Bilayer Structure", Workshop on Polyunsaturated Lipids, Biophysical Society, Baltimore, Maryland

June, 2004: "Effect of Peptides on DOPC Structure and Fluctuations", Emerging Challenges in Membrane Biophysics, Sun Valley, ID

Dec., 2005: "What are we made of? X-ray scattering Studies of Lipid Membranes and Peptides". First invited speaker for the new Pittsburgh chapter of Association for Women in Science

Sept., 2006: "Implications of Structure for Water Permeability Through Fully Hydrated Fluid Lipids Bilayers". Invited talk presented at three locations during a 10-day visit to Europe: 1) Gordon conference on Bioelectrochemistry, Sept. 4, 2006. 2) Institute Laue-Langevin (ILL), Sept. 8, 2006. 3) Memphys, University of Southern Denmark, Odense, Denmark, 9/11, 2006.

Oct., 2006: "Determination of Fully Hydrated, Fluid Phase Lipid Bilayer Structures and Elastic Properties Using Synchrotron X-Radiation and Diffuse Scattering Analysis". 64th Annual Pittsburgh Diffraction Conference, Duquesne University, Pittsburgh, PA, Oct. 28, 2006.

March, 2007: "Use of X-ray Diffuse Scattering to Study Lipids Membranes, Peptides and Cholesterol", Lab Group of Prof. Ronald Montelaro, Dept. of Immunology, University of Pittsburgh

March, 2007: "Fusion Peptide (FP-23) from the HIV-1 Virus Increases Fluctuations and Changes Interactions between Model Membranes". Invited talk for the Department of Chemistry, Michigan State University, East Lansing, MI, March 27, 2007.

June, 2007: "X-ray diffuse scattering probes interaction of HIV peptides with membranes". Biological Membranes and Membrane Proteins: Challenges for Theory and Experiment, Park City, UT

Oct., 2007: "Structure and Interaction of Fully Hydrated, Fluid Phase Lipid Membranes and HIV-1 Peptide/Lipid Mixtures". Invited talk for the University of Pittsburgh, Molecular Biophysics and Structure Biology Seminar Series

Nov., 2007: "My personal odyssey: A road with many turns". Invited talk at Douglass College, in Pathways to the Professions

Oct., 2008: "Structure and interactions of fully hydrated, fluid phase lipid membranes with HIV peptide and cholesterol additives." Invited talk for Dept. of Physics, Kent State U., Kent, Ohio.

Nov., 2008: "My personal odyssey - a road with many turns." Invited speaker for Women in Science, Chemistry Dept., CMU

Feb., 2009: "Structure and Bending Rigidity of Fully Hydrated Lipid Bilayers With Added Peptides and Cholesterol Using Diffuse X-ray Scattering." Invited talk - Membrane Structure and Assembly Subgroup at the Biophysical Society, Boston, MA

July, 2009: "Alamethicin in lipid bilayers: Combined use of X-ray scattering and MD simulations." Invited talk - Telluride Science Research Center meeting of Biological Membranes and Membrane Proteins: Challenges for Theory and Experiment, Telluride, CO.

Feb., 2010: "Membrane work in the Nagle, Tristram-Nagle lab." Invited talk for the CMU undergraduate colloquium.

Mar., 2010: "Structure and Interactions of Fully Hydrated, Fluid Phase Lipid Membranes and HIV-1 Peptide/Lipid Mixtures." Invited talk for CMU Virology Club.

Oct.4,2010: First Gluckstern Lecture: "Lipid Bilayer Structure and Interactions", Physics Dept., U. Massachusetts, Amherst

Oct.6,2010: Second Gluckstern Lecture: "Lipid Bilayer/Additives- Structure and Interactions", Physics Dept., U.Mass, Amherst

Nov., 2010: "HIV Fusion Peptide Penetrates, Disorders, and Softens T-Cell Membrane Mimics." Invited talk for Biological & Biophysical

Basis of Membrane Dynamics and Organization workshop at Mellon Institute, Nov. 5-6.

Nov., 2010: Introduction to Research, CMU Graduate Colloquium, "Structure and Interactions of Lipid Bilayer/Additives"

Mar., 2011: Talk at the Biophysical Society meeting in Baltimore, MD, "HIV Fusion Peptide Penetrates, Disorders and Softens T-Cell Membrane Mimics"

May&Dec,2011: Invited talk at NCNR, NIST (May 10) and Chalk River Labs, Ontario, Canada (December 16), "CMU Humidity Chamber at NCNR - From Conception to Reality"

Sept., 2011: Introduction to Research, CMU Graduate Colloquium, "Structure and Interactions of Lipid Bilayers and Additives"

Sept., 2011: CMU Undergrad Upperclass Colloquium, "Using X-rays to Probe Membrane Structure and Elasticity in the Nagle/Tristram-Nagle (MSIL) Lab"

Oct., 2011: Physics Faculty Lunch, "Using X-rays to probe membrane structure and elasticity in the Nagle/Tristram-Nagle Lab"

Dec., 2011: Seminar at the Ellis School, Pittsburgh, PA, "How to write scientific articles"

Oct., 2012: Invited seminar at Molecular Biophysics/Structural Biology "Structure and interactions of fully hydrated, fluid phase lipid membranes and HIV-1 peptide/lipid mixtures"

Feb., 2013: Invited talk for MBSB Interview Weekend, Univ. Pitt. Structure and interactions of fully hydrated, fluid phase lipid membranes with HIV-1 peptides

May, 2013: Invited seminar in Biological Physics seminar series, Physics Dept., CMU. "Membrane structure correlates to function of LLP2 on the cytoplasmic terminal tail of HIV-1 gp41 protein"

July, 2013: Invited talk in workshop: Biological membranes and Membrane Proteins: Challenges for Theory and Experiment, Snowmass, CO "Synergistic approach to membrane structural studies using X-rays and MD simulations"

Nov., 2013: Invited seminar for Graduate student colloquium, Physics, CMU "Membrane structure correlates to function of LLP2 on the cytoplasmic terminal tail of HIV-1 gp41 protein"

Jan., 2014: Invited seminar for the MBSB interview weekend, Univ. Pitt. "Structure and interactions of fully hydrated, fluid phase lipid membranes with HIV-1 peptides"

Feb., 2014: Poster at the Biophysical Society meeting, San Francisco, CA. "HIV-1 Tat membrane translocation probed by low- and wide-angle X-ray scattering, neutron scattering, CD spectroscopy and MD simulations" (with Kiyo Akabori)

Nov., 2014: Invited talk for Plots and Scotch, "A tale of three chambers or why you should back up your data"

Dec., 2014: Invited talk for First year CMU Physics grad students, "Structure determination of HIV-1 Tat/fluid phase membranes"

Jan., 2015: Invited talk for visiting MB/SB grad students: "Structure and interactions of fully hydrated, fluid phase lipid membranes with HIV-1 peptides"

Feb., 2015: Co-chair Membrane Structure Platform Session at the Biophysical Society Mtg., Baltimore, MD. "Interaction of HIV-1 Gag protein's MA membrane binding domain with membrane mimics probed by low- and wide-angle X-ray scattering"

July, 2015: Invited talk at the Telluride Science Research Center, Biological Membranes and membrane Proteins: Challenges for Theory and Experiment, "Structure determination of HIV-1 Tat/fluid phase membranes", Telluride, Colorado

Nov., 2015: Invited Keynote Lecture at the International Workshop: Membrane Hydration: A Challenge to Nanosystems, "Determination of number of water molecules/lipid using X-ray and neutron scattering methods and volumetric measurements", Santiago del Estero, Argentina

Nov., 2015: Invited Closing Plenary Lecture, 44th Annual Argentinian Biophysical Society Meeting, "Use of X-ray scattering to elucidate HIV peptide/membrane interactions", Santiago del Estero

Nov., 2015: Introduction to Research for first year CMU Physics grad students, "Membrane hydration and movement of HIV-1 Tat across membranes"

Feb 2016-18: Introduction to the Physics Dept. X-ray facility, 3 15-min lectures to upper class undergrad Colloquium students

May, 2016: Sigma Xi, Scientific Café, "HIV Today: Status and Research"

Oct., 2016: Introduction to Research for first year CMU Physics Grad students, "HIV-1 matrix-31 membrane binding peptide interacts differently with membranes containing PS vs. PI(4,5)P₂"

June, 2017: Biological Membranes and Membrane Proteins: Challenges for Theory and Experiment, "Interaction of an antimicrobial peptide with membrane mimics", Santa Fe, New Mexico

Oct., 2018: Biol. Sci. Dept., CMU, Journal Club, "Use of diffuse X-ray scattering to determine both elastic constants and structure of peptide/lipid interactions"

June, 2019: Biological Membranes and Membrane Proteins: Challenges for Theory and Experiment, "Elastic and structural results of the antimicrobial peptides WLBU2 and D8 interaction with membranes", Santa Fe, New Mexico

Nov., 2019: ChemMatCars Liquid/Interface Workshop, "X-ray diffuse scattering (XDS) - Tristram-Nagle lab, Physics Dept., CMU", Argonne, Chicago, Illinois

Mar., 2020: ACS National Meeting, "Elastic and structural interactions of eCAPs WLBU2 and D8 with bacterial lipid membrane mimics", held virtually when Philadelphia venue was cancelled (Covid)

Nov., 2021: Los Alamos National Lab Theoretical Biology and Biophysics Group, "Use of x-ray and neutron scattering to anchor MD simulations of membranes with additives", virtual

June, 2022: Biological Membranes and Membrane Proteins: Challenges for Theory and Experiment, "Antimicrobial peptide mechanism studied by scattering-guided molecular dynamics simulation", Santa Fe, New Mexico

March, 2023: DESYlab, CMPC meeting, "Antimicrobial peptide mechanism studied by scattering-guided molecular dynamics simulation", DESYlab, Petra III, Hamburg, Germany

Jan., 2024: Molecular Biophysics/Structure Biology (MBSB) seminar series, "Location matters for antimicrobial peptide effectivity", Pittsburgh, PA

Oct., 2024: Physics Department Undergraduate Colloquium talks by faculty, "Use of X-ray scattering and Circular Dichroism to study the interaction between antimicrobial peptides and membranes"

REVIEWER of SCIENTIFIC JOURNALS:

Phys. Rev. E., Journal of Physical Chemistry B, Biophysical J

TEACHING

Research for Physics Undergraduates: 33-350 (sophomores and juniors), and 33-451 (seniors) ongoing

Experimental Physics: 33-104 (Fall, 2016)

Local trainer for the Xenocs Xeuss SAXS: Dec., 2022-present

Advanced X-Ray Scattering Techniques, SAXS/GIWAXS: 27-707, Material Science and Engineering (Fall, 2023, 2025)

Small-angle x-ray scattering (SAXS): Molecular Biophysics I, MBSB (Fall, 2023, 2024, 2025, 2026)

See also Teaching Activities in Elements Annual Report

SCIENCE FAIRS and OUTREACH ACTIVITIES

1990-2000: Science-By-Mail, Boston Museum of Science

1992-2007, 10-19, 22-26: Sigma Xi Undergraduate Research Symposium, (part of Meeting of the Minds at CMU), Judge

1993: Sigma Xi Undergraduate Research Symposium, Director

1995-2005: Volunteer Research Mentor for CMU High School Outreach

1996, 1998: Volunteer Research Mentor for NSF Summer Research Experience for Undergraduates, CMU

1995-2000: Pittsburgh Regional Science & Engineering Fair PRSEF, Judge

2000-2010: Presenter of the Sigma Xi Award at the PRSEF

1996-1999: Pennsylvania Jr. Academy of Sciences PJAS Science Fair, Judge

2000-2025: Founder and Presenter of CMU Sigma Xi Award, PJAS Fair

2004, 2016: Judge, SRAA Poster Competition, Biophysical Society

2005-2006: Mentor for the Millions-CMU Physics Dept. PJAS Outreach

2005, 7, 10, 12, 14: Mentor HHMI Summer Research Experience for Undergraduates

2006-08, 12, 17-26: Mentor for CMU undergraduate summer research programs

2008: Lectured Ms. Wright's science class, Perry Traditional Acad.

2008-2013: Mentor for Sigma Xi CMU competition, Meeting of the Minds

2009-2013: Mentor for Douglass College Extern Program, 2 weeks, January

2011: Lectured Dr. Richards' Ellis HS students - scientific writing

2012: Mentored Ellis HS students to publish their scientific papers

2012, 15, 18: Judge, Intel International Science & Engg. Fair, David L. Lawrence Convention Center, Pittsburgh, PA

2013: Mentor for recent CMU undergrad funded by Lipella Company

2013: Presented my research to two high school students, Tzarina and Guillaume Shippee on Oct. 25, while they videotaped me.

2014: Mentored Ellis HS student who published her work in The National High School Journal of Science, Sruthi Muluk

2014: Demonstrated oriented lipid membrane sample preparation and microscope imaging for the Tour Your Future series of talks organized by Nina Barbuto of the Carnegie Science Center

2020: Lab tour for visiting CUWIP physics students

2021: Alpha Epsilon Delta, Pre-med club at CMU, virtual presentation

2021: Pittsburgh-Allderdice Field Virtual Field Trip to CMU Physics Dept. X-ray Facility

2022: High School Physics Teacher Training, Biological Physics at CMU

2022: Eden Christian Academy high school students, lab demo and talk

2020, 2022: Judge, Sigma Xi virtual poster session, National and international high school students at the ISEF science fair

2023-2026: Pennsylvania Governor's School for the Sciences, CMU mentor

2025: Tour of the Materials Characterization Facility Xenocs Xeuss for the National Association for College Admission Counseling

2025: Girl Scouts of Western Pennsylvania, STEM career exploration day, Tour of the MCF Xenocs Xeuss in Hamerschlag Hall

LIST OF PUBLICATIONS (October, 2026)

- 123) Kuzel, Z., Clement, J.A., Irla, S., AboHussien, A., TRISTRAM-NAGLE, S., Shankar, M.R. 2026. Composition-Structure-Property Mappings Defining Ionic Liquid Crystal Elastomers. American Chemical Society Applied Polymer Materials 8, 15388-15398.
- 122) Hackney, A., Hartmann, L., Parasnis, R., Leong, Austin, L., Chen, M., Knox, L., Jaber, J., Gao, W., Dupuy, F., Xiang, W., Klousnitzer, J., Deslouches, B., TRISTRAM-NAGLE, S. 2026. Lysine is More Effective Than Arginine in Two Tryptophan-Rich Antimicrobial Peptides. Biochimica et Biophysica Acta Biomembranes 1868: 184548.
- 121) Knox, L., Winstel, P., Deserno, M., Nagle, J.F., TRISTRAM-NAGLE, S. 2025. Bending Moduli of Mixtures: Diffusional Softening and Interactions. Biophysical Journal 125:12336-12345.
- 120) Sharma, D., Kawakami, M., Rice, M., Smith, E., Westrey, S., Shang, Y., Gist, C., Madureira, L.M.P., Schulz, K.H.G., Varni, A.J., Stranick, I.M., Gil, R.R., TRISTRAM-NAGLE, S., Peteanu, L., Kowalewski, T., Noonan, K.J.T. 2025. Examining the Impact of Side-Chain Chirality on Conformation of a Helical Poly(3-(S-1-ethylhexyl) esterfuran). Macromolecules 58:12336-12345.
- 119) Kuzel, Z., Clement, A., Tabrizi, M., AboHussien, A., Irla, S., Seresht, H.B., Chun, Y., TRISTRAM-NAGLE, S., Liu, Q., Shankar, M.R. 2025. Multifunctional Ionene Liquid Crystal Elastomers. ACS Applied Materials and Interfaces 17: 9728-9740.
- 118) Mitra, S., Chen, M.T., Stedman, F., Hernandez, J., Kumble, G., Kang, X., Zhang, C., Tang, G., Reed, I., Daugherty, I.Q., Liu, W., Klucznik, K.R., Ocloo, J.L., Li, A.A., Klousnitzer, J., Heinrich F., Deslouches, B. TRISTRAM-NAGLE, S. 2025. Cyclization of Two Antimicrobial Peptides Improves Their Activity. ACS Omega 10: 9728-9740.
- 117) Mitra, S., Chandrasekhar, B., Li, Y., Coopershlyak, M., Mahoney, M.E., Evans, B., Koenig, R., Hall, S.C.L., Kloesgen, B., Heinrich, F., Deslouches, B., TRISTRAM-NAGLE, S. 2024. How unnatural amino acids in antimicrobial peptides change interactions with lipid model membranes. The Journal of Physical Chemistry B 128: 9772-9784.
- 116) Mitra, S., Chandrasekhar, B., Li, Y., Coopershlyak, M., Mahoney, M.E., Evans, B., Koenig, R., Hall, S.C.L., Kloesgen, B., Heinrich, F., Deslouches, B., TRISTRAM-NAGLE, S. 2024. Novel non-helical antimicrobial peptides insert into and fuse lipid model membranes. Soft Matter 20 : 4088-4101.
- 115) Mitra, S., Coopershlyak, M., Li, Y., Chandrasekhar, B., Koenig, R., Chen, M.-T., Evans, B., Heinrich, F., Deslouches, B., TRISTRAM-NAGLE, S. 2023. Novel Helical Trp- and Arg-Rich Antimicrobial Peptides Locate Near Membrane Surfaces and Rigidify Lipid Model Membranes. Advanced Nanobiomed Research 3:2300013.
- 114) Jakkampudi, T., Lin, Q., Mitra, S., Vijai, A., Qin, W., Kang, A., Chen, J., Ryan, E., Wang, R., Gong, Y., Heinrich, F., Song, J., Di, Y.-P., TRISTRAM-NAGLE, S. 2023. Lung SPLUNC1 Peptide Derivatives in the Lipid

Membrane Headgroup Kill Gram-Negative Planktonic and Biofilm Bacteria. *Biomacromolecules* 24:2904-2815.

113) Kawakami, M., Sharma, D., Varni, A.J., TRISTRAM-NAGLE, S., Yaron, S., Kowalewski, T., Noonan, K.J.T. 2023. Design, Synthesis and Aromaticity of an Alternating Cyclo[4]Thiophene[4]Furan. *Chemistry - A European Journal* e202300477.

112) Shafieenezhad, A., Mitra, S., Wassall, S.R., TRISTRAM-NAGLE, S., Nagle, J.F., Petrache, H.I. 2023. Location of Dopamine in Lipid Bilayers and Its Relevance to Neuromodulator Function. *Biophysical Journal* 122:1118-1129.

111) Nagle, J.F., Jennings, N., Qin, W., Yan, D., TRISTRAM-NAGLE, S., Heinrich, F. 2023. Structure of the Gel Phase of diC22:1PC Lipid Bilayers Determined by X-ray Diffraction. *Biophysical Journal* 122:1033-1042.

110) Xiang, W., Clemenza, P., Klousnitzer, J., Chen, J., Qin, W., TRISTRAM-NAGLE, S., Doi, Y., Di, Y.P., Deslouches, B. 2022. Rational Framework for the Design of Trp- and Arg-Rich Peptide Antibiotics Against Multidrug-Resistant Bacteria. *Frontiers in Microbiology* 13:889791(1-16).

109) Allsopp, R., Pavlova, A., Cline, T., Salyapongse, A.M., Gillilan, R.E., Di, Y.P., Deslouches, B., Klauda, J.B., Gumbart, J.C., TRISTRAM-NAGLE, S. 2022. Antimicrobial Peptide Mechanism Studied by Scattering-Guided Molecular Dynamics Simulation. *Journal of Physical Chemistry B* 126:6922-6935.

108) Nagle, J.F., Evans, E.A., Bassereau, P., Baumgart, T., TRISTRAM-NAGLE, S., Dimova, R. 2021. A Needless but Interesting Controversy. *Proceedings of the National Academy of Sciences USA* 118:e2025011118 (Letter).

107) Varni, A.J., Kawakami, J.M., TRISTRAM-NAGLE, S., Yaron, D., Kowalewski, T., Noonan, K.J. 2021. Design, Synthesis, and Properties of a Six-Membered Oligofuran Macrocyclic. *Organic Chemistry Frontiers* 8:1775-1782.

106) Loney, R.W., Brandner, B., Dagan, M.P., Smith, P.N., Roche, M., Fritz, J.R., Hall, S.B., TRISTRAM-NAGLE, S. 2021. Changes in Membrane Elasticity Caused by the Hydrophobic Surfactant Proteins Correlate Poorly with Adsorption of Lipid Vesicles. *Soft Matter* 17:3358-3366.

105) Fritz, J.R., Loney, R.W., Hall, S.B., TRISTRAM-NAGLE, S. 2021. Suppression of L α /L α Phase Coexistence in the Lipids of Pulmonary Surfactant. *Biophysical Journal* 120:243-253.

104) Loney, R. W., Panzuela, S., Chen, J., Yang, Z., Fritz, J.R., Dell, Z., Corradi, V., Kumar, K., Tieleman, D.P., Hall, S.B., TRISTRAM-NAGLE, S. 2020. Location of the Hydrophobic Surfactant Proteins, SP-B and SP-C in Fluid-Phase Bilayers. *Journal of Physical Chemistry B* 124:6763-6774.

103) West, A., Zoni, V., Teague, W.E., Leonard, A.N., Vanni, S., Gawrisch, K., TRISTRAM-NAGLE, S., Sachs, J.N., Klauda, J.B. 2020. How do Ethanolamine Plasmalogens Contribute to Order and Structure of Neurological Membranes? *Journal of Physical Chemistry B* 124:828-839.

- 102) Seper, B.C., Ko, A., Abma, A., Folkerts, A.D., TRISTRAM-NAGLE, S., Harper, P.E. 2020. Methylene Volumes in Monoglyceride Bilayers Are Larger Than in Liquid Alkanes. *Chemistry and Physics of Lipids* 226:104833(1-8).
- 101) Heinrich, F., Salyapongse, A., Kumagai, A., Dupuy, F.G., Shukla, K., Penk, A., Huster, D., Ernst, R.K., Pavlova, A., Gumbart, J.C., Deslouches, B., Di, Y.P., TRISTRAM-NAGLE, S. 2020. Synergistic Biophysical Techniques Reveal Structural Mechanisms of Engineered Cationic Antimicrobial Peptides in Lipid Model Membranes. *Chemistry - A European Journal* 26:6247-6256.
- 100) Nagle, J.F., Venable, R.M., Maroclo-Kemmerling, E., TRISTRAM-NAGLE, S., Harper, P.E. and Pastor, R.W. 2019. Revisiting Volumes of Lipid Components in Bilayers. *The Journal of Physical Chemistry B* 123:2607-2709.
- 99) Nagle, J.F., Cognet, P., Dupuy, F.G. and TRISTRAM-NAGLE, S. 2019. Structure of Gel Phase DPPC Determined by X-ray Diffraction. *Chemistry and Physics of Lipids* 218:168-177.
- 98) Kumagai, A., Dupuy, F.G., Arsov, Z., Elhady, Y., Moody, D., Ernst, R.K., Deslouches, B., Montelaro, R.C., Di, Y.P. and TRISTRAM-NAGLE, S. 2019. Elastic Behavior of Model Membranes with Antimicrobial Peptides Depends on Lipid Specificity and D-Enantiomers. *Soft Matter* 15:1860-1868.
- 97) Peralta, M.F., Smith, H., Moody, D., TRISTRAM-NAGLE, S. 2018. Effect of Anti-Leishmania Drugs on the Structural and Elastic Properties of Ultradeformable Lipid Membranes. *Journal of Physical Chemistry B* 122:7332-7339.
- 96) TRISTRAM-NAGLE, S. 2018. Physics of HIV. *Journal of Physics D: Applied Physics* 51:183001.
- 95) Arsov, Z., González-Ramírez, E.J., Goñi, F.M., TRISTRAM-NAGLE, S., Nagle, J.F. 2018. Phase Behavior of Palmitoyl and Egg Sphingomyelin. *Chemistry and Physics of Lipids* 13:102-110.
- 94) Dupuy, F.G., Pagano, I., Andenoro, K., Peralt, M.F., Elhady, Y., Heinrich, F., TRISTRAM-NAGLE. 2018. Selective Interaction of Colistin with Lipid Model Membranes. *Biophysical Journal* 114:919-928.
- 93) Skandani, A., Clement, J.A., TRISTRAM-NAGLE, S., Shankar, M.R. 2017. Aliphatic Flexible Spacer Length Controls Photomechanical Response in Compact, Ordered Liquid Crystalline Polymer Networks. *Polymer* 133:30-39.
- 92) O'Neil, L., Andenoro, K., Pagano, I., Carroll, L., Langer, L., Dell, Z., Perera, D., Treece, B.W., Heinrich, F., Lösche, M., Nagle, J.F., TRISTRAM-NAGLE, S. 2016. HIV-1 Matrix-31 Membrane Binding Peptide Interacts Differently with Membranes Containing PS vs. PI(4,5)P2. *Biochimica et Biophysica Acta* 1858:3071-3081.
- 91) Stetten, A.Z., Moraca, G., Corcoran, T.E., TRISTRAM-NAGLE, S., Garoff, S., Przybycien, T.M., Tilton, R.D. 2016. Enabling Marangoni Flow at Air-Liquid Interfaces Through Deposition of Aerosolized Lipid Dispersions. *Journal of Colloid and Interface Science* 484:270-278.

- 90) Nagle, J.F., Jablin, M.S., TRISTRAM-NAGLE, S. 2016. Sugar Does Not Affect the Bending and Tilt Moduli of Simple Lipid Bilayers. *Chemistry and Physics of Lipids* 196:76-80.
- 89) Nagle, J.F., Akabori, K., Treece, W., TRISTRAM-NAGLE, S. 2016. Determination of Mosaicity in Oriented Stacks of Lipid Bilayers. *Soft Matter* 12:1884-1891.
- 88) TRISTRAM-NAGLE, S. 2015. Use of X-Ray and Neutron Scattering Methods with Volume Measurements to Determine Lipid Bilayer Structure and Number of Water Molecules/Lipid. In *Membrane Hydration, the Role of Water in the Structure and Function of Biological Membranes, Subcellular Biochemistry Vol. 71*. Ed. E. Anibal Disalvo, Springer International Publishing AG, Switzerland.
- 87) Neale, C., Huang, K., Garcia, A.E., TRISTRAM-NAGLE, S. 2015. Penetration of HIV-1 Tat47-57 into PC/PE Bilayers Assessed by MD Simulation and X-ray Scattering. *Membranes* 5:473-494.
- 86) Qiu, Y., Mohin, J., Tsai, C.-H., TRISTRAM-NAGLE, S., Gil, R.R., Kowalewski, T., Noonan, K.J.T. 2015. Stille Catalyst-Transfer Polycondensation Using Pd-PEPPSI-Ipr for High-Molecular-Weight Regioregular Poly(3-hexylthiophene). *Macromolecular Rapid Communications* 36:840-844.
- 85) Reese, C.W., Strango, Z.I., Dell, Z.R., TRISTRAM-NAGLE, S., Harper, P.E. 2015. Structural Insights Into the Cubic-Hexagonal Phase Transition Kinetics of Monolein Modulated by Sucrose Solutions. *Physical Chemistry Chemical Physics* 17:9194-9204.
- 84) Ma, Y., Ghosh, S.K., Bera, S., Jiang, Z., TRISTRAM-NAGLE, S., Lurio, L.B., Sinha, S.K. 2015. Accurate Calibration and Control of Relative Humidity Close to 100% by X-Raying a DOPC Multilayer. *Physical Chemistry Chemical Physics* 17:3580-3576.
- 83) Nagle, J.F., Jablin, M.S., Tristram-Nagle, S., Akabori, K. 2015. What Are the True Values of the Bending Modulus of Simple Lipid Bilayers? *Chemistry and Physics of Lipids* 185:3-10.
- 82) Akabori, K., Huang, K., Treece, B.W., Jablin, M.S., Maranville, B., Woll, A., Nagle, J.F., Garcia, A.E., TRISTRAM-NAGLE, S. 2014. HIV-1 Tat Membrane Interactions Probed Using X-ray and Neutron Scattering, CD Spectroscopy and MD Simulations. *Biochimica et Biophysica Acta* 1838:3078-3087. Supporting Information.
- 81) Boscia, A., Treece, B.W., Mohammadyani, D., Klein-Seetharaman, J., Braun, A.R., Wassenaar, T.A., Kloesgen, B., TRISTRAM-NAGLE, S. 2014. X-ray Structure, Thermodynamics, Elastic Properties and MD Simulations of Cardiolipin/ Dimyristoylphosphatidylcholine Mixed Membranes. *Chemistry and Physics of Lipids* 178:1-10.
- 80) Tristram-Nagle, S. 2014. Review of Membrane Structural Biology with Biochemical and Biophysical Foundations. Second Edition, by Mary Luckey. Cambridge and New York: Cambridge University Press. ISBN: 978-1-107-03063-3.

- 79) Boscia, A., Akabori, K., Benamram, Z., Michel, J.A., Jablin, M.S., Steckbeck, J.D., Montelaro, R.C., Nagle, J.F. and TRISTRAM-NAGLE, S. 2013. Membrane Structure Correlates to Function of LLP2 on the Cytoplasmic Tail of HIV-1 GP41 Protein. *Biophysical Journal* 105:657-555. Supporting Information.
- 78) Pogozheva, I.D., Tristram-Nagle, S., Mosberg, H.I. and Lomize, A.L. 2013. Structural Adaptations of Proteins to Different Biological Membranes. *Biochimica et Biophysica Acta* 1828:2592-2608. Supporting Information.
- 77) Hallinen, K., TRISTRAM-NAGLE, S., Nagle, J. F. 2012. Volumetric Stability of Lipid Bilayers. *Phys. Chem. Chem. Phys.* 14:15252-15457.
- 76) Pan, J., Heberle, F.A., TRISTRAM-NAGLE, S., Szymanski, M., Koepfinger, M., Katsaras, J., Kučerka, N. 2012. Molecular Structures of Fluid Phase Phosphatidylglycerol Bilayers as Determined by Small-Angle Neutron and X-ray Scattering. *Biochimica Biophysica Acta* 1818:2135-2148.
- 75) Raghunathan, M., Zubovski, Y., Venable, R.M., Pastor, R.W., Nagle, J.F. and TRISTRAM-NAGLE, S. 2012. Structure and Elasticity of Lipid Membranes with Genistein and Daidzein Bioflavonoids using X-ray Scattering and MD Simulations. *Journal of Physical Chemistry B* 116:3918-1927 (selected for cover image).
- 74) Braun, A.R., Sevcsik, E., Chin, P., Rhoades, E., TRISTRAM-NAGLE, S. and Sachs, J.N. 2012. α -Synuclein Induces Both Positive Mean Curvature and Negative Gaussian Curvature in Membranes. *Journal of the American Chemical Society* 134:2613-2620.
- 73) Shchelokovskyy, P., TRISTRAM-NAGLE, S. and Dimova, R. 2011. Effect of the HIV-1 Fusion Peptide on the Mechanical Properties and Leaflet Coupling of Lipid Bilayers. *New J. Physics* 13: 025004.
- 72) Uppamoochikkal, P., TRISTRAM-NAGLE, S. and Nagle, J.F. 2010. Orientation of Tie-Lines in the Phase Diagram of DOPC:DPPC:Cholesterol Model Biomembranes. *Langmuir* 22:17363-17368.
- 71) TRISTRAM-NAGLE, S., Chan, R., Kooijman, E., Qiang, W., Weliky, D.P. and Nagle, J.F. 2010. HIV Fusion Peptide Penetrates, Disorders and Softens T-cell Membrane Mimics. *J. Mol. Biol.* 402:139-153.
- 70) TRISTRAM-NAGLE, S., Kim, D., Akhunzada, N., Kučerka, N., Mathai, J.C., Katsaras, J., Zeidel, M. and Nagle, J.F. 2010. Structure and Permeability of Fully Hydrated DiphytanoylPC. *Chem. Phys. Lipids* 163:630-637.
- 69) Pan, J., TRISTRAM-NAGLE, S. and Nagle, J.F. 2009. Alamethicin Aggregation in Lipid Membranes. *J. Membrane Biol.* 231:11-27.
- 68) Pan, J., TRISTRAM-NAGLE, S. and Nagle, J.F. 2009. Effects of Cholesterol on Structural and Mechanical Properties of Membranes Depends on Lipid Chain Saturation. *Phys. Rev. E* 80:021931 (1-12).
- 67) Guler, S.D., Ghosh, D.D., Pan, J., Mathai, J.C., Zeidel, M.L., Nagle, J.F. and TRISTRAM-NAGLE, S. 2009. Effects of Ether vs. Ester Linkage on Lipid Bilayer Structure and Water Permeability. *Chem. Phys. Lipids* 160:33-44.
- 66) Pan, J., Tieleman, D.P., Nagle, J.F., Kucerka, N. and TRISTRAM-NAGLE, S. 2009. Alamethicin in Lipid Bilayers: Combined Use of X-ray Scattering and MD Simulations. *Biochim. Biophys. Acta* 1788:1387-1397.
- 65) Kučerka, N., Perlmutter, J. D., Pan, J., TRISTRAM-NAGLE, S., Katsaras, J. and Sachs, J. N. 2008. The Effect of Cholesterol on Short- and Long-

- Chain Monounsaturated Lipid Bilayers as Determined by Molecular Dynamics Simulations and X-ray Scattering. *Biophys. J.* 95:2792-2805.
- 64) Pan, J., Mills, T.T., TRISTRAM-NAGLE, S. and Nagle, J.F. 2008. Cholesterol Perturbs Lipid Bilayers Non-universally. *Phys Rev. Lett.* 100:198108.
- 63) Mills, T.T., Toombes, G.E.S., TRISTRAM-NAGLE, S., Smilgies, D-M., Feigenson, G.W. and Nagle, J.F. 2008. Order Parameters and Areas in Fluid-Phase Oriented Lipid Membranes Using Wide Angle X-ray Scattering, *Biophys. J.* 95: 669-681.
- 62) Mills, T.T., TRISTRAM-NAGLE, S., Heberle, F.A., Morales, N.F., Zhao, J., Wu, J., Toombes, G.E.S., Nagle, J.F. Nagle and Feigenson, G.W., 2008. Liquid-liquid Domains in Bilayers Detected by Wide Angle X-ray Scattering, *Biophys. J.* 95: 682-690.
- 61) Greenwood, A. I., Pan, J., Mills, T. T., Nagle, J. F., Epand, R. M. and TRISTRAM-NAGLE, S., 2008. CRAC Motif Peptide of the HIV-1 gp41 Protein Thins SOPC Membranes and Interacts with Cholesterol. *Biochim. Biophys. Acta* 1778:1120-1130.
- 60) Mathai, J.C., TRISTRAM-NAGLE, S., Nagle, J.F. and Zeidel, M.L., 2008. Structural Determinants of Water Permeability through the Lipid Membrane, *J. Gen. Physiol.* 131:69-76. Published online Dec. 17, 2007.
- 59) Nagle, J.F., Mathai, J.C., Zeidel, M.L. and Tristram-Nagle, S., 2008. Theory of Passive Permeability Through Lipid Bilayers, *J. Gen. Physiol.* 131:77-85. Published online Dec. 31, 2007.
- 58) Pan, J., TRISTRAM-NAGLE, S. and Nagle, J. F. 2008. Temperature Dependence of Structure, Bending Rigidity and Bilayer Interactions of DOPC Bilayers. *Biophysical Journal J.* 94:117-124.
- 57) TRISTRAM-NAGLE, S., 2007. Preparation of Oriented, Fully Hydrated Lipid Samples for Structure Determination Using X-ray Scattering, for *Methods in Molecular Biology* 400 (Methods in Membrane Lipids), pp. 63-75, ed. Alex Dopico, Humana Press, Totowa, NJ.
- 56) TRISTRAM-NAGLE, S. and Nagle, J.F. 2007. HIV-1 Fusion Peptide Decreases Bending Energy, Promotes Curved Fusion Intermediates. *Biophys. J.* 93: 2048-2055.
- 55) Kučerka, N., TRISTRAM-NAGLE, S. and Nagle, J.F. 2006. Closer Look at Structure of Fully Hydrated Fluid Phase DPPC Bilayers. *Biophysical Letters in Biophys. J.* 90, L83-85.
- 54) Greenwood, A.I., TRISTRAM-NAGLE, S. and Nagle, J.F. 2006. Partial Molecular Volumes of Lipid and Cholesterol, *Chemistry and Physics of Lipids* 143:1-10.
- 53) Zhang, R., Bo, L., Iovu, M.C., Jeffries-EL, M., Sauvé, G., Cooper, J., Jia, S., Tristram-Nagle, S., Smilgies, D.M., Lambeth, D.N., McCullough, R.D. and Kowalewski, T. 2006. Nanostructure Dependence of Field-Effect Mobility in Regioregular Poly(3-hexylthiophene) Thin Film Field Effect Transistors. *J. Am. Chem. Soc.* 128:3480-3481.
- 52) Kučerka, N., TRISTRAM-NAGLE, S. and Nagle, J.F. 2006. Structure of Fully Hydrated Fluid Phase Lipid Bilayers with Monounsaturated Chains. *J. Membrane Biol.* 208:1-10.

- 51) Petrache, H.I., TRISTRAM-NAGLE, S., Harries, D., Kucerka, N., Nagle, J.F. and Parsegian, V.A. 2005. Swelling of Phospholipids by Monovalent Salt. J. Lipid Res. 47:302-309.
- 50) Chu, N., Kučerka, N., Liu, Y., TRISTRAM-NAGLE, S. and Nagle, J.F. 2005. Anomalous Swelling of Lipid Bilayer Stacks Is Caused by Softening of the Bending Modulus. Phys. Rev. E. 71:041904.
- 49 Kučerka, N., Liu, Y., Chu, N., Petrache, H.I., TRISTRAM-NAGLE, S. and Nagle, J.F. 2005. Structure of Fully Hydrated Fluid Phase DMPC and DLPC Lipid Bilayers Using X-Ray Scattering From Oriented Multilamellar Arrays and From Unilamellar Vesicles. Biophys. J. 88:2626-2637.
- 48) TRISTRAM-NAGLE, S., Lewis, R.N.A.H., Blickenstaff, J.W., DiPrima, M., Marques, B.F., McElhaney, R.N., Nagle, J.F. and Schneider, J.W. 2005. Thermodynamic and Structural Characterization of Amino-Acid Linked Dialkyl Lipids. Chem. Phys. Lipids 134:29-39.
- 47) Petrache, H.I., TRISTRAM-NAGLE, S., Gawrisch, K., Harries, D., Parsegian, V.A., and Nagle, J.F. 2004. Structure and Fluctuations of Charged Phosphatidyl-Serine Bilayers in the Absence of Salt. Biophys. J. 86:1574-1586.
- 46) TRISTRAM-NAGLE, S., and Nagle, J.F. 2003. Lipid Bilayers: Thermodynamics, Structure, Fluctuations and Interactions. Chem. Phys. Lipids (Invited Summary Of Avanti Award Talk) 127:3-14.
- 45) Eldho, N.V., Feller, S.E., TRISTRAM-NAGLE, S., Polozov, I.V., and Gawrisch, K. 2003. Polyunsaturated Docosahexaenoic vs. Docosapentaenoic Acid-Differences Lipid Matrix Properties from the Loss of One Double Bond. Am. Chem. Soc. 125: 6409-6421.
- 44) TRISTRAM-NAGLE, S., Liu, Y., Legleiter, J. and Nagle, J.F. 2002. Structure of Gel Phase DMPC Determined by X-Ray Diffraction. Biophys. J. 83:3324-3335.
- 43) Lyatskaya, Y., Liu, S., TRISTRAM-NAGLE, S., Katsaras, J. and Nagle, J.F. 2001. Method for Obtaining Structure and Interactions from Oriented Lipid Bilayers. Phys. Rev. E 63:011907[1-9].

- 42) Nagle, J.F. and TRISTRAM-NAGLE, S. 2000. Structure and Interactions of Lipid Bilayers: Role of Fluctuations in Lipid Bilayers: Structure and Interactions, Eds. J. Katsaras and T. Gutberlet, (Springer-Verlag's Biological Physics Series, Berlin), pp. 1-23.
- 41) Lewis, R.N.A.H., TRISTRAM-NAGLE, S., Nagle, J.F. and McElhaney, R.N. 2000. The Thermotropic Phase Behavior of Cationic Lipid Membranes. *Biochim. Biophys. Acta* 1510:70-82.
- 40) Nagle, J.F. and TRISTRAM-NAGLE, S. 2000. Structure of Lipid Bilayers. Invited Review for *Biochim. Biophys. Acta* 1469:159-195.
- 39) Nagle, J.F. and TRISTRAM-NAGLE, S. 2000. Lipid Bilayer Structure. *Current Opinion in Structural Biology* 10:474-480.
- 38) Katsaras, J., TRISTRAM-NAGLE, S., Liu, Y., Headrick, R.L., Fontes, E., Mason, P.C. and Nagle, J.F. 2000. Clarification of the Ripple Phase of Lecithin Bilayers Using Fully Hydrated, Aligned Samples. *Phys. Rev. E* 61:5668-5677.
- 37) Nagle, J.F., Liu, Y., TRISTRAM-NAGLE, S., Epand, R.M. and Stark, R.E. 1999. Re-Analysis of Magic Angle Spinning NMR Determination of Intercellular Waters. *Biophys. J.* 77:2062-2065.
- 36) TRISTRAM-NAGLE, S., Isaacson, Y., Lyatskaya, Y., Liu, Y., Brummond, K., Katsaras, J. and Nagle, J. F. 1999. Polymorphism in Myristoyl-Palmitoylphosphatidylcholine. *Chem. Phys. Lipids* 100:101-113.
- 35) TRISTRAM-NAGLE, S., Petrache, H.I. and Nagle, J.F. 1998. Structure and Interactions of Fully Hydrated Dioleoylphosphatidylcholine Bilayers. *Biophys. J.* 75:917-925 (56).
- 34) Petrache, H.I., TRISTRAM-NAGLE, S. and Nagle, J.F. 1998. Fluid Phase Structure of EPC and DMPC Bilayers, *Chem. Phys. Lipids* 95:83-94.
- 33) Nagle, J. F., Petrache, H.I., Goulliaev, N., TRISTRAM-NAGLE, S., Liu, Y., Suter, R.M. and Gawrisch, K. 1998. Multiple Mechanisms for Critical Behavior in the Biologically Relevant Phase of Lecithin Bilayers. *Phys. Rev. E.* 58:7769-7776.
- 32) Petrache, H.I., Goulliaev, N., TRISTRAM-NAGLE, S., Zhang, R., Suter, R.M. and Nagle, J. F. 1998. Interbilayer Interactions: High Resolution X-Ray Scattering Study. *Phys. Rev. E* 57:7014-24.
- 31) Nagle, J. F., TRISTRAM-NAGLE, S., Takahashi, H. and Hatta, I. 1998. Comment on DPPC Subgel Phase Formation Process. *Euro. Phys. J. B* 1:339.
- 30) TRISTRAM-NAGLE, S., Petrache, H.I., Suter, R. M. and Nagle, J.F. 1998. Effect

of Substrate Roughness on (D)-Spacing Supports Theoretical Resolution of Vapor Pressure Paradox. *Biophys. J.* 74:1421-1427.

29) TRISTRAM-NAGLE, S., Moore, T., Petrache, H. and Nagle, J.F. 1998. DMSO Produces a New Subgel Phase in DPPC: DSC and X-Ray Diffraction Study. *Biochim. Biophys. Acta* 1369:19-33.

28) Sun, W.-J., S. TRISTRAM-NAGLE, R.M. Suter and Nagle, J.F. 1996. Structure of Gel Phase Saturated Lecithin Bilayers: Temperature and Chain Length Dependence. *Biophys. J.* 71:885-891.

27) Sun, W.-J., S. TRISTRAM-NAGLE, R.M. Suter and NAGLE, J.F. 1996. Structure of the Ripple Phase in Lecithin Bilayers. *Proc. Natl. Acad. Sci. USA* 93, 7008-7012.

26) Nagle, J.F., Zhang, R., TRISTRAM-NAGLE, S., Sun, W., Petrache, H. and Suter, R.M. 1996. X-ray Structure Determination of L α -Phase DPPC Bilayers. *Biophys. J.* 70:1419.

25) Zhang, R., TRISTRAM-NAGLE, S., Sun, W., Headrick, R.L., Irving, T.C., Suter, R.M. and Nagle, J.F. 1995. Small Angle X-Ray Scattering From Lipid Bilayers Is Well Described by Modified Caillé Theory, But Not by Paracrystalline Theory. *Biophys. J.* 70:349-357 (1996).

24) Sun, W., TRISTRAM-NAGLE, S., Suter, R.M. and Nagle, J.F. 1996. Anomalous Phase Behavior of Long Chain Saturated Lecithin Bilayers. *Biochim. Biophys. Acta* 1279:17-24.

23) Zhang, R., Sun, W., TRISTRAM-NAGLE, S., Headrick, R.L., Suter, R.M. and Nagle, J.F. 1995. Critical Fluctuations in Membranes. *Phys. Rev. Lett.* 74:2832-2835.

22) Suter, R. M., Zhang, R., Sun, W., TRISTRAM-NAGLE, S. and Nagle, J. F. 1995. High Resolution Studies of Lipid Bilayers, *CHESS Newsletter*, 26-27.

21) McCullough, R.D., Williams, S.P., TRISTRAM-NAGLE, S., Jayaraman, M., Ewbank, P.C. and Miller, L. 1995. The First Synthesis and New Properties of Regioregular, Head-to-tail Coupled Polythiophenes. *Synthetic Metals* 69:279-282.

20) TRISTRAM-NAGLE, S. and Dowd, S. 1994. X-Ray Diffraction Study of Three 19F-Labeled Dimyristoylphosphatidylcholines. *J. Phys. Chem.* 98:4469-4472.

- 19) McCullough, R.D., Williams, S.P., Jayaraman, M., Reddinger, J., Miller, L. and TRISTRAM-NAGLE, S. 1994. Synthesis and Physical Properties of Self-Orienting Head-to-Tail Polythiophenes. Material Research Society Symp. Proc. 328:215-220.
- 18) Sun, W.J., Suter, R.M., Knewton, M.A., Worthington, C.R., TRISTRAM-NAGLE, S., Zhang, R. and Nagle, J.F. 1994. Order and Disorder in Fully Hydrated Unoriented Bilayers of Gel Phase DPPC. Phys. Rev. E. 49:4665-4676.
- 17) TRISTRAM-NAGLE, S., Sun, W.-J., Suter, R.M. and Nagle, J.F. 1994. Kinetics of Subgel Formation in DPPC: X-Ray Diffraction Study Proves Nucleation-Growth Hypothesis. Biochim. Biophys. Acta 1191:14-20.
- 16) McCullough, R.D., TRISTRAM-NAGLE, S., Williams, S.P., Lowe, R.D. and Jayaraman, M. 1993. Self-Orienting Head-to-Tail Poly(3-alkylthiophenes): New Insights on Structure-Property Relationships in Conducting Polymers. J. Amer. Chem. Soc. 115:4910-4911.
- 15) TRISTRAM-NAGLE, S., Zhang, R., Suter, R.M., Worthington, C.R., Sun, W.-J. and Nagle, J.F. 1993. Measurement of Chain Tilt Angle in Fully Hydrated Bilayers of Gel Phase Lecithins. Biophys. J. 64:1097-1109.
- 14) McCullough, R.D., Lowe, R.D., Jayaraman, M., Ewbank, P.C., Anderson, D.L. and TRISTRAM-NAGLE, S. 1993. Synthesis and Physical Properties of Regiochemically Well-Defined Head-to-Tail Poly(3-Alkylthiophenes). J. Syn. Met. 55-57:1198-1203.
- 13) TRISTRAM-NAGLE, S. and Wingert, L.M. 1990. A Thermotropic Study of 1-Deoxy-1-(N)-methyloctanamido)-D-glucitol (MEGA-8) Using Microscopy, Calorimetry and X-Ray Diffraction, Mol. Cryst. Liq. Cryst. 188:41-56.
- 12) Kennedy, C.L., Zanolidou, H.R., Sagar, S., TRISTRAM-NAGLE, S.A. and Domach, M.M. 1989. Microcalorimetry, Fluorescence, and Fractionation Study of Yeast Alcohol Dehydrogenase: Stability and Heterogeneity Implications, Biotechnol. Prog. 5, 164-171.
- 11) Wiener, M.C., TRISTRAM-NAGLE, S., Wilkinson, D.A., Campbell, L.E. and Nagle, J.F. 1988. Specific Volumes of Lipids in Fully Hydrated Bilayer Dispersions, Biochim. Biophys. Acta 938: 135-142.

- 10) TRISTRAM-NAGLE, S., Wiener, M.C., Yang, C.-P. and Nagle, J.F. 1987. Kinetics of the Subtransition in Dipalmitoylphosphatidylcholine, *Biochemistry* 26:4288-4294.
- 9) TRISTRAM-NAGLE, S., Yang, C.-P. and Nagle, J.F. 1986. Thermodynamic Studies of Purple Membrane, *Biochim. Biophys. Acta* 854:58-66.
- 8) Nagle, J.F. and TRISTRAM-NAGLE, S. 1984. Elements of Proton Pump Models, in *Information and Energy Transduction of Biological Membranes*, eds. C.L. Bolis, E.J.M. Helmreich and H. Passow (A.R. Liss, Inc., N.Y.), pp. 103-111.
- 7) Nagle, J.F. and TRISTRAM-NAGLE, S. 1983. Hydrogen Bonded Chain Mechanisms for Proton Conduction and Proton Pumping, *J. Membrane Biol.* 74:1-14.
- 6) TRISTRAM-NAGLE, S. and Packer, L. 1981. Effects of Arginine Modification on the Photocycle and Proton Pumping of Bacteriorhodopsin, *Biochem. Intl.* 3:621-628.
- 5) TRISTRAM, S.A. 1981. The Role of the Positively Charged Amino Acids in Bacteriorhodopsin, Ph.D. Dissertation, University of California, Berkeley, pp. 1-379.
- 4) Packer, L., Quintanilha, A.T., Carmeli, C., Sullivan, P.D., Scherrer, P., TRISTRAM, S., Herz, J., Pfeifhofer, A. and Mehlhorn, R.J. 1981. Molecular Aspects of Light-Induced Uptake and Release of Protons by Purple Membranes, *Photochem. Photobiol.* 33: 575-585.
- 3) Sullivan, P.D., Quintanilha, A.T., TRISTRAM, S. and Packer, L. 1980. Isotope Effects and Activation Parameters for Chemically-Modified Bacteriorhodopsin, *FEBS Lett.* 117: 359-362.
- 2) Packer, L., TRISTRAM, S., Herz, J., Russell, C. and Borders, C. 1979. Chemical Modification of Purple Membranes: Role of Arginine and Carboxylic Acid Residues in Bacteriorhodopsin, *FEBS Lett.* 108:243-248.
- 1) Konishi, T., TRISTRAM, S. and Packer, L. 1979. The Effect of Cross-Linking on Photocycling Activity of Bacteriorhodopsin, *Photochem. Photobiol.* 29:353-358.