

George P. Lisi

Department of Molecular Biology, Cell Biology & Biochemistry • Warren Alpert Medical School • Brown University
 george_lisi@brown.edu • <https://vivo.brown.edu/display/glisi> • lisilabnmr.com

EDUCATION:

| | |
|---|------------------------------|
| Dartmouth College Ph.D., Chemistry (with D.E. Wilcox & E.V. Pletneva) | Hanover, NH 2014 |
| Fairfield University B.Sc., Chemistry | Fairfield, CT 2009 |

EMPLOYMENT:

| | |
|--|---|
| Assistant Professor, Warren Alpert Medical School, Brown University (appointed 9/1/2018) <i>Department of Molecular Biology, Cell Biology & Biochemistry</i> | Providence, RI 2018 - Present |
| Postdoctoral Research Fellow, Yale University <i>Department of Chemistry (with J. P. Loria)</i> | New Haven, CT 2014 - 2018 |

PUBLICATIONS:

- See ncbi.nlm.nih.gov/sites/myncbi/1f7yuRKsyj65T/bibliography/48613662/public/?sort=date&direction=descending
- See www.researchgate.net/profile/George_Lisi

* Denotes corresponding author(s) # Denotes equal contribution

- (44) Maschietto, F.; Qiu, T.; Wang, J.*; Shi, Y.; Allen, B.; **Lisi, G.P.**; Lolis, E.; Batista, V.S.* “Valproate Coenzyme-A Conjugate Blocks Opening of Receptor Binding Domain in the Spike Trimer of SARS-CoV-2 by an Allosteric Mechanism” *Manuscript under review*
- (43) Wang, J.*; Arantes, P.R.; Ahsan, F.M.; Sinha, S.; Kyro, G.W.; Maschietto, F.; Allen, B.; Skeens, E.; **Lisi, G.P.***; Batista, V.S.*; Palermo, G.* “Structural and Dynamic Insights into Cas9: How it Recognizes Target DNA Duplexes, Makes Double-stranded Breaks, and Releases Cleaved Duplexes” *Manuscript under review*
- (42) Chen, E.; Widjaja, V.; Allen, B.; Das, P.; Bhandari, V.; Lolis, E.J.; Batista, V.S.; **Lisi, G.P.*** “Mapping N- to C-terminal Allosteric Coupling through Disruption of the CD74 Activation Site in D-dopachrome Tautomerase” *Manuscript under review*
- (41) Parkins, A.#; Chen, E.#; Rangel, V.; Singh, M.; Xue, L.; **Lisi, G.P.***; Pantouris, G.* “Ligand-induced Conformational Changes Enable Intersubunit Communication in D-dopachrome Tautomerase” *Manuscript under review*
- (40) Fredericks, A.M.#; East, K.W.#; Shi, Y.#; Liu, J.; Maschietto, F.; Ayala, A.; Cioffi, W.G.; Cohen, M.; Fairbrother, W.G.; Lefort, C.T.; Nau, G.J.; Levy, M.M.; Wang, J.; Batista, V.S.; **Lisi, G.P.***; Monaghan, S.F.* “Identification and Mechanistic Basis of Non-ACE2 Blocking Neutralizing Antibodies from COVID-19 Patients with Deep RNA Sequencing and Molecular Dynamics Simulations” *bioRxiv* **2022**. DOI: 10.1101/2022.06.29.498206. (**preprint only, not peer reviewed) *Manuscript under review*
- (39) Wang, J.*; Liu, J.; Gisriel, C.J.; Wu, S.; Maschietto, F.; Flesher, D.A.; Lolis, E.; **Lisi, G.P.**; Brudvig, G.W.; Xiong, Y.; Batista, V.S. “How to Correct Relative Voxel Scale Factors for Calculations of Vector-difference Fourier Maps in Cryo-EM” *Journal of Structural Biology*. **2022**. *In press*
- (38) Nierzwicki, L.; East, K.W.; Binz, J.; Hsu, R.V.; Arantes, P.R.; Ahsan, M.; Skeens, E.; Pacesa, M.; Jinek, M.; **Lisi, G.P.***; Palermo, G.* “Principles of Target DNA Cleavage and the Role of Mg²⁺ in the Catalysis of CRISPR-Cas9” *Nature Catalysis*. **2022**. *In press*.
- (37) Wang, J.*; Shi, Y.; Reiss, K.; Maschietto, F.; Lolis, E.; Konigsberg, W.H.; **Lisi, G.P.**; Batista, V.S.* “Structural Insights into Binding of Remdesivir Triphosphate within the Replication-transcription Complex of SARS-CoV-2” *Biochemistry* **2022**. 61. 1966-1973.
- (36) Wang, J.*; Skeens, E.; Arantes, P.; Maschietto, F.; Allen, B.; **Lisi, G.P.***; Palermo, G.*; Batista, V.S.* “Structural Basis for Reduced Dynamics of Three Engineered HNH Endonuclease Lys-to-Ala Mutants of the Cas9 Enzyme” *Biochemistry* **2022**. 61. 785-794.
- (35) **Lisi, G.P.***; Rivalta, I.*; Venditti, V.* “Editorial: Structural and Dynamic Aspects of Protein Function and Allostery” *Frontiers in Molecular Biosciences* **2022**. DOI: 10.3389/fmolb.2022.876499.

- (34) Wang, J.*; Shi, Y.; Reiss, K.; Allen, B.; Maschietto, F.; Lolis, E.; Konigsberg, W.H.; **Lisi, G.P.**; Batista, V.S.* "Insights into the Binding of Single-stranded Viral RNA Template to the Replication-transcription Complex of SARS-CoV-2 for the Priming Reaction from Molecular Dynamics Simulations" *Biochemistry* **2021**. 61. 424-432.
- (33) Skeens, E.; Gadzuk-Shea, M.M.; Shah, D.; Bhandari, V.; Schweppe, D.K.; Berlow, R.B.*; **Lisi, G.P.*** "Redox-dependent Structure and Dynamics of Macrophage Migration Inhibitory Factor Reveal Sites of Latent Allostery" *Structure* **2022**. 30. 840-850.
- Commentary in "Cytokine Aerobics: Oxidation Controls Cytokine Dynamics and Function" *Structure* **2022**
- (32) Skeens, E.#; Pantouris, G.#; Shah, D.; Ombrello, M.J.; Maluf, N.K.; Bhandari, V.; **Lisi, G.P.***; Lolis, E.J.* "A Cysteine Variant at an Allosteric Site in MIF Alters Protein Dynamics and Biological Function in Homo- and Heterotrimeric Assemblies" *Frontiers in Molecular Biosciences* **2022**. 9. DOI: 10.3389/fmolb.2022.783669.
- (31) Nierzwicki, L.#; East, K.W.#; Morzan, U.N.; Arantes, P.R.; Batista, V.S.; **Lisi, G.P.***; Palermo, G.* "Enhanced Specificity Mutations Perturb Allosteric Signaling in CRISPR-Cas9" *eLife* **2021**. 10. e73601. **Journal Cover Art**
- (30) Belato, H.B.; D'Ordine, A.M.; Nierzwicki, L.; Jogl, G.; Palermo, G.*; **Lisi, G.P.*** "Structural and Dynamic Insights into the HNH Nuclease of Divergent Cas9 Species" *Journal of Structural Biology* **2021**. 214. 107814-107824.
- (29) Cui, J.Y.; **Lisi, G.P.*** "Molecular Level Insights into the Structural and Dynamic Factors Driving Cytokine Function" *Frontiers in Molecular Biosciences* **2021**. 8. 10.3389/fmolb.2021.773252. (Thematic collection - Structural and Dynamic Aspects of Protein Function and Allostery)
- (28) Parkins, A.; Skeens, E.; McCallum, C.M.; **Lisi, G.P.***; Pantouris, G.* "The N-terminus of MIF Regulates the Dynamic Profile of Residues Involved in CD74 Activation" *Biophysical Journal* **2021**. 120. 1-8.
- (27) Chen, E.; Reiss, K.; Shah, D.; Ramu, M.; Murphy, E.L.; Murphy, J.W.; Batista, V.S.; Bhandari, V.; Lolis, E.J.; **Lisi, G.P.*** "A Structurally Preserved Allosteric Site in the MIF Superfamily Affects Enzymatic Activity and CD74 Activation in D-dopachrome Tautomerase" *Journal of Biological Chemistry* **2021**. 297. 101061-101073.
- (26) Wang, J.*; Reiss, K.; Shi, Y.; Lolis, E.; **Lisi, G.P.**; Batista, V.S.* "Inhibition Mechanism of Remdesivir on Reproduction of SARS-CoV-2 and Ebola Virus" *Biochemistry* **2021**. 60. 1869-1875.
- (25) East, K.W.; Delaglio, F.; **Lisi, G.P.*** "A Simple Approach for Reconstruction of Non-uniformly Sampled Pseudo-3D NMR Data for Accurate Measurement of Spin Relaxation Parameters" *Journal of Biomolecular NMR* **2021**. 75. 213-219.
- (24) Skeens, E.#; East, K.W.#; **Lisi, G.P.*** "1H, 13C 15N Backbone Resonance Assignment of the Recognition Subdomain 3 (Rec3) from *Streptococcus pyogenes* CRISPR-Cas9" *Biomolecular NMR Assignments* **2020**. 15. 25-28.
- (23) Murphy, J.W.; Rajasekaran, D.; Merkel, J.; Skeens, E.; Keeler, C.; Hodsdon, M.; **Lisi, G.P.**; Lolis, E.* "High-throughput Screening of a Functional Human CXCL12-CXCR4 Signaling Axis in a Genetically Modified *S. cerevisiae*: Discovery of a Novel Up-regulator of CXCR4 Activity" *Frontiers in Molecular Biosciences* **2020**. 7. DOI: 10.3389/fmolb.2020.00164
- (22) Pantouris, G.*; Khurana, L.; Ma, A.; Skeens, E.; Reiss, K.; Batista, V.S.; **Lisi, G.P.***; Lolis, E.J.* "Regulation of MIF Activity by an Allosteric Site at the Central Solvent Channel" *Cell Chemical Biology* **2020**. 27. 740-750.
- (21) Cui, J.Y.; Zhang, F.; Nierzwicki, L.; Palermo, G.; Linhardt, R.J.; **Lisi, G.P.*** "Mapping the Structural and Dynamic Determinants of pH-sensitive Heparin Binding to Granulocyte Macrophage-colony Stimulating Factor" *Biochemistry* **2020**. 59. 3541-3553.
- (20) East, K.W.; Newton, J.C.; Morzan, U.N.; Narkhede, Y.B.; Acharya, A.; Skeens, E.; Jogl, G.; Batista, V.S.; Palermo, G.*; **Lisi, G.P.*** "Allosteric Motions of the CRISPR-Cas9 HNH Nuclease Probed by NMR and Molecular Dynamics" *Journal of the American Chemical Society* **2020**. 142. 1348-1358.
- Highlighted in "Allosteric Control of Enzyme Activity: From Ancient Origins to Recent Genome-editing Technologies" *Biochemistry* **2020**
- Editor's selection for *JACS* **2020** virtual issue dedicated to outstanding early career investigators
- (19) East, K.W.; Skeens, E.; Cui, J.Y.; Belato, H.B.; Mitchell, B.; Hsu, R.; Batista, V.S.; Palermo, G.; **Lisi, G.P.*** "NMR and Computational Methods for Molecular Resolution of Allosteric Pathways in Enzyme Complexes" *Biophysical Reviews*. **2020**. 12. 155-174.

- (18) East, K.W.; Leith, A.; Ragavendran, A.; Delaglio, F.; **Lisi, G.P.*** "NMRdock: Lightweight and Modular NMR Processing" *bioRxiv*. **2019**. DOI: 10.1101/679688. (**preprint only, not peer reviewed)
- (17) Belato, H.B.#; East, K.W.#; **Lisi, G.P.*** "¹H, ¹³C, ¹⁵N Backbone and Side Chain Resonance Assignments of the HNH Nuclease from *Streptococcus pyogenes* CRISPR-Cas9" *Biomolecular NMR Assignments*. **2019**. 13. 367-370.
- (16) Negre, C.F.A.*; Morzan, U.N.*; Hendrickson, H.P.; Pal, R.; **Lisi, G.P.**; Loria, J.P.; Rivalta, I.*; Batista, V.S.* "Eigenvector Centrality for Characterization of Protein Allosteric Pathways" *Proceedings of the National Academy of Sciences, USA*. **2018**. 115. E12201-E12208.
- (15) **Lisi, G.P.**; Currier, A.A.; Loria, J.P.* "Glutamine Hydrolysis by Imidazole Glycerol Phosphate Synthase Displays Temperature-Dependent Allosteric Activation" *Frontiers in Molecular Biosciences*. **2018**. 5. DOI: 10.3389/fmolb.2018.0004
- (14) **Lisi, G.P.***; Loria, J.P.* "Allostery in Enzyme Catalysis" *Current Opinion in Structural Biology*. **2017**. 47. 123-130. (Thematic issue - Catalysis and Regulation)
- (13) **Lisi, G.P.**; East, K.W.; Batista, V.S.; Loria, J.P.* "Altering the Allosteric Pathway in IGPS Suppresses Millisecond Motions and Catalytic Activity" *Proceedings of the National Academy of Sciences, USA*. **2017**. 114. E3414-E3423.
- (12) Rivalta, I.*; **Lisi, G.P.**; Snoeberger, N.-S.; Manley, G.A.; Loria, J.P.*; Batista, V.S.* "Allosteric Communication Disrupted by a Small Molecule Binding to the Imidazole Glycerol Phosphate Synthase Protein-Protein Interface" *Biochemistry*. **2016**. 55. 6484-6494.
- (11) **Lisi, G.P.**; Hughes, R.P.; Wilcox, D.E.* "Coordination Contributions to Protein Stability in Metal-Substituted Carbonic Anhydrase" *Journal of Biological Inorganic Chemistry*. **2016**. 21. 659-667.
- (10) **Lisi, G.P.**; Manley, G.A.; Hendrickson, H.; Rivalta, I.; Batista, V.S.; Loria, J.P.* "Dissecting Dynamic Allosteric Pathways using Chemically Related Small Molecule Activators" *Structure*. **2016**. 24. 1155-1166. (Feature Article)
- (9) **Lisi, G.P.***; Loria, J.P.* "Solution NMR Spectroscopy for the Study of Enzyme Allostery" *Chemical Reviews*. **2016**. 116. 6323-6369. (Thematic issue - Protein Ensembles and Allostery)
- (8) **Lisi, G.P.**; Loria, J.P.* "Using NMR Spectroscopy to Elucidate the Role of Molecular Motions in Enzyme Function" *Progress in NMR Spectroscopy*. **2016**. 92-93. 1-17.
- (7) Amacher, J.F.; Zhong, F.; **Lisi, G.P.**; Zhu, M.Q.; Alden, S.L.; Hoke, K.H.; Madden, D.R.; Pletneva, E.V.* "A Compact Structure of Cytochrome *c* Trapped in a Lysine-Ligated State: Loop Refolding and Functional Implications of a Conformational Switch" *Journal of the American Chemical Society*. **2015**. 137. 8435-8449.
- (6) **Lisi, G.P.**; Png, C.Y.M.; Wilcox, D.E.* "Thermodynamic Contributions to the Stability of the Insulin Hexamer" *Biochemistry*. **2014**. 53. 3576-3584.
- (5) Zhong, F.; **Lisi, G.P.**; Collins, D.P.; Dawson, J.H.; Pletneva, E.V.* "Redox-Dependent Stability, Protonation, and Reactivity of Cysteine-Bound Heme Proteins" *Proceedings of the National Academy of Sciences, USA*. **2014**. 111. E306-E315.
- (4) Harper-Leatherman, A.S.*; Iftikhar, M.; Ndoi, A.; Scappaticci, S.J.; **Lisi, G.P.**; Buzard, K.L.; Garvey, E.M. "Simplified Procedure for Encapsulating Cytochrome *c* in Silica Aerogel Nanoarchitectures While Retaining Gas-Phase Bioactivity" *Langmuir*. **2012**. 28. 14756-14765.
- (3) Miecznikowski, J.R.*; Lo, W.; Lynn, M.A.; Jain, S.; Keilich, L.C.; Kloczko, N.F.; O'Loughlin, B.E.; DiMarzio, A.P.; Foley, K.M.; **Lisi, G.P.**; Kwiecien, D.J.; Butrick, E.E.; Powers, E.; Al-Abbasee, R. "Syntheses, Characterization, Density Functional Theory Calculations and Activity of Tridentate SNS Zinc Pincer Complexes Based on Bis-Imidazole or Bis-Triazole Precursors" *Inorganica Chimica Acta*. **2012**. 387. 25-36.
- (2) Miecznikowski, J.R.*; Lo, W.; Lynn, M.A.; O'Loughlin, B.E.; DiMarzio, A.P.; Martinez, A.M.; Lampe, L.; Foley, K.M.; Keilich, L.C.; **Lisi, G.P.**; Kwiecien, D.J.; Pires, C.M.; Kelly, W.J.; Kloczko, N.F.; Morio, K.N. "Syntheses, Characterization, Density Functional Theory Calculations and Activity of Tridentate SNS Zinc Pincer Complexes" *Inorganica Chimica Acta*. **2011**. 376. 515-524.
- (1) Miecznikowski, J.R.*; Caradonna, J.P.; Foley, K.M.; Kwiecien, D.J.; **Lisi, G.P.**; Martinez, A.M. "Introduction to Homogenous Catalysis with Ruthenium-Catalyzed Oxidation of Alcohols: An Experiment for Undergraduate Advanced Inorganic Chemistry Students" *Journal of Chemical Education*. **2011**. 88. 657-661.

WORKS IN PROGRESS:

*Denotes corresponding author(s) #Denotes equal contribution

- (5) Skeens, E.; **Lisi, G.P.*** "Analysis of Coordinated Chemical Shifts to Map Allosteric Regulatory Networks in Proteins" *In preparation – invited contribution to Methods, thematic issue "New Advances in NMR Spectroscopy"*
- (4) Wang, J.*; Maschietto, F.; Qiu, T.; Reiss, K.; Shi, Y.; Allen, B.; Lolis, E.; **Lisi, G.P.**; Batista, V.S.* "Structurally Divergent Conformations of the Receptor-binding Domain of the SARS-CoV-2 Spike Trimer Revealed by Molecular Dynamics Simulations" *In preparation*
- (3) Wang, J.*; Maschietto, F.; Qiu, T.; Reiss, K.; Shi, Y.; Allen, B.; Lolis, E.; **Lisi, G.P.**; Batista, V.S.* "Omicron Mutations Destabilize the Closed Conformation of Receptor Binding Domains in the Spike Trimer of SARS-CoV-2" *In preparation*
- (2) Nierzwicki, L.#; East, K.W.#; Morzan, U.N.; Arantes, P.R.; Batista, V.S.; **Lisi, G.P.***; Palermo, G.* "A Bottom-up Approach to Divide-and-Conquer Allostery through Solution NMR and All-atom Molecular Dynamics" *In Preparation*
- (1) Wang, J.*; Maschietto, F.; Allen, B.; **Lisi, G.P.**; Palermo, G.; Batista, V.S.* "Molecular Dynamics Simulation-based Decomposition of Alternate Rotamer Conformations in Methionine Conformational Heterogeneity" *In Preparation*

INVITED LECTURES & CONFERENCE LECTURES:

- (18) The Pennsylvania State University, Dept of Chemistry, State College, PA (Nov **2022**)
- (17) 29th International Conference on Magnetic Resonance in Biological Systems, Boston, MA (Aug **2022**)
- (16) Providence VA Medical Center, Vascular Research Laboratory, Providence, RI (Feb **2022**)
- (15) National Institute of Standards and Technology and University of Maryland, Institute for Bioscience and Biotechnology Research, Rockville, MD (Nov **2021**)
- (14) American Chemical Society National Meeting, Physical Chemistry Section, Atlanta, GA (Aug **2021**)
- (13) International Council on Magnetic Resonance in Biological Systems (ICMRBS) Webinar Series (Aug **2021**)
- (12) University of the Pacific, Dept. of Chemistry, Stockton, CA (Mar **2021**)
- (11) Fairfield University, Dept. of Chemistry & Biochemistry, Fairfield, CT (Feb **2021**)
- (10) Providence VA Medical Center, Vascular Research Laboratory, Providence, RI (Dec **2020**)
- (9) Brown University, Dept. of Molecular Biology, Cell Biology, & Biochemistry, Providence, RI (Apr **2020**)
- (8) 61st Experimental NMR Conference (ENC), Baltimore, MD (Mar **2020**)
- (7) University of California, Riverside, Dept. of Bioengineering, Riverside, CA (Feb **2020**)
- (6) Brown University, Dept. of Molecular Pharmacology, Physiology, & Biotechnology, Providence, RI (Feb **2019**)
- (5) Brown University, Dept. of Chemistry, Providence, RI (Nov **2018**)
- (4) 59th Experimental NMR Conference (ENC), Orlando, FL (Mar **2018**)
- (3) University of Connecticut Health Center, Dept. of Molecular Biology & Biophysics, Farmington, CT (May **2017**)
- (2) Fairfield University, Dept. of Chemistry & Biochemistry, Fairfield, CT (Nov **2015**)
- (1) Northeastern Regional Meeting of the American Chemical Society, New Haven, CT (Nov **2013**)

PROFESSIONAL ACTIVITIES & AFFILIATIONS:

- Brown University Structural Biology Core Facilities Executive Committee 2022 - Present
- Deputy Editorial Board, *Journal of Structural Biology* 2022 - Present
- NIH BBM Study Section (*ad hoc*) 2022
- NSF SBIR/STTR Review Panel 2021
- New England Science Symposium Judge, Harvard Medical School 2021
- Guest Editor – *Frontiers in Molecular Biosciences* 2020 – 2021
- Invited collection on "Structural and Dynamic Aspects of Protein Function and Allostery"
- Faculty Trainer, Graduate Program in Molecular Biology, Cell Biology & Biochemistry (MCB) 2018 – Present
- Faculty Trainer, Graduate Program in Therapeutic Sciences (TSGP) 2018 – Present
- Faculty Trainer, Graduate Program in Pathobiology 2018 – Present
- Member, Sigma Xi Scientific Research Society 2009 – Present
- Member, American Chemical Society 2009 – Present
- Manuscript Reviewer (*ad hoc*) - *ACS Medicinal Chemistry Letters*, *ACS Physical Chemistry Au*, *BioEssays*, *Biochemical Society Transactions*, *Bioorganic & Medicinal Chemistry*, *Biophysical Journal*, *Clinical and Translational Medicine*, *Journal of the American Chemical Society*, *Journal of Biomolecular NMR*, *Journal of Immunotherapy of Cancer*, *Journal of Molecular Biology*, *Journal of Structural Biology*, *Methods in Enzymology*, *Nature Chemical Biology*, *Nature Communications*, *Nucleic Acids Research*, *Science Advances*

TEACHING:

BIOL 0280 (Introductory Biochemistry)

2019 - Present

G.P. Lisi 4

Updated 10.1.2022

Instructor Score: 4.47/5.00 Course Score: 3.91/5.00 (2022, 378 students, Course Leader)

Instructor Score: 4.34/5.00 Course Score: 4.11/5.00 (2021, 442 students)

BIOL 1270/2270 (Advanced Biochemistry)

Instructor Score: 4.50/5.00 Course Score: 4.50/5.00 (2021, 25 students)

Instructor Score: 4.95/5.00 Course Score: 4.80/5.00 (2020, 23 students, Course Leader)

Instructor Score: 4.69/5.00 Course Score: 4.56/5.00 (2019, 31 students)

GUEST LECTURES:

BIOL 0100 (Living Biology)

2019 – Present

BIOL 1100 (Cell Physiology & Biophysics)

BIOL 2030 (Foundations for Advanced Study in Life Sciences)

RCR (Responsible Conduct of Research for Graduate Students)

EXTERNAL TEACHING:

CHEM 041 (Biochemistry) – Dartmouth College, Hanover, NH

2020 – 2021

HLST 3900 (The Corona Pandemic, a Class and a Conversation) – Fairfield University, Fairfield, CT

2020

WORKSHOP TEACHING:

“Building a Resilient Community” – Self-advocacy and Assertiveness for Scientists – Providence, RI.

2022

“Entering Research at Yale” Workshop Series – New Haven, CT

2015 – 2018

NMRBox, National Center for Biomolecular NMR Data Processing & Analysis – Farmington CT

2017

HONORS:

- NSF CAREER Award 2021
- *Journal of the American Chemical Society* issue highlighting outstanding early career investigators 2021
- Richard B. Salomon Faculty Research Award 2021
- Arthur Dunham Holmes 1906 Memorial Graduate Fellowship, Dartmouth College 2013
- GAANN Graduate Fellowship, U.S. Dept. of Education 2010 - 2011
- Outstanding Senior Chemistry Major, Fairfield University 2009
- Distinguished Work in the Natural Sciences, College of Arts & Sciences, Fairfield University 2009
- Presidential Academic Scholarship, Fairfield University 2006 – 2009

RESEARCH GRANTS:

Current

R01 GM144451

National Institute of General Medical Sciences, NIH

Unraveling the Allosteric Mechanism of Macrophage Migration Inhibitory Factor with Molecular Resolution

09/01/22 – 08/31/27

PI: Lisi Co-I: Batista Co-I: Schweppe

Amount: \$1,650,000

DBI 2233775

National Science Foundation

Helium Recovery Equipment: Securing Rhode Island and Southern New England NMR Structural Biology

Infrastructure

09/15/22 – 08/31/25

PI: Fawzi Co-PI: Lisi Co-PI: Naik

Amount: \$322,300

R01 HL163005

National Heart, Lung, and Blood Institute, NIH

Combining Targeted Demethylation with Noncoding RNA-mediated mRNA Stabilization as a Strategy for Therapeutic Arteriogenesis in the Aged

05/01/22 – 04/30/27

PI: Morrison Co-I: Lisi Co-I: Sellke Co-I: Fedulov

Amount: \$2,000,000 (total) \$499,935 (Lisi)

MCB 2143760

National Science Foundation

CAREER: Molecular Resolution of Long-range Allostery in CRISPR-Cas9

Updated 10.1.2022

01/01/22 – 12/31/26

PI: Lisi

Amount: \$1,400,000

R01 GM136815

National Institute of General Medical Sciences, NIH

Studies of Allostery between Multi-domain Proteins and Nucleic Acid Complexes

02/01/21 – 11/30/24

PI: Batista Co-I: Lisi Co-I: Palermo

Amount: \$1,292,688 (total) \$430,896 (Lisi)

Completed

Project Lead, COBRE Center for the Computational Biology of Human Disease, Phase II

National Institute of General Medical Sciences, NIH – P20 GM109035

Mapping Long-range Allosteric Pathways in CRISPR-Cas9

09/01/21 – 08/31/26

PI: Rand Project PI: Lisi

Amount: \$239,100

Richard B. Salomon Faculty Research Award

Office of the Vice President for Research, Brown University

Mapping the Molecular Determinants of Long-range Allostery and Specificity in CRISPR-Cas9

03/01/21 – 06/30/22

PI: Lisi

Amount: \$15,000

Project Lead, COBRE Center for the Computational Biology of Human Disease, Phase I

National Institute of General Medical Sciences, NIH – P20 GM109035

Mapping Long-range Allosteric Pathways in CRISPR-Cas9

09/01/19 – 02/28/21

PI: Rand Project PI: Lisi

Amount: \$437,396

Seed Award

Office of the Vice President for Research, Brown University

Redox-mediated Control of Protein Structure as a Potential Therapy for Inflammation

01/01/19 – 06/30/20

PI: Lisi

Amount: \$30,000

Medical Research Grant

Rhode Island Foundation

Redox Control of Immunoregulatory Factors as Targeted Therapies for Inflammation

04/01/19 – 03/31/20

PI: Lisi

Amount: \$25,000

Pilot Award, COBRE Center for the Computational Biology of Human Disease

National Institute of General Medical Sciences, NIH – P20 GM109035

Developing Experimental and Computational Synergy in Studies of Enzyme Allostery

01/01/19 – 12/31/19

PI: Rand Project PI: Lisi

Amount: \$30,000

Pilot Award, Cardiopulmonary Vascular Biology COBRE

National Institute of General Medical Sciences, NIH – P20 GM103652

Redox Control of Macrophage Migration Inhibitory Factor Structure and Function

PI: Harrington, Rounds Project PI: Lisi

Amount: \$50,000 (Award Declined)

Ph.D. THESIS COMMITTEES:

| | |
|--|----------------|
| Vinnie Widjaja – MCB (George Lisi, supervisor) | 2022 - Present |
| Madeline Clark – MCB (George Lisi, supervisor) | 2022 - Present |
| Rachel Carley – Therapeutic Sciences (Alan Morrison, supervisor) | 2022 - Present |
| Raphael Britt – MCB (Gerwald Jogl & John Sedivy, supervisors) - <i>committee chair</i> | 2022 - Present |
| Noah Wake – Therapeutic Sciences (Nicolas Fawzi, supervisor) | 2022 - Present |
| Erin Skeens – MCB (George Lisi, supervisor) | 2021 - Present |
| Alexandra D'Ordine – MCB (Gerwald Jogl & John Sedivy, supervisors) - <i>ad hoc</i> | 2021 - 2022 |
| Anna Bock – Biotechnology (Nicolas Fawzi, supervisor) | 2021 - Present |
| Jose Mercado-Ortiz – MPP (Nicolas Fawzi, supervisor) – <i>committee chair</i> | 2021 - Present |
| Gerardo Reyes-Chavez – MCB (Gary Wessel, supervisor) | 2020 - Present |
| Selahaddin Gumus – Chemistry (Sarah Delaney, supervisor) | 2020 - 2022 |
| Jennifer Cui – MCB (George Lisi, supervisor) | 2020 - Present |
| Helen Belato – MPP (George Lisi, supervisor) | 2019 - Present |
| Emily Chen – MCB (George Lisi, supervisor) | 2019 - 2022 |
| Anastasia Murthy – MCB (Nicolas Fawzi, supervisor) | 2019 - 2020 |
| Veronica Ryan – Neuroscience (Nicolas Fawzi, supervisor) | 2019 - 2020 |

Sc.M. THESIS COMMITTEES:

| | |
|---|------|
| Amber Chevannes – Biotechnology (Nicolas Fawzi, supervisor) | 2019 |
|---|------|

UNDERGRADUATE HONORS THESES SUPERVISED:

| | |
|---------------------|------|
| Aditya Rao | 2022 |
| Jonathan Scalabrini | 2022 |
| Nadia Goldberg | 2021 |

STUDENTS & STAFF:

| Postdoctoral | Years | Subsequent Position |
|---------------------------|----------------|---|
| Kyle East (Ph.D. Yale) | 2019 - 2021 | Scientist, biomolecular NMR, Eli Lilly & Co. |
| Emily Chen (Ph.D. Brown) | 2022 - Present | |
| Research Staff | Years | Subsequent Position |
| Camila Molina Roca | Su. 2022 | Ph.D. Student, Brown University MCB |
| Vinnie Widjaja | Su. 2021 | Ph.D. Student, Brown University MCB |
| Jennifer Cui | 2019 | Ph.D. Student, Brown University MCB |
| Erin Skeens | 2018 - 2020 | Ph.D. Student, Brown University MCB |
| Graduate Students | Years | Subsequent Position |
| Madeline Clark (NIH T32) | 2022 - Present | |
| Vinnie Widjaja (NIH IMSD) | 2022 - Present | |
| Erin Skeens | 2021 - Present | |
| Jennifer Cui | 2020 - Present | |
| Helen Belato (NSF GRFP) | 2019 - Present | |
| Emily Chen (NIH T32) | Ph.D. 2022 | Postdoctoral Associate, Brown University |
| Undergraduates | Years | Subsequent Position |
| Mariana Floody | 2022 - Present | |
| Yannie Lam | 2022 - Present | |
| Jeet Patel | 2022 - Present | |
| Adela Herce | 2021 – 2022 | Research Associate, Brigham & Women's Hospital |
| Aditya Rao | 2021 – 2022 | Research Associate, Texas Heart Institute |
| Jon Scalabrini | 2021 – 2022 | NIH Post-baccalaureate Program, NIDDK/NHLBI |
| J.P. Moïse | 2020 - 2021 | West Virginia University Medical School |
| Nadia Goldberg | 2019 - 2021 | Columbia University College of Physicians & Surgeons |
| Ji Yun (Estelle) Han | 2019 (Summer) | Computational Biology Group, Memorial Sloan Kettering |
| Allison Gallagher | 2019 (Summer) | Virginia Commonwealth University School of Pharmacy |

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| Samuel Croes | 2019 - 2021 | Life sciences consultant, Acsel Health |
| <i>Rotation Students</i> | <i>Years</i> | <i>Program</i> |
| Alexa Knight | F 2022 | Molecular Biology, Cell Biology & Biochemistry |
| Camila Molina Roca | F 2022 | Molecular Biology, Cell Biology & Biochemistry |
| Carmelissa Norbrun | F 2021 | Therapeutic Sciences |
| Rachel Carley | W 2021 | Therapeutic Sciences |
| Mai Huynh | W 2021 | Pathobiology |
| Yanitza Rodriguez | S 2020 | Molecular Biology, Cell Biology & Biochemistry |
| Jennifer Dumouchel | S 2020 | Therapeutic Sciences |
| Gerardo Reyes-Chavez | W 2020 | Molecular Biology, Cell Biology & Biochemistry |
| Maureen Dowell | W 2019 | Molecular Biology, Cell Biology & Biochemistry |
| Layra Cintron-Rivera | F 2018 | Pathobiology |
| Carlos Toro | F 2018 | Therapeutic Sciences |
