

Christopher Solís, PhD, MBA

Full name: Christopher Solís-Ocampo
Assistant Professor
Department of Nutrition & Integrative
Physiology, Florida State University

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EDUCATION

2019 – 2022 Master of Business Administration, Business Analytics Concentration, UIC
2018 – 2019 Certificate in Bioinformatics, University of Illinois at Chicago (UIC)
2011 – 2016 Ph.D. in Biochemistry, South Dakota State University (SDSU)
2007 – 2011 B.S. in Industrial Chemistry, National University of Costa Rica (UNA)

RESEARCH AND PROFESSIONAL EXPERIENCE

2023 – present Assistant Professor, Department of Nutrition and Integrative Physiology, Florida State University, Tallahassee, FL

2017 – present Postdoctoral Research Associate (Advisor: Brenda Russell, PhD), Department of Physiology and Biophysics, UIC College of Medicine, Chicago, IL.
Achievements: publications in peer-reviewed journal articles, an NHLBI K99 grant, several awards, invitations to speak at international scientific conferences

2019 – present Co-Director, Microscopy Core (Part time), Department of Physiology and Biophysics, UIC College of Medicine, Chicago, IL. Achievements: managed the use of the departmental Zeiss LSM880 confocal microscope to the greatest efficiency, worked coordinated with the vendor to schedule annual maintenance, supported the implementation of a virtual booking system

2016 – 2017 ELISA/Electrophoresis Lab Manager, SoDak Labs Inc., Brookings, South Dakota. Achievements: improved lean laboratory practices on assays

2013 – 2015 Graduate Research Assistant (Advisor: John M. Robinson, MD, PhD), Department of Chemistry and Biochemistry, SDSU, Brookings, South Dakota. Dissertation: Functional Effects of Calcium Regulation of Cardiac Thin Filaments at Single Particle Resolution

2010 Undergraduate Research Experience, School of Chemistry, UNA, Heredia, Costa Rica. Research project: Use of natural dyes on dye-sensitized solar cells

2010 Quality Control Intern, Laboratorios Lisan (<http://lisancr.com/>), San José, Costa Rica. Achievements: Prepared protocols for validation of pharmaceutical manufacturing processes and developed a quality risk assessment of the water purification system

RESEARCH FUNDING

Pending Funding

R00 HL151825 07/01/23 – 06/31/25 9.0 Cal Months
\$249,000/year
NIH/NHLBI
Post-translational mechanisms of cardiac adaptation during unloading

Role: (PI: Solis-Ocampo, C)

Goals: to investigate how the chemical phosphorylation and ubiquitination of α -actinin regulates sarcomere assembly and cardiac muscle mass

Past Funding

K99 HL 151825

08/01/20 – 07/31/23

12 Cal Months

\$75,000/year

NIH/NHLBI

Post-translational mechanisms of cardiac adaptation during unloading

Role: (PI: Solis-Ocampo, C)

Goals: to investigate how the muscle proteins, CapZ and α -actinin, are chemically modified by ubiquitination or acetylation to regulate cardiac muscle mass

Networking Mini-Grant

12/01/18 – 01/01/19

\$500

Biophysical Society

Role: (PI: Solis-Ocampo, C)

Costa Rican Biophysics Symposium, 1st Edition

PUBLICATIONS

* Corresponding/ co-corresponding author

1. Muñoz M, **Solís C**, Rosas P. PAK1 KO Compromises myocardial contractility and relaxation in aged and young mice. In preparation
2. Rawat V, DeLear P, Prashanth P, Ozgurses ME, Tebeje A, Burns PA, Conger KO, **Solís C**, Hasnain Y, Novikova A, Endress JE, González-Sánchez P, Dong W, Stephanopoulos G, DeNicola GM, Harris IS, Sept D, Mason FM, Coloff JL. Drug screening in human physiologic medium identifies uric acid as an inhibitor of rigosertib efficacy. *bioRxiv* [Preprint]. 2023: 2023.07.26.550731. doi: 10.1101/2023.07.26.550731
3. **Solís C***, Warren CM, Dittloff K, DiNello E, Solaro RJ, Russell B. Cardiomyocyte external mechanical unloading activates modifications of α -actinin differently from sarcomere-originated unloading. *FEBS J.* 2023. doi: 10.1111/febs.16925. Epub ahead of print.
4. **Solís C**, Thompson WC, Peña JR, McDermott-Roe C, Langa P, Warren CM, Chrzanowska M, Wolska BM, Solaro RJ, Pieter Detombe and Goldspink PH (2022) Mechano-growth factor E-domain modulates cardiac contractile function through 14-3-3 protein interactomes. *Front. Physiol.* 13:1028345. doi: 10.3389/fphys.2022.1028345
5. Chaves G, Rodríguez-Corrales JA, **Solís, C***. Editorial for 'Issue focus on 2nd Costa Rica biophysics symposium — March 11th–12th, 2021'. *Biophys Rev.* 2022 14(2), 545-548. <https://doi.org/10.1007/s12551-022-00947-5>
6. Dittloff KT, Spanghero E, **Solís C**, Banach K, Russell B. Transthyretin deposition alters cardiomyocyte sarcomeric architecture, calcium transients and contractile force. *Physiological Reports.* 2022 10 (5), e15207
7. **Solís C**, Russell B. Striated muscle proteins are regulated both by mechanical deformation and by chemical post-translational modification. *Biophys Rev.* 2021 13(5), 679-695. doi:10.1007/s12551-021-00835-4
8. **Solís C***, Chaves G, & Rodríguez-Corrales, J. Announcing the call for the Issue Focus on the 2nd Costa Rican Biophysics Symposium-virtual meeting. *Biophys Rev.* 2021; 1-2. doi:10.1007/s12551-021-00816-7

9. **Solís C**, Solaro RJ. Novel insights into sarcomere regulatory systems control of cardiac thin filament activation. *J Gen Physiol*. 2021 Jul 5;153(7):e202012777. doi: 10.1085/jgp.202012777. PMID: 33740037
10. Russell B, **Solís C**. Mechanosignaling pathways alter muscle structure and function by post-translational modification of existing sarcomeric proteins to optimize energy usage. *J Muscle Res Cell Motil*. 2021 Feb 17. doi: 10.1007/s10974-021-09596-9. PMID: 33595762.
11. Johnson D, Landim-Vieira M, **Solís C**, Zhu L, Robinson JM, Pinto JR, Chalovich JM. Eliminating the First Inactive State and Stabilizing the Active State of the Cardiac Regulatory System Alters Behavior in Solution and in Ordered Systems. *Biochemistry*. 2020 Sep 22; 59(37):3487-3497. doi: 10.1021/acs.biochem.0c00430. Epub 2020 Sep 9. PMID: 32840354.
12. **Solís C***, Robinson JM. Cardiac troponin and tropomyosin bind to F-actin cooperatively, as revealed by fluorescence microscopy. *FEBS Open Bio*. 2020;10(7):1362-1372. doi:10.1002/2211-5463.12876
13. **Solís C***, Rodríguez-Corrales JA, Alvarado FJ Lessons Learned from Organizing a Biophysics Symposium in a Developing Country. *The Biophysicist*. 2020; 1(2): 2. doi: <https://doi.org/10.35459/tbp.2019.000144>
14. **Solís C**, Russell B. CapZ integrates several signaling pathways in response to mechanical stiffness. *J Gen Physiol*. 2019; 151(5):660-669. doi:10.1085/jgp.201812199. **Highlighted on the cover of the issue**
15. Mkrtschjan MA, **Solís, C**, Wondmagengn, A, Majithia, J, Russell, B. PKC epsilon signaling effect on actin assembly is diminished in cardiomyocytes when challenged to additional work in a stiff microenvironment. *Cytoskeleton*. 2018; 75(8): 363-371
16. Mkrtschjan M.A., Gaikwad, S.B., Kappenman, K.J., **Solís, C.**, Dommaraju, S., Le, L., Desai, TA, Russell, B. Lipid signaling affects primary fibroblast collective migration and anchorage in response to stiffness and microtopography. *J Cell Physiol*. 2018; 233(4): 3672-3683
17. Le, LV, Mohindra, P, Fang, Q, Sievers, RE, Mkrtschjan M, **Solis, C.**, Safraneke, CW, Russell, B, Lee, RJ, Desai, TA. Injectable hyaluronic acid based microrods provide local micromechanical and biochemical cues to attenuate cardiac fibrosis after myocardial infarction. *Biomaterials*. 2018; 169: 11-21.doi: 10.1016/j.biomaterials.2018.03.042. PMID: 29631164; PMCID: PMC5931400.
18. **Solís, C***, Kim, GH, Moutsoglou, ME, Robinson, JM. Ca²⁺ and Myosin Cycle States Work as Allosteric Effectors of Troponin Activation. *Biophysical Journal*. 2018; 115: 1762–1769
19. Rodríguez-Corrales, J.A., González Murillo, A.H., Mora Aparicio, C., **Solis-Ocampo, C**. Control Banding for wastes: a spreadsheet for a simple and fast comparison of impact on the environment of wastes with chemical substances. *Uniciencia*. 2013; 27(1): 140-155. 2013. ISSN 1101 – 0275

Complete List of Published Work, 13 citations, 7 are first or corresponding author:

MyBibliography:

<https://www.ncbi.nlm.nih.gov/myncbi/1JMfxGrcC8u5g/bibliography/public/>

Google Scholar:

<https://scholar.google.com/citations?user=vAoAMrwAAAAJ&hl=en>

CONFERENCE ABSTRACTS

1. **Solís C**, Warren C, Dittloff KT, DiNello E, Solaro RJ, Russell B. Cardiomyocyte External Mechanical Unloading Activates Modifications of α -actinin Differently from Sarcomere-originated Unloading. International Society for Heart Research-North American Section (ISHR-NAS) XLII Annual Meeting. June 26th-30th, 2023, Madison, WI.
2. **Solís C**, Warren C, Dittloff KT, DiNello E, Solaro RJ, Russell B. Cardiomyocyte External Mechanical Unloading Activates Modifications of α -actinin Differently from Sarcomere-originated Unloading.

- International Society for Heart Research-North American Section (ISHR-NAS) XLII Annual Meeting. June 26th-30th, 2023, Madison, WI.
3. **Solís C**, Warren C, Dittloff KT, DiNello E, Solaro RJ, Russell B. Whole-cell Mechanical Loading And Unloading Triggers More Post-translational Modifications In α -actinin Than Myosin Activators And Inhibitors. American Heart Association—Basic Cardiovascular Sciences Meeting. July 25th-28th, 2022, Chicago, IL. Poster
 4. **Solís C**, Warren C, Dittloff KT, DiNello E, Solaro RJ, Russell B. Whole Cell Mechanical Unloading Triggers More Post-Translational Modifications in Z-Disc Proteins than Myosin Inhibitors. Chicago Regional Cardiovascular Symposium 2022. March 11th, 2022, Loyola University Medical Center, Maywood, IL. **Oral presentation** (Rapid-fire talk)
 5. **Solís C**, Warren C, Dittloff KT, DiNello E, Solaro RJ, Russell B. Whole-cell mechanical loading and unloading triggers more post-translational modifications in Z-disc proteins than myosin activators and inhibitors. Biophysical Society Meeting, San Francisco, CA, 2022. *Biophysical Journal*. 121: 434a. **Oral Presentation**
 6. **Solís C**, DiNello E, Warren C, Solaro RJ, Russell, B. Whole-cell mechanical loading and unloading triggers more post-translational modifications in α -actinin than myosin activators and inhibitors. International Society for Heart Research-North American Section (ISHR-NAS) XL Annual Meeting. Sept 12th-17th, 2021, Denver, CO. Poster
 7. Dittloff KT, Spanghero E, **Solís C**, Russell, B. Microenvironmental transthyretin deposition alters cardiomyocyte structure and function. International Society for Heart Research-North American Section (ISHR-NAS) XL Annual Meeting. Sept 12th-17th, 2021, Denver, CO. Poster
 8. **Solís C**, Warren C, DiNello E, Solaro RJ, Russell B. Sarcomere Disassembly After Unloading Is Regulated By Ubiquitination and Acetylation of CapZ and alpha-actinin. Chicago Mass Spec Day 2020. August, 2020. Chicago, IL. **Oral presentation**
 9. **Solís C**, Warren C, Solaro RJ, Russell B. Sarcomere Disassembly After Unloading Is Regulated By Ubiquitination and Acetylation of CapZ and alpha-actinin. American Heart Association Basic Cardiovascular Sciences meeting. July, 2020. Chicago, IL. Poster
 10. Sarcomere disassembly after unloading is regulated by ubiquitination and acetylation of CapZ and alpha-actinin. Cytoskeleton meeting. March 2020. Chicago, IL. Poster
 11. **Solís C**, Russell B. Sarcomere disassembly after unloading is regulated by ubiquitination and acetylation of CapZ and α -actinin. UIC Center for Cardiovascular Research Day. UIC. September, 2019. **Oral presentation**
 12. **Solís C**, Russell B. Sarcomere disassembly after unloading is regulated by ubiquitination and acetylation of CapZ and α -actinin. Talks, 2019 European Muscle Conference, Canterbury, UK. September 2019. *J Muscle Res Cell Motil*. 2019 Jun;40(2):227-274. doi: 10.1007/s10974-019-09534-w. **Oral presentation**
 13. **Solís-Ocampo C**, Rusell, B. (2019). CapZ actúa como integrador de señalamiento intracelular en respuesta a estímulos mecánicos en el miofilamento cardiaco. En Y. Morales-López (Ed.), *Memorias del I Congreso Internacional de Ciencias Exactas y Naturales de la Universidad Nacional, Costa Rica, 2019* (e120, pp.1-6). Heredia: Universidad Nacional. doi <http://dx.doi.org/10.15359/cicen.1.22>. **Oral presentation**
 14. **Solís-Ocampo, C.** (2019). Alosteroismo en las proteínas reguladoras del filamento delgado cardiaco controlan la formación de Puentes Cruzados. En Y. Morales-López (Ed.), *Memorias del I Congreso Internacional de Ciencias Exactas y Naturales de la Universidad Nacional, Costa Rica, 2019* (e255, pp. 1-2). Heredia: Universidad Nacional. doi <http://dx.doi.org/10.15359/cicen.1.93>. **Oral presentation**
 15. **Solís C**, Russell, B. The CapZ β -tentacle interacts with PIP2 to control CapZ dynamics in response to mechanical stiffness. UIC College of Medicine Research Forum. UIC. November, 2018. Poster
 16. **Solís C**, Russell B. The CapZ β -tentacle interacts with PIP2 to control CapZ dynamics in response to mechanical stiffness. UIC Center for Cardiovascular Research Day. UIC. September, 2018. **Oral presentation**

17. **Solis, C.**, Russell, B. Substrate Stiffness Affects Myocyte Organization and Hypertrophy via PIP2 Signaling Pathways. Myofilament Meeting. Madison, WI. May 2018. Poster
18. **Solis, C.**, Mkrtshjan, M., Russell, B. Substrate Stiffness and Work Affects Myocyte Hypertrophy and CapZ Dynamics via PKC-Epsilon and PIP2 Signaling Pathways Biophysical Society Meeting, San Francisco, CA, 2018. Biophysical Journal. 114:38a. **Oral Presentation**
19. **Solis, C.**, Russell, B. Substrate Stiffness Affects Myocyte Organization and Hypertrophy via PIP2 Signaling Pathways. UIC Center for Cardiovascular Research Day. UIC. September, 2017. Chicago, IL. Poster
20. **Solis, C.**, Kim, G.H., Moutsoglou, M., and Robinson, J. "Study of Ca²⁺ and Myosin Dependent Activation of Regulated Actin Filaments by FLIM-FRET. Myofilament Meeting, May 2016. Madison, WI. Poster
21. **Solis-Ocampo, C.**, Moutsoglou, M. E., Kim, G.H., and Robinson, J. M. 2015. Studying Troponin within Regulated Actin at Single Molecule Resolution. Biophysical journal 108:422a. Poster
22. Moutsoglou, M. E., **Solis-Ocampo, C.**, Kumar, M., de Tombe, P., Robinson, J.M. Treating heart failure with preserved ejection fraction through troponin I phospho-mimicry. American Heart Association's Scientific Sessions, November 2015. Orlando, FL. Poster
23. Moutsoglou, M. E., Kim, G.H., **Solis-Ocampo, C.**, and Robinson, J. M. 2015. A FRET-Based Assay for Monitoring Actions of Calcium Sensitizers on the Thin Filament. Biophysical journal 108:130a. Poster
24. **Solis-Ocampo, C.**, Kim, G.H., Moutsoglou, M., and Robinson, J. Direct visualization of troponin-tropomyosin binding to F-actin. Myofilament Meeting, June 2014. Madison, WI. Poster
25. **Solis-Ocampo, C.**, Moutsoglou, M., Kim, G.H., and Robinson, J. M. 2014. Direct Visualization of Cooperative Binding of Troponin-Tropomyosin to F-Actin. Biophysical journal 106:350a. Poster
26. Moutsoglou, M. E., Kim, G.H., **Solis-Ocampo, C.**, Wu, S. C., and Robinson, J. M. 2014. Ca²⁺-Induced Structural Changes in Tn: A Multi-Site FRET Study Combining TCSPC with Single Filament Imaging. Biophysical journal 106:349a. Poster
27. **Solis-Ocampo, C.**, Kim, G.H., Moutsoglou, M., and Robinson, J. 2013. Surface Immobilization of Cardiac Thin Filaments. Biophysical journal 104:449a. Poster.
28. Baldwin, T. A., Kim, G.H., **Solis-Ocampo, C.**, Moutsoglou, M. E., and Robinson, J. M. 2013. Experimental Determination of the Forster Critical Distance. Biophysical journal 104:348a. Poster
29. **Solis-Ocampo, C.**, Kim, G.H., Moutsoglou, M., and Robinson, J. Surface immobilization of troponin-tropomyosin for single-pair FRET analysis. Myofilament Meeting, June 2012. Madison, WI. Poster

HONORS

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|------|---|
| 2023 | Elected Fellow, Intersections Science Fellows Symposium (ISFS), October 4 th -6 th , 2023. Selected but had to decline because accepted a faculty position before the symposium. |
| 2023 | Travel Award recipient, young investigator category. International Society for Heart Research-North American Section (ISHR-NAS) XLII Annual Meeting. June 26 th -30 th , 2023, Madison, WI. |
| 2022 | Postdoc Award Winner. Inaugural Vanderbilt Basic Sciences' Hispanic and Latin Heritage Month. Vanderbilt School of Medicine Basic Sciences, Nashville, TN. October 12, 2022 |
| 2022 | Award for Excellent Poster. Chicago Regional Cardiovascular Symposium 2022. March 11 th , 2022, Loyola University Medical Center, Maywood, IL |
| 2022 | Travel Award Recipient, 66 th Biophysical Society Annual Meeting, Feb 19 th -Feb 23 th , 2022, San Francisco, California. |

- 2021 Trainee Award Winner, Postdoctoral Fellow Awardee category, Center for Cardiovascular Research, Research Day. UIC, Chicago, Illinois. September 24th, 2021
- 2021 Finalist, Excelsior Award. Society of General Physiologists. The finalist award includes a one-year complimentary membership to the Society of General Physiologists. July 29th, 2021
- 2019 Distinction Award, Young Investigator Oral Presentations. 48th European Muscle Conference, Canterbury, UK. September 11th, 2019
- 2019 Postdoctoral Travel Award Winner, 48th European Muscle Conference, Canterbury, UK, Office of the Vice Chancellor for Research, UIC. September 2019
- 2019 Cover Image, Journal of General Physiology, May 2019, Volume 151, No. 5. "CapZ integrates several signaling pathways in response to mechanical stiffness", The Rockefeller University Press
- 2018 Awardee, Networking mini-Grant: Costa Rican Biophysics Symposium, 1st Edition. Amount: \$500. Biophysical Society, December 17th, 2018
- 2018 Poster Presentation Award Winner, Postdoctoral Fellows and Residents Category, "The CapZ β -tentacle interacts with PIP2 to control CapZ dynamics in response to mechanical stiffness", College of Medicine Research Forum, UIC, Chicago, IL. December 3th, 2018
- 2018 Young Investigator Award Recipient, Center for Cardiovascular Research, Research Day. UIC, Chicago, Illinois. September 12th, 2018
- 2017 Postdoctoral Trainee Poster Presentation Award, Center for Cardiovascular Research, Research Day. UIC, Chicago, Illinois. September 20th, 2017
- 2016 Graduate Teaching Certificate of Excellence, Center for the Enhancement of Teaching & Learning (CETL). SDSU, Brookings, SD. April 10th, 2016

INVITED TALKS

- 2022 Invited speaker, "Whole-cell mechanical loading and unloading triggers more post-translational modifications in Z-disc proteins than myosin activators and inhibitors". Platform presentation at 66th Biophysical Society Annual Meeting. San Francisco, CA. February 23rd, 2022. Biophysical Journal, 121: 434a.
- 2022 Invited speaker, Linking mechanobiology of cardiac muscle cells to myofibrillar assembly. Department of Cardiovascular Sciences, Temple University, Philadelphia, PA. Tuesday January 18th, 2022
- 2022 Invited speaker, Linking mechanobiology of cardiac muscle cells to myofibrillar assembly. Cardiac Muscle Society, Early Career Committee Seminar Series 2021-2022. Friday January 7th, 2022
- 2021 Invited speaker, *De la química, a la bioquímica, a la fisiología: definiendo los principios moleculares de las enfermedades cardíacas a distintas escalas biológicas* (From chemistry, to biochemistry to physiology: defining the molecular principles of cardiac diseases at different molecular scales). School of Chemistry Seminar, UNA. May 11th, 2021. Recording available at https://www.facebook.com/591881737495027/videos/1173645753084019/?__so__=channel_tab&__rv__=all_videos_card
- 2020 Invited speaker, *¿Por qué hacer un estudio de post-grado en el extranjero y cuales son las oportunidades profesionales?* (Why do a graduate degree abroad and what are the professional prospects?). Inter-University Congress on Green Chemistry and Clean Technologies. November 27, 2020

- 2019 Invited speaker, “Efectos funcionales de la regulación de calcio en los filamentos delgados cardiacos” Virtual Seminar at the School of Pharmacy, University of the Medical Sciences (UICMED), San José, Costa Rica. November 5th, 2019
- 2019 Invited speaker, “Sarcomere disassembly after unloading is regulated by ubiquitination and acetylation of CapZ and α -actinin”. UIC Center for Cardiovascular Research Day. UIC. September 20th, 2019
- 2018 Invited speaker, “The CapZ β -tentacle interacts with PIP2 to control CapZ dynamics in response to mechanical stiffness”. Center for Cardiovascular Research, Research Day. UIC, Chicago, IL. September 12th, 2018
- 2018 Invited speaker, “Substrate Stiffness and Work Affects Myocyte Hypertrophy and CapZ Dynamics Via PKC-Epsilon and PIP2 Signaling Pathways”. Platform presentation at 62nd Biophysical Society Annual Meeting. San Francisco, CA. February 18th, 2018. Biophysical Journal. 114:38a

LEADERSHIP: ORGANIZATION OF MEETINGS/ SYMPOSIA

- 2023 Volunteer, US Human Proteome Organization (HUPO) Meeting, March 4th-8th, Chicago, IL
- 2022 Moderator, Early Career Committee Seminar Series: Maggie Lam “The Dynamic Life of Protein and Proteoforms”, June 3rd, 2022.
- 2022 Moderator, session “Trainee Oral Abstracts” at the Chicagoland Cardiovascular Research Symposium, Loyola University Chicago – Stritch School of Medicine, Friday March 11th, 2022
- 2022 Co-chair, session “Platform: Muscle Structure and Function II” at the Biophysical Society 66th Annual Meeting, San Francisco, California, Feb 19th-23rd, 2022
- 2021 Organizing Committee, 2nd Costa Rican Biophysics Symposium (Virtual), National Academy of Sciences, Costa Rica, March 11th-12th. Official site: <https://crbiophysics.wordpress.com>
- 2019 Chair and Co-Founder, 1st Costa Rican Biophysics Symposium, National Academy of Sciences, Costa Rica, January 11th. Official site: <https://crbiophysics.wordpress.com>

LEADERSHIP: UIC POSTDOCTORAL ASSOCIATION (PDA), UIC

- 2021 – present Past President
- 2021 Organizing Committee, 5th Annual Career Development Symposium
- 2020 – 2021 Committee member, B1G10+ Postdoctoral Alliance
- 2020 – 2021 President, PDA
- 2020 PDA Rep., Early Career Research Restart COVID-19 working group.
Achievements: provided recommendations and guidance, in collaboration with early-career faculty members at UIC, to help research restart during COVID-19. May-June 2019
- 2020 Organizing Committee, 4th Annual Career Development Symposium
- 2019 – 2020 Vice President, PDA
- 2019 Organizing Committee, 3rd Annual Career Development Symposium
- 2019 – 2021 Committee member, Chicago Area Postdoctoral Association (CAPA)
- 2018 Chair, 2nd Annual Career Development Symposium
- 2017 – 2019 Director of Event Programming, PDA

LEADERSHIP: OTHER

- 2023 – present Early Career Researcher Committee Member, Human Proteome Organization (HUPO) (<https://www.ushupo.org/ECR>), Portland, OR
- 2021 – present Early Career Committee Member, Cardiac Muscle Society. Official site: <https://www.cardiac-muscle-society.org>
- 2020 Panelist, Ask the experts: How to get your K award. UIC Center for Translational Science, UIC, Chicago, Illinois. October 26th, 2020
- 2019 Co-Organizer, Q&A session for non-tenure PhDs with Aron Jaffe, PhD (Novartis), Department of Physiology and Biophysics Seminar Series, UIC, Chicago, Illinois. November 8th, 2019
- 2019 – 2021 Co-Organizer, Department of Physiology Seminar Series, UIC, Chicago, Illinois
- 2018 – 2019 Co-Organizer, Your Future in Science, Center for Clinical and Translational Science, UIC, Chicago, Illinois
- 2019 Moderator, Your Future in Science panel: Careers in the Financial Industry, with Michel Burrows, PhD (Aspire Capital Partners LLC) and Myles Minter, PhD (William Blair), Your Future in Science, Center for Clinical and Translational Science, UIC, Chicago, Illinois May 16, 2019
- 2018 Moderator, PhD Careers in Technical Support, with Matthew Curtis, PhD (Carl Zeiss Microscopy) and Danyelle Martin, PhD (Medline Industries Inc.). Your Future in Science, Center for Clinical and Translational Science, UIC, Chicago, Illinois, June 21, 2018
- 2018 Volunteer/ Poll Worker, 2018 Costa Rica Presidential Elections, Costa Rica Consulate General in Chicago, Chicago, Illinois
- 2017 – 2021 Organizer, Heart Research Journal Club, Center for Cardiovascular Research, UIC, Chicago, Illinois. Role: managed the organization of 3-4 journal clubs per semester
- 2014 – 2015 Executive Media Designer, International Relations Council (IRC), SDSU, Brookings, SD
- 2012 – 2013 Treasurer, Latin American Student Association (LASA), SDSU, Brookings, SD

PUBLIC ENGAGEMENTS

- 2021 Featured in the university newspaper “Campus” from the UNA in regard to the organization of the Second Costa Rican Biophysics Symposium (July 2021). Retrieved from <https://publica2.una.ac.cr/periodicoCampus/julio-2021/pdf/campusdelcampus.pdf>
- 2020 Featured in the University of Illinois at Chicago Science post. “NIH funds heart muscle cell research” (22 December 2020). Retrieved from <https://uicscience.tumblr.com/post/638218888906211328/top-cardiac-muscle-cells-credit-chrisopher>
- 2020 Interview with the Children’s Museum of Costa Rica (21 December 2020) Retrieved from https://m.facebook.com/museodelosninoscr/videos/4621034431300564/?refsrc=https%3A%2F%2Fm.facebook.com%2Fstory.php&_rdr
- 2020 Featured in the Costa Rican news channel “Telenoticias” in regard to the NHLBI K99 grant being awarded. Teletica.com Redacción (19 October 2020) Tico destaca en Estados Unidos por sus estudios sobre el corazón. Retrieved

from https://www.teletica.com/nacional/tico-destaca-en-estados-unidos-por-sus-estudios-sobre-el-corazon_270899

2020 Featured in the Costa Rican news outlet “crhoy” in regard to the awarded NHLBI K99 grant. Johel Solano (19 October 2020) Sueño hecho realidad: tico gana prestigioso premio científico y tendrá laboratorio en EEUU. Retrieved from <https://www.crhoy.com/reportaje-especial/sueno-hecho-realidad-tico-gana-prestigioso-premio-cientifico-y-tendra-laboratorio-en-eeuu/>

REVIEWER

2021 – present *Ad hoc* Guest Editor, *Journal of Visualized Experiments (JoVE)*. In charge of the Methods Collections issue “Advances in small animal models for CVD - from cardiomyocytes to whole heart studies”. <https://www.jove.com/methods-collections/1068>

2021 – present *Ad hoc* Guest Editor, *Biophysical Reviews*. In charge of the Issue Focus highlighting the activities of the 2021 Costa Rican Biophysics Symposium. <https://www.springer.com/journal/12551/editors>

2019 – present *Ad hoc* Reviewer, *American Journal of Physiology: Heart and Circulatory Physiology*

2019 – present *Ad hoc* Reviewer, *Journal of Muscle Research and Cell Motility*

2014 *Ad hoc* Reviewer, *Journal of Polymers and the Environment*. Springer

ORGANIZATIONS

2021 – present Member, International Society for Heart Research-North American Section (ISHR-NAS)

2021 – present Member, Cardiac Muscle Society. Official Site: <https://www.cardiac-muscle-society.org>

2020 – present Member, National Postdoctoral Association, Rockville, MD

2017 – present Member, American Heart Association (AHA)

2017 Member, American Society for Quality (ASQ)

2014 – present Member, Latin American Society of Biophysicists (SOBLA)

2012 – present Member, Biophysical Society

TEACHING EXPERIENCE

2022 Instructor, PHYB571: Clinical Applications of Physiology I, UIC College of Medicine, Chicago, Illinois. Achievements: delivered one lecture on “Sickle Cell Disease” to 9 students and a second lecture in which I organized presentations by the students on “Blood Disorders”. I provided feedback on the student’s presentations and in the essays prepared by the students who were expectations.

2022 Instructor, PHYB551: Human Physiology I, UIC College of Medicine, Chicago, Illinois. Achievements: delivered one lecture on “Control of Respiration” to 31 students and provided questions for the exam.

2020 Co-Coordinator, Physiology Lectures, Summer Pre-Matriculation Program, UIC College of Medicine, Chicago, Illinois. Achievements: supported the implementation of virtual lectures for pre-medicine/-dentistry students

- 2020 Presenter, "Introduction to R for data analysis", Data Science for Postdocs — Live Webinar Series, Chicago Area Postdoctoral Association (CAPA), Chicago, Illinois. Achievements: prepared a 1-hr virtual lecture on how to use R for data cleaning, plots, and curve fitting for ~40 attendees
- 2018 – present Physiology Instructor, Summer Pre-Matriculation Program, UIC College of Medicine, Chicago, Illinois. Achievements: lectured cardiovascular physiology topics to ~30-50 students
- 2016 Graduate Teaching Assistant, Department of Physics, SDSU, Brookings, South Dakota. Achievements: lectured general physics labs (PHYS111) to ~60 students (3 labs with ~20 students each)
- 2011 – 2012 Graduate Teaching Assistant, Department of Chemistry and Biochemistry, SDSU, Brookings, South Dakota. Achievements: lectured general chemistry (CHEM 112) and biochemistry (CHEM 466L) labs to ~60 (3 labs with ~20 students each) and ~30 students (2 labs with ~15 students each) respectively
- 2010 – 2011 Tutor, *Programa de Éxito Académico*, UNA, Heredia, Costa Rica. Achievements: provided supplementary lectures for general and physical chemistry for up to 10 students per class

OTHER TRAINING AND COURSEWORK

- 2021 Academic Lab Management & Leadership Symposium, Torrey Pines Training Consortium (TPTC). Official site: <https://tptc.wordpress.com/almls/>. Description: The four-day workshop aims to equip postdocs and junior faculty in the biomedical, physical and life sciences with the professional competencies to lead innovative and productive research programs
- 2018 3rd Annual Update in Cardiovascular Disease for the Primary Care Provider, UIC, Chicago, IL (4.5 AMA Credits). Description: Update on genetic testing in heart disease, atrial fibrillation, onco-cardiology, structural heart intervention, and frontiers in research
- 2018 Cardiovascular Symposium 2018, Methodist Hospitals, Schererville, IN (5.0 AMA Credits). Description: Update on pathophysiology, AHA revised guidelines on high blood pressure, atrial fibrillation, and heart valve repair
- 2013 Digital Image Processing (EE 575), Department of Electrical Engineering and Computer Science, SDSU. Description: Image processing techniques in MATLAB
- 2012 Structural Determination of Organic Compounds (CHEM 724), Department of Chemistry and Biochemistry, SDSU. Description: Theory and practice on use of NMR, mass spectrometry and IR
- 2011 Workshop on Liposomal Pharmaceutical Formulations, UNA and National Center of High Technology. Description: Theory and practice in production of liposomal micelles for targeted drug delivery