

## CURRICULUM VITAE

### Hui-Ting Lee, Ph.D.

University of Alabama at Birmingham, Department of Chemistry  
901 14<sup>th</sup> Street S., Birmingham, AL  
e-mail: htlee@uab.edu, Phone: (205)934-8137

#### CURRENT POSITION

##### University of Alabama at Birmingham

Assistant Professor of Chemistry

Birmingham, AL

August 2019-present

#### EDUCATION

##### University of Nebraska Medical Center

Omaha, NE

*Doctor of Philosophy in Pharmaceutical Sciences (May 2005- June 2010)*

Title of Dissertation: "Biophysical Chemistry of DNA Conformations and Interactions."

Advisor: Luis A. Marky, Ph. D.

##### National Dong Hwa University

Hualien, Taiwan

*Bachelor of Science in Life Science (Aug 1999-June 2003)*

Topic of undergraduate research: "In vitro refolding of small proteins."

Advisor: Chia-Ching Chang, Ph. D.

#### WORK EXPERIENCE

##### University of Illinois at Urbana-Champaign & Johns Hopkins University

Urbana-Champaign, IL & Baltimore, MD

Postdoctoral Research Fellow; Advisor: Sua Myong, Ph. D

2014-2019

- **Worked on** single-molecule study of DNA damage and cancer regulation relates to telomere and telomerase.

##### Loyola University Maryland

Baltimore, MD

Affiliate Instructor of Chemistry

September 2018- July 2019

- **Teaching** General Chemistry Lab.

##### Johns Hopkins University

Baltimore, MD

Postdoctoral Research Fellow, Advisor: Sarah A. Woodson, Ph. D

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- **Discovered** that the molecular crowded environment can rescue ribozyme mutation.
- **Developed** a system applying SAXS to investigate the 3D conformational change of intron upon RNA splicing.

##### University of Nebraska Medical Center

Omaha, NE

*Graduate Researcher*, Advisor: Luis A. Marky, Ph. D.

2005-2010

- **Quantified** the effect of non-conventional secondary structure and solution environment on DNA targeting.
- Conducted several **collaborations with drug delivery and cancer research groups.**

#### TECHNICAL SPECIALTIES

Single-molecule FRET, Stochastic Optical Reconstruction Microscopy (STORM) Imaging, small angle X-ray

scattering (SAXS), differential scanning calorimetry, isothermal titration calorimetry.

## **TEACHING EXPERIENCES**

### **University of Alabama at Birmingham (Course instructor):**

CH 460/560/660/760 Fundamentals of Biochemistry (Spring 2020, Fall 2020, Spring 2021, Fall 2021, Fall 2022, Fall 2023, Fall 2024)

CH 461/561/661/761 Advanced Biochemistry (Spring 2022, Spring 2024)

CH 769 Special Topics in Biochemistry (Fall 2022)

CH 749 Special Topics in Inorganic Chemistry (Fall 2020)

CH 469 Biophysical Journal Club (Fall 2021, Fall 2023)

### **Johns Hopkins University:**

AS.020.205.21.SU17 Introduction to Biological Molecules (Summer 2017)— Guest lecturer.

AS.020.205.22.SU17 Introduction to Biological Molecules (Summer 2017)— Guest lecturer.

AS.250.625.01.SU18 Single Molecule Measurements (Summer 2018)— Teaching assistant.

### **Loyola University Maryland:**

CH-106-09&10 19/SP General Chemistry Lab II (Spring 2019)—Instructor.

CH-105-09&10&11 18/FA General Chemistry Lab I (Fall 2018)—Instructor.

## **OTHER WORK EXPERIENCES**

**External Editor and Literary Scout**, Hizashi Publishing, New Taipei City, Taiwan 2016-2022

- **Selecting, reviewing and translating** English books for translation and publication in the Taiwanese market.
- **Bridging** communication between the company and American/European publishers for prospective translation of books.

**Research Assistant**, Institute of Neuroscience, National Yang-Ming University, Taiwan. 2004-2004

- **Developed** a baculovirus expression system and FPLC purification protocol for a neurofilament protein.

## **CERTIFICATE**

Johns Hopkins University Teaching Academy Certificate of Completion (October 2017.)

## **FUNDINGS**

- 2024, NSF MCB-2338902 "CAREER: Single-Molecule Study of Nucleic Acid Conformational Dynamics in Telomere", Principal Investigator: Hui-Ting Lee.
- 2021, UAB Faculty Development Grant. Principal Investigator: Hui-Ting Lee.

## **AWARDS**

- 2008-2010, UNMC Program of Excellent Graduate Assistantship.
- 2008 UNMC Pharmaceutical Sciences Peter Gwilt Senior Graduate Student Travel Award.
- 2007 The 38th Midwest Student Biomedical Research Forum. College of Pharmacy Graduate Student Cash Award. Present to Hui-Ting Lee and Luis A. Marky.

- 2007 CRS-Capsugel Graduate/Post-Doc Award of Innovative Aspects of Oral Drug Delivery & Absorption.  
Present to: Xim-Ming Liu and co-authors: Richard A. Reinhardt, Hui-Ting Lee, Luis Marky, and Dong Wang.

### **CONFERENCE TALKS AND SEMINARS**

- “Using single-molecule FRET to reveal nucleic acid conformational dynamics and gene regulation”,  
Departmental seminar at National Yang Ming Chiao Tung University, Department of Biological Science and Technology, Hsinchu, Taiwan, April 16, 2025.
- “Single-molecule FRET study of Telomere looping.” Departmental seminar at Auburn University, Department of Physics, Auburn, AL, March ??, 2025.
- “Telomere looping and transcription at single molecule level.” Departmental seminar at University of Alabama, Department of Chemistry and Biochemistry, Tuscaloosa, AL, February 25, 2025.
- “Structural dynamics during telomer loop formation” Invited panel talk at SERMACS 2023, Durham, NC Oct. 25-28, 2023
- “Single-molecule FRET study on telomere and RNA distribution” short talk at UAB Structural Biology Forum, Birmingham, AL, Jan. 9, 2023
- “Telomere G-quadruplexes: What Does “Stability” Mean?” panel talk at 36th Annual Gibbs Conference on Biothermodynamics, Carbondale, IL , Oct. 1-4, 2022
- “Studying Telomere G-quadruplexs with smFRET” seminar at University of Arkansas, remote, Sept. 23, 2021
- “Tracking external mRNA delivery using STORM microscopy” panel talk at Gordon Research Conference on Single Molecule Approaches to Biology, Castelldefels, Spain, July 3 - 8, 2022
- “Dance to central dogma with physical chemistry at the single molecule level” panel talk at SERMACS 2021, Birmingham AL, Nov. 10-13, 2021
- “Telomere Structure at Single-Molecule Level” seminar at University of Alabama at Huntsville, Huntsville AL, Oct. 29<sup>th</sup>, 2021
- “DNA-RNA hybrid G-quadruplex near the 3’ end of telomere overhang” seminar at Kent State University, remote, Oct. 21, 2021
- “Studying structural dynamics of G-quadruplex in single-stranded telomere tandem repeats with single-molecule FRET”, 2020 ACS Fall 2020 Virtual Meeting & Expo, Wed. Aug 19, 2020

### **PUBLICATIONS (underlines mark undergraduate student co-authors)**

1. “Multiple binding modes of TMPyP4 with human telomere DNA G-quadruplex” Alan Gunter, Arianna Lacen, and **Hui-Ting Lee**; manuscript in preparation.
2. “Telomere and Subtelomere gene regulation: a recent review.” Tanvir Ahmed Chowdhury and **Hui-Ting Lee**; to be submitted to Frontiers in Bioscience-Landmark in March 2025. (Invited review.)
3. “The new generation of RNA quantification.” Tyrese Boddie, Arianna N. Lacen, Tanvir Ahmed Chowdhury and **Hui-Ting Lee**; to be submitted to J. of Physical Chemistry B in 2025. (Invited review.)
4. “Fusobacteria nucleatum determines the expression of amphetamine-induced behavioral responses through an epigenetic phenomenon” Samuel J. Mabry, \*, Xixi Cao, \*, Yanqi Zhu, Caleb Rowe<sup>1</sup>, Shalin Patel, Camilla Gonzales-

- Arancibia<sup>1</sup>, Tiziana Romanazzi, David P. Saleeby, Anna Elam, **Hui-Ting Lee**, Serhat Turkmen<sup>6</sup>, Shelby N. Lauzon<sup>6</sup>, Cesar E. Hernandez<sup>1</sup>, HaoSheng Sun, Hui Wu, †, Angela M. Carter, and Aurelio Gal; *BioRxiv*, 2025.
5. "TRF2 induced Telomere loop formation mechanism and kinetics by single-molecule FRET" Arianna N. Lacen, Tanvir Ahmed Chowdhury, Kristen Buettner, and **Hui-Ting Lee**; to be submitted to *Nature Communications* by February 28, 2025.
  6. "Effects of ribonucleotides on telomeric G4 formation, dynamics, and initiation of ribonucleotide repair by RNaseH2", Luis M. Cortez, Md Ibnul Rifat Rahman, Griffin Welfer, Fillipo Riva, **Hui-Ting Lee**, and Bret D. Freudenthal; to be submitted to *Nucleic Acid Research* by February 9, 2025. (co-corresponding author.)
  7. "Tracing the Chromatin: From 3C to Live-Cell Imaging" Arianna N. Lacen and **Hui-Ting Lee**; *Chemical & Biomedical Imaging* 2024 2 (10), 659-682 DOI: 10.1021/cbmi.4c00033 (Invited review.)
  8. "Slow G-Quadruplex Conformation Rearrangement and Accessibility Change Induced by Potassium in Human Telomeric Single-Stranded DNA" Arianna N. Lacen, Alan Gunter, and **Hui-Ting Lee**; *J. Phys. Chem. B* 2024, 128, 25, 5950–5965
  9. "Interaction of Poly(Ethylene Glycol)-b-Poly-L-Lysine Copolymers with DNA Structures: A Thermodynamic Investigation." **Hui-Ting Lee**, Alexander Lushnikov & Luis A. Marky, In: Sugimoto, N. (eds) *Handbook of Chemical Biology of Nucleic Acids*. 2023, Springer, Singapore. [https://doi.org/10.1007/978-981-16-1313-5\\_35-1](https://doi.org/10.1007/978-981-16-1313-5_35-1)
  10. "DNA-RNA hybrid G-quadruplex tends to form near the 3' end of telomere overhang and reduces telomere accessibility" Bok-Eum Choi and **Hui-Ting Lee**; *Biophysical Journal* **2022**, 121(15), 2962-2980.

#### **EARLY PUBLICATIONS (underlines mark undergraduate student co-authors)**

1. **Hui-Ting Lee**, Samantha Sanford, Tapas Paul, Joshua Choi, Arindam Bose, Patricia Opresko, and Sua Myong. "Position-Dependent Effect of Guanine Base Damage and Mutations on Telomeric G-quadruplex and Telomerase Extension." *Biochemistry* **2020**, **59**, 2627-2639..
2. Sarah E. Johnson, Calliste Reiling-Steffensmeier, **Hui-Ting Lee**, and Luis A. Marky. "Unfolding and Targeting Thermodynamics of a DNA Intramolecular Complex with Joined Triplex-Duplex Domains" *J. Phys. Chem. B*, **2018**, 122 (3), 1102–1111
3. **Hui-Ting Lee**, Arindam Bose, Chun-Ying Lee, Patricia Opresko, and Sua Myong. "Molecular mechanism by which oxidative DNA damage promotes telomerase activity." *Nucleic Acids Res.* **2017**, 45(20): 11752–11765
4. **Hui-Ting Lee**, Carolyn Carr, Irine Khutsishvili, and Luis A. Marky. "Effect of Loop Length and Sequence on the Stability of DNA Pyrimidine Triplexes with TAT Base Triplets." *J. of Phys. Chem. B* **2017**, 121(39), 9175-9184
5. Elise Fouquerel, Justin Lormand, Arindam Bose, **Hui-Ting Lee**, Grace S Kim, Jianfeng Li, Robert W Sobol, Bret D Freudenthal, Sua Myong and Patricia L Opresko "Oxidative guanine base damage regulates telomerase activity", *Nat. Struct. Mol. Biol.* **2016**, 23(12):1092-1100
6. Duncan Kilburn, Raza Behrouzi, **Hui-Ting Lee**, Krishnarjun Sarkar, Robert M. Briber, and Sarah A. Woodson "Entropic stabilization of folded RNA in crowded solutions measured by SAXS." *Nucleic Acids Res.* **2016**, 44(19):9452-9461
7. **Hui-Ting Lee**, Duncan Kilburn, Raza Behrouzi, Robert M. Briber, and Sarah A. Woodson. "Molecular crowding overcomes the destabilizing effects of mutations in a bacterial ribozyme." *Nucleic Acids Res.* **2015**, 43(2):1170-6

8. Iztok Prislan, **Hui-Ting Lee**, Cynthia Lee, and Luis A. Marky "The Size of the Internal Loop in DNA Hairpins Influences Their Targeting with Partially Complementary Strands" *J. of Phys. Chem. B* **2015**, 119 (1), 96–104
9. Irine Khutsishvili, Sarah E. Johnson, Calliste Reiling, Iztok Prislan, **Hui-Ting Lee**, and Luis A. Marky "Interaction of DNA Intramolecular Structures with Their Complementary Strands: A Thermodynamic Approach for the Control of Gene Expression". *Chemical Biology of Nucleic Acids*, **2014**, 367-383
10. Ravi Desai, Duncan Kilburn, **Hui-Ting Lee**, Sarah A. Woodson. "Increased ribozyme activity in crowded solutions" *J. of Biological Chemistry* **2014**, 289(5):2972-7.
11. **Hui-Ting Lee**, Lela Waters, Chris M. Olsen, Irine Khutsishvili, and Luis A. Marky. "Probing the Temperature Unfolding of a Variety of DNA secondary Structures with the Fluorescence Properties of 2-aminopurine". *Acta Chimica Slovenica* **2012**;59(3):443-453
12. **Hui-Ting Lee**, Caroline Carr, Hollie Siebler, Lela Waters, Irine Khutsishvili, Fany Iseka, Brian Domack, Chris M. Olsen, and Luis A. Marky. "A Thermodynamic Approach for the Targeting of Nucleic Acid Structures with Their Complementary Single Strands." *Methods Enzymol.* **2011**, 492:1-26
13. L. A. Marky, **Hui-Ting Lee**, and A. Garcia. "Watson-Crick base pairs" in *Encyclopedia of Life Sciences*. John Wiley & Sons, Inc, Hoboken, NJ. **2010**. DOI: 10.10032/9780470015902.a0003126.pub2.
14. **Hui-Ting Lee**, Irine Khutsishvili, and Luis A. Marky. "DNA Complexes Containing Joined Triplex and Duplex Motifs: Melting Behavior of Intramolecular and Bimolecular Complexes with Similar Sequences." *J. of Phys. Chem. B* **2010**, 114, 541–548
15. Chris M. Olsen, **Hui-Ting Lee**, and Luis A. Marky. "Unfolding Thermodynamics of Intramolecular G-quadruplexes: Base Sequence Contributions of the Loops." *J. of Phys. Chem. B* **2009**, 113, 2587–2595.
16. **Hui-Ting Lee**, Chris M. Olsen, Lela Waters, Holly Sukup, and Luis A. Marky. "Thermodynamic Contributions of the Reactions of DNA Intramolecular Structures with Their Complementary Strands." *Biochimie* **2008**, 90, 1052-1063.
17. **Hui-Ting Lee**, Santiago Arciniegas, and Luis A. Marky. "Unfolding Thermodynamics of DNA Pyrimidine Triplexes with Different Molecularities." 2008, *J. of Phys. Chem. B* **2008**, 112, 4833-4840.
18. Xin-Ming Liu, **Hui-Ting Lee**, Richard A. Reinhardt, Luis Marky, and Dong Wang. "Novel Biomaterial-Binding Cyclodextrins for Controlled Drug Delivery in Oral Cavity." *J. of Controlled Release* **2007**, 122, 54-62.
19. Chia-Ching Chang, Xu-Cheng Yeh, **Hui-Ting Lee**, Po-Yen Lin and Lou-Sing Kan. "Refolding of Lysozyme by Quasistatic and Direct Dilution Reaction Paths: A First-Order-Like State Transition." *Phys. Rev. E* **2004**, 70, 011904
20. Yi-Liang Liu, **Hui-Ting Lee**, Chia-Ching Chang, and Lou-Sing Kan. "Reversible Folding of Cysteine-rich Metallothionein by an Overcritical Reaction Path." *Biochem. Biophys. Res. Commun.* **2003**, 306: 59-63.

#### **POSTER AND STUDENT PRESENTATIONS (underlines mark undergraduate students)**

1. "smFRET study of the T-loop and R-loop interplay" Tanvir Ahmed Chowdhury, Arianna N. Lacen, and Hui-Ting Lee, poster presented at the 39th Gibbs Conference on Biothermodynamics, Carbondale, Illinois, September 28 – October 1, 2024
2. "Single Molecule Study of G-Quadruplex Dynamics of Telomere Sequences from Different Species" Md Ibnul Rifat Rahman, Kierra Dalrymple, Hui-Ting Lee, poster presented at the 39th Gibbs Conference on Biothermodynamics,

Carbondale. Illinois, September 28 – October 1, 2024

3. “smFRET Investigation of Structural Dynamics During T-Loop Formation” Arianna Lacen, Kristen Buettner, Hui-Ting Lee, poster presneted at the 39th Gibbs Conference on Biothermodynamics, Carbondale. Illinois, September 28 – October 1, 2024
4. “smFRET study of the T-loop and R-loop interplay”, Hui-Ting Lee, Tanvir Chowdhury, Arianna Lacen, poster presneted at Gordon Research Conference Single Molecule Approaches to Biology, Newry, Maine, United States, July 14 - 19, 2024
5. “smFRET Investigation of Structural Dynamics During T-Loop Formation”, Arianna N. Lacen and Hui-Ting Lee, short talk presented by Arianna N. Lacen at EMBO Workshop: Telomere Function and Evolution in Health and Disease, Rome, Italy, May 6- 11, 2024.
6. “The Potential Regulatory Role of Telomeric Overhang Structure in Telomere Looping”, Hui-Ting Lee and Arianna N. Lacen, poster presented at EMBO Workshop: Telomere Function and Evolution in Health and Disease, Rome, Italy, May 6- 11, 2024
7. “Subtelomeric Sequence of TERRA Regulates the Level of Gene Expression”, Tanvir Ahmed Chowdhury and Hui-Ting Lee, poster presented at the 37th Gibbs Conference on Biothermodynamics, Carbondale, IL, October 14-17, 2023
8. “Using smFRET to investigate structural dynamics between G Quadruplexes and T-Loops in vitro”, Arianna Lacen and Hui-Ting Lee, poster presented at the 37th Gibbs Conference on Biothermodynamics, Carbondale, IL, October 14-17, 2023
9. “G-Quadruplex Stabilization by TMPyP4 Monitored Through Introduction of Complimentary DNA”, Andrew Symasek, Alan Gunter, and Hui-Ting Lee, poster presented at the 37th Gibbs Conference on Biothermodynamics, Carbondale, IL, October 14-17, 2023
10. “Beyond the End Replication Problem: Using smFRET to investigate the formation and dynamics between G Quadruplexes and T-Loops in Human Telomeres” Arianna Lacen and Hui-Ting Lee, panel talk at SERMACS 2022, San Juan, Puerto Rico, October 19-22, 2022
11. “Effects of salt conditions on the reaction between the porphyrin TMPyP4 and the G-quadruplex”, Alan Gunter and Hui-Ting Lee, poster presented at the 36th Annual Gibbs Conference on Biothermodynamics, October 1-4, 2022.
12. “Probing Equilibrium between GQ and T-Loop Formation using smFRET”, Arianna Lacen and Hui-Ting Lee, poster presented at the 36th Annual Gibbs Conference on Biothermodynamics, October 1-4, 2022.
13. “Conformational stability of G4 DNA have differential effect on ssDNA-RNA G4 hybrid and R-loop formation”, Tanvir Chowdhury and Hui-Ting Lee, poster presented at the 36th Annual Gibbs Conference on Biothermodynamics, October 1-4, 2022.
14. “Effects of salt conditions on the reaction between the porphyrin TMPyP4 and the G-quadruplex”, Alan Gunter and Hui-Ting Lee, Biological Stain Commission Annual Meeting, Atlanta, GA, August 5, 2022
15. “DNA-RNA hybrid G-quadruplex tends to form near the 3’ end of telomere overhang and reduces telomere accessibility. “ Bok-Eum Choi, Hui-Ting Lee; poster presented at the 35th Annual Gibbs Conference on

Biothermodynamics, September 25-28, 2021.

16. "Human telomeric DNA-RNA hybrid G-quadruplex", Bok-Eum Choi, Hui-Ting Lee, oral presentation in 18th Annual UAB Postdoctoral Research Day, September 21, 2021.
17. "Structural and functional characterization of telomeric DNA-RNA (TERRA) hybrid G-quadruplex by single molecule FRET. " Bok-Eum Choi, Hui-Ting Lee; poster presented at 65th Biophysical Society Annual Meeting, February 22-26, 2021.
18. "Probing Conformational Dynamics of GQ Formation in Varying Na<sup>+</sup>/K<sup>+</sup> Ratios" Arianna N. Lacen and Hui-Ting Lee; poster presented at the 35th Annual Gibbs Conference on Biothermodynamics on 9/26/2021
19. "Probing Conformational Dynamics of GQ Formation in Varying Na<sup>+</sup>/K<sup>+</sup> Ratios" Arianna N. Lacen and Hui-Ting Lee; poster presented at SERMACS 2021 on 11/10

### **EARLIER PRESENTATIONS**

1. **Hui-Ting Lee** "The Effect of Oxidative Stress on Telomere length regulation." seminar in the University of Alabama at Birmingham, May 30, 2018, Birmingham, AL.
2. **Hui-Ting Lee**, Tapas Paul, Samantha Sanford, Josh Choe, Sachin Govind, Arindam Bose, Patricia L. Opresko and Sua Myong. "Position of Base Damage Controls Telomere Conformation and Telomerase Extension Activity", 33<sup>rd</sup> Annual Gibbs Conference on Biothermodynamics, October 5<sup>th</sup>-8<sup>th</sup>, 2019. Carbondale, IL
3. **Hui-Ting Lee**, Tapas Paul, Samantha Sanford, Joshua Choe, Sachin Govind, Arindam Bose, Patricia L. Opresko and Sua Myong. "Position of Oxidative Damage Controls Telomere Conformation and Telomerase Extension Activity" Oral presentation, Biophysical Society 62<sup>ed</sup> Annual Meeting, March 2<sup>nd</sup>-6<sup>th</sup>, 2019, Baltimore, MD
4. **Hui-Ting Lee**, Tapas Paul, Samantha Sanford, Joshua Choe, Sachin Govind, Arindam Bose, Patricia L. Opresko and Sua Myong. "Position of Oxidative Damage Controls Telomere Conformation and Telomerase Extension Activity" Poster presentation, Single Molecule Approaches to Biology Gordon Research Conference, July 15<sup>th</sup>-20<sup>th</sup>, 2018, West Dover, VT.
5. **Hui-Ting Lee**, Arindam Bose, Chun-Ying Lee, Patricia Opresko, Sua Myong. "Molecular mechanism by which oxidative DNA damage promotes telomerase activity" Poster presentation, Cold Spring Harbor meeting on Telomeres & Telomerase, May 2<sup>nd</sup>- 6<sup>th</sup>, 2017, Cold Spring Harbor, NY.
6. Arindam Bose, **Hui-Ting Lee**, Sua Myong, Patricia Opresko. "The role of common oxidative DNA lesions in Modulating telomere structure and telomerase activity" Poster presentation, Cold Spring Harbor meeting on Telomeres & Telomerase, May 2<sup>nd</sup>- 6<sup>th</sup>, 2017, Cold Spring Harbor, NY.
7. **Hui-Ting Lee**, Grace Kim, Patricia Opresko, Sua Myong. "Single Molecule Studies of Oxidative Damage on Human Telomere" Poster presentation, Biophysical Society 60<sup>th</sup> Annual Meeting, February 27<sup>th</sup>-March 2<sup>nd</sup> 2016, Los Angeles, CA.
8. **Hui-Ting Lee**, Duncan Kilburn, Sarah Woodson. "Crowded Environments Compensate Destabilizing Mutations in the Azoarcus Ribozyme" Poster presentation, the 18<sup>th</sup> Annual Meeting of the RNA Society, June 11-16<sup>th</sup>, 2013, Davos, Switzerland.
9. Irine Khutshivilli, Iztok Prislan, **Hui-Ting Lee**, Cynthia Lee and Luis A. Marky "Unfolding and Targeting

Thermodynamics of DNA Stem-Loop Motifs" Poster presentation, Biophysical Society 57<sup>th</sup> Annual Meeting, February 2<sup>nd</sup>-6<sup>th</sup>, 2013, Philadelphia, PA.

10. Iztok Prislan, **Hui-Ting Lee**, Cynthia Lee, Luis A Marky. "Unfolding and Targeting Thermodynamics of DNA Hairpins Containing Internal Loops" Poster presentation, Biophysical Society 55<sup>th</sup> Annual Meeting, March 5<sup>th</sup>-9<sup>th</sup> 2011, Baltimore, MD.
11. **Hui-Ting Lee**, Carolyn Carr, Hollie Siebler, Irine Khutsishvili, and Luis A. Marky. "Targeting DNA Hairpin Loops with Their Partially Complementary Strands." Poster presentation, Biophysical Society 54<sup>th</sup> Annual Meeting, February 20<sup>th</sup>-24<sup>th</sup>, 2010, San Francisco, CA.
12. Irine Khutsishvili, Sarah Johnson, **Hui-Ting Lee**, and Luis A. Marky. "Melting Behavior of DNA Complexes with Joined Triple and Duplex Motifs." Poster presentation, Biophysical Society 54<sup>th</sup> Annual Meeting, February 20<sup>th</sup>-24<sup>th</sup>, 2010, San Francisco, CA.
13. Hollie Siebler, Carolyn Carr, Irine Khutsishvili, **Hui-Ting Lee** and Luis A. Marky. "Interaction of DNA Hairpin Loops with Their Partially Complementary Strands." Podium presentation, SERMACS 2009, October 21<sup>st</sup>-24<sup>th</sup>, 2009, San Juan, Puerto Rico.
14. **Hui-Ting Lee**, Irine Khutsishvili and Luis A. Marky. "Loop Contributions to the Unfolding Thermodynamics of DNA Triplexes." Poster presentation, SERMACS 2009, October 21<sup>st</sup>-24<sup>th</sup>, 2009, San Juan, Puerto Rico.
15. Irine Khutsishvili, Sarah Johnson, **Hui-Ting Lee** and Luis A. Marky. "Melting Behavior of DNA Complexes with Joined Triple and Duplex Motifs." Poster presentation, 23<sup>rd</sup> Annual Gibbs Conference on Biothermodynamics, October 3<sup>rd</sup>-6<sup>th</sup>, 2009. Carbondale, IL
16. Carolyn Carr, Hollie Siebler, Irine Khutsishvili, **Hui-Ting Lee** and Luis A. Marky. "Mimicking the Targeting of mRNA: Interaction of DNA Hairpin Loops with Its Partially Complementary Strands." Poster presentation, 23<sup>rd</sup> Annual Gibbs Conference on Biothermodynamics, October 3<sup>rd</sup>-6<sup>th</sup>, 2009. Carbondale, IL
17. **Hui-Ting Lee**, Irine Khutsishvili and Luis A. Marky. "Loop Contributions on the Unfolding Thermodynamics of DNA Triplexes." Poster presentation, 23<sup>rd</sup> Annual Gibbs Conference on Biothermodynamics, October 3<sup>rd</sup>-6<sup>th</sup>, 2009. Carbondale, IL
18. Carolyn Carr, Hollie Siebler, Irine Khutsishvili, **Hui-Ting Lee** and Luis A. Marky. "Targeting Non-Canonical DNA Structure with Partially Complementary Strands." Poster presentation, the Research Colloquium of UNMC Summer Research Undergraduate Students, August 7<sup>th</sup>, 2009. Omaha, NE.
19. Hollie Siebler, Carolyn Carr, **Hui-Ting Lee**, Irine Khutsishvili, and Luis A. Marky. "Mimicking the Targeting of RNA: Reaction of DNA Stem-loop Motifs with Partially Complementary Strands." Poster presentation, the Research Colloquium of UNMC Summer Research Undergraduate Students, August 7<sup>th</sup>, 2009. Omaha, NE.
20. **Hui-Ting Lee**, Lela Waters, Chris Olsen, Irine Khutsishvili and Luis A. Marky. "Unfolding of Non-Canonical DNA Structures: Correlation of Optical and DSC Melting Curves with Fluorescence Melts Using 2-Aminopurine." Poster presentation, PGSRM 2009, June 25<sup>th</sup>-27<sup>th</sup>, 2009. West Lafayette, IN.
21. **Hui-Ting Lee**, Lela Waters, Chris Olsen, Irine Khutsishvili and Luis A. Marky "Helix-Coil Transitions of Unusual DNA Structures by Measuring the Fluorescence Changes of 2-Aminopurine When Incorporated into DNA." Poster presentation, Biophysical Society 53<sup>rd</sup> Annual Meeting, February 28<sup>th</sup> - March 4<sup>th</sup>, 2009, Boston, MA.



22. **Hui-Ting Lee** "Biophysical Chemistry of Nucleic Acid Triple Helices: Unfolding and Targeting Reactions." Invited seminar in National Chiao Tung University, Dec. 23, 2008, Hsin-Chu, Taiwan.
23. Lela Waters, Chris Olsen, Irine Khutsishvili and Luis A. Marky "Probing the Temperature-Unfolding of Unusual DNA Structures with 2-Aminopurine" Poster presentation, 60<sup>th</sup> Southeastern Regional Meeting of the American Chemical Society, November 12<sup>th</sup>-15<sup>th</sup>, 2008, Nashville, TN.
24. **Hui-Ting Lee**, Lela Waters, Chris Olsen, Irine Khutsishvili and Luis A. Marky "Probing the Temperature-Unfolding of Unusual DNA Structures with 2-Aminopurine" Poster presentation, 22<sup>nd</sup> Annual Gibbs Conference on Biothermodynamics, October 4<sup>th</sup>-7<sup>th</sup>, 2008. Carbondale, IL.
25. Brian Domack, Fany Iseka, Irine Khutsishvili, **Hui-Ting Lee** and Luis A. Marky. "Mimicking the Targeting of mRNA: Interaction of a Three-way DNA Junction with Its Complementary Strands" Poster presentation, 22<sup>nd</sup> Annual Gibbs Conference on Biothermodynamics, October 4<sup>th</sup>-7<sup>th</sup>, 2008. Carbondale, IL.
26. Fany Iseka, Brian Domack, Irine Khutsishvili, **Hui-Ting Lee**, and Luis A. Marky. "Mimicking the Targeting of mRNA: Interaction of a Three-way DNA junction with Its Complementary Strands." Podium presentation, INBRE/BRIN Annual Meeting. August 11th-13th, 2008. Grand Island, Omaha.
27. Hea Young Kim, **Hui-Ting Lee**, and Luis A. Marky. "Temperature Unfolding of Intramolecular DNA Triplexes: Energetic Contribution of the Base Triplet Stacks." Poster presentation, the Research Colloquium of UNMC Summer Research Undergraduate Students. July 30<sup>th</sup>, 2008. Omaha, NE.
28. Lela Waters, **Hui-Ting Lee**, Chris M. Olsen, Irine Khutsishvili, and Luis A. Marky. "Probing the Temperature Unfolding of Unusual DNA Structures Using the Fluorescent Property of 2-Aminopurine." Poster presentation, the Research Colloquium of UNMC Summer Research Undergraduate Students. July 30<sup>th</sup>, 2008. Omaha, NE.
29. **Hui-Ting Lee**, Lela Waters, and Luis A. Marky, "Using Intramolecular DNA Structures for Targeting Their Complementary Strands" Poster presentation, the Pharmaceuticals Graduate Student Research Meeting, June 26<sup>th</sup>-28<sup>th</sup>, 2008. Ann Arbor, MI.
30. **Hui-Ting Lee**, Lela Waters, and Luis A. Marky. "Optimizing Oligonucleotide Reagents for the Control of Gene Expression." Poster presentation, the Biophysical Society 52<sup>nd</sup> Annual Meeting, February 2<sup>nd</sup>-6<sup>th</sup>, 2008. Long Beach, CA.
31. Luis A. Marky, Irine Khutsishvili, **Hui-Ting Lee**, and Chris M. Olsen. "Unfolding Thermodynamics of Unusual DNA Structures: Intramolecular G-quadruplexes and "Pyrimidine" Triplexes." Podium presentation, Proteins Under Pressure, January 21<sup>st</sup>-25<sup>th</sup>, 2008. Santa Fe, NM.
32. Luis A. Marky, Lela Waters, Santiago Arciniegas and **Hui-Ting Lee**. "Thermodynamics of DNA Pyrimidine Triplexes: Unfolding and Interactions." Podium presentation, SERMACS 2007, October 24<sup>th</sup>-27<sup>th</sup>, 2007. Greenville, SC.
33. **Hui-Ting Lee**, Lela Waters, and Luis A. Marky. "Unfolding of Bimolecular Triplexes Composed of a Single Homopurine Strand and Double Complementary Homopyrimidine Strand." Poster presentation, the 2<sup>nd</sup> Annual Structural Biology and Molecular Biophysics Workshop. August 6<sup>th</sup>, 2007. Omaha, NE.
34. **Hui-Ting Lee**, Lela Waters, Santiago Arciniegas, and Luis A. Marky. "DNA Pyrimidine Triplexes: Folding Thermodynamics and Interactions." Podium presentation, 21<sup>st</sup> Annual Gibbs Conference on Biothermodynamics, September 29<sup>th</sup>-October 2<sup>nd</sup>, 2007. Carbondale, IL.

35. Lela Waters, **Hui-Ting Lee**, and Luis A. Marky. "The *in vitro* Double Targeting of DNA Single Strands Yields Stable Bimolecular Triplexes." Poster presentation, the Research Colloquium of UNMC Summer Research Undergraduate Students. August 2<sup>nd</sup>, 2007. Omaha, NE.
36. Ian Herran, Irine Khutsishvili, **Hui-Ting Lee**, and Luis A. Marky. "Does the Stability of a DNA Duplex Affect the Formation of Its Related Triplex?" Poster presentation, the Research Colloquium of UNMC Summer Research Undergraduate Students. August 2<sup>nd</sup>, 2007. Omaha, NE.
37. Xim-Ming Liu, Richard A. Reinhardt, **Hui-Ting Lee**; Luis A. Marky; and Dong Wang. "Novel Biomineral-Binding Cyclodextrins for Controlled Drug Delivery in Oral Cavity." Podium presentation, the 34<sup>th</sup> Annual Meeting & Exposition of the Controlled Release Society (CRS). July 7<sup>th</sup>-11<sup>th</sup>, 2007. Long Beach, CA.
38. Chris M. Olsen, Irine Khutsishvili, **Hui-Ting Lee**, Ronald Shikiya, Ana Maria Soto, and Luis A. Marky. "Contributions of Methyl Groups on the Stability of DNA Triplexes and G-quadruplexes." Podium presentation, the 223<sup>rd</sup> ACS Meeting. March 25<sup>th</sup>-27<sup>th</sup>, 2007. Chicago, IL.
39. **Hui-Ting Lee**, Santiago Arciniegas and Luis A. Marky. "Unfolding of DNA Triplexes as a Function of Their Molecularity." Poster presentation, the Nebraska Research and Innovation Conference. March 21<sup>st</sup>, 2007. Omaha, NE.
40. **Hui-Ting Lee** and Luis A. Marky "Targeting DNA Single Strands with an Intramolecular DNA Triplex." Poster presentation, the 38<sup>th</sup> Midwest student biomedical research forum. February 23<sup>rd</sup>-24<sup>th</sup>, 2007. Omaha, NE.
41. **Hui-Ting Lee**, Santiago Arciniegas, Andre Seidel, Irine Khutsishvili and Luis A. Marky. "Comparative Unfolding of DNA Triplexes with Different Molecularities." Poster presentation, the 20<sup>th</sup> Annual Gibbs conference on Biothermodynamics. October 15<sup>th</sup>-18<sup>th</sup>, 2006. Carbondale, IL
42. **Hui-Ting Lee** and Luis A. Marky. "Targeting DNA Single Strands with an Intramolecular DNA Triplex." Poster presentation, the 20<sup>th</sup> Annual Gibbs conference on Biothermodynamics. October 15<sup>th</sup>-18<sup>th</sup>, 2006. Carbondale, IL.
43. **Hui-Ting Lee** and Luis A. Marky. "Targeting DNA Single Strands with an Intramolecular DNA Triplex Containing TAT Base Triplets Exclusively." Podium presentation, PSGP seminar, September 22<sup>nd</sup>, 2006
44. **Hui-Ting Lee** and Luis A. Marky. "Targeting of Intramolecular Triplexes with Shorter Length Strands." 2006 1<sup>st</sup> Annual Structural Biology and Molecular Biophysics Workshop. August 7<sup>th</sup>, 2006. Omaha, NE.
45. **Hui-Ting Lee** and Luis A. Marky "Targeting of Nucleic Acids with Compact Intramolecular Triplexes." EPSCoR 2006 Expo. March 29<sup>th</sup>, 2006. Lincoln, NE.
46. **Hui-Ting Lee** and Luis A. Marky "Targeting DNA structures with oligonucleotides." The 37<sup>th</sup> Midwest student biomedical research forum. February 17<sup>th</sup>-18<sup>th</sup>, 2006. Omaha, NE.
47. **Hui-Ting Lee**, Ronald Shikiya, and Luis A Marky. "In vitro targeting of DNA triplexes with oligonucleotides." 19<sup>th</sup> Annual Gibbs conference on Biothermodynamics. October 15<sup>th</sup>-18<sup>th</sup>, 2005. Carbondale, IL.