# TEXAS STATE VITA

## I. Academic/Professional Background

A. Name: Steven T. Whitten Title: Associate Professor

B. Educational Background

| *Degree* | *Year* | *University* | *Major* | *Thesis/Dissertation* |
|---|---|---|---|---|
| Ph. D. | 2000 | The Johns Hopkins University | Biophysics | Acid denaturation and pH dependence of stability of staphylococcal nuclease. |
| B. S. | 1994 | University of Nebraska at Omaha | Physics | Optimization of a nuclear particle detector. |

C. University Experience

| *Position* | *University* | *Dates* |
|---|---|---|
| Associate Professor | Texas State University | 2015 – |
| Assistant Professor | Texas State University | 2009 – 2015 |
| Research Assistant Professor | University of Texas Medical Branch, Galveston | 2006 – 2009 |

D. Relevant Professional Experience

| *Position* | *Entity* | *Dates* |
|---|---|---|
| Senior Scientist and Partner | RedStorm Scientific, Inc | 2004 – 2009 |
| Research Scientist | RedStorm Scientific, Inc | 2001 – 2004 |
| Post-Doctoral Fellow | University of Texas Medical Branch, Galveston | 2001 – 2006 |
| Post-Doctoral Fellow | Florida State University | 2000 |

E. Other Professional Credentials (licensure, certification, etc.)

## II. TEACHING

A. Teaching Honors and Awards:

1. Program for Excellence in Teaching and Learning, Texas State University, 2009-2010.
2. Presidential Distinction Award for Excellence in Teaching, College of Science and Engineering, Texas State University, 2020.
3. Texas State Transfer Champion Honorable Mention, Transfer Center (in recognition of excellent service to Transfer Students), Texas State University, October 2022.

B. Courses Taught:

Texas State University

1. CHEM 7395, Fundamentals in Molecular and Biophysical Chemistry (2024 – current)
2. CHEM 5381, Physical Biochemistry (2010, 2012, 2014, 2017 – 2019, 2024 – current)
3. CHEM 3390, Physical Chemistry for Biochemists (2015 – current)
4. CHEM 3381, Biochemical Techniques (2018 – 2023)
5. CHEM 3275, Biochemical Techniques (2017)
6. CHEM 1342, General Chemistry II (2011, 2013)
7. CHEM 3276, Experimental Biochemistry (2011 – 2016)
8. CHEM 3380, Physical Methods in Biochemistry (2010)
9. CHEM 4375/5375, Fundamentals of Biochemistry (2009 – 2012)

University of Texas Medical Branch, Galveston

1. Biochemistry (2007, 2008)

C. Graduate Theses/Dissertations, Honors Theses, or Exit Committees (if supervisor, please indicate):

1. Graduate Theses/Dissertations, Honors Theses, or Exit Committees as Supervisor

1. Erika Soria. *Use of Xiphophorus reveals impact of host genetics on gut microbiota composition and genetic loci associated with human disease.* Defense: June 21, 2023. Co-supervisor with Yuan Lu.
2. Nathan P. Khaodeuanepheng. *Polymer properties that predict protein structure class from the primary sequence.* Defense: November 7, 2022.
3. Ayyam Y. Ibrahim. *Intrinsic sequence-based properties that identify intrinsically disordered phase-separating protein regions.* Defense: July 6, 2022. Co-supervisor with Karen A. Lewis.
4. George R. Parra. *Phosphoserine incorporation into the Intrinsically Disordered N-terminal Domain of the p53 Tumor Suppressor Protein.* Defense: November 5, 2019.

5. Elisia Ariana Paiz. *Using heat effects on coil hydrodynamic size to reveal the nature and energetics of denatured state conformational bias.* Defense: October 31, 2019.
6. Benjamin Ricard. *The effects of primary sequence perturbation on the structure of intrinsically disordered proteins.* Defense: July 18, 2017.
7. Leona Martin. *Investigating cold adaptation of intrinsically disordered proteins in p53 homologs.* Defense: November 4, 2016.
8. Lance English. *Electrostatic effects on the structure of intrinsically disordered proteins.* Defense: July 13, 2016.
9. Erin Tilton. *Cold adaption of intrinsically disordered structure studied in p53 homologs.* Defense: July 12, 2016.
10. Shobha Gokul. *Quantifying the ability of RF-amide neuropeptide analogs to promote amyloidosis of recombinant human prion protein.* Defense: October 15, 2015.
11. James Campbell. *Optimization of SDD-AGE as a method to study amyloid conversion of human recombinant prion protein.* Defense: July 2, 2014.
12. Reagan Meredith. *Quantitative characterization of peptide induced amyloidosis of recombinant human prion protein.* Defense: June 4, 2014.
13. Ryan Maldonado. *Testing the ability of RF-amide neuropeptides to promote amyloidosis of recombinant human prion protein.* Defense: February 27, 2014.
14. Leasha Schaub. *Quantifying the energetics of binding between p53 and DNA using electrophoretic mobility shift assays.* Defense: August 31, 2012.
15. Melody Adam. *Peptide-induced amyloidosis of recombinant human prion protein.* Defense: January 2, 2012.

2. Graduate Theses/Dissertations, Honors Theses, or Exit Committees as Committee Member

1. Travis T. Anderson, *Targeted Anti-cancer Therapy Derived from Daffodil Alkaloid Nariclasine.* Defense: July 6, 2026.
2. David M. Engelhardt, *Investigations into the cellular response to folic acid fortification.* University of Colorado, Boulder, Department of Molecular, Cellular, and Developmental Biology, Defense: August 20, 2024.
3. Jaclyn Remsing, *Assessing the Liquid-Liquid Phase Separating Abilities of Eyes Absent Protein.* Defense: June 28, 2024.
4. Olga Becker, *Expression and purification of the LaRP6 La Module from Tetrabaena Socialis.* Defense: April 13, 2023.
5. Julia E. Roberts, *The N-terminal Region of the Arbadiposis Thaliana LARP6C Protein Contributes to Structural Stability*. Defense: April 15, 2020.
6. Brianna Norbury Godinez, *The Structural and Functional Role of Vertebrate LaRP6 N-terminal Region*. Defense: April 10, 2020.
7. Eliana L. Peña, *Structural and biochemical characterization of domains in the posttranslational regulator LARP6*. Defense: March 29, 2018.
8. Jose Miguel Castro, *Biochemical analysis of evolutionary divergent vertebrate LARP6 proteins.* Defense: March 30, 2017.
9. Eliseo Salas, *Characterization of ligand specificity of the RNA-binding protein LARP6.* Defense: March 29, 2017.
10. Francisco Betancourt, *Biochemical analysis of LARP6 proteins from arabidopsis thaliana.* Defense: February 9, 2017.
11. Jordan Chang, *Molecular genetic characterization of Xiphophorus Maculatus JP 163 B skin upon exposure to varying wavelengths of light.* Defense: March 31, 2016.

12. Kaela Caballero, *Differential gene expression in the skin of xiphophorus maculatus JP 163 B in response to full spectrum (10,000K) fluorescent light.* Defense: June 30, 2015.
13. James Titus, *Stabilization of the ends of chromosomes in yeast yku70 mutants: role of telomerase complex subunits and telomere-associated proteins.* Defense: April 21, 2015.
14. Jennifer Lilley, *Analysis of NHEJ DNA repair efficiency and accuracy in new mutants of saccharomyces cerevisiae.* Defense: April 8, 2015.
15. Amber Lucas, *Identification of critical residues in spliceosomal protein Dib1*. Defense: June 24, 2014.
16. Andres Gonzalez, *Binding affinity of epitherlial sodium channel subunits and peptides measured through surface plasmon resonance.* Defense: May 16, 2014.
17. Gustav Agbley. *Biotransformations of nitriles and alcohols to carboxylic acids using industrial enzymes.* Defense: April 3, 2013.
18. Daniel Cromwell. *Specificity studies of recombinant 2-(2'-hydroxyphenyl) benzenesulfinate desulfinate (DszB) from Nocardia asteroides A3H1 and Rhodococcus erythropolis IGTS8.* Defense: March 5, 2013.
19. Samantha Swann. *Development of a yeast dilution pronging assay to investigate ion modulation of sodium self-inhibition in epithelial sodium channels (ENAC).* Defense: January 2, 2013.
20. Drew Sowersby. *Exploring gene overexpression as a strategy to increase alcohol resistance in the yeast saccharomyces cerevisiae.* Defense: August 2012.
21. Grantham Peltier. *Determining critical residues for intersubunit binding of the human epithelial sodium channel.* Defense: August 2012.
22. Adriana Palacios. *Transfection efficiencies of chitosan/siRNA nanoparticles in colorectal cancer cells.* Defense: August 2012.
23. Eric Malczewskyj. *Analysis of genes that affect telomere stability in YKU70 mutants and new approaches for separation of yeast nucleic acids.* Defense: August 2012.
24. Thuy Nhu Nguyen. *Investigation of DNA stability in saccharomyces cerevisiae mutants defective in the repair of broken chromosomes.* Defense: August 2012.
25. Jennifer DeMars. *Use of a novel genomics approach to identify new DNA repair genes and development of improved repair assays.* Defense: December 2011.

D. Courses Prepared and Curriculum Development:

1. CHEM 3390, Physical Chemistry for Biochemists (2015)
2. CHEM 5381, Physical Biochemistry (2010)
3. CHEM 3380, Physical Methods in Biochemistry (2010)
4. CHEM 3276, Experimental Biochemistry (2011)
5. CHEM 4375/5375, Fundamentals of Biochemistry (2009)

E. Funded External Teaching Grants and Contracts:

F. Submitted, but not Funded, External Teaching Grants and Contracts:

G. Funded Internal Teaching Grants and Contracts:

Program for Excellence in Teaching & Learning
Travel Award
06/01/10 – 05/31/11
Total Funds Awarded: $800

H. Submitted, but not Funded, Internal Teaching Grants and Contracts:

I. Other:

1. Undergraduate Research Students Mentored in the Research Laboratory

    1. Alexis Treska (Summer 2026 – current)
    2. Yakima Menon (Spring 2026 – current)
    3. Gabriel Andaverde (Fall 2025 – current)
    4. Joseph Parsons (Fall 2025 – current)
    5. Prakriti Gautam (CS major; Fall 2025 – current)
    6. Clay Duckworth (Fall 2025 – current)
    7. Samuel Johnson (Fall 2025 – current)
    8. Alyssa Harig (Fall 2025 – current)
    9. Oliver Rettele (Fall 2025 – current)
    10. Josh Lee (Fall 2025 – current)
    11. Geraldine Aviles (Fall 2025 – current)
    12. Paige Geyer (Summer 2025 – current)
    13. Cammie Searle (Fall 2025 – current)
    14. Lucie Maas (Fall 2024 – Spring 2025)
    15. Devin Cook (Fall 2024 – Spring 2025)
    16. Ethan Nuernberg (Fall 2024 – Spring 2025)
    17. Mitchell Worob (Fall 2024 – current)
    18. Audrey Van Zandt (St. Edward’s University, REU, Summer 2024)
    19. Ande M. Beasley (Spring 2024)
    20. Oliver Kipp (Spring 2024 – Spring 2025)
    21. Samuel Dech (Fall 2023 – Spring 2024)
    22. Jakob Hall (Fall 2023 – Spring 2024)
    23. Cassidy Knox (Fall 2023 – Spring 2025)
    24. Tiffany Taylor (Summer 2023)
    25. Jess Nepogodin (Spring 2023 – Spring 2024)
    26. Quintin A Eckert (Fall 2022 – Spring 2023)
    27. Methias Dowdle (Fall 2022 – Spring 2023)
    28. Orion Songe (Nicholls State University, Summer 2022)
    29. Colorado Wilson (Fall 2021 – Spring 2023)
    30. Alejandro Alanis Flores (Summer 2021, Fall 2022 – Spring 2023)
    31. Preston Burkett (Spring 2021 – Spring 2022)
    32. Sumera Asif (Spring 2021)
    33. Asad Karim (Chemistry major; Fall 2020 – Spring 2021)
    34. Armand Berry (Spring 2020)
    35. Jack Roberson (Fall 2019 – Spring 2020)
    36. Mariah L. Noggler (Summer 2019 – Spring 2020)

37. Alaina D. Mgbere (Summer 2019 – Fall 2019)
38. Keegan A. Lorenz-Ochoa (Spring 2019 – Spring 2020)
39. Allison Bebo (Fall 2018 – Spring 2020)
40. Seth Peniagua (Fall 2018)
41. Stephen So (Summer 2018 – Fall 2018)
42. Shane McDowell (Fall 2017 – Fall 2019)
43. Dylan Cheatham (Fall 2017 – Spring 2018)
44. Bruce Dare (Fall 2017)
45. Pablo Exiquio Garcia (visiting student, Stanford University, Summer 2017)
46. Sarah Voss (Summer 2017 – Fall 2018)
47. Connor Tremallo (Summer 2017 – Spring 2018)
48. Dann Rivera (Summer 2017)
49. Sima (Dena) Norouzi (Spring 2017)
50. Tyler Ivy (Spring 2017 – Spring 2018)
51. Ravi Chavali (Spring 2017)
52. Joshua Zamarripa (Spring 2017 – Summer 2018)
53. Jeffrey Edwards (Fall 2016 – Spring 2017)
54. James Egbu (Fall 2016 – Spring 2017)
55. Sydney Parker (Fall 2016)
56. Richard Laskey (Fall 2016 – Spring 2017)
57. Alejandra Maria Moreno (Summer 2016 – Fall 2016)
58. Daniel Newton (Summer 2016 – Fall 2016)
59. Thaddeus Christopher (Summer 2016 – Spring 2017)
60. Taylor Perrin (Summer 2016 – Spring 2017)
61. Andrea Perales (Fall 2015 – Fall 2016)
62. Padraig O'Hara (Fall 2015 – Spring 2016)
63. Melissa Carrizales (Fall 2015 – Spring 2016)
64. George Parra (Fall 2015 – Fall 2019)
65. Benjamin Ricard (Fall 2015 – Summer 2017)
66. Nina Perez, Alamo Colleges (Summer 2015)
67. Maria Tomasso (Spring 2015 – Summer 2016)
68. Esau Sanchez (Fall 2014)
69. Ezra Mendez (Spring 2014 – Fall 2014)
70. Christopher Brown (Fall 2013 – Spring 2014)
71. Claudia Reyes (Fall 2013 – Fall 2016)
72. Priscilla Collard (Fall 2013 – Spring 2014)
73. Garrett Chesnut (Fall 2013 – Spring 2015)
74. Marcus Guerra (Spring 2013 – Spring 2015)
75. Christopher Grygier (Spring 2013 – Spring 2015)
76. David Engelhardt (Fall 2012 – Spring 2015)
77. Anthony Thomas (Fall 2013)
78. Kimberly Long (Fall 2012 – Fall 2013)
79. Zachary Heathman (Fall 2012 – Spring 2013)
80. Megan Gros (Fall 2012 – Spring 2013)
81. Micheal Tarver (Spring 2012 – Spring 2015)
82. Kiva McFetridge (Spring 2011 – Spring 2012)
83. Armando Daniel (Fall 2011 – Spring 2012)
84. Ryan Gates (Fall 2011 – Spring 2012)
85. Matthew Lynch (Spring 2011 – Spring 2012)

86. Sarah Guevara (Fall 2011)
87. Tiffany Mauldin (Fall 2011)
88. Tim Langridge (Fall 2010 – Spring 2013)
89. Stephen Gates (Fall 2010 – Spring 2011)
90. Ryan Maldonado (Fall 2010 – Spring 2011)
91. Nathan Bullock (Fall 2010 – Fall 2011)
92. William Richardson (Fall 2010 – Spring 2011)
93. John Pierce (Summer 2010 – Fall 2010)
94. Reagan Meredith (Summer 2010 – Fall 2011)
95. Abel Sibaja (Spring 2010 – Fall 2010)
96. Tim Castaneda (Summer 2010)
97. Ozzy Anwar (Spring 2010 – Spring 2011)
98. Kevin Cummings (Spring 2010 – Spring 2011)
99. Salvador Velez (Spring 2010 – Fall 2011)
100. Steven Williams (Spring 2010 – Fall 2010)
101. James Campbell (Spring 2010)
102. James Flink (Spring 2010)
103. Bryan Shaw (Spring 2010)

Honors Thesis:

1. Stephen Gates. *Beta amyloid formation and its effect on Alzheimer's Disease.* Spring 2011.
2. Micheal Jace Tarver. *Testing the ability of standard molecular dynamic software force fields to accurately model the structural features of intrinsically disordered proteins.* Spring 2015.

**III. SCHOLARLY/CREATIVE (**In all cases, place a * after the name of the corresponding author, place a † after the name of any graduate students under your supervision, and place a ‡ after the name of any undergraduate students under your supervision; for oral or poster presentations, underline the name of the presenter)

A. Works in Print (including works accepted, forthcoming, in press)

1. Books (if not refereed, please indicate)

a. Scholarly Monographs:

b. Textbooks:

c. Edited Books:

d. Chapters in Books:

1. Hilser, V. J.; Whitten, S. T. Energy flow and allostery in an ensemble. In *Proteins: Energy, Heat, and Signal Flow*; CRC Press, **2009**; pp 341-360.

2. Whitten, S. T.; Ferreon, J. C.; Hamburger, J. B.; Hilser, V. J. Calorimetric determination of the thermodynamics of polyproline II (PII) helix formation in the unfolded states of protein. In *Unfolded proteins: from denatured states to intrinsically disordered*; Nova Science Publishers, Inc, **2008**; pp 169-193.

e. Creative Books:

2. Articles

a. Refereed Journal Articles:

Kipp, O. L.[‡]; Lewis, K. A.; Hough, L. E.*; Whitten, S. T.* Missense mutations in intrinsically disordered protein regions link pathogenicity and phase separation. *J. Biol. Chem.* **2025**, 301, 110773.
Wilson, C.[‡]; Lewis, K. A.; Fitzkee, N. C.; Hough, L. E.; Whitten, S. T.* ParSe 2.0: A web tool to identify drivers of protein phase separation at the proteome level. *Protein Sci.* **2023**, 32, e4756.
Yarawsky, A. E.; Ori, A. L.; English, L. R.[†]; Whitten, S. T.; Herr, A. B.* Convergent behavior of extended stalk regions from staphylococcal surface proteins with widely divergent sequence patterns. *Protein Sci.* **2023**, 32, e4707.
Ibrahim, A. Y.[†]; Khaodeuanepheng, N. P.[†]; Amarasekara, D. L.; Correia, J. J.; Lewis, K. A.; Fitzkee, N. C.; Hough, L. E.; Whitten, S. T.* Intrinsically disordered regions that drive phase separation form a robustly distinct protein class. *J. Biol. Chem.* **2023**, 299, 102801.
Paiz, E. A.[†]; Allen, J. H.; Correia, J. J.; Fitzkee, N. C.; Hough, L. E.; Whitten, S. T.* Beta turn propensity and a model polymer scaling exponent identify intrinsically disordered phase-separating proteins. *J. Biol. Chem.* **2021**, 297, 101343.
Paiz, E. A.[†]; Lewis, K. A.; Whitten, S. T.* Structural and energetic characterization of the denatured state from the perspectives of peptides, the coil library, and intrinsically disordered proteins. *Molecules* **2021**, *26*, 634.
Tischer A.; Brehm, M. A.; Machha, V. R.; Moon-Tasson, L.; Benson, L. M.; Nelton, K. J.; Leger, R. R.; Obserm, T.; Martinez-Vargas, M.; Whitten, S. T.; Chen, D.; Pruthi, R. K.; Bergen, H. R.; Cruz, M. A.; Schneppenheim, R.; Auton, M.* Evidence for the Misfolding of the A1 Domain within Multimeric Von Willebrand Factor in Type 2 Von Willebrand Disease. *J Mol Biol* **2020**, 432, 305-323.
English, L. R.[†]; Voss, S. M.[‡]; Tilton, E. C.[†]; Paiz, E. A.[†]; So, S.[‡]; Parra, G. R.[†]; Whitten, S. T.* Impact of heat on coil hydrodynamic size yields the energetics of denatured state conformational bias. *J Phys Chem B* **2019**, *123*, 10014-10024.
English, L. R.[†]; Tischer, A.; Demeler, A. K.; Demeler, B.; Whitten, S. T.* Sequence reversal prevents chain collapse and yields heat-sensitive intrinsic disorder. *Biophys J* **2018**, *115*, 328-340.
English, L. R.[†]; Tilton, E. C.[†]; Ricard, B. J.[†]; Whitten, S. T.* Intrinsic α helix propensities compact hydrodynamic radii in intrinsically disordered proteins. *Proteins* **2017**, *85*, 296-311.
Yarawsky, A. E.; English, L. R.[†]; Whitten, S. T.; Herr, A. B.* The proline/glycine-rich region of the biofilm adhesion protein aap forms an extended stalk that resists compaction. *J Mol Biol* **2017** *429*, 261-279.

Tomasso, M. E.[‡]; Tarver, M. J.[‡]; Devarajan, D.[†]; Whitten, S. T.* Hydrodynamic radii of intrinsically disordered proteins determined from experimental polyproline II propensities. *PLoS Comput Biol* **2016** 12(1):e1004686.
Dasari, R.; Masi, M.; Lisy, R.; Ferdérin, M.; English, L. R.[†]; Cimino, A.; Mathieu, V.; Brenner, A. J.; Kuhn, J. G.; Whitten, S. T.; Evidente, A.; Kiss, R.; Kornienko, A.* Fungal metabolite ophiobolin A as a promising anti-glioma agent: in vivo evaluation, structure-activity relationship and unique pyrrolylation of primary amines. *Bioorg Med Chem Lett* **2015** *25*, 4544-4548.
Zimmermann, M.; Tischer, A.; Whitten, S. T.; Auton, M.* Structural origins of misfolding propensity in the platelet adhesive VWF A1 domain. *Biophys J* **2015**, *109*, 398-406.
Perez, R[†]; Tischer, A.; Auton, M.; Whitten, S. T.* Alanine and proline content modulate global sensitivity to discrete perturbations in disordered proteins. *Proteins* **2014**, *82*, 3373-3384.
Langridge, T. D.[‡]; Tarver, M. J.[‡]; Whitten, S. T.* Temperature effects on the hydrodynamic radius of the intrinsically disordered N-terminal region of the p53 protein. *Proteins* **2014**, *82*, 668-678.
Hilser, V. J.; Whitten, S. T.* Using the COREX/BEST Server to model the native state ensemble. *Methods Mol. Biol.* **2014**, *1084*, 255-269.
Schaub, L. J.[†]; Campbell, J. C.[†]; Whitten, S. T.* Thermal unfolding of the N-terminal region of p53 monitored by circular dichroism spectroscopy. *Protein Sci.* **2012**, *21*, 1682-1688.
Campbell, J. C.[†]; Whitten, S. T.* Mutational analysis of m-values as a strategy to identify cold-resistant substructures of the protein ensemble. *Proteins* **2012**, *80*, 184-193.
Wrabl, J. O.; Gu, J.; Liu, T.; Schrank, T. P.; Whitten, S. T.; Hilser, V. J.* The role of protein conformational fluctuations in allostery, function, and evolution. *Biophys. Chem.* **2011**, *159*, 129-141.
Bell-Upp, P.; Robinson, A. C.; Whitten, S. T.; Wheeler, E. L.; Lin, J.; Stites, W. E.; García-Moreno E., B.* Thermodynamic principles for the engineering of pH-driven conformational switches and acid insensitive proteins. *Biophys. Chem.* **2011**, *159*, 217-226.
Manson, A. C.; Whitten, S. T.; Ferreon, J. C.; Fox, R. O.; Hilser, V. J.* Characterizing the role of ensemble modulation in mutation-induced changes in binding affinity. *J. Am. Chem. Soc.* **2009**, *131*, 6785-6793.
Wang, S.; Gu, J.; Larson, S. A.; Whitten, S. T.; Hilser, V. J.* Denatured-state energy landscapes of a protein structural database reveal the energetic determinants of a framework model for folding. *J. Mol. Biol.* **2008**, *381*, 1184-1201.
Whitten, S. T.; Yang, H. W.; Fox, R. O.; Hilser, V. J.* Exploring the impact of conformational bias on the binding of peptides to the SEM-5 SH3 domain. *Protein Sci.* **2008**, *17*, 1200-1211.
Whitten, S. T.; García-Moreno E., B.; Hilser, V. J.* Ligand effects on the protein ensemble: unifying the descriptions of ligand binding, local conformational fluctuations, and protein stability. *Methods Cell Biol.* **2008,** 84, 871-891.
Liu, T.; Whitten, S. T.; Hilser, V. J.* Functional residues serve a dominant role in mediating the cooperativity of the protein ensemble. *Proc. Natl. Acad. Sci. USA* **2007**, *104*, 4347-4352.
Whitten, S. T.; Kurtz, A. J.; Pometun, M. S.; Wand, J. A.; Hilser, V. J.* Revealing the nature of the native state ensemble through cold denaturation. *Biochemistry* **2006**, 45,

10163-10174.
Fitch, C. A.; Whitten, S. T.; Hilser, V. J.; García-Moreno E., B.* Molecular mechanisms of pH-driven conformational transitions of proteins: Insights from continuum electrostatics calculations of acid unfolding. *Proteins* **2006,** *63*, 113-126.
Liu, T.; Whitten, S. T.; Hilser, V. J.* Ensemble-based signatures of energy propagation in proteins: a new view of an old phenomenon. *Proteins* **2006**, *62*, 728-738.
Hilser, V. J.*; García-Moreno E., B.; Oas, T. G.; Kapp, G.; Whitten, S. T. A statistical thermodynamic model of the protein ensemble. *Chem. Rev.* **2006**, *106*, 1545-1558.
Whitten, S. T.; García-Moreno E., B.; Hilser, V. J.* Local conformational fluctuations can modulate the coupling between proton binding and global structural transitions in proteins. *Proc. Natl. Acad. Sci. USA* **2005**, *102*, 4282-4287.
Vertrees, J.; Barritt, P.; Whitten, S. T.; Hilser, V. J.* COREX/BEST server: a web browser-based program that calculates regional stability variations within protein structures. *Bioinform.* **2005**, *21*, 3318-3319.
Olmsted, S. S.; Khanna, K. V.; Ng, E. M.; Whitten, S. T.; Johnson, O. N. III; Markham, R. B.; Cone, R. A.; Moench, T. R.* Low pH immobilizes and kills human leukocytes and prevents transmission of cell-associated HIV in a mouse model. *BMC Infect. Dis.* **2005**, *5*, 79-87.
Hamburger, J. B.; Ferreon, J. C.; Whitten, S. T.; Hilser, V. J.* Thermodynamic mechanisms and consequences of the polyproline II ($P_{II}$) structural bias in the denatured states of proteins. *Biochemistry* **2004**, *43*, 9790-9799.
Whitten, S. T.; Wooll, J. O.; Razeghifard, R.; García-Moreno E., B.; Hilser, V. J.* The origin of pH-dependent changes in *m*-values for the denaturant-induced unfolding of proteins. *J. Mol. Biol.* **2001**, *309*, 1165-1175.
Whitten, S. T.; García-Moreno E., B.* pH dependence of stability of staphylococcal nuclease: evidence of substantial electrostatic interactions in the denatured state. *Biochemistry* **2000**, *39*, 14292-14304.

b. Non-refereed Articles:

3. Conference Proceedings

a. Refereed Conference Proceedings:

1. Searle, C.; Aviles, G.; Johnson, S.; Whitten, S. T.* *Comparative Analysis of Protein-Mediated Phase Separation Across the Three Domains of Life, Relative to Humans*, Undergraduate Research Conference (URC), Texas State University, San Marcos, TX, April 22, 2026.
2. Murphy, C. V.; Hernandez, V.; Whitten, S. T.; Lewis, K. A.; Hough, L. E.* *Harnessing a vast natural dataset to comprehensively characterize biological protein condensation*, American Physical Society (APS) Global Physics Summit, Denver, CO, Mar 18, 2026.
3. O'Donnell, L. A.; Niehof, L.; Rodulfo, L. G.; Fisher, A. M.; Whitten, S. T.; English, L. R.* *Bringing Biochemistry into Organic Chemistry through an LLPS-Based CURE*

*Module*, 129th Annual Meeting of the Texas Academy of Science, University of Texas at Tyler, Tyler, TX, Feb 28, 2026.

4. Murphy, C. V.; Velez, S. D. V. G.; Ramirez, D. A.; Whitten, S. T.; Lewis, K. A.; Hough, L. E.* *Harnessing a vast natural dataset to comprehensively characterize biological protein condensation*, 39th Annual Gibbs Conference on Biological Thermodynamics, Carbondale, IL, Sep 29, 2025.
5. Tischer, A.; Moon-Tasson, L.; Whitten, S. T.; Auton, M.*. *Physiological Concentrations of Calcium Alter the Quaternary Structure of VWF A1A2A3 Domains*, International Society on Thrombosis and Haemostasis Research, 2025 Congress, Washington D. C., June 21-25, 2025.
6. Lewis, K. A.; Kerwin, S. M.; Libich, D. S.; McLean, R. J. C.; Oyajobi, B. O.; Whitten, S. T. *Biomedical Research Training at Texas State*, 2025 Health Scholars Showcase, Translational Health Research Center, Texas State University, San Marcos, TX, April 4, 2025.
7. Knox, C. F.; Kipp, O. L.; Ramirez, D.; Allen, J.; Whited, A.; Whitten, S. T.; Hough, L. E.* *Visualizing Liquid-Liquid Phase Separation Behavior of a Coiled-Coil Protein*, CU Boulder Summer Multicultural Access to Research Training Program 2024, Boulder, CO, August 8, 2024.
8. Van Zandt, A. R.; Nepogodin, J. E.; Kipp, O. L.; Whitten, S. T.* *Protein-mediated macromolecular phase separation in complete genomes.* 2024 RICE Undergraduate Research Showcase, Texas State University, San Marcos, TX, July 26, 2024.
9. Kipp, O. L.; Knox, C. F.; Nepogodin, J. E.; Whitten, S. T.* *Aberrant protein phase separation in human disease.* 2024 TXST STEM Conference, Texas State University, San Marcos, TX, Apr 12, 2024.
10. Taylor, T.; Cisneros Ramirez, C.; Velez Guzman, S. D.; Hough, L. E.; Whitten, S. T.; Lewis, K. A.* *Role of EYA in DNA damage response and cell fate determined through liquid-liquid phase separation.* 2024 TXST STEM Conference, Texas State University, San Marcos, TX, Apr 12, 2024.
11. Deb, S.; Gonzalez, L.; Whitten, S. T.; Lewis, K. A.* *Evaluating potential phase separation behavior identified by ParSe using GFP-fusion proteins and yeast.* 2024 TXST STEM Conference, Texas State University, San Marcos, TX, Apr 12, 2024.
12. Knox, C. F.; Kipp, O. L.; Nepogodin, J. E.; Whitten, S. T.* *Targeting aberrant protein phase separation in human disease.* Texas Academy of Science 2024 Annual Meeting, Odessa, TX, March 2, 2024. Best Poster Award, Cell and Molecular Biology category.
13. Taylor, T.; Hough, L. E.; Lewis, K. A.; Whitten, S. T.* *Evaluating phase separation behavior in ZNF326 (1-237).* Annual Biomedical Research Conference for Minority Students (ABRCMS) 2023, Phoenix, AZ, November 15-18, 2023.
14. Remsing, J. N.; Gonzalez, L.; Whitten, S. T.; Lewis, K. A.* *Development of purification protocols for the aggregation-prone transactivation domains of the EYA transcriptional regulators.* Annual Biomedical Research Conference for Minority Students (ABRCMS) 2023, Phoenix, AZ, November 15-18, 2023.
15. Remsing, J. N.; Gonzalez, L.; Whitten, S. T.; Lewis, K. A.* *Development of purification protocols for the aggregation-prone transactivation domains of the EYA transcriptional regulators.* 2023 Biomedical Sciences Mini Symposium, Texas State University, San Marcos, TX, August 17, 2023.
16. Remsing, J. N.; Whitten, S. T.; Lewis, K. A.* *Development of purification protocols for the aggregation-prone transactivation domains of the EYA transcriptional*

*regulators.* Discover BMB, Annual meeting of the American Society for Biochemistry and Molecular Biology, Seattle, WA, March 25-28, 2023.

17. Velez Guzman, S. D.; Whitten, S. T.; Lewis, K. A.* *Engineering a new expression system for purification and analysis of phase-separating proteins.* Discover BMB, Annual meeting of the American Society for Biochemistry and Molecular Biology, Seattle, WA, March 25-28, 2023.
18. Spooner, M. H.; Lewis, K. A.*; Whitten, S.T.* *Biomedical Research Training at Texas State: Preparing Bobcats for doctoral programs in the biomedical sciences.* Health Scholar Showcase, Performing Arts Center, Texas State University, San Marcos, TX, March 3, 2023.
19. Ibrahim, A. Y.†; Khaodeuanepheng, N. P.†; Amarasekara D. L.; Correia, J. J.; Fitzkee, N. C.; Lewis, K. A.; Hough, L. E.*; Whitten, S.T.* *Intrinsically disordered regions that drive phase separation form a robustly distinct protein class.* 67th Annual Meeting of the Biophysical Society, San Diego, CA, Feb 20, 2023.
20. Wilson, C.†; Ibrahim, A. Y.†; Correia, J. J.; Fitzkee, N. C.; Lewis, K. A.; Hough, L. E.; Whitten, S.T.* *ParSe version 2: A second-generation predictor of protein phase separation based upon intrinsic sequence-based properties.* 36th Annual Gibbs Conference on Biological Thermodynamics, Carbondale, IL, Oct 2, 2022.
21. Songe, O.†; Hebert, M. D.; Whitten, S.T.* *Investigating the mechanism of liquid-liquid phase separation by human colin.* REU Summer Research Symposium, Texas State University, San Marcos, TX, August 4, 2022.
22. Lewis, K. A.*; Whitten, S.T. *Biomedical Research Training at Texas State: Preparing Bobcats for PhD programs in the biomedical sciences.* Health Scholar Showcase, Performing Arts Center, Texas State University, San Marcos, TX, April 8, 2022.
23. Ibrahim, A. Y.†; Khaodeuanepheng, N. P.†; Lewis, K. A.; Whitten, S. T.* *Defining Protein Characteristics that Drive Phase Separation.* Annual Biomedical Research Conference for Minority Students (ABRCMS) 2021, virtual/online, Nov 12, 2021.
24. Hackler, E. L.; Gonzalez, L.; English, L. R.†; Whitten, S. T.; Lewis, K. A.* *The C-Terminal Domain of the RNA Binding Protein LaRP6 is Intrinsically Disordered.* 2021 Southwest Regional Meeting of the American Chemical Society, Austin, TX, November 2, 2021.
25. Ibrahim, A. Y.†; Khaodeuanepheng, N.†; Lewis, K. A.; Whitten, S. T.* *Defining Protein Characteristics that Drive Phase Separation.* 35th Annual Gibbs Conference on Biological Thermodynamics, virtual/online, Sep 26, 2021.
26. Camacho, P.†; English, L. R.†; Lewis, K. A.; Whitten, S. T.* *Intrinsic Conformational Preferences of the Charged Amino Acids in Disordered Proteins.* Experimental Biology 2021, virtual/online, April 27-30, 2021.
27. Camacho, P.†; English, L. R.†; Whitten, S. T.* *Intrinsic Conformational Preferences of the Charged Amino Acids in Disordered Proteins.* 65th Annual Meeting of the Biophysical Society, virtual/online, February 27, 2021.
28. Camacho, P.†; English, L. R.†; Whitten, S. T.* *Intrinsic Conformational Preferences of the Charged Amino Acids in Disordered Proteins.* 2020 Annual Biomedical Research Conference for Minority Students (ABRCMS), virtual/online, November 11, 2020.
29. Paiz, E. A.†; English, L. R.†; Bebo, A.†; Parra, G. L.†; Whitten, S. T.* *Conformational Bias in Denatured Protein and its Role in Folding.* 33rd Annual Gibbs Conference on Biological Thermodynamics, Carbondale, IL, October 5, 2019.

30. Tischer, A.; Brehm, M. A.; Machha, V. R.; Moon-Tasson, L.; Benson, L. M.; Nelton, K. J.; Leger, R. R.; Obser, T.; Martinez-Vargas, M.; Whitten, S. T.; Chen, D.; Pruthi, R. K.; Bergen, H. R.; Cruz, M. A.; Schneppenheim, R.; Auton, M.* *Detecting Structural Disorder in Multimeric Von Willebrand Factor.* International Society on Thrombosis and Haemostasis 2019 Congress, Melbourne, Australia, July 6, 2019.
31. Paiz, E. A.†; English, L. R.†; So, S.; Whitten, S. T.* *Thermodynamics of Conformational Bias in the Denatured States of Protein.* 2019 Women in Science & Engineering (WISE) Conference, Texas State University, San Marcos, TX, March 8, 2019.
32. Paiz, E. A.†; English, L. R.†; So, S.; Whitten, S. T.* *Thermodynamics of Conformational Bias in the Denatured States of Protein.* 2018 Annual Biomedical Research Conference for Minority Students (ABRCMS), Indianapolis, IN, November 14, 2018.
33. Parra, G. L.†; English, L. R.†; Whitten, S. T.* *Phosphoserine incorporation into the intrinsically disordered N-terminal domain of the p53 tumor suppressor protein.* 2018 Annual Biomedical Research Conference for Minority Students (ABRCMS), Indianapolis, IN, November 14, 2018.
34. English, L. R.†; Voss, S. M.†; Tischer, A.; Auton, M.; Whitten, S. T.* *Sequence reversal prevents chain collapse and yields heat-sensitive intrinsic disorder.* 32nd Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, October 7, 2018.
35. Parra, G. L.†; English, L. R.†; Whitten, S. T.* *Quantitative model of phosphorylation on disordered protein structure.* 2018 Inaugural Department of Chemistry & Biochemistry Research Colloquium, Texas State University, San Marcos, TX, April 6, 2018.
36. Voss, S. M.†; Zamarripa, J.†; English, L. R.†; Whitten, S. T.* *Structural determinants of liquid-liquid phase separation in intrinsically disordered proteins.* 2018 Inaugural Department of Chemistry & Biochemistry Research Colloquium, Texas State University, San Marcos, TX, April 6, 2018.
37. English, L. R.†; Voss, S. M.†; Tischer, A.; Auton, M.; Whitten, S. T.* *Intrinsic α-helix propensities compact retro nuclease $R_h$.* Central Texas ACS Centennial Celebration, Austin TX, November 10, 2017.
38. English, L. R.†; Voss, S. M.†; Tischer, A.; Auton, M.; Whitten, S. T.* *Intrinsic α-helix propensities compact retro nuclease $R_h$.* 2017 Biochemistry & Structural Biology Department Annual Retreat, UT Health San Antonio, San Antonio, TX, November 3, 2017.
39. English, L. R.†; Voss, S. M.†; Tischer, A.; Auton, M.; Whitten, S. T.* *Intrinsic α-helix propensities compact retro nuclease $R_h$.* 31st Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, September 24, 2017.
40. Parra, G. L.†; English, L. R.†; Whitten, S. T.* *Phosphorylation effects on hydrodynamic size in intrinsically disordered proteins.* 31st Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, September 25, 2017.
41. Parra, G. L.†; English, L. R.†; Whitten, S. T.* *Phosphorylation effects on hydrodynamic size in intrinsically disordered proteins.* PREM Research Poster Session for External Advisory Board, Texas State University PREM Center, San Marcos, TX, April 11, 2017.
42. Ezzell, N. A.; Zhang, Y.; Whitten, S. T.; Fitzkee, N. C.* *Improving the performance of simulations of the intrinsically disordered N-terminal domain from p53.* Biophysical Society 61st Annual Meeting, New Orleans, LA, February 11-15, 2017.

43. Ricard, B. J.†; English, L. R.†; Tilton, E. C.†; Perrin, T. A.†; Whitten, S. T.* *Quantifying the contributions of intrinsic conformational propensities and net charge on the hydrodynamic size of disordered protein structures.* 30th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, September 26, 2016.
44. Parra, G. L.†; English, L. R.†; Whitten, S. T.* *Phosphorylation effects on hydrodynamic size in intrinsically disordered proteins.* 30th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, September 26, 2016.
45. English, L. R.†; Engelhardt, D.†; Tilton, E. C.†; Reyes, C.†; Whitten, S. T.* *pH effects on intrinsically disordered protein structures.* 30th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, September 25, 2016.
46. English, L. R.†; Tilton, E. C.†; Ricard, B. J.†; Whitten, S. T.* *Quantifying the contributions of intrinsic conformational propensities and net charge on the hydrodynamic size of disordered proteins.* Gordon Research Conference on Intrinsically Disordered Proteins, Les Diablerets, Switzerland, June 28, 2016.
47. Tomasso, M. E.†; Devarajan, D.; Tarver, M. J†; English, L. R.†; Tilton, E. C.†; Whitten, S. T.* *Experimental Polyproline II Propensities Describe Sequence Effects on Hydrodynamic Size for Intrinsically Disordered Proteins.* Texas PREM Network Summer Conference, San Marcos, TX, June 26, 2016.
48. Parra, G. L.†; English, L. R.†; Whitten, S. T.* *Phosphorylation Effects on Hydrodynamic Size in Intrinsically Disordered Proteins.* Texas PREM Network Summer Conference, San Marcos, TX, June 26, 2016.
49. English, L. R.†; Engelhardt, D.†; Tilton, E. C.†; Reyes, C.†; Whitten, S. T.* *Electrostatic effects on intrinsically disordered protein structure.* Texas PREM Network Summer Conference, San Marcos, TX, June 26, 2016.
50. English, L. R.†; Engelhardt, D.†; Tilton, E. C.†; Reyes, C.†; Whitten, S. T.* *Electrostatic effects on intrinsically disordered protein structure.* Biology Department Symposium, Texas State University, San Marcos, TX, April 22, 2016.
51. Ricard, B. J.†; Tomasso, M. E.†; English, L. R.†; Tilton, E. C.†; Whitten, S. T.* *Hydrodynamic radii of intrinsically disordered proteins determined from intrinsic polyproline II propensities.* ASBMB 2016 Annual Conference, San Diego, CA, April 2-6, 2016.
52. Tomasso, M. E.†; Devarajan, D.; Tarver, M. J.†; English, L. R.†; Tilton, E. C.†; Whitten, S. T.* *Experimental polyproline II propensities describe sequence effects on hydrodynamic size for intrinsically disordered proteins.* Biophysical Society 60th Annual Meeting, Los Angeles, CA, March 2, 2016.
53. Tomasso, M. E.†; Devarajan, D.; Tarver, M. J†; Whitten, S. T.* *Hydrodynamic radii of intrinsically disordered proteins determined from experimental polyproline II propensities.* 29th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, October 5, 2015.
54. Devarajan, D.; Tarver, M. J†; Yingling, Y. G.; Whitten, S. T.* *Hydrodynamic radii and polyproline II propensities from atomistic molecular dynamic simulations of intrinsically disordered proteins.* 29th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, October 4, 2015.
55. Perez, N.†, Martin, L.†; Tilton, E. C.†; Whitten, S. T.* *Biophysical characterization of protein macromolecules.* CHEMIE REU Summer Program, Texas State University, Department of Chemistry and Biochemistry. August 2015.
56. Tarver, M. J†; Whitten, S. T.; Lee J-G; Yingling, Y. G.* *Sequence and temperature effects on the intrinsically disordered N-terminal region of the p53 protein.*

Partnerships for Research and Education in Materials (PREM) 10th Anniversary Celebration, 2014 MRS Fall Meeting, Boston, MA, December 1, 2014.

57. Tarver, M. J†; Yingling, Y. G.; Whitten, S. T.* *$PP_{II}$ propensities in IDPs measured by $R_h$ compaction from glycine substitutions.* 28th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, September 22, 2014.
58. Tarver, M. J†; Whitten, S. T.; Lee J-G; Yingling, Y. G.* *Sequence and temperature effects on the intrinsically disordered N-terminal region of the p53 protein.* NC State Summer Undergraduate Research Symposium, North Carolina State University, Raleigh, NC, July 30, 2014.
59. Lucas, A. L.; Whitten, S. T.; Maeder C.* *Identification of critical residues in Spliceosomal Protein Dib1.* 2014 Experimental Biology Conference, San Diego, CA, April 25, 2014.
60. Tarver, M. J†; Yingling, Y. G.; Whitten S. T.* *Mechanistic basis for ligand-regulated control of protein self-assembly into fibril nanostructures.* Women in Science and Engineering (WISE) Conference, Texas State University, San Marcos, TX, November 22, 2013.
61. Lucas, A. L.; Whitten, S. T.; Maeder C.* *Identification of critical residues in Spliceosomal Protein Dib1.* Women in Science and Engineering (WISE) Conference, Texas State University, San Marcos, TX, November 22, 2013.
62. Lucas, A. L.; Whitten, S. T.; Maeder C.* *Identification of critical residues in Spliceosomal Protein Dib1.* Collaborative Basic & Translational Research in the Sciences Conference, University of Texas San Antonio, San Antonio, TX, October 18, 2013.
63. Meredith, R.†; Whitten S. T.* *Molecular interactions that control protein assembly into nanofiber structures.* 27th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, October 7, 2013.
64. Perez, R.†; Whitten S. T.* *Contributions of alanine residues to the hydrodynamic radius of p53(1-93).* 27th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, October 7, 2013.
65. Zimmerman, M. T.; Tischer, A., Whitten S. T.; Auton, M.* *Structural Homology ≠ Thermodynamic Equivalence.* 27th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, October 7, 2013.
66. Langridge, T. D.†; Tarver, M. J.†; Whitten S. T.* *An equation that correlates hydration radius to PII folding in intrinsically disordered proteins.* Gordon Research Conference Proteins, Holderness, NH, June 16-21, 2013.
67. Tarver, M. J.†; Yingling, Y. G.; Whitten S. T.* *Mechanistic basis for ligand-regulated control of protein self-assembly into fibril nanostructures.* 7th Annual Undergraduate Research Conference, Texas State University – San Marcos, San Marcos, TX, April 24-26, 2013. 1st place poster award.
68. Tarver, M. J.†; Yingling, Y. G.; Whitten S. T.* *Mechanistic basis for ligand-regulated control of protein self-assembly into fibril nanostructures.* HSI Research Symposium, Texas State University – San Marcos, San Marcos, TX, March 20, 2013.
69. Meredith, R.†; Campbell, J. C.†; Adam, M.†; Whitten S. T.* *Ligand-induced synthetic prions: detection of a prion intermediate.* 26th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, September 22-25, 2012.
70. Campbell, J. C.†; Whitten, S. T.* *Correlation of m-value effects to cold-resistant substructures of the protein ensemble.* 25th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, September 17-20, 2011.

71. Schaub, L. J.†; Tracy, J.†; Whitten, S. T.* *Functional relevance of unfolded protein: investigating allostery in the tumor suppressor protein p53.* Women in Science and Engineering (WISE) Conference, Texas State University – San Marco, San Marcos, TX, April 8, 2011.
72. Whitten, S. T.; Diaz-Espinoza, R.; Morales, R.; Soto, C. A.; Hilser, V. J.* *Prion replication is reversible, under thermodynamic control, and can be catalyzed by a peptide cofactor.* 22nd Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, October 4-7, 2008.
73. Whitten, S. T.; Diaz-Espinoza, R.; Morales, R.; Soto, C. A.; Hilser, V. J.* *Peptide ligands that target the cooperative network in the prion protein stimulate $PrP^{Sc}$ formation.* 22nd Annual Meeting of the Protein Society, San Diego, CA, July 19-23, 2008.
74. Whitten, S. T.; Soto, C. A.; Hilser, V. J.* *Peptide ligands that target the cooperative network in the prion protein stimulate $PrP^{Sc}$ formation.* 16th Annual Texas Protein Folders Meeting, Navasota, TX, March 2008.
75. Whitten, S. T.; Hilser, V. J.* *Designing ligands as conformational switches to inhibit or stimulate disease.* 21st Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, September 29 – October 2, 2007.
76. Whitten, S. T.; Kurtz, A. J.; Pometun, M. S.; Wand, A. J.; Hilser, V. J.* *Revealing the nature of the native state ensemble through cold denaturation.* 20th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, October 7-10, 2006.
77. Whitten, S. T.; Auton, M.; Lui, T.; Bolen, D. W.; García-Moreno, E., B.; Wand, A. J.; Hilser, V. J.* *Unifying protein behavior through a hybrid structural-thermodynamic model of the ensemble.* 9th Annual Hopkins Folding Meeting, Fall 2005.
78. Whitten, S. T.; Fox, R. O.; Hilser, V. J.* *Ensemble-based structural energetics: implications for the design and optimization of pharmaceutical compounds.* Colorado Protein Stability Conference, Breckenridge, CO, Summer 2002.

b. Non-refereed:

4. Abstracts:

5. Reports:

English, L. R.†; Demeler, A.; Whitten, S. T.; Demeler B.* *Temperature dependence of hydrodynamic radius of an intrinsically disordered protein measured in the Optima AUC analytical ultracentrifuge.* Application Note to Beckman-Coulter, Indianapolis, IN, January 15, **2018**.

6. Book Reviews:

7. Other Works in Print:

Ensemble-based analysis of the pH-dependent stability of proteins.
U.S. Patent 7,027,969

Issued: April 11, 2006

B. Works not in Print

1. Papers Presented at Professional Meetings:

2. Invited Talks, Lectures, and Presentations:

1. Whitten, S. T.* *The Texas Doctoral Bridge Program*, Symposium on Student Success, College of Science and Engineering, Texas State University, San Marcos, TX, December 3, 2025.
2. Knox, C. F.; Kipp, O. L.; Whitten, S. T.; English, L. R.* *Visualizing Liquid-Liquid Phase Separation of Intrinsically Disordered Proteins*, Texas Academy of Sciences 128th Annual Meeting, Baylor University, Waco, TX, February 28, 2025.
3. Knox, C. F.; Kipp, O. L.; Ramirez, D.; Allen, J.; Whited, A.; Whitten, S. T.; Hough, L. E.* *Visualizing Liquid-Liquid Phase Separatory Behavior of Structurally Diverse Proteins*, Gulf Coast Undergraduate Research Symposium at Rice University, Houston, TX, November 9, 2024.
4. Kipp, O. L.; Knox, C. F.; Nepogodin, J. E.; English, L. R.; Whitten, S. T.* *Aberrant protein phase separation in human disease*, Gulf Coast Undergraduate Research Symposium at Rice University, Houston, TX, November 9, 2024.
5. Knox, C. F.; Kipp, O. L.; Nepogodin, J. E.; English, L. R.; Whitten, S. T.* Targeting aberrant protein phase separation in human disease, American Chemical Society Southwestern Regional Meeting, Waco, TX, October 20-23, 2024.
6. Knox, C. F.; Kipp, O. L.; Ramirez, D.; Allen, J.; Whited, A.; Whitten, S. T.; Hough, L. E.* *Visualizing Liquid-Liquid Phase Separatory Behavior of Structurally Diverse Proteins*, University of Texas Fall Undergraduate Research Symposium, Austin, TX, October 5, 2024.
7. Kipp, O. L.; Knox, C. F.; Nepogodin, J. E.; English, L. R.; Whitten, S. T.* *Aberrant protein phase separation in human disease*, University of Texas Fall Undergraduate Research Symposium, Austin, TX, October 5, 2024.
8. Knox, C. F.; Kipp, O. L.; Ramirez, D.; Allen, J.; Whited, A.; Whitten, S. T.; Hough, L. E.* *Visualizing Liquid-Liquid Phase Separatory Behavior of a Coiled-coil Protein*, The Leadership Alliance National Symposium, Hartford, CT, July 27, 2024.
9. Whitten, S. T.* *Targeting aberrant protein phase separation in human disease.* Texas Woman's University. Department of Chemistry and Biochemistry, Research Seminar Series, Denton, TX, Mar 22, 2024.
10. Whitten, S. T.* *Intrinsically disordered regions that drive phase separation form a robustly distinct protein class.* 37th Annual Gibbs Conference on Biothermodynamics, Touch of Nature Outdoor Education Center, Carbondale, IL, Oct 15, 2023.
11. Ibrahim, A. Y.†; Lewis, K. A.; Whitten, S. T.* *ParSe 2.0: A second-generation sequence-based predictor of protein phase separation.* Annual Meeting of the Southeast Biophysical Consortium, Texas Woman's University, Denton, TX, May 26, 2022.
12. Ibrahim, A.Y.†; Khaodeuanepheng, N.P.†; Paiz, E.A.†; Allen, J.H.; Correia, J.J.; Fitzkee, N.C.; Lewis, K.A.; Whitten, S.T.; Hough, L.E.* *Defining protein characteristics that drive phase separation.* 66th Annual Meeting of the Biophysical Society, San Francisco, CA, February 21, 2022.

13. Whitten, S.T.* *The South Texas Doctoral Bridge Training Program.* HSI Symposium, Texas State University, LBJ Grand Ballroom, September 17, 2021.
14. Whitten, S.T.* *Distinct Structural Features of IDPs Predict their Potential to Drive Liquid-Liquid Phase Separation.* Mississippi State University, Department of Chemistry, Research Seminar Series, September 18, 2020.
15. Whitten, S.T.* *My experiences as a Physics Major.* Society of Physics Students, Department of Physics, Texas State University, San Marcos, TX, March 12, 2020.
16. Whitten, S.T.*, English, L. R.†, Paiz, E. A.† *Heat effects on coil hydrodynamic size reveal the energetics of denatured state conformational bias.* 64th Annual Meeting of the Biophysical Society, San Diego, CA, February 17, 2020.
17. Paiz, E. A.†, and Whitten, S. T.* *Conformational Bias in Denatured Protein and its Role in Folding.* 33rd Annual Gibbs Conference on Biological Thermodynamics, Carbondale, IL, October 5, 2019.
18. English, L. R.†, Paiz, E. A.†, and Whitten, S. T.* *Conformational Bias in Denatured Protein and its Role in Folding.* 74th Calorimetry Conference, Santa Fe, NM, July 31, 2019.
19. English, L. R.†*, Tilton, E. C.†, and Whitten, S. T. *Teaching study skills.* Transforming Undergraduate Education in the Molecular Life Sciences, University of the Incarnate Word, San Antonio, TX, July 25-28, 2019.
20. English, L. R.†, and Whitten, S. T.* *Intrinsic Conformational Bias in Denatured Protein Measured from the Mean Hydrodynamic Size.* Southeast Regional Biophysical Consortium, Louisiana State University, Baton Rouge, LA, June 4, 2019.
21. Paiz, E. A.†, and Whitten, S. T.* *Conformational Bias in Denatured Protein and its Role in Folding.* Southeast Regional Biophysical Consortium, Louisiana State University, Baton Rouge, LA, June 4, 2019.
22. Whitten, S.T.*, and English, L. R.† *Conformational Bias in Unfolded Proteins Studied by Sequence Reversal.* 63rd Annual Meeting of the Biophysical Society, Baltimore, MD, March 3, 2019.
23. Voss, S. M.†, and Whitten, S.T.* *Sequence reversal prevents chain collapse and yields heat sensitive intrinsic disorder.* Gulf Coast Undergraduate Research Symposium, Rice University, Houston, TX, October 6, 2018.
24. English, L. R.†, and Whitten, S.T.* *Sequence reversal prevents chain collapse and yields heat sensitive intrinsic disorder.* 73rd Calorimetry Conference, Tahoe City, CA, August 6, 2018.
25. Whitten, S.T.* *Studies on the structure and thermodynamic character of intrinsically disordered proteins.* University of Texas Health San Antonio, Department of Biochemistry and Structural Biology, San Antonio, TX, September 29, 2017.
26. English, L. R.†, and Whitten, S.T.* *Intrinsic α-helix propensities determined from heat effects on retro-nuclease hydrodynamic size.* 72nd Calorimetry Conference, Colorado Springs, CO, July 31, 2017.
27. Whitten, S.T.* *Sequence effects on hydrodynamic size for intrinsically disordered proteins described from experimental polyproline II propensities.* 252nd American Chemical Society National Meeting, Philadelphia, PA, August 24, 2016.
28. Whitten, S.T.* *Quantitative model of the protein conformational ensemble for intrinsically disordered proteins.* 71st Calorimetry Conference, Oahu, Hawaii, August 4, 2016.
29. Whitten, S.T.* *The properties of disordered proteins: why it matters to biological systems and what my lab has observed.* Texas State University, Material Science,

Engineering, and Commercialization (MSEC), Research Forum, San Marcos, TX, April 1, 2016.

30. Whitten, S.T.* *Personal experiences as the first employee of a biotech start-up.* Texas State University, Material Science, Engineering, and Commercialization (MSEC), Commercialization Forum, San Marcos, TX, April 1, 2016.
31. Tamasso, M. E†; Whitten, S. T.* *Hydrodynamic radii of intrinsically disordered proteins determined from experimental polyproline II propensities.* 29th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, October 3, 2015.
32. Whitten, S.T.* *Quantitative descriptions of disordered protein structures.* Texas Woman's University, Department of Chemistry and Biochemistry, Denton, TX, January 30, 2015.
33. Tarver, M. J†; Whitten, S. T.* *$PP_{II}$ propensities in IDPs measured by $R_h$ compaction from glycine substitutions.* 28th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, September 20, 2014.
34. Whitten, S.T.* *Coupled structural relationships in intrinsically disordered proteins.* 69th Calorimetry Conference, Santa Fe, NM, July 7, 2014.
35. Whitten, S.T.* *Presentation to Committee on Academic and Workforce Success (CAWS) of Texas Higher Education Coordinating Board.* Texas Higher Education Coordinating Board, 1200 E Anderson Lane, Austin, TX, June 25, 2014.
36. Brown, C.†; Whitten, S.T.* *Charge effects on the structural characteristics of intrinsically disordered protein.* Biology Colloquium, Department of Biology, Texas State University, San Marcos, TX, April 25, 2014.
37. Whitten, S.T.* *Structural characteristics of intrinsically disordered proteins.* University of Kansas Medical Center, Department of Biochemistry and Molecular Biology, Kansas City, KS, March 7, 2014.
38. Whitten, S.T.* *Identifying regulatory sites in proteins.* Texas Enzyme Mechanisms Conference, University of Texas at Austin, College of Pharmacy, Austin, TX, January 4, 2014.
39. Whitten, S.T.* *Mechanistic basis for ligand-regulated control of protein self-assembly into fibril nano structures.* MRSEC Seminar Series, North Carolina State University, Raleigh, NC, October 24, 2013.
40. Whitten, S.T.* *Temperature effects on the hydrodynamic radius of intrinsically disordered proteins.* 27th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, October 8, 2013
41. Perez, R.†; Whitten, S.T.* *Contributions of alanine residues to the hydrodynamic radius of p53(1-93).* 27th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, October 5, 2013.
42. Meredith, R.†; Whitten, S.T.* *Ligand-induced synthetic prions: detection of a prion intermediate.* 26th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, September 22, 2012.
43. Whitten, S.T.* *Developing peptide ligands that intervene in prion amyloidosis.* Southwest Regional Meeting of the American Chemical Society, Austin, TX, November 10, 2011.
44. Campbell, J.C.†; Whitten, S.T.* *Correlation of m-value effects to cold-resistant substructures of the protein ensemble*. 25th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, September 17, 2011.
45. Whitten, S.T.* *Functional allostery in unfolded protein.* Baylor University, Department of Chemistry and Biochemistry, Waco, TX, November 5, 2010.

46. Whitten, S.T.* *Undergraduate physics meets molecular biology: a natural fit.* University of Nebraska at Omaha, Department of Physics, Omaha, NE, March 26, 2010.
47. Whitten, S.T.* *Peptide-based intervention in the misfolding disorders.* Texas State University - San Marcos, Department of Biology, San Marcos, TX, October 26, 2009.
48. Whitten, S.T.* *Developing ligands that intervene in protein misfolding disease.* University of Iowa, College of Medicine, Department of Biochemistry, Iowa City, IA, April 2, 2009.
49. Whitten, S.T.* *Developing ligands that intervene in protein misfolding disease.* Texas State University - San Marcos, Department of Chemistry and Biochemistry, San Marcos, TX, February 2, 2009.
50. Whitten, S.T.* The development of ligands that intervene in protein misfolding. University of Nebraska Medical Center, School of Pharmacy, Department of Pharmaceutical Sciences, Omaha, NE, January 20, 2009.
51. Whitten, S.T. *The design and discovery of a reversible prion catalyst.* Tulane University Health Sciences Center, School of Medicine, Department of Biochemistry, December 1, 2008.
52. Whitten, S.T. *Peptide ligands that target the cooperative network in the prion protein stimulate $PrP^{Sc}$ formation.* 16th Annual Texas Protein Folders Meeting, Navasota, TX, March 14, 2008.
53. Whitten, S.T. *Designing ligands as conformational switches to inhibit and stimulate disease.* University of Colorado at Denver Health Sciences Center, School of Pharmacy, Department of Pharmaceutical Sciences, Denver, CO, November 29, 2007.
54. Whitten, S.T. *Protein X mimetics: The de novo design of synthetic peptides that facilitate structural conversion of the prion protein to disease-associated aggregates.* 20th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, October 9, 2006.

3. Consultancies:

4. Workshops:

5. Other Works not in Print:

a. Works “submitted” or “under review”

1. Maguire, L.; Reskin, S.; Wall, K.; Arroyo, E.; Marchando, P.; Whitten, S. T.; Erbse, A.; Hough, L. E.* Aggregation of an FG nucleoporin under crowded conditions. In revision. https://www.biorxiv.org/content/10.1101/2024.04.15.589310v1

b. Works “in progress”

c. Other works not in print

C. Grants and Contracts

1. Funded External Grants and Contracts:

Circular Dichroism Spectrometer
National Institute of General Medical Sciences, National Institutes of Health
S10GM158770
8/1/2025 – 7/31/2026
Type of Grant: Equipment
Role on Grant: co-PI (1 of 3) (Sean M. Kerwin, PI)
Total Funds Awarded: $209,852
Direct Funds Received: $209,852

Texas Doctoral Bridge Program
National Institute of General Medical Sciences, National Institutes of Health
T32GM154636
8/1/2024 – 7/31/2029
Type of Grant: Training
Role on Grant: PI – contact (1 of 4 PIs)
Total Funds Awarded: $2,761,618
Direct Funds Received: $2,600,793
Total Funds to Texas State: $2,683,781

Creating Equitable Pathways to STEM Graduate Education: Texas-Colorado Physical Sciences
Alfred P. Sloan Foundation
#G-2022-19553
01/01/2023 – 12/31/2024
Type of Grant: Training
Role on Grant: co-PI (1 of 4) (Karen A. Lewis, PI)
Total Funds Awarded: $249,299
Direct Funds Received: $140,377

MRI: Acquisition of Automated Isothermal Titration Calorimeter for Biophysical Research at Texas State University
National Science Foundation
2216145
9/07/2022 – 8/31/2025
Type of Grant: Equipment
Role on Grant: co-PI (1 of 3) (Karen A. Lewis, PI)
Total Funds Awarded: $265,280
Direct Funds Received: $265,280

South Texas Doctoral Bridge Program
National Institute of General Medical Sciences, National Institutes of Health
R25GM102783
8/01/2018 – 5/31/2023 (no cost extensions through 05/31/2025)
Type of Grant: Training
Role on Grant: PI (1 of 2)

Total Funds Awarded: $1,506,205
Direct Funds Received: $1,240,489

Quantitative Description of Phosphorylation Effects on Disordered Protein Structure
National Institute of General Medical Sciences, National Institutes of Health
R15GM115603
8/01/2015 – 07/31/2018
Type of Grant: Research
Role on Grant: PI
Total Funds Awarded: $335,562
Direct Funds Received: $225,000

Structural Characterization of the Protein Ensemble by Equilibrium Unfolding Methods
Texas Higher Education Coordinating Board
NHARP 003615-0003-2011
11/15/2012 – 02/28/2015
Type of Grant: Research
Role on Grant: PI
Total Funds Awarded: $45,000
Direct Funds Received: $45,000

Texas State University PREM: Center on Interfaces in Materials. A Partnership with the Research Triangle MRSEC
National Science Foundation
DMR 1205670
06/01/2012 – 02/28/2019
Type of Grant: Training
Role on Grant: Co-PI (1 of 18) (William J. Brittain, PI)
Total Funds Awarded: $3,401,000
Direct Funds Received: $265,520

Role of Unfolded Protein in Functional Allostery: Multi-domain Control of DNA Binding in the Tumor Suppressor Protein p53
Research Corporation for Science Advancement
Cottrell College Science Award #20039
07/01/2011 – 06/31/2014
Type of Grant: Research
Role on Grant: PI
Total Funds Awarded: $35,000
Direct Funds Received: $35,000

A Software Tool for Optimizing the Solubility of Therapeutic Proteins
National Institutes of Health, National Cancer Institute
1 R43 CA128213-01
09/26/2007 – 02/28/2009
Type of Grant: SBIR
Role on Grant: PI
Total Funds Awarded: $121,820
Direct Funds Awarded: $99,000

Antiviral Agents Directed as West Nile Virus
National Institutes of Health, National Institute of Allergy and Infectious Diseases
R43 AI55110
06/01/2003 – 05/31/2005
Type of Grant: SBIR
Role on Grant: PI
Total Funds Awarded: $497,876
Direct Funds Awarded: $432,936

2. Submitted, but not Funded, External Grants and Contracts:

Calcium Regulates Platelet Adhesion by Von Willebrand Factor
National Institute of General Medical Sciences, National Institutes of Health
Submitted 06/01/2026
Type of Grant: Research
Role on Grant: co-PI (M. T. Auton, PI)
Amount of Grant: $3,911,110.00
Funds to Texas State: $412,506.00
Status: Pending

BRE-SPAD at Texas State University
National Institute of General Medical Sciences, National Institutes of Health
Submitted 01/27/2026
Type of Grant: Training
Role on Grant: co-PI (M. M. Villagran, PI)
Amount of Grant: $3,755,249.00
Funds to Texas State: $3,755,249.00
Status: Pending

Targeting aberrant physiological protein phase separation in tumors
National Institute of General Medical Sciences, National Institutes of Health
Submitted 02/25/2023
Type of Grant: Research
Role on Grant: PI
Amount of Grant: $475,428.00
Funds to Texas State: $475,428.00
Status: Not funded

Texas Doctoral Bridge Program
National Institute of General Medical Sciences, National Institutes of Health
Submitted 10/12/2022
Type of Grant: Training
Role on Grant: PI – contact (MPI)
Amount of Grant: $3,012,189.00
Funds to Texas State: $2,918,964.00
Status: Not funded

Automated Isothermal Calorimetry at Texas State University

Department of Defense Foundation, Research and Education Program for Historically Black Colleges and Universities and Minority-Serving Institutions
Submitted 8/16/2021
Type of Grant: Research Equipment
Role on Grant: Co-PI (K. A. Lewis, PI)
Amount of Grant: $320,580.03
Funds to Texas State: $320,580.03
Status: Not funded

Creating Equitable Pathways to STEM Graduate Education
Sloan Foundation
Submitted 6/17/2021
Type of Grant: Training
Role on Grant: Co-PI (K. A. Lewis, PI)
Amount of Grant: $249,521
Funds to Texas State: $163,430
Status: Not funded

Simple, Direct Approach to Phosphoproteins with High Fidelity Phosphoserine Mimetics
National Institutes of Health (R21, PAR-19-254)
Submitted 2/17/2020
Type of Grant: Research
Role on Grant: Co-PI
Amount of Grant: $385,644
Funds to Texas State: $385,644
Status: Not funded

Biology Integration Institutes (BII) Implementation: Dynamic Biological Assemblies
National Science Foundation (BII, NSF 20-508)
Submitted 2/06/2020
Type of Grant: Research
Lead PI: Christine Morrow, UC Boulder
Role on Grant: Co-PI
Subcontract funds to Texas State: $143,777
Status: Not funded

Understanding the Thermal Properties, Structural Characteristics, and Therapeutic Potential of Elastin-Like Polypeptides
National Institutes of Health (RM1, PAR-17-340)
Submitted full proposal, 1/27/2020 (Tracking number GRANT13002188)
Type of Grant: Research
Lead PI: Nicholas Fitzkee, Mississippi State University
Role on Grant: Co-PI
Amount of Grant: $6,357,315
Funds to Texas State: $1,006,850
Status: Not funded

Structural Characterization of the Denatured State to Understand Protein Folding and Misfolding
National Institute of General Medical Sciences, National Institutes of Health

R15GM139119-01 (AREA PA-16-200)
Submitted 10/25/2019
Type of Grant: Research
Role on Grant: PI
Amount of Grant: $428,776
Status: Not funded

Understanding the Thermal Properties, Structural Characteristics, and Therapeutic Potential of Elastin-Like Polypeptides
National Institutes of Health (RM1, PAR-17-340)
Submitted preproposal, 10/06/2017
Submitted full proposal, 5/21/2018 (RM1GM131931)
Type of Grant: Research
Role on Grant: Co-PI
Amount of Grant: $6,489,727
Funds to Texas State: $847,423
Status: Not funded

Texas State University PREM: Center for Materials Assembly. A Partnership with University of Colorado MRSEC
National Science Foundation (DRM-PREM, NSF 17-599)
Submitted proposal, 02/02/18
Type of Grant: Training
Role on Grant: Co-PI
PI: William Brittain
Amount of Grant: $4,171,754
Status: Not funded

Quantitative Description of Phosphorylation Effects on Disordered Protein Structure
National Institute of General Medical Sciences, National Institutes of Health
R15GM115603-02 (renewal application; AREA PA-16-200)
Submitted 10/24/2017
Type of Grant: Research
Role on Grant: PI
Amount of Grant: $448,350
Status: Not funded

Understanding the Thermal Properties, Structural Characteristics, and Therapeutic Potential of Elastin-Like Polypeptides
National Institutes of Health (RM1, PAR-17-340)
Submitted preproposal, 10/06/2017
Type of Grant: Research
Role on Grant: Co-PI
Amount of Grant: $6,489,727
Funds to Texas State: $847,423
Status: Invited for full proposal (submitted 05/21/18; not funded)

Quantitative Measurements of Polyproline II Propensities in Disordered Proteins
Welch Foundation

Submitted: 01/30/2015
Type of Grant: Research
Role on Grant: PI
Amount of Grant: $195,000
Status: Not funded

Cold Adaptation of Intrinsically Disordered Structure
Welch Foundation
Submitted: 01/30/2014
Type of Grant: Research
Role on Grant: PI
Amount of Grant: $180,000
Status: Not funded

Molecular Determinants of IDP Structure
National Institutes of Health, National Institute of General Medical Sciences
Submitted: 11/18/2013
Type of Grant: Research (AREA)
Role on Grant: PI
Amount of Grant: $445,500
Status: Not funded

ERC: Engineering Research Center for BioEngineered Delivery Systems
National Science Foundation
Submitted: 08/2013
Type of Grant: Research
Role on Grant: Co-PI
Amount of Grant: $40,000,000
Status: Not funded

Estimating Polyproline II Structure from Size Measurements of Protein Fragments.
Welch Foundation
Submitted: 02/01/2013
Type of Grant: Research
Role on Grant: PI
Amount of Grant: $180,000
Status: Not funded

Structure and Stability Characterization of a Model ID Transcription Factor
National Institutes of Health, National Institute of General Medical Sciences
Submitted: 10/24/2012
Type of Grant: Research (AREA)
Role on Grant: PI
Amount of Grant: $442,412
Status: Not funded

CAREER: Thermodynamic Description of Signal Transduction in Intrinsically Disordered Protein.
National Science Foundation, Division of Molecular Cellular Biology

Submitted: 07/23/2012
Type of Grant: Research (CAREER)
Role on Grant: PI
Amount of Grant: $525,094
Status: Not funded

Molecular Interactions that Control Self-Assembly of Protein into Nanofiber Structures
Welch Foundation
Submitted: 02/01/2012
Type of Grant: Research
Role on Grant: PI
Amount of Grant: $150,000
Status: Not funded

CAREER: Thermodynamic Description of Signal Transduction in Physiologically Unfolded Protein.
National Science Foundation, Division of Molecular Cellular Biology
Submitted: 07/21/2011
Type of Grant: Research (CAREER)
Role on Grant: PI
Amount of Grant: $517,151
Status: Not funded

Chemical Basis of Allostery in the Tumor Suppressor Protein p53
American Cancer Society
Submitted: 03/08/2011
Type of Grant: Research
Role on Grant: PI
Amount of Grant: $590,013
Status: Not funded

Functional Relevance of Unfolded Protein: Investigating Allostery in p53
National Institutes of Health, National Institute of General Medical Sciences
Submitted: 01/13/2011
Type of Grant: Research (AREA)
Role on Grant: PI
Amount of Grant: $443,469
Status: Not funded

Chemical Basis of Allostery in Unfolded Protein
Welch Foundation
Submitted: 01/06/2011
Type of Grant: Research
Role on Grant: PI
Amount of Grant: $100,000
Status: Not funded

Contributions of Structural Disorder to Molecular Communication Mechanisms
Army Research Office

Submitted: 08/18/2010
Type of Grant: Research
Role on Grant: PI
Amount of Grant: $270,000
Status: Not funded

Peptide-based Intervention to Prevent and Treat Alzheimer's Disease
Texas Higher Education Coordinating Board
Submitted: pre-proposal 09/02/2009, full proposal 01/11/2010
Type of Grant: Research (NHARP)
Role on Grant: PI
Amount of Grant: $200,000
Status: Not funded

Characterization of Prion Amyloidosis Using Peptide-Based Intervention
National Institutes of Health
Submitted: 06/26/2009
Type of Grant: Research (R01)
Role on Grant: Texas State Co-PI
Amount of Grant: $1,553,137
Status: Not funded

3. Funded Internal Grants and Contracts:

PREM CIMA (NSF) Seed Grant Award
Hydrogel formation by the N-terminal domains of the Eyes Absent Proteins 1 and 2
01/2025 – 12/2025
Type of Grant: Research
Role on Grant: co-PI (1 of 4) (Karen A. Lewis, PI)
Total Funds Awarded: $8,000

2024-2025 Fellows Program
Translational Health Research Center (Texas State University)
09/01/2024 – 07/31/2025
Type of Grant: Clinical and translational research and training proposal development
Role on Grant: THRC 2024-2025 Faculty Fellow
Total Funds Awarded: $23,522 (25% of 9-month contract salary)

Health Research Accelerator Award
Translational Health Research Center (Texas State University)
05/15/2023 – 03/01/2024
Type of Grant: Research
Role on Grant: PI (1 of 3)
Total Funds Awarded: $15,000

A predictive algorithm for identifying proteins that phase separate
Research Enhancement Program (Texas State University)
01/18/2022 – 05/31/2023

Type of Grant: Research
Role on Grant: PI
Total Funds Awarded: $16,000

Sequence and Charge Contributions to the Structures of Intrinsically Disordered Proteins
Research Enhancement Program (Texas State University)
01/14/2014 – 03/31/2015
Type of Grant: Research
Role on Grant: PI
Total Funds Awarded: $8,000

Structural Characterization of the Protein Ensemble by Equilibrium Unfolding Methods
Research Enhancement Program (Texas State University)
01/01/2012 – 03/31/2013
Type of Grant: Research
Role on Grant: PI
Total Funds Awarded: $8,000

Multi-domain Allosteric Control of DNA Binding in p53
Research Enhancement Program (Texas State University)
01/01/2010 – 03/31/2011
Type of Grant: Research
Role on Grant: PI
Total Funds Awarded: $8,000

Structural Thermodynamics of Prion Infectivity
Mitchell Center for Neurodegenerative Diseases (University of Texas Medical Branch)
02/01/2007 – 01/31/2009
Type of Grant: Research
Role on Grant: Co-PI
Total Funds Awarded: $70,000

4. Submitted, but not Funded, Internal Grants and Contracts:

Structural Characterization of the Denatured State to Understand Protein Folding and Misfolding
Research Enhancement Program (Texas State)
Submitted 10/01/2019
Type of Grant: Research
Role on Grant: PI
Amount of Grant: $8,000

Measuring the Energetics of Charge-Charge Interactions in Intrinsically Disordered Proteins
Research Enhancement Program (Texas State)
Submitted 10/25/2017
Type of Grant: Research
Role on Grant: PI
Amount of Grant: $8,000

D. Fellowships, Awards, Honors:

1. Faculty Fellow Medal of Achievement, Translational Health Research Center, Texas State University (December 8, 2025)
2. Research Grant Millionaire Award, College of Science and Engineering, Texas State University (October 1, 2025)
3. THRC 2025 Faculty Fellow, Translational Health Research Center (August 2024 – July 2025)
4. Texas State Transfer Champion, Honorable Mention, Texas State University (2022)
5. Research Enhancement Program Award, Texas State University (2021)
6. Presidential Distinction Award for Excellence in Teaching, Texas State University, College of Science and Engineering (2020)
7. Organizer for the Intrinsically Disordered Protein (IDP) Symposium for the 74$^{th}$ Annual Calorimetry Conference (2019)
8. Secretary-Treasurer of the Intrinsically Disordered Protein (IDP) Subgroup of the Biophysical Society (March 2019 – March 2020)
9. Secretary-Treasurer Elect of the Intrinsically Disordered Protein (IDP) Subgroup of the Biophysical Society (March 2018 – March 2019)
10. Department Nominee for the Presidential Award for Excellence in Scholarly/Creative Activities, Department of Chemistry and Biochemistry, Texas State University (2018)
11. Award R15GM115603, National Institute of General Medical Sciences of the National Institutes of Health (2015)
12. Dean Nominee for the Presidential Award for Excellence in Scholarly/Creative Activities, College of Science and Engineering, Texas State University (2014)
13. Research Enhancement Program Award, Texas State University (2013)
14. Elected co-organizer for the 2014 Gibbs Conference on Biothermodynamics (2013)
15. Research Enhancement Program Award, Texas State University (2011)
16. Norman Hackerman Advanced Research Program Award (2011)
17. Cottrell College Single Investigator Award (2010)
18. Research Enhancement Program Award, Texas State University (2009)
19. Post-Doctoral Fellowship, American Heart Association, #0020398B (2000)
20. Post-Doctoral Fellowship, National Institutes of Health, #1 F32 HL 10443-01 (Declined, 2000)
21. Post-Doctoral Research Award, National Science Foundation, #130362020 (2000)
22. Pre-Doctoral Fellowship, National Institutes of Health (1994-1998)
23. DOE Undergraduate Research Intern, Lawrence Berkeley National Laboratory (1993)
24. Hitchcock Science Foundation Scholarship, University of Nebraska at Omaha (1992)
25. Milo Bail Diamond Memorial Scholarship, University of Nebraska at Omaha (1992)
26. Regents' Scholarship, University of Nebraska at Omaha (1990-1994)
27. Dean's List, University of Nebraska at Omaha (1990-1994)

## IV. SERVICE

A. Institutional

1. University:

- Academic Standards Committee, Representative for the College of Science and Engineering, 2020-2021

2. College:

- Proposal reviewer, Student Undergraduate Research Fund, Honors College, Fall 2011
- Proposal reviewer, Student Undergraduate Research Fund, Honors College, Spring 2012
- Master's Thesis Award Selection Committee, for Physical Sciences, Math, and Engineering, Fall 2018
- Graduate College, Poster Judge, 11th Annual International Research Conference, November 5, 2019

3. Department/School:

- Graduate Student Recruiting Committee, Fall 2010 – Summer 2011.
- Biochemistry Curriculum Committee, Fall 2010 – current.
- Faculty Search Committee, Organic line, Fall 2011.
- Faculty Search Committee, Analytical line, Fall 2011.
- Equipment Committee, Fall 2011 – current.
- Safety Committee, Fall 2012 – current.
- Faculty Search Committee, Biochemistry line (x2), Fall 2013.
- Ad Hoc Committee Department Website, Fall 2013 – Spring 2015.
- Bobcat Days Representative for Department, February 2014.
- Poster Judge, CheMIE REU, Dept of Chemistry and Biochemistry, August 2014.
- Faculty Search Committee, Biochemistry line, Fall 2014.
- Outcomes and Assessment Committee, Fall 2014 – current.
- BS Biochemistry Degree Outcomes and Assessment Coordinator, Fall 2014 – current.
- Evaluation Committee, Fall 2015 – Fall 2018.
- Poster Judge, CheMIE REU, Dept of Chemistry and Biochemistry, August 2015.
- Research Enhancement Program Department Representative, Fall 2015.
- Faculty Evaluation Committee, Fall 2015 – Spring 2018.
- Bobcat Days Representative for Department, November 2015.
- Judge, Honors College Undergraduate Research Conference Poster Competition, Texas State University, April 22, 2016.
- Faculty Search Committee, Physical Chemistry line, Chair, Fall 2016.
- Biochemistry MS Program Committee, Chair, Fall 2016 – current.
- Biochemistry MS Program Coordinator, Fall 2016 – current.
- Department Graduate Program Committee, Fall 2016 – current.
- Initiated and organized *Lunch and Learn* training for our research students that covers maintenance and proper use of laboratory equipment, September 2018 – current.
- Ad Hoc Committee on Presidential Awards, Fall 2018 – current.
- Department Committee to Revise Outcomes and Assessments, Fall 2018.
- Bobcat Days Representative for Department, November 2018.
- Poster judge, 11th Annual International Research Conference, Texas State University, San Marcos, November 5, 2019.
- Applicant reviewer, Texas State U-RISE Program, September 10, 2021.
- Faculty Search Committee, Physical Chemistry line, Chair, Summer 2021 – Winter 2022.

- Bobcat Days Representative for Department, April 9, 2022.
- Research Enhancement Program Department Representative, Fall 2022.
- Applicant reviewer, Texas State U-RISE Program, February 3, 2023.
- Poster Judge, CheMIE REU, Texas State Summer RICE Showcase, August 2, 2023.
- Research Enhancement Program Department Representative, Fall 2023.
- Applicant reviewer, Texas State U-RISE Program, October 4-5, 2023.
- Faculty Search Committee, Molecular Biophysics line, Summer 2024 – Winter 2025.
- Faculty Search Committee, Chair, Biology and Chemistry and Biochemistry joint TT faculty position, Spring 2026 – Summer 2026.

B. Professional:

- Article reviewer for journals
    i. *Proteins: Structure, Function, and Bioinformatics*
    *ii.* *Biochimie*
    iii. *PLoS Computational Biology*
    iv. *PLoS One*
    *v.* *Springer Plus*
    vi. *International Journal of Biological Macromolecules*
    vii. *International Journal of Molecular Sciences*
    viii. *Protein Expression and Purification*
    *ix.* *BBA Proteins and Proteomics*
    x. *Journal of Chemical Theory and Computation*
    *xi.* *Molecular Simulation*
    *xii.* *Journal of the American Chemical Society*
    *xiii.* *JAC Au*
    *xiv.* *Biophysical Journal*
    *xv.* *Human Mutation*
    *xvi.* *Journal of Physical Chemistry*
    *xvii.* *Biomolecules*
    *xviii.* *Molecules*
    *xix.* *Microorganisms*
    *xx.* *Antibiotics*
    xxi. *Nature Communications Chemistry*
    *xxii.* *Advanced Science*
    *xxiii.* *Cellular and Molecular Biology Letters*
- Conference organizer, 28th Annual Gibbs Conference on Biological Thermodynamics, Carbondale, IL, September 20-23, 2014.
- Proposal reviewer, National Science Foundation, Division of Molecular and Cellular Biosciences, Molecular Biophysics, January 2015, February 2016.
- Proposal reviewer, Kentucky Science and Engineering Foundation (KSEF), R&D Excellence awards, April 2015.
- Secretary-Treasurer-Elect of the Intrinsically Disordered Protein (IDP) Subgroup of the Biophysical Society (elected, March 2018).
- Secretary-Treasurer of the Intrinsically Disordered Protein (IDP) Subgroup of the Biophysical Society, March 2019 – March 2020.
- Co-chair of the platform session *Protein Structure and Conformation I* at the 63rd Annual Meeting of the Biophysical Society, Baltimore, MD, March 3, 2019.

- Organizer of the Intrinsically Disordered Protein (IDP) Symposium of the 74th Annual Calorimetry Conference, Santa Fe, NM, July 28 – August 2, 2019.
- Poster Judge for the IDP Subgroup, Student Research Achievement Award, 64th Annual Meeting of the Biophysical Society, San Diego, CA, February 16, 2020.
- Molecular and Integrative Signal Transduction (MIST) Study Section, Cell Biology Integrated Review Group, Center for Scientific Review, National Institutes of Health, February 16, 2021.
- Review Editor in *Molecular Recognition* for the journal *Frontiers in Molecular Biosciences* (2021 – 2025).
- Review Editor in *Molecular Biophysics* for the journal *Frontiers in Molecular Biosciences* (2022 – 2025).
- Poster Committee, 36th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, October 1-4, 2022.
- Poster Committee, 37th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL, October 14-17, 2023.
- NIGMS T32 Study Section, Molecular and Cellular Sciences and Technologies Review Branch, Center for Scientific Review, National Institutes of Health, July 22, 2025.
- NIGMS S10 Study Section, ZRG1 CDB-T(30) review meeting, Center for Scientific Review, National Institutes of Health, January 13-14, 2026.
- Review Editor in *Structural Biology* for the journal *Frontiers in Molecular Biosciences* (2026 – current).

C. Community:

- Elected Public Official, Vice President, Board of Directors, Galveston County Municipal Utility District #14, 2003 – 2009.

D. Service Honors and Awards:

E. Service Grants and Contracts

1. Funded External Service Grants and Contracts:

2. Submitted, but not Funded, External Service Grants and Contracts:

3. Funded Internal Service Grants and Contracts:

4. Submitted, but not Funded, Internal Service Grants and Contracts: