CURRICULUM VITAE

JULIAN (JIUNN-LIANG) CHEN

Arizona State University
School of Molecular Sciences
Tempe, AZ 85287-1604

Office phone: (480) 965-3650)
E-mail: JLChen@asu.edu
http://www.public.asu.edu/~jchen61/

EDUCATION

1997 Ph.D., Indiana University, Bloomington, Indiana
Major: Molecular, Cellular and Developmental Biology
Advisor: Norman R. Pace

1991 B.S., National Cheng-Kung University, Taiwan
Major: Biology

EMPLOYMENT

2016 –**present** Professor
School of Molecular Sciences
Arizona State University, Tempe, Arizona

2010 – 2016 Associate Professor
Department of Chemistry and Biochemistry
Arizona State University, Tempe, Arizona

2004 –2010 Assistant Professor
Department of Chemistry & Biochemistry
Arizona State University, Tempe, Arizona

2004 –2010 Assistant Professor (Joint Appointment)
School of Life Sciences, Division of Cellular & Molecular Biosciences
Arizona State University, Tempe, Arizona

2003 –2004 Research Associate
Department of Molecular Biology and Genetics
Johns Hopkins University, School of Medicine

1998 –2003 Postdoctoral Fellow with Carol W. Greider
Department of Molecular Biology and Genetics
Johns Hopkins University School of Medicine

1996 –1997 Graduate research with Norman R. Pace
Department of Plant and Microbial Biology
University of California, Berkeley, CA

1991 –1992 Research Technician
Institute of Molecular Biology, Academia Sinica, Taiwan

FELLOWSHIP & AWARDS

2000-2003 Fellow of The Leukemia & Lymphoma Society
2005 MARC Travel Award
2007-2012 NSF Faculty Early Career Development (CAREER) Award

PROFESSIONAL AFFILIATIONS

Member, The RNA Society (since 1996)
Member, American Society for Biochemistry and Molecular Biology (ASBMB) (since 2004)
Member, The Genetics Society of America (GSA) (since 2011)
Member, American Association for the Advancement of Science
Member, Society of Chinese Bioscientist in America (SCBA) (since 2015)

RESEARCH

CURRENT RESEARCH SUPPORTS

NIH R01-GM094450-06 ($1,334,737 / 4 years) PI 2016-**2020**
Title: Molecular Mechanism of Telomerase Action

NSF–MCB1616078 ($610,000 / 3 years) PI 2016-**2019**
Title: Biogenesis and Evolution of Fungal Telomerase RNA

COMPLETED RESEARCH SUPPORTS

External

NIH R01-GM094450-05S1 ($68,000 / 1 year) PI 2015-2016
Title: Molecular Mechanism of Telomerase Action – Administrative Supplement for Equipment (microscale thermophoresis instrumentation)

NIH R01-GM094450-04S1 ($84,607 / 1 year) PI 2014-2016
Title: Molecular Mechanism of Telomerase Action – Administrative Supplement for smFRET studies of telomerase conformation dynamics

NIH R01-GM094450-01 ($1,397,491 / 5 years) PI 2011-2016
Title: Molecular Mechanism of Telomerase Action

NIH R21-RR025211 ($403,861 / 2 years) PI 2008-2010
Title: Development of a Fish Model for Dyskeratosis Congenita and Cancer Research

NIH R01-GM081490 ($1,021,003 / 5 years) Co-I 2007-2012
Title: Structure and Function of the Proton-Turbine of the ATP-Synthase (PI: Petra Fromme)

NSF CAREER Award–MCB0642857 ($698,155 / 5 years) PI 2007-2013
Title: Molecular Evolution of Telomerase Ribonucleoprotein: A Phylogenetic Study of Telomerase RNA Structure and Function

Internal

ASU CLAS Seed Grant ($50,000) PI 2013-2014

Mayo Clinic-ASU Collaborative PARCORE Seed Grant Award ($35,000) PI 2005-2006

ASU Start-Up Fund to Julian J-L Chen ($467,000 / 3 years) 2004-2007

PUBLICATIONS

Peer-Reviewed Articles: (H-index=28 based on Google Scholar)

42. Huang, J., C.J. Bley, D.P. Rand, J.J.-L. Chen and M. Lei (2017). In vitro preparation and crystallization of vertebrate telomerase subunits. **Methods in Molecular Biology** 1587: 161-169.
41. Podlevsky, J.D., Y. Li and J.J.-L. Chen (2016) The functional requirement of two structural domains within telomerase RNA emerged early in eukaryotes. **Nucleic Acids Research** 44(20): 9891-9901.
40. Podlevsky, J.D. and J.J.-L. Chen (2016) Evolutionary perspectives of telomerase RNA structure and function. **RNA Biology** 13(8): 720-732.
39. Podlevsky, J.D., Y. Li and J.J.-L. Chen (2016) Structure and function of echinoderm telomerase RNA. **RNA** 22(2): 204-215.
38. Huang, J., C.J. Bley, D.P. Rand, J.J.-L. Chen and M. Lei (2015). Sample preparation of telomerase subunits for crystallization. **Bio-protocol** 5(16): e1565.
37. Qi, X., D.R. Rand, J.D. Podlevsky, Y. Li, A. Mosig, P.F. Stadler and J.J.-L. Chen (2015) Prevalent and distinct spliceosomal 3′-end processing mechanisms for fungal telomerase RNA. **Nature Communications** 6, 6105, doi:10.1038/ncomms7105.
36. Stanley, S.E., J.J.-L. Chen, J.D. Podlevsky, J.K. Alder, N.N. Hansel, R. Mathias, X. Qi, N.N. Rafaels, R.A. Wise, E.K. Silverman, K.C. Barnes and M. Armanios (2015) Telomerase mutations in smokers with emphysema. **The Journal of Clinical Investigation** 125(2), 563-570.
35. Brown, A.F., J.D. Podlevsky, X. Qi, Y. Chen, M. Xie and J.J.-L. Chen (2014) A self-regulating template in human telomerase. **Proc. Natl. Acad. Sci. U.S.A.** 111(31): 11311-11316. *[From the Cover]*
34. Huang, J., A.F. Brown, J. Wu, J. Xue, C.J. Bley, D.P. Rand, L. Wu, R. Zhang, J.J.-L. Chen* and M. Lei* (2014)

Structural basis for protein-RNA recognition in telomerase. **Nature Structural and Molecular Biology** 21: 507-512. (*co-corresponding)

33. Li, Y., J.D. Podlevsky, M. Marz, X. Qi, S. Hoffmann, P.F. Stadler and J.J.-L. Chen (2013) Identification of purple sea urchin telomerase RNA using a next-generation sequencing based approach. **RNA** 19: 852-860.
32. Gramatges, M.M., X. Qi, G.S. Sasa, J.J.-L. Chen* and A.A. Bertuch* (2013) A homozygous telomerase T motif variant resulting in markedly reduced repeat addition processivity in siblings with Hoyeraal Hreidarsson syndrome. **Blood** 121(18): 3586-3593. (*contributed equally)
31. Podlevsky, J.D. and J.J.-L. Chen (2012) It all comes together at the ends: Structure, function, and biogenesis of telomerase. **Mutation Research** 730: 3-11. *(Review)*
30. Qi, X., Y. Li, S. Honda, S. Hoffmann, M. Marz. A. Mosig, J.D. Podlevsky, P.F. Stadler, E.U. Selker and J.J.-L. Chen (2012) The common ancestral core of vertebrate and fungal telomerase RNAs. **Nucleic Acids Research** 41: 450-462.
29. Qi, X., M. Xie, A.F. Brown, C.J. Bley, J.D. Podlevsky and J.J.-L. Chen (2012) RNA/DNA hybrid binding affinity determines telomerase template translocation efficiency. **EMBO J.** 31: 150-161.
28. Bley, C.J., X. Qi, D.P. Rand, C.R. Borges, R.W. Nelson and J.J.-L. Chen (2011) RNA-protein binding interface in the telomerase ribonucleoprotein. **Proc. Natl. Acad. Sci. U.S.A.** 108(51): 20333-20338.
27. Parry, E.M., J.K. Alder, X. Qi, J.J.-L. Chen and M.Y. Armanios (2011) Syndrome complex of bone marrow failure and pulmonary fibrosis predicts germline defects in telomerase. **Blood** 117 (21): 5607-5611.
26. Alder, J.K., J.D. Cogan, A.F. Brown, C.J. Anderson, W.E. Lawson, P.M. Lansdorp, J.A. Phillips 3rd, J.E. Loyd, J.J.-L. Chen, and M.Y. Armanios (2011) Ancestral mutation in telomerase causes defects in repeat addition processivity and manifests as familial pulmonary fibrosis. **PLoS Genetics** 7(3): e1001352.
25. Lawrence, R.M., B. Varco-Merth, C.J. Bley, J.J.-L. Chen, and P. Fromme (2011) Recombinant production and purification of the subunit c of chloroplast ATP synthase. **Protein Expression and Purification** 76: 15-24.
24. Xie, M., J.D. Podlevsky, X. Qi, C.J. Bley and J.J.-L. Chen (2010) A novel motif in telomerase reverse transcriptase regulates telomere repeat addition rate and processivity. **Nucleic Acids Research** 38: 1982-1996.
23. Stadler,P.F., J.J.-L. Chen, J. Hackermuller, S. Hoffmann, P. Khaitovich, A. Kretzschmar, A. Mosig, S.J. Prohaska, X. Qi, K. Schutt and K. Ullmann (2009) Evolution of vault RNAs. **Molecular Biology and Evolution** 26: 1975-1991.
22. Alder, J.K., J.J.-L Chen, L. Lancaster, S. Danoff, S.C. Su, M. Prince, I. Vulto, M. Xie, X. Qi, R.M. Tuder, J.A. Phillips, P.M. Lansdorp, J.E. Loyd and M.Y. Armanios (2008) Short telomeres are a risk factor for idiopathic pulmonary fibrosis. **Proc. Natl. Acad. Sci. U.S.A.** 105: 13051-13056.
21. Ye, Y., W. Wen, Y. Xiang, X. Qi, J.T. LaBelle, J.J.-L. Chen and J. Wang (2008) Direct electrochemical monitoring of RNase activity. **Electroanalysis** 20: 919-922.
20. Xie, M., A. Mosig, X. Qi, Y. Li, P.F. Stadler and J.J.-L. Chen (2008) Structure and function of the smallest vertebrate telomerase RNA from teleost fish. **Journal of Biological Chemistry** 283: 2049-2059.
19. Podlevsky, J.D., C.J. Bley, R.V. Omana, X. Qi and J.J.-L. Chen (2008) The telomerase database. **Nucleic Acids Research** 36: D339-D343.
18. Li, Y., J.A. Yates and J.J.-L. Chen (2007) Identification and characterization of sea squirt telomerase reverse transcriptase. **Gene** 400: 16-24.
17. Xiang, Y, M. Xie, R. Bash, J.J.-L. Chen and J. Wang (2007) Ultrasensitive label-free aptamer-based electronic detection. **Angewandte Chemie** Int. Ed. 46(47): 9054-9056.
16. Mosig, A, J.J.-L. Chen and P.F. Stadler (2007) Homology search with fragmented nucleic acid sequence patterns. **Lecture Notes in Computer Science.** 4645: 335-345.
15. Armanios, M., J.J.-L. Chen, W.E. Lawson, J.K. Alder, R.G. Ingersoll, C. Markin, M. Xie, J. Cogan, J.A. Philips III, P.M. Lansdorp, C.W. Greider and J.E. Loyd (2007) Telomerase mutations in families with idiopathic pulmonary fibrosis. **New England Journal of Medicine** 356: 1317-1326.
14. Lin, C., M. Xie, J.J.-L Chen, Y. Liu and H. Yan (2006) Rolling-circle amplification of a DNA nanojunction. **Angewandte Chemie** Int. Ed. 45: 7537-7539.
13. Marquez, S.M., J.-L Chen, D. Evans and N.R. Pace (2006) Structure and function of eukaryotic ribonuclease P RNA. **Molecular Cell** 24: 445-456. (cover)
12. Armanios, M., J.J.-L Chen, Y.-P. Chang, R. A. Brodsky, A. Hawkins, C.A. Griffin, J.R. Eshleman, A. Chakravarti, A. Hamosh and C.W. Greider (2005) Haploinsufficiency of hTERT leads to anticipation in autosomal dominant dyskeratosis congenital. **Proc. Natl. Acad. Sci. U.S.A.** 102: 15960-15964.

11. Chen, J.-L. and C.W. Greider (2005) Functional analysis of the pseudoknot structure in human telomerase RNA. **Proc. Natl. Acad. Sci. U.S.A.** 102: 8080-8085.
10. Chen, J.-L. and C.W. Greider (2004) An emerging consensus for telomerase RNA structure. **Proc. Natl. Acad. Sci. U.S.A.** 101: 14683-14684. *[Commentary]*
9. Chen, J.-L. and C.W. Greider (2004) Telomerase RNA structure and function: implications for dyskeratosis congenita. **Trends in Biochemical Sciences** 29: 183-192. *[Review]*
8. Chen, J.-L. and C.W. Greider (2003) Template boundary definition in mammalian telomerase. **Genes & Development** 17: 2747-2752.
7. Chen, J.-L. and C.W. Greider (2003) Determinants in mammalian telomerase RNA that mediate enzyme processivity and cross-species incompatibility. **EMBO J.** 22: 304-314.
6. Chen, J.-L., K.K. Opperman and C.W. Greider (2002) A critical stem-loop structure in the CR4-CR5 domain of mammalian telomerase RNA. **Nucleic Acids Research** 30: 592-597.
5. Chen, J.-L., M.A. Blasco and C.W. Greider (2000) Secondary structure of vertebrate telomerase RNA. **Cell** 100: 503-514.
4. Thomas, B.C., A.V. Kazantsev, J.-L. Chen and N.R. Pace (2000) Photoaffinity cross-linking and RNA structure analysis. **Methods in Enzymology** 318: 136-147.
3. Chen, J.-L., J.M. Nolan, M.E. Harris and N.R. Pace (1998) Comparative photocross-linking analysis of the tertiary structures of *Escherichia coli* and *Bacillus subtilis* RNase P RNAs. **EMBO J.** 17: 1515-1525.
2. Harris, M.E., A.V. Kazantsev, J.-L. Chen and N.R. Pace (1997) Analysis of the tertiary structure of the ribonuclease P ribozyme-substrate complex by site-specific photoaffinity crosslinking. **RNA** 3: 561-576.
1. Chen, J.-L. and N.R. Pace (1997) Identification of the universally conserved core of ribonuclease P RNA. **RNA** 3: 557-560.

Invited Book Chapters

4. J.J.-L. Chen and, J.D. Podlevsky (2015) Telomeres and telomerase. In **Encyclopedia of Cell Biology**, Vol. 1, R. Bradshaw and P. Stahl, eds. Waltham, MA: Academic Press, p. 418-425.
3. Brown, A.F., J.D. Podlevsky and J.J.-L. Chen (2014) Telomerase: A eukaryotic DNA polymerase specialized in telomeric repeat synthesis. In **Nucleic Acid Polymerases**-1st edition, K. Murakami and M. Trakselis, eds., Springer Press. p.215-236.
2. Tzfati, Y. and J.J.-L. Chen (2012) Telomerase RNA: Structure, function, and molecular mechanisms. In **Telomerases: Chemistry, Biology and Clinical Applications**-1st edition, N.F. Lue and C. Autexier, eds., John Wiley & Sons, Inc. p.23-51.
1. Chen, J.-L. and C.W. Greider (2005) Telomerase biochemistry and biogenesis. In **Telomeres**-2nd edition, T. deLange, E. Blackburn and V. Lundblad, eds., Cold Spring Harbor Laboratory Press. p.49-79.

PRESENTATIONS

Invited Talks

33. "Unraveling the inner workings of the telomerase ribonucleoprotein complex", NIH, NIDDK, Laboratory of Molecular Biology, May 11, 2016.
32. "Mechanism for dGTP-specific stimulation of human telomerase processivity", The EMBO Conference – Telomeres, Telomerase and Disease, Liege, Belgium, April 26th-May 1st, 2016.
31. "Structure and mechanism of telomerase", University of Arizona, College of Medicine, Department of Basic Medical Sciences, Phoenix, January 08, 2015.
30. "Structure and mechanism of telomerase", National Tsing-Hua University, Taiwan, December 18, 2014.
29. "Structure and mechanism of telomerase", National Taiwan University College of Medicine, Taiwan, December 15, 2014.
28. "Structure and mechanism of telomerase", Yonsei University College of Medicine, South Korea, December 08, 2014.
27. "The divergent structure and mechanism of telomerase ribonuceloprotein" The 2014 RiboClub Annual Meeting, Sherbrooke, Quebec, Canada, September 22-24, 2014.
26. "New mechanistic insights into telomerase catalytic cycle" The Banbury conference on Telomeres and Disease, The Banbury Center in CSHL, NY, September 08-11, 2013.

25. "The inner workings of telomerase: A remarkable reverse transcriptase" Department of Biochemistry and Molecular Biophysics, Washington University School of Medicine in St. Louis, MO, April 01, 2013.
24. "The inner workings of telomerase: A fast-evolving ribonucleoprotein enzyme" Department of Biology, Temple University, Philadelphia, PA, January 28, 2013.
23. "Telomerase: A fast-evolving and highly specialized reverse transcriptase" School of Molecular Biosciences, Washington State University, Pullman, WA, April 12, 2012.
22. "The molecular perspective of telomerase template translocation", Sackler Colloquia of the National Academy of Sciences, Beckman center, Irvine, CA, September 29-30, 2010.
21. "Unmasking the inner workings of telomerase – an unconventional reverse transcriptase" Department of Immunology, University of Arizona, Tucson, AZ, November 20th, 2009.
20. "Telomerase Mechanism – An old reverse transcriptase with new tricks" Department of Pathology & Laboratory, Emory University, School of Medicine, Atlanta, GA, October 27th, 2009.
19. "Molecular mechanism of telomerase action" Department of Molecular and Cellular Biology, National Taiwan University, Taipei, Taiwan, March 2009.
18. "Molecular mechanism of telomerase action" Department of Life Sciences, National Dong-Hwa University, Hualien, Taiwan, March 2009.
17. "Molecular mechanism of telomerase action" Department of Radiation Genetics, Kyoto University, Kyoto, Japan, March 2009.
16. "Structural and functional diversity of telomerase RNP enzyme" PICB, Chinese Academy of Sciences, Shanghai, China, Feb. 2009.
15. "Telomerase: An old dog with new tricks" Department of Pharmacology and Toxicology, College of Pharmacy, University of Arizona, Tucson, AZ., Oct. 2008.
14. "Evolutionary diversity of telomerase RNP complex" Interdisciplinary Center for Bioinformatics, University of Leipzig, Leipzig, Germany, July 2008.
13. "Structural diversity of telomerase RNA" The Third Chromosome Biology Symposium at Academia Sinica, Taipei, Taiwan, Dec. 2005.
12. "Telomerase RNA structure and function: One problem, many solutions" Department of Biology, Rensselaer Polytechnic Institute, Troy, NY, April 2004.
11. "Telomerase RNA structure and function: One problem, many solutions" Department of Molecular, Cellular and Developmental Biology, University of California, Santa Barbara, CA, 2004
10. "Telomerase RNA structure and function: One problem, many solutions" School of Life Sciences, Arizona State University, Tempe, AZ, 2004.
9. "Telomerase RNA structure and function: Insight into dyskeratosis congenital" Department of Biochemistry and Molecular Biology, Uniformed Services Univ. of the Health Sciences, Bethesda, MD, 2004.
8. "Human telomerase RNA: From structure to function" Department of Biochemistry, University of Missouri, Columbia, MO, 2004.
7. "Human telomerase RNA: From structure to function" Human Cancer Genetics Program, Ohio State University, Columbus, OH, 2003.
6. "Human telomerase RNA: From structure to function" Department of Biochemistry, University of Utah, Salt Lake City, UT, 2003
5. "Human telomerase RNA: From structure to function" Department of Biological Sciences, SUNY at Albany, Albany, NY, 2003.
4. "Human telomerase RNA: From structure to function" Department of Biochemistry and Molecular Pharmacology, University of Massachusetts Medical School, Worcester, MA, 2002.
3. "Human telomerase RNA: From structure to function" Institute of Biomedical Sciences, National Chung Hsing University, Taichung, Taiwan, 2002.
2. "Human telomerase RNA: From structure to function" Institute of Molecular Biology, Academia Sinica, Taipei, Taiwan, 2002.
1. "Human telomerase RNA: From structure to function" Department of Biomedical Sciences, College of Medicine, Florida State University. Tallahassee, FL, 2002.

Oral Presentations at Meetings

10. J.J.-L. Chen (2014) A self-regulating template in human telomerase. The 19th annual meeting of the RNA Society at

Quebec, Canada, June 3rd- 8th, 2014.

9. J.J.-L. Chen (2014) A self-regulating template in human telomerase. The EMBO Conference – Telomeres, Telomerase and Disease, Brussels, Belgium, April 30th-May 4th, 2014.
8. J.J.-L. Chen (2013) The 3' end biogenesis of telomerase RNA. Gordon Research Conference – Nucleic Acids at University of New England, Biddeford, ME, June 2-7, 2013.
7. Qi, X, Y. Li, S. Honda, M. Marz, S. Hoffmann, P. Stadler, E. Selker, and J.J.-L. Chen (2011) *Neurospora crassa*, a new fungal model for the study of telomerase regulation and telomere biology. The 7th Biennial Telomeres and Telomerase Meeting at Cold Spring Harbor Laboratories, NY, May 3-7, p.22.
6. Xie, M., J. Podlevsky and J.J.-L. Chen (2009) A template free telomerase can act as a conventional reverse transcriptase. The 6th Biennial Telomeres and Telomerase Meeting at Cold Spring Harbor Laboratory, NY, April 28-May 2, p.7.
5. Chen, J.-L. and C.W. Greider (2004) RNA determinants for mammalian telomerase processivity and template boundary definition. The Structural Biology of Chromosomes Symposium at the Stowers Institute, Kansas City, MO.
4. Chen, J.-L. and C.W. Greider (2003) RNA determinants for mammalian telomerase processivity and template boundary definition. The 3rd Biennial Telomeres and Telomerase Meeting at Cold Spring Harbor Lab, p1.
3. Chen, J.-L. and C.W. Greider (2000) Phylogenetic and mutational analysis of vertebrate telomerase RNA secondary structure. The 5th annual meeting of the RNA Society at University of Wisconsin-Madison, p104.
2. Chen, J.-L., M.A. Blasco, M. Hemann and C.W. Greider (1999) Phylogenetic comparative analysis of the secondary structure of telomerase RNA from higher eukaryotes. The 1st Biennial Telomeres and Telomerase Meeting at Cold Spring Harbor Laboratory, p2.
1. Chen, J.-L. and N.R. Pace (1997) The universally conserved core structure of RNase P RNA. The 2nd annual meeting of the RNA Society at Banff, Alberta, Canada, p13.

Poster Presentation at Meetings

45. Joshua D. Podlevsky, Yang Li and Julian J.-L. Chen (2015) Structure-function compensation within the RNA component for telomerase catalysis. The 2015 Biennial Telomeres and Telomerase Meeting at Cold Spring Harbor Laboratory, NY, p.132.
44. Yinnan Chen, Xiaodong Qi and Julian J.-L. Chen (2015) Mechanism for dGTP-dependent repeat addition processivity of human telomerase. The 2015 Biennial Telomeres and Telomerase Meeting at Cold Spring Harbor Laboratory, NY, p.40.
43. Susan E. Stanley, Julian J.-L. Chen, Joshua D. Podlevsky, Jonathan K. Alder, Nadia N. Hansel, Rasika A. Mathias, Xiaodong Qi, Nicholas M. Rafaels, Robert A. Wise, Edwin K. Silverman, Kathleen C. Barnes and Mary Armanios (2015) Telomerase mutations in smokers with severe emphysema. The 2015 Biennial Telomeres and Telomerase Meeting at Cold Spring Harbor Laboratory, NY, p.154.
42. Huang, J., J. Wu, D.P. Rand, C.J. Bley, J.J.-L. Chen and M. Lei (2013) Structure basis for the protein-RNA recognition in telomerase. The 2013 Biennial Telomeres and Telomerase Meeting at Cold Spring Harbor Laboratory, NY, p.79.
41. Podlevsky, J.D., Y. Li, X. Qi and J.J.-L. Chen (2013) The unique central domain structure in purple sea urchin telomerase RNA is functionally equivalent to vertebrate CR4/5. The 2013 Biennial Telomeres and Telomerase Meeting at Cold Spring Harbor Laboratoreis, NY, p.158.
40. Qi, X., Y. Li, D.P. Rand and J.J.-L. Chen (2013) Sm-independent 3'-end processing in fungal telomerase RNA. The 2013 Biennial Telomeres and Telomerase Meeting at Cold Spring Harbor Laboratories, NY, p.160.
39. Qi, X, Y. Li, D.P. Rand and J.J.-L. Chen (2013) Diversity of telomeric sequences and telomerase RNA structures within Ascomycetes. The 27th Fungal Genetics Conference at Asilomar. Pacific grove, CA, March 12-16, p.39.
38. Gramatges, M.M., G.S. Sasa, X. Qi, J.J.-L. Chen, S.E. Plon and A.A. Bertuch (2012) Constitutional telomerase-associated gene variants in pediatric acute myeloid leukemia (AML). The 54th ASH Annual Meeting and Exposition, Atlanta, GA, p.1408.
37. Gramatges, M.M., X. Qi, G.S. Sasa, J.J.-L. Chen and A.A. Bertuch (2012) A homozygous telomerase reverse transcriptase T motif variant resulting in markedly reduced telomerase repeat addition processivity in siblings with Hoyeraal Hreidarsson syndrome. The 54th ASH Annual Meeting and Exposition, Atlanta, GA, p.1272.
36. Gramatges, M.M., G.S. Sasa, X. Qi, J.J.-L. Chen, S.E. Plon and A.A. Bertuch (2012) Characterization of germline telomerase-associated gene variants in pediatric acute myeloid leukemia. The 26th Annual ASPHO Meeting, Miami, FL, p.561.
35. Qi, X, Y. Li, S. Honda, M. Marz, S. Hoffmann, P. Stadler, E. Selker, and J.J.-L. Chen (2011) *Neurospora crassa* is a better fungal model system for the study of telomerase regulation and telomere biology. The 26th Fungal Genetics

Conference at Asilomar. Pacific grove, CA, March 15-20, p.196.

34. Qi, X., Y. Li, S. Honda, M. Marz, S. Hoffmann, P. Stadler, E. Selker and J.J.-L. Chen (2010) Telomerase RNA from the filamentous fungus, *Neurospora crassa*. Sackler Colloquia of the National Academy of Sciences, Beckman center, Irvine, CA, p.33.
33. Li, Y., X. Qi, M. Marz, S. Hoffmann, P. Stadler and J.J.-L. Chen (2010) Identification and characterization of the telomerase RNA from *Strongylocentrotus purpuratus* (purple sea urchin). Sackler Colloquia of the National Academy of Sciences, Beckman center, Irvine, CA, p.29.
32. Bley, C.J. and J.J.-L. Chen (2010) High resolution mapping of telomerase RNA-protein contacts. Sackler Colloquia of the National Academy of Sciences, Beckman center, Irvine, CA, p.22.
31. Qi, X., Y. Li, S. Honda, M. Marz, S. Hoffmann, P. Stadler, E. Selker and J.J.-L. Chen (2010) The largest telomerase RNA from the non-yeast fungus, *Neurospora crassa*. The 15th annual meeting of the RNA Society at University of Washington, Seattle, WA, p.491, June 22-26, 2010.
30. Xie, M, X. Qi, J.D. Podlevsky and J.J.-L. Chen (2009) The molecular mechanism of telomerase processivity. Gordon Research Conference – Nucleic Acids at University of New England, Biddeford, ME, May 31- June 05, 2009.
29. Xie, M, J.D. Podlevsky, X. Qi, C.J. Bley and J.J.-L. Chen (2009) Telomerase regulates repeat addition processivity through binding and releasing RNA/DNA heteroduplex. The 14th annual meeting of the RNA Society at University of Wisconsin, Madison, WI, p.557.
28. Xie, M., J.D. Podlevsky, X. Qi, C.J. Bley and J.J.-L. Chen (2009) A novel motif in TERT regulate template translocation permitting processive telomerase reaction. The 6th Biennial Telomeres and Telomerase Meeting at Cold Spring Harbor Laboratories, NY, p.185.
27. Qi, X., M. Xie and J.J.-L. Chen (2009) Effect of enhanced specific activity of telomerase on telomere lengthening rate. The 6th Biennial Telomeres and Telomerase Meeting at Cold Spring Harbor Laboratories, NY, p.146.
26. Podlevsky, J.D., Y. Taniguchi, M. Xie, S. Takeda and J.J.-L. Chen (2009) Telomerase deficiency does not suppress caudal fin regeneration within medaka (*Oryzias latipes*). The 6th Biennial Telomeres and Telomerase Meeting at Cold Spring Harbor Laboratories, NY, p.143.
25. Li, Y., K.W. Gaston, X. Qi, M.A. Rubio, J.D. Alfonzo and J.J.-L. Chen (2009) Isolation of telomerase RNA from the early-branching protozoan *Trypanosoma Brucei*. The 6th Biennial Telomeres and Telomerase Meeting at Cold Spring Harbor Laboratories, NY, p.85.
24. Bley, C.J. and J.J.-L. Chen (2009) UV cross-linking of telomerase RNP toward mapping physical RNA-protein contacts. The 6th Biennial Telomeres and Telomerase Meeting at Cold Spring Harbor Laboratories, NY, p.38.
23. Alder, J.K. M. Xie, J.D. Cogan, William.E. Lawson, P.M. Lansdorp, J.A. Phillips 3rd, J.E. Loyd, J.J.-L. Chen, M.Y. Armanios (2009) Defects in telomerase processivity lead to telomere shortening in a large kindred with idiopathic pulmonary fibrosis. The 6th Biennial Telomeres and Telomerase Meeting at Cold Spring Harbor Laboratory, NY, p.25.
22. Xie, M, J.D. Podlevsky, X. Qi, C. Bley and J.J.-L. Chen (2009) Telomerase regulates repeat addition processivity through binding and releasing RNA/DNA heteroduplex. The 53rd annual meeting of Arizona-Nevada Academy of Science at University of Arizona, Tucson, AZ, April 2009, p.36
21. Alder, J.K., J.J.-L. Chen, L. Lancaster, S. Danoff, P.M. Lansdorp, J.E. Loyd, M.Y. Armanios (2008) Short Telomeres are a risk factor for Idiopathic Pulmonary Fibrosis. Molecular Genetics of Aging at Cold Spring Harbor, NY, Sept. 2008, p.159.
20. Li, Y, X. Qi and J.J.-L. Chen (2008) An *in vitro* biochemical approach for cloning telomerase RNA. The 13th annual meeting of the RNA Society at Free University–Berlin, Germany, July 2008, p.705
19. Xie, M, X. Qi, J.D. Podlevsky, C. Bley and J.J.-L. Chen (2008) A novel motif in the RT domain of telomerase is essential for telomerase repeat addition processivity. Gordon Research Conference – Nucleic Acids at Salve Regina University, Newport, RI, June 1-6, 2008.
18. Xie, M, A. Mosig, X. Qi, Y. Li, P.F. Stadler and J.J.-L. Chen (2007) The smallest vertebrate telomerase RNA from teleost fish. The 5th Biennial Telomeres and Telomerase Meeting at Cold Spring Harbor Laboratories, NY, p181.
17. Mosig, A, J.J.-L. Chen and P.F. Stadler. (2007) Homology search with fragmented nucleic acid sequence patterns. The 7th International Workshop on Algorithms in Bioinformatics (WABI) at Philadelphia, PA, September 2007.
16. Armanios, M., J.J.-L. Chen, J.A. Philips III, P.M. Lansdorp, C.W. Greider and J.E. Loyd (2007) Telomerase mutations in families with idiopathic pulmonary fibrosis. Keystone Symposia, Plenary Session, March 3rd.
15. Armanios, M., L.Y. Hao, J.J-L. Chen, M.A. Strong and C.W. Greider (2006) Telomere Shortening and Stem Cell Failure in Dyskeratosis Congenita. American Association for Cancer Research Annual Meeting, Washington, DC, p7211.

14. Marquez, S.M., J.J-L Chen, D. Evans and N.R. Pace (2006) Functions of the RNA in the eukaryotic ribonuclease P. The 11th annual meeting of the RNA Society at Seattle, Washington, p378.
13. Armanios, M., J.J-L Chen, Y.-P. Chang, R. A. Brodsky, A. Hawkins, C.A. Griffin, J.R. Eshleman, A. Chakravarti, A. Hamosh and C.W. Greider (2005) Haploinsufficiency of hTERT leads to anticipation in autosomal dominant dyskeratosis congenita. Cold Spring Harbor 70th Symposium: Cancer, Cold Spring Harbor, NY.
12. Armanios, M., J.J-L Chen, Y.-P. Chang, R. A. Brodsky, A. Hawkins, C.A. Griffin, J.R. Eshleman, A. Chakravarti, A. Hamosh and C.W. Greider (2005) Haploinsufficiency of hTERT leads to anticipation in autosomal dominant dyskeratosis congenita. Cold Spring Harbor Symposium on Quantitative Biology.
11. Chen, J.-L. and C.W. Greider (2001) Probing the telomerase RNA binding site of telomerase reverse transcriptase protein. The 2nd International Conference for Proteins that bind RNA at Austin, Texas, p77.
10. Chen, J.-L. and C.W. Greider (2001) Probing the telomerase RNA secondary structure by ribonuclease digestion. The 2nd Biennial Telomeres and Telomerase Meeting at Cold Spring Harbor Laboratory, p40.
9. Marquez, S.M., J.-L. Chen and N.R. Pace (2000) Interaction of the eucaryal Rnase P RNA with tRNA. The 5th annual meeting of the RNA Society at University of Wisconsin-Madison, p91.
8. Martin-Rivera, L., J.-L. Chen and C.W. Greider and M.A. Blasco (1999) Structure-function studies in the mouse telomerase RNA (mTR). The 1st Biennial Telomeres and Telomerase Meeting at Cold Spring Harbor Laboratory, p80.
7. Pace, N.R., B.C. Thomas, J.-L. Chen and A. Kazantsev (1998) Structure and catalytic activity in the ribozyme ribonuclease P. The 3rd annual meeting of the RNA Society at University of Wisconsin-Madison, p528.
6. Frank, D.N., J.-L. Chen, A. Ellington and N.R. Pace (1996) *In vitro* selection of novel variants of ribonuclease P. The 1st annual meeting of the RNA Society at University of Wisconsin-Madison, p223.
5. Harris, M.E., J.-L. Chen, A.V. Kazantsev and N.R. Pace (1996) All-atom modeling of the tertiary structure of the RNase P ribozyme. The 1st annual meeting of the RNA Society at University of Wisconsin-Madison, p268.
4. Chen, J.-L., M.E. Harris and N.R. Pace (1996) Three-dimensional similarity of bacterial RNase P RNA structures. The 1st annual meeting of the RNA Society at University of Wisconsin-Madison, p119.
3. Pace, N.R., J.W. Brown, J.-L. Chen, D.N. Frank, E.S. Haas, M.E. Harris, J.M. Nolan, B.-K. Oh, M.A. Rubio and R. Siegel (1995) Focus on the heart of Ribonuclease P. RNA Processing Meeting at Cold Spring Harbor Laboratory, p218.
2. Nolan, J.M., M.E. Harris, J.-L. Chen, B.-K. Oh, J.W. Brown and N.R. Pace (1995) An update of the RNase P tertiary structure: Phylogenetic perspectives and new crosslinking reagents. RNA Processing Meeting at Cold Spring Harbor Laboratory, p213.
1. Nolan, J.M., M.E. Harris, B.-K. Oh, J.-L. Chen, J.W. Brown and N.R. Pace (1994) A phylogenetic approach to modeling ribonuclease P RNA tertiary structure. RNA Processing Meeting of the RNA Society at University of Wisconsin-Madison, p317.

TEACHING

COURSES TAUGHT

Indiana University, Bloomington, Department of Biology (1993)

BIO 342 Microbial Physiology Lab (Teaching Assistant)

Arizona State University (2004-**present**)

(Graduate level)

BCH 501 Current Topic in Biochemistry (1 credit) (Dept of Chem & Biochem)
2004 Fall Enrollment = 21 (team-taught with Hao Yan)

BCH 598 Nucleic Acids and Nanobiotechnology (3 credit) (Dept of Chem & Biochem)
2004 Fall Enrollment = 25 (team-taught with Hao Yan)
2006 Spring Enrollment = 23 (team-taught with Hao Yan)

BCH 561 Advanced Topics in Biochemistry I (3 credit) (Dept of Chem & Biochem)
2007 Spring Enrollment = 05 (team-taught with Petra Fromme)
2008 Spring Enrollment = 10 (team-taught with Petra Fromme)
2010 Spring Enrollment = 31 (team-taught with Petra Fromme)
2011 Spring Enrollment = 12 (team-taught with Petra Fromme)

BCH 598 Advanced Topics in Biochemistry II (3 credit) (Dept of Chem & Biochem)

2012 Fall Enrollment = 07

(Undergraduate level)

BCH 461 General Biochemistry I (3 credit) (Dept of Chem & Biochem)
- 2006 Spring Enrollment = 41 (team-taught with Tom Moore)
- 2007 Spring Enrollment = 60 (team-taught with Tom Moore)
- 2008 Spring Enrollment = 50 (team-taught with Scott Lefler)
- 2010 Spring Enrollment = 69 (team-taught with Rebekka Wachter)
- 2011 Spring Enrollment = 101 (team-taught with Rebekka Wachter)
- 2011 Fall Enrollment = 116 (team-taught with Wilson Francisco)
- 2013 Spring Enrollment = 107
- 2014 Spring Enrollment = 100
- 2015 Spring Enrollment = 98
- 2015 Fall Enrollment = 102
- 2016 Spring Enrollment = 110
- 2017 Spring Enrollment = 96

BCH 465 Protein & Nucleic Acid Biochemistry (3 credit) (Dept of Chem & Biochem)
- 2011 Fall Enrollment = 30 (team-taught with Rebekka Wachter)
- 2013 Fall Enrollment = 19 (team-taught with James Allen)
- 2014 Spring Enrollment = 22 (team-taught with Scott Lefler)
- 2015 Spring Enrollment = 22

MIC/MBB 445 Techniques in Molecular Biology (2 credit) (School of Life Sciences)
- 2005 Fall Enrollment = 25
- 2006 Fall Enrollment = 23
- 2007 Fall Enrollment = 33 (team-taught with Kathy Sykes)
- 2008 Fall Enrollment = 41 (team-taught with Kathy Sykes)

MIC/MBB 446 Techniques in Molecular Biology Lab (2 credit) (School of Life Sciences)
- 2005 Fall Enrollment = 17
- 2006 Fall Enrollment = 20
- 2007 Fall Enrollment = 17 (team-taught with Kathy Sykes)
- 2008 Fall Enrollment = 18 (team-taught with Kathy Sykes)
- 2009 Fall Enrollment = 13

(Guest Lectures)

BDE 598 Fundamentals of Biological Design (Biodesign Institute, ASU)
Sep 22, 2008 Topic: Manipulation of Nucleic Acids (3-hour lecture)

BDE 701 Molecular Biotechnology (Biodesign Institute, ASU)
Nov 04, 2009 Topic: Structure and Chemistry of Nucleic Acids (2-hour lecture)

SERVICE

Professional Service

Panel Reviewer for Grant Funding Agency:

NIH Study Section-Molecular Genetic A - MGA (2012 - 2016)

Ad hoc Reviewer for Grant Funding Agencies:

US-Israel Binational Science Foundation (2006)
National Science Foundation (NSF) (2006, 2010, 2012)
Austrian Science Fund (FWF) (2010)
National Institutes of Health (NIH) Study Section MGA (2011)
Maryland Technology Development Corporation (TEDCO) (2011)
French National Research Agency (2017)

Editorial Board Member of Scientific Journals:

Journal of Biological Chemistry (2013 - **2018**)
Frontiers in Genetics – Non-coding RNA (2010 - **present**)

Meeting Session Chair:

The 2013 Telomeres and Telomerase Meeting, Session 5, at Cold Spring Harbor Laboratory, NY

Judge for Science Fairs:

Grand Award judge for *the 2005 Intel International Science Engineering Fair*, Phoenix, AZ (05/2005)
Judge for *the 7th Annual ASU MGE@MSA Student Research Conference*, Tempe, AZ (04/2007)
Grand Award judge for *the 2013 Intel International Science Engineering Fair*, Phoenix, AZ (05/2013)

Department Service (DCB: Dept. of Chemistry & Biochemistry / SoLS: School of Life Sciences / SMS: School of Molecular Sciences)

Member:	Committee on Graduate Recruitment (DCB)	(2004 – 2006)
Member:	Committee on Academic Advising (DCB)	(2006 – 2009)
Member:	Committee on Teaching Assistants (DCB)	(2006 – 2009)
Member:	MCB Graduate program admission Committee (SoLS)	(2007 – 2008)
Member:	Committee on Masters Degree Programs (DCB)	(2009 – 2010)
Member:	Committee on Undergraduate Student Research Mentoring and Advising (DCB)	(2009 – 2012)
Member:	Committee on Graduate Recruitment (DCB)	(2010 – 2012)
Member:	Committee on Strategic Planning (DCB)	(2011 – 2012)
Member:	Faculty Search Committee-Chemical Biology (DCB)	(2012 – 2013)
Member:	Personnel & Budget Committee (DCB)	(2012 – 2014)
Member:	Committee on Graduate Programs (DCB)	(2012 – 2014)
Member:	Committee on Faculty and Academic Professional Awards(SMS)	(2014 - **present**)
Member:	Personnel & Budget Committee (SMS)	(2016 – **present**)
Member:	Committee on Faculty Mentoring (SMS)	(2016 - **present**)

University Service

Member:	Department Chair Search Committee	(2005 – 2006)
Member:	Selection Committee on the Maher Alumni Scholarship	(2006, 2013)
Member:	Committee on the Graduate Program in MCB	(2007)
Member:	ASU Lab Safety Subcommittee	(2012 – 2013)
Member:	ASU Radiation Safety Committee	(2012 – **present**)
Member:	ASU Committee on Committees	(2014 – 2017)
Member:	School of Molecular Sciences Director Search Committee	(2015)
Member:	*Ad hoc* Review Committee for ASU Limited Submission-Searle Scholar program	(2016)
Member:	*Ad hoc* Review Committee for ASU Limited Submission-NSF MRI	(2016)
Member:	*Ad hoc* Review Committee for ASU Graduate College Fellowship	(2017)