

CURRENT POSITIONS

NASA JET PROPULSION LABORATORY (JPL)	<i>Pasadena, California</i>
Origins and Habitability Lab (OHL)	
Research Scientist, Origin of Life / Prebiotic Chemistry.	August 2022 – present
Mars Reconnaissance Orbiter (MRO) Payload Support Team	January 2025 – present
○ PST cycle coordinator and science planner	
OAK CREST INSTITUTE OF SCIENCE	<i>Pasadena, California</i>
Visiting Research Scientist	June 2025 – present
SEARCH FOR EXTRATERRESTRIAL LIFE INSTITUTE (SETI)	<i>Mountain View, California</i>
Research Affiliate.	June 2025 – present

ADDITIONAL PROFESSIONAL EXPERIENCE

NASA JET PROPULSION LABORATORY (JPL)	<i>Pasadena, California</i>
• Associate Program Area Scientist for Ocean Worlds Science (October 2022 – March 2025)	
○ Represent and lead JPL’s ocean worlds strategic activities; provide astrobiology, mission, and ocean world expertise for JPL’s Planetary Sciences Directorate	
• Science Team Member of Exobiology Extant Life Surveyor (EELS) Path to Flight Working Group (August 2022 – September 2024)	
• Enceladus Vent Explorer (EVE) Science Team Member (Jan 2021 - Jan 2022); Science Co-Lead (Jan 2022 – Jan 2023)	
○ Co-led three 15+ person workshops over a 4-month period to collect input from scientists, technologists, and engineers to create a comprehensive Science Traceability Matrix (STM) for mission concepts to Enceladus	
○ Presented the results of the workshop study to a team of NASA science, engineers, and scientists at the NIAC Year II mid-year review	
• Planetary Science Summer School (PSSS), Session 1 Member (Summer 2020)	
○ Accepted into a competitive program, participated in 18-member team for development of Pre-Phase A study of a flyby mission to Enceladus	

MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT)	<i>Cambridge, Massachusetts</i>
Ph.D. Researcher in Chemistry Department	November 2014 – June 2019
• Explored four routes towards the development of a continuous-flow synthesis of atorvastatin for implementation into an automated system	
○ Collaborated with a chemical engineering group (Jensen group, MIT)	
○ Funded by the Defense Advanced Research Projects Agency (DARPA) to produce pharmaceuticals on demand	
• Designed and synthesized air- and moisture-stable organometallic materials, specifically nickel(II) precatalysts with phosphine and <i>N</i> -heterocyclic carbene ligands with a novel and mild activation mechanism	
○ Employed the precatalysts in C–C and C–N bond-forming reactions to lower the catalyst loading and improve reaction yield	
• Collaborated with chemical biology and materials research groups on the high-throughput screening of non-natural peptide binders to antigens, funded by DARPA (Pentelute and Johnson groups, MIT)	
○ Synthesized mini-proteins not found in nature and determined binding affinity to an antibody against an influenza virus surface protein	
○ Explored metal binding to peptides	

RECENT PROPOSALS FUNDED

PI:

- **2025. PI.** JPL Spontaneous R&TD. “X-ray computed tomography (CT) scanning and irradiation of Ceres salt crystals.” (Co-I: Liu, Y.; Castillo-Rogez, J.; Bescup, J.; Hodyss, R. Bose, M. (ASU))
- **2025. Study Lead.** Keck Institute for Space Science (KISS) Study “Next Frontiers in the Investigation of Extraterrestrial Organics” (Co-Leads: Bose, M.; Tejada, J.)
- **2025-2028. PI.** NASA ROSES Exobiology. Organic Preservation and Reaction on Ceres. (Science PI: Czaplinski, E.; Co-I: Hodyss, R.; Henderson, B.; Collaborator: Barge, L. M.; Castillo-Rogez, J.)
- **2025-2028. Initiative Lead.** JPL Strategic Research & Technology Development Initiative “Science of Organic-Rich Samples” (Task Lead: Hoffman, A.)
- **2024-2025. PI.** JPL Researchers on Campus (JROC). “Developing Synergy between Experimental Astrobiology and Exoplanet Research.” (Co-I: Y. Yung Caltech)
- **2023-2024. PI.** JPL Researchers on Campus (JROC). “Venus Weathering Experiments and Analysis for Future Mission Success.” (Co-I: J. Jackson Caltech)
- **2023. PI.** JPL Spontaneous R&TD. “Astrobiological Investigation of Amino Acids under Ceres Conditions for Future Missions.” (Co-I: Hodyss, R.; Henderson, B. L.)
- **2022. PI.** NASA Astrobiology Early Career Collaboration Award. “Understanding the Nitrogen Isotopic Distribution of Prebiotic Reactions Under a Geologic Context.” In collaboration with Dr. Jennifer Stern and Dr. Bethany Theiling, NASA Goddard Flight Research Center.

CO-I:

- **2025-2026. Co-I.** ASTROBi Foundation. Testing the Origin of the Proton Motive Force: Electrochemical Studies of Quinones and Iron Sulfides. (Co-PI: Barge, L. M.; Mantriam, K. Collaborators: Goldman, A.; LaRowe, D.; Jones, J.-P.)
- **2024-2025. Co-I.** JPL Center for Academic Partnerships (CAP). “Developing a consortium for training undergraduates in experimental astrobiology research.” (PI: Barge, L. M.; Jones, J.-P.; Johnson-Finn, K. (RPI))
- **2024-2027. Co-I.** NASA ROSES Habitable Worlds. “Feeding Enceladus’ Deep Biosphere.” (PI: Barge, L. M. Co-I Glein, C.)
- **2024-2025 Co-I.** JPL Center for Academic Partnerships (CAP). “Joint STEM Pathways Program with Primarily Undergraduate Institutes.” (PI: Barge, L. M.; Co-I: Forsythe, J. (CofC))
- **2023-2025 Co-I.** JPL Strategic Research & Technology (R&TD) Development Initiative. “Assessing Origin of Life (OOL) Scenarios for Exoplanet Studies.” (Initiative Lead: Lawrence, C. PI: Kataria, T.; Co-I: Barge, L. M.; Chen, P.; Yung, Y. (Caltech))
- **2023-2025 Co-I.** NASA ROSES SMD Bridge Program Seed Funding (renamed MOSAIC). “Diversifying Student Pipelines in STEM: Environmental Pollution Reduction inspired by Planetary Science.” (PI: Khodayari, A. (California State University - Los Angeles - CSULA); Co-I: Barge, L. M.; Dong, W. (California State Polytechnic University – Pomona)).
- **2023. Co-I.** JPL Spontaneous R&TD “Low Velocity Impact Particles Collector.” (PI: M. Badescu, Co-I: Hofmann, D.; Choukroun, M. N.)

EDUCATION

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

PH.D. IN CHEMISTRY WITH TIMOTHY F. JAMISON

GPA: 5.0/5.0

- Thesis: Synthesis and Use of Bench-Stable Precatalysts with Heck-Type Activation and Progress Towards the Continuous-Flow Synthesis of Atorvastatin

Cambridge, Massachusetts

September 2014 – June 2019

UNIVERSITY OF CHICAGO

B.S. IN CHEMISTRY

GPA: 3.79/4.0

Chicago, Illinois

September 2010 – June 2014

- Graduated with General Honors
- Worked with Viresh Rawal from 2011-2014

PEER REVIEWED PUBLICATIONS

STUDENTS / POSTDOCS MENTORED UNDERLIGNED

Corresponding author = *; Co-first author = ‡

ACCEPTED/PUBLISHED:

1. Raizi-Sekowski, S. ‡; Bundang, K. ‡; Chastain, J.; Carman, N.; Velling, S.; Aguilera, J.; Luna, M.; Trejo, C.; Alain, O.; Teece, B. L.; Dzurilla, K. A.; Barge, L. M.*; **Weber, J. M.*** “Organic Cofactors in the Electron Transport Chain: Properties and Connection to the Prebiotic World.” *ChemSystemsChem*. **2026**, *accepted*. <https://doi.org/10.1002/syst.202500037>
2. **Weber, J. M.***; Martinez, E.; Sheppard, R. Y.; Rodriguez, L. E.; Celestian, A.; Teece, B. L.; Barge, L. M. “Mineral Weathering Experiments for Terrestrial Planetary Analogs in a Continuous-Flow Reactor.” *Geofluids* **2026**, *2026*, 6180315. <https://doi.org/10.1155/gfl/6180315>
3. Sheppard, R. Y.; **Weber, J. M.**; Rodriguez, E. L.; Trejo, C.; Hausrath, E. M.; Barge, L. M. “The effect of clay minerals on Li in martian groundwater simulant.” *ICARUS* **2026**, *443*, 116769. <https://doi.org/10.1016/j.icarus.2025.116769>
4. **Weber, J. M.***; Rodriguez, L. E.; Cable, M. L.; Ingham, M.; Barge, L. M.; Chodas, M.; Cochran, C. J.; Elder, C. M.; Fayolle, E.; Henderson, B. L.; Hosseini, S.; Marusiak, A. G.; Melwani-Daswani, M.; Nordheim, T. A.; Perl, S. M.; Ono, M. “Architectures and Instruments for Enceladus Exploration.” *JGR Planets*, **2025**, *130*, e2024JE008908. <https://doi.org/10.1029/2024JE008908>
5. Rodriguez, L. E.*; **Weber, J. M.**; Cable, M. L.; Barge, L. M.; Castillo-Rogez, J. C.; Chodas, M.; Ferguson, S. N.; Schenk, P. M.; Vance, S. D.; Carpenter, K.; Ingham, M. D.; Cochran, C. J.; Elder, C. M.; Henderson, B. L.; Hosseini, S.; Marusiak, A. G.; Noell, A. C.; Perl, S. M.; Ono, M. “A roadmap for the Exploration of Enceladus.” *JGR Planets*, **2025**, *130*, e2024JE008907. <https://doi.org/10.1029/2024JE008907>
6. Velling, S. J.; **Weber, J. M. ***; Jones, J.-P.; Wertheim, A.; Alian, O. M.; Rossman, G. R.; Barge, L. M.* “Porous Silica Scaffolds Enable Mechanically Robust Simulated Hydrothermal Chimney Growth.” *Langmuir*, **2025**, *41*, 19111 – 19126. <https://doi.org/10.1021/acs.langmuir.5c00933>
7. Martinez, E.; Flores, E. Valadez, D.; **Weber, J. M.***; VanderVelde, D.; Sheppard, R. Y.; Hodyss, R.; Castillo-Rogez, J. C.; Melwani Daswani, M.; Henderson, B. L.; Barge, L. M. “Organic Adsorption onto Iron Hydroxide and Sulfide Minerals: Implications for Ceres Sample Return Analysis.” *ACS Earth and Space Chem* **2025**, *9*, 1060 – 1069. <https://doi.org/10.1021/acsearthspacechem.4c00372>
8. Işik, S.; Melwani Daswani, M.*; Işik, E.; **Weber, J. M.**; Kiyak, O. "The stability and energetics of the citric acid cycle and a precursor prebiotic network in ocean world interiors" *ACS Earth and Space Chem*. **2025**, *9*, 1392 – 1412. <https://doi.org/10.1021/acsearthspacechem.4c00371>
9. Velling, S. J.; Rodriguez, L. E.; Oyala, P. H.; Jones, J.-P.; Barge, L. M.; **Weber, J. M.*** “Application of Electron Paramagnetic Resonance Spectroscopy for Studies of Prebiotic Metals and Complexes.” *28th Volume of Metals in Life Sciences*. **2025**, *6*, 236 – 289. <https://doi.org/10.1201/9781003459910-6>
10. Keller, F.; Kataria, T.; Barge, L. M.; Chen, P.; Yung, Y.; **Weber J. M.*** “An Exploration of Origin of Life for Exoplanetary Science” *Frontiers in Astronomy and Space Science*, **2025**, *12*, 1544426. <https://doi.org/10.3389/fspas.2025.1544426>
11. Marlin, T. C.; **Weber, J. M.***; Sheppard, R. Y.; Perl, S.; Diener, D.; Baum, M. M.; Barge, L. M.* “Chemical Gardens as Analogues for Prebiotic Chemistry on Ocean Worlds.” *CHEM*, **2025**, *11*, 102289. <https://doi.org/10.1016/j.chempr.2024.08.012>
12. Mahr, T. J.; Teece, B. L.*; Zaugg, G.; Dzurilla, K. A.; **Weber, J. M.**; Barge, L. M. “Laboratory Analogues of Black Smoker Hydrothermal Vent Mineral Facies Relevant to Planetary Science.” *75th International Astronautical Congress (IAC)* **2024**, IAC-24-,E2,3-GTS.4,2,x82038. <http://dx.doi.org/10.52202/078379-0036>
13. **Weber, J. M.***; Leonard, E. J. “The Astrobiological Potential of the Uranian Moon System.” *Astrobiology* **2024**, *24*, 765 – 854. <https://www.liebertpub.com/doi/10.1089/ast.2024.0045>
14. **Weber, J. M. ‡***; Czaplinski, E. C. ‡; Henderson, B. L.; Barge, L. M.; Castillo-Rogez, J. C.; Hodyss, R. “Photochemical Stability and Reactivity of Sodium Pyruvate: Implications for Organic Analysis on Ceres”

ACS Earth and Space Chemistry. **2024**, *8*, 1385 – 1393.

<https://doi.org/10.1021/acsearthspacechem.4c00045>

15. Rodriguez, L. E. ‡*; **Weber, J. M.** ‡; Barge, L. M. “Evaluating Pigments as a Biosignature: Abiotic / Prebiotic Synthesis of Pigments and Pigment Mimics in Planetary Environments.” *Astrobiology*, **2024**, *24*, 767 – 782. <https://doi.org/10.1089/ast.2023.0006>
16. Ono, H.; Thakker, R.; Georgiev, N.; Gavrillov, P.; Archanian, A.; Drevinskas, T.; Daddi, G.; Paton, M.; Strub, M.; Melikyan, H.; Pailevanian, T.; Royce, R.; Swan, R. M.; Lopez, C.; Ambrose, E.; Jones, B.; Roman, C.; Tosi, L. P.; Rieber, R.; Gildner, M.; Hockman, B.; Lemus, D. L. D.; Moreno, D. P.; Hasseler, T. D.; Vaquero, T. S.; Veismann, M.; Nakka, Y. K.; Marteau, E.; Yearicks, S.; Aghli, S.; Agnes, G.; Samnani, M.; Bowkett, J.; de los Reyes, B.; Tempest, M.; Shiraiishi, L.; Jasour, A.; Tran, T.; Ingham, M.; Nash, J.; Spilker, L.; Balentine, D.; Barchowsky, A.; Bevreng, F.; Botteon, K.; Brown, K.; Caballero, M.; Carpenter, K.; Chodas, M.; Daca, A.; Dacey, S.; Deger, H.; Feldman, J.; Gardner, A.; Goddu, A.; holland, J.; Jain, A.; Jasper, J.; Jin, C.; Khanum, M.; Joerfeld, R.; Leake, C.; Mark, G.; Morrell, B.; Naish, J.; Reid, W.; Rodriguez, J.; Talbot, W.; **Weber, J. M.**; Wright, M.; Zade, H.; Zhang, J.; Etheredge, R.; Robinson, M. “To Boldly Go Where No Robots Have Gone Before – Part 1: EELS Robot to Spearhead a New One-Shot Exploration Paradigm with In-Situ Adaptation.” *AIAA SciTech 2024 Forum*. **2024**, 1746. <https://doi.org/10.2514/6.2024-1746>
17. Schaible, M. J.*; Szeinbaum, N.; Bozdog, G. O.; Chou, L.; Grefenstette, N.; Colón-Santos, S.; Rodriguez, L. E.; Styczinski, M. J.; Thweatt, J. L.; Todd, Z. R.; Vázquez-Salazar, A.; Adams, A.; Araújo, M. N.; Altair, T.; Borges, S.; Burton, D.; Campillo-Balderas, J. A.; Cang, E. M.; Caro, T.; Calatano, E.; Chen, K.; Conlin, P. L.; Cooper, Z. S.; Fisher, T. M.; Fos, S. M.; Garcia, A.; Glaser, D. M.; Harman, C. E.; Hermis, N. Y.; Hooks, M.; Johnson-Finn, K.; Lehmer, O.; Hernández-Morales, R.; Hughson, K. H.G.; Jácome, R.; Jia, T. Z.; Marlow, J. J.; McKaig, J.; Mierzejewski, V.; Muñoz-Velasco, I.; Nural, C.; Oliver, G. C.; Penev, P. I.; Raj, C. G.; Roche, T. P.; Sabuda, M. C.; Schaible, G. A.; Sevgen, S.; Sinhac, P.; Steller, L. H.; Stelmach, K.; Tarnas, J. Tavares, F.; Trubl, G.; Vidaurri, M.; Vincent, L.; **Weber, J. M.**; Weng, M. M.; Wilpiszeki, R. L.; Young, A. “Chapter 1: The Astrobiology Primer 3.0.” *Astrobiology*, **2024**, *24*, S-4 – S-39. <https://doi.org/10.1089/ast.2021.0129>
18. Rodriguez, L. E.*; Altair, T.; Hermis, N.; Jia, T. Z.; Roche, T. P.; Steller, L. H.; **Weber, J. M.** “Chapter 4: A Geological and Chemical Context for the Origins of Life on Early Earth.” *Astrobiology* **2024**, *24*, S-76 – S-106. <https://doi.org/10.1089/ast.2021.0139>
19. **Weber, J. M.**; Marlin, T. C.; Prakash, M.; Teece, B. L.; Dzurilla, K. Barge, L. M. “A Review on Hypothesized Metabolic Pathways on Europa and Enceladus: Space-Flight Detection Considerations” *Life* **2023**, *13*, 1726. <https://doi.org/10.3390/life13081726>
20. Goldman, A. G.*; **Weber, J. M.**; LaRowe, D. E.; Barge, L. M.* “Electron Transport Chains as a Window into the Earliest Stages of Evolution.” *PNAS* **2023**, *120*, e2210924120. <https://doi.org/10.1073/pnas.2210924120>
21. Chodas, M.*; Ono, H.; **Weber, J.**; Rodriguez, L.; Hockman, B.; Mitchell, K.L., Cable, M.L. "Enceladus Vent Explorer Mission Architecture Trade Study," *2023 IEEE Aerospace* **2023**, 1 – 16. <https://doi.org/10.1109/AERO55745.2023.10115635>.
22. Barge, L. M.*; Flores, E.; **Weber, J. M.**; Fraeman, A. A.; Yung, Y. L.; VanderVelde, D.; Martinez, E.; Castonguay, A.; Billings, K.; Baum, M. M. “Prebiotic Reactions in a Mars Analog Iron Mineral System: Effects of Nitrate, Nitrite, and Ammonia on Amino Acid Formation.” *Geochimica et Cosmochimica Acta*. **2022**, *336*, 469 – 479. <https://doi.org/10.1016/j.gca.2022.08.038>
23. **Weber, J. M.** ‡*; Tran, T. H. ‡ “Synthesizing Bioactive Molecules: Synergies between Drug Discovery Techniques and Astrobiology Research.” *ACS Earth and Space Chem.* **2022**, *6*, 1213 – 1220. <https://doi.org/10.1021/acsearthspacechem.1c00326>
24. Prakash, M.; **Weber, J. M.***; Rodriguez, L. E.; Sheppard, R. Y.; Barge, L. M. “Database on Mineral Mediated Carbon Reduction: Implications for Future Research.” *International Journal of Astrobiology* **2022**, *21*, 423 – 440. <https://doi.org/10.1017/S1473550422000052>
25. **Weber, J. M.***; Henderson, B. L.; LaRowe, D. E., Goldman, A. G., Perl, S. M., Billings, K., Barge, L. M.* “Iron-sulfur minerals drive NAD⁺ reduction under prebiotic Earth conditions.” *Astrobiology* **2022**, *22*, 25 – 34. <https://doi.org/10.1089/ast.2021.0035>
26. Lee, C.*; **Weber, J. M.**; Rodriguez, L. E.; Sheppard, R. Y.; Barge, L. M.; Berger, E. L.; Burton, A. S. “Chirality in organic and mineral systems: A review of reactivity and alteration processes relevant to

- prebiotic chemistry and life detection missions.” *Symmetry* **2022**, *14*, 460.
<https://doi.org/10.3390/sym14030460>
27. Barge, L. M.*; Rodriguez, L. E.; **Weber, J. M.**; Theiling, B. P. “Determining the ‘Biosignature Threshold’ for life detection on biotic, abiotic, or prebiotic worlds.” *Astrobiology* **2022**, *22*, 481 – 493.
<https://doi.org/10.1089/ast.2021.0079>
 28. Henao, S. G.; Karanauskas, V.; Drummond, S. M.; Dewitt, J. T.; Maloney, C. M.; Mulu, C.; **Weber, J. M.**; Barge, L. M., Gaylor, M. O.* “Planetary Minerals Catalyze Conversion of a Polycyclic Aromatic Hydrocarbon to a Prebiotic Quinone: Implications for the Origins of Life.” *Astrobiology* **2022**, *22*, 197 – 209. <https://doi.org/10.1089/ast.2021.0024>
 29. **Weber, J. M.***; Barge, L. M. "Iron-Silicate Chemical Garden Morphology and Reactivity with Alpha-Keto Acids." *ChemSystemsChem* **2021**, *3*, e2000058. <https://doi.org/10.1002/syst.202000058>
 30. Spiers, E. M.*; **Weber, J. M.**; Venigalla, C.; Annex, A. M.; Chen, C. P.; Gray, P. C.; Lee, C. I. McInyre, K. J.; Berdis, J. R.; Carberry Mogan, S. R.; do Vale Periera, P.; Kumar, S.; O’Neill, W.; Czajk, E. A.; Johnson, P. E.; Pascuzzo, A.; Tallapragada, S.; Phillips, D.; Mitchell, K.; Nash, A.; Scully, J.; Lowes, L. “Tiger: Concept Study for a New Frontiers Enceladus Habitability Mission.” *Planetary Science Journal* **2021**, *2*, 195. <https://doi.org/10.3847/PSJ/ac19b7>
 31. Perl S. M.; Celestian, A. J.; Cockell, C. S.; Corsetti, F. A.; Barge, L. M.; Bottjer, D.; Filiberto, J.; Berelson, W. M.; Sessions, A. L.; Bacter, B. K. Kanik, I.; Potter-McIntyre, S.; Kataria, T.; Chen, P.; **Weber, J. M.**; Rodriguez, L. E.; Melwani-Daswani, M. “A Proposed Geobiology-Driven Nomenclature for Astrobiological in situ Observations and Sample Analysis.” *Astrobiology* **2021**, *21*, 954 – 967.
<https://doi.org/10.1089/ast.2020.2318>
 32. Flores, E.* Martinez, E., Rodriguez, L. E., **Weber, J. M.**, Khodayari, A., Barge, L. M.* "Effects of Amino Acids on Phosphate Adsorption onto Iron (Oxy)hydroxide Minerals under Early Earth Conditions." *ACS Earth and Space Chem*, **2021**, *5*, 1048 – 1057. <https://doi.org/10.1021/acsearthspacechem.1c00006>
 33. Barge, L. M.*; Flores, E.; VanderVelde, D.; **Weber, J. M.**; Baum, M. M.; Castonguay, A. "Geochemical gradients determine organic distributions in prebiotic reaction networks." *JGR Planets* **2020**, *125*, e2020JE006423. <https://doi.org/10.1029/2020JE006423>
 34. Hooks, M. R.; Webster, P.; **Weber, J. M.***; Perl, S. Barge, L. M.; “Effects of Amino Acids on Iron-Silicate Chemical Garden Precipitates.” *Langmuir* **2020**, *36*, 5793 – 5801.
<https://doi.org/10.1021/acs.langmuir.0c00502>
 35. **Weber, J. M.**; Longstreet, A. R.; Jamison, T. F.* “Bench-Stable Nickel Precatalysts with Heck-type Activation.” *Organometallics* **2018**, *37*, 2716 – 2722. <https://doi.org/10.1021/acs.organomet.8b00351>
 36. Strieth-Kalthoff, F.; Longstreet, A. R.; **Weber, J. M.**; Jamison, T. F.* “Bench-Stable N-Heterocyclic Carbene Nickel Precatalysts for C–C and C–N Bond-Forming Reactions.” *ChemCatChem* **2018**, *10*, 2873 – 2877. <https://doi.org/10.1002/cctc.201800454>
 37. Gates, Z. G.*; Vinogradov, A. A.; Quartararo, A. J.; Bandyopadhyay, A.; Choo, Z.-N.; Evans, E. D.; Halloran, K. H.; Mijalis, A. J.; Mong, S. K.; Simon, M. D.; Standley, E. A.; Styduhar, E. D.; Tasker, S. Z.; Touti, F.; **Weber, J. M.**; Wilson, J. L.; Jamison, T. F.; Pentelute, B. L.* “Xenoprotein Engineering via Synthetic Libraries.” *PNAS* **2018**, *115*, E5298 – E5306. <https://doi.org/10.1073/pnas.1722633115>

SELECTED LEADERSHIP AND SERVICE ACTIVITIES

Member of PCE3 and NOW Steering Committees (2025 – present)

Member of the International Science Committee of REDESPA (Spanish Planetology and Astrobiology Network - Red Española de Planetología y Astrobiología). (2024 – present)

Member of the Search for Life Science Analysis Group (SFL-SAG) (2024 – present)

Panelist for Planetary Science Panel at JPL Blue Sky 20 Years Ahead Panel (Sept 2023)

Lead Organizer / Founder Astrobiology and Drug Discovery Synergies Focus Group (2020 – 2024)

- Bi-monthly discussion meeting to generate new synthetic chemistry collaborations and method development between JPL and the University of Houston Drug Discovery Institute

Founding Committee Member of OVEN Venus Early Career Group (VEXAG SAW 13) (2022 – 2024)

2026 Astrobiology Science Conference (AbSciCon) Science Organizing Committee (SOC) Member