

CURRICULUM VITAE

Mihaela Glamoclija

Assistant Professor

Personal information

Birth date, place:	April 18, 1974, Karlovac, Croatia	Work address:	Department of Earth and Environmental Sciences Rutgers University - Newark 101 Warren St, Room 138 Newark, NJ 07102 U.S.A.
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Education

2001 – 2005: Ph.D. in Planetary Sciences at the International Research School of Planetary Sciences (IRSPS), Università d'Annunzio, Chieti-Pescara (Italy); Advisors: Prof. Gian Gabriele Ori, Dr. Lucia Marinangeli and Dr. Goro Komatsu.

1992 - 2000: B.Sc. in Geology with a specialization in Micropaleontology at University of Belgrade (Serbia).
*B.Sc. program in Geology at the UB lasts 5 ½ years, after implementation of Bologna Process in Europe my B.Sc. degree was recognized as M.S. Thesis Advisors: Prof. S. Mitrovic and Prof. Lj. Runic.

Professional History

05/ 2013 – present: **Assistant Professor at Department of Earth and Environmental Sciences, Rutgers University - Newark**
03/2010 – 09/2013: Research Scientist at Geophysical Laboratory, Carnegie Institution of Washington.
09/2007 – 03/2010: Postdoctoral Fellowship at Geophysical Laboratory, Carnegie Institution of Washington; advisor Dr Andrew Steele.
05/2005 – 08/2007: Postdoctoral Fellowship at Geology Department, Indiana University; advisors Prof Abhijit Basu and Juergen Schieber.
06/2001–06/2002: Geologist-researcher at Geomagnetic Institute of Yugoslavia, Department of Paleomagnetism, Grocka, Belgrade (Serbia).

Professional Preparation

- Series of RU organized workshops on Python and statistical data analysis April 2021
- Webinar “Bias Incidents: Legal Challenges & Considerations for Reporting & Responding” April 2021
- Cutting Edge Early Career workshop, organized by AGU, Washington DC, July 2013

Field Work

2018: August – AntiAtlas, Morocco
2017 – 2018: New Jersey & Pennsylvania, Allentown Cambrian Formation
2013: January - Campi Felgrei, Italy

March - White Sands National Monument, New Mexico
 2012: May - Mojave Desert, CA
 October – Campi Felgrei, Italy
 2011: August- Arctic Mars Analog Svalbard Expedition (AMASE); Svalbard, Norway.
 2010: August- Arctic Mars Analog Svalbard Expedition (AMASE); Svalbard, Norway.
 September- Arctic Mars Analog Svalbard Expedition (AMASE); Mono Lake, California
 2009: March- White Sands National Monument, New Mexico
 August- Arctic Mars Analog Svalbard Expedition (AMASE); Svalbard, Norway.
 2008: August– Arctic Mars Analog Svalbard Expedition (AMASE); Svalbard, Norway.
 2007: February – White Sands National Monument, New Mexico; Estancia Basin, New Mexico, Guadalupe National Park, Texas.
 2006 to 2007: Jackson Creek, Bloomington, Indiana, weekly observations of the microbial ecosystem.
 2004: August - Vesuvius and Solfatara Volcanoes, Italy.
 2002: March - Solfatara Volcano, Italy.
 April - Paterno mud volcanoes and Etna volcano, Italy.

Professional Service

2022: **Mars Sample Return (MSR) Temperature-Time Tiger Team** focused on understanding the consequences of potentially heating Mars samples for various combinations of temperature and time prior to their investigation by scientists on Earth. We have agreed with the MSR program to a general upper temperature limit for “unavoidable” operational transients of +30°C. Depending on the engineering choices still to be made we need to be prepared to discuss and react to potential threats to the samples of exceeding the +30°C temperature requirement.

2018 - 2021: **International Service: Committee on Space Research (COSPAR) “Sample Safety Assessment Protocol (SSAP) Working Group”** Member of “SSAP Working Group”; in line with article IX of the UN Space Treaty the measures and regulations are described in the COSPAR Planetary Protection Policy. This working group is assembled to decide on the procedures and protocols of safety of the returned samples. The Group is composed of 10-15 individuals selected by NASA or COSPAR. The mandate of the SSAP Working Group is to develop a protocol to assess if there are indications of Martian life, extant or extinct, in any Martian material and spacecraft hardware exposed to Martian material and if this would constitute a biological hazard to the terrestrial biosphere, while maintaining the scientific integrity of the overall material from Mars to the maximum extent possible.

2021: **Life Detection Forum: Biosignature Knowledge Base and Measurement Technology Forum.** Member of the Structural biosignatures working group. Experts are brought together to develop Knowledge Base (KB) content for specific biosignatures to provide knowledge and support discourse about the detection of signs of life. This online repository of our current knowledge with regard to the detection of various signs of life and/or living processes will support current Mars 2020 mission and the selection of samples to be brought back to Earth, as well as future life-detection space missions.

Peer-reviewed Journals

1. Reviewer for Nature
2. Reviewer and Review Editor Frontiers Astronomy and Space Sciences
3. Reviewer for Frontiers Microbiology
4. Reviewer for Palaeogeography, Palaeoclimatology, Palaeoecology
5. Reviewer for Planetary and Space Science
6. Reviewer for Meteoritics and Planetary Science
7. Reviewer for Sedimentary Geology
8. Reviewer for Origins of Life and Evolution of the Biosphere
9. Reviewer for Italian Journal of Geosciences
10. Reviewer for Geochimica et Cosmochimica Acta
11. Reviewer for Geomicrobiology Journal
12. Reviewer for Bollettino della Società Paleontologica Italiana
13. Reviewer for Rendiconti Lincei Scienze Fisiche e Naturali, Springer

14. Reviewer for Elements
15. Reviewer for Geology
16. Reviewer for Icarus
17. Reviewer for Space Science Reviews
18. Reviewer for Astrobiology
19. Reviewer for Geobiology
20. Reviewer for Astronomy and Space Science

Proposal Review Panels

- Mars 2020 Participating Scientist NASA review panel; 2020
- NASA Postdoctoral Program (NPP) 2016
- Planetary Science and Technology Through Analog Research, NASA panel; 2015, 2016, 2017, 2018 chair
- Mars Science Laboratory Participating Scientist; NASA review panel; 2011
- Astrobiology Science and Technology for Exploring Planets (ASTEP), NASA review panel; 2011
- Astrobiology: Exobiology and Evolutionary Biology, NASA review panel; 2011

External Reviewer for Proposal Review Panels

- Geobiology and low-temperature geochemistry program, National Science Foundation 2012
- Sedimentary geology and paleobiology program, National Science Foundation 2012
- Moon and Mars Analog Missions Activities, NASA 2011
- Astrobiology: Exobiology and Evolutionary Biology, NASA program 2013
- Austrian Space Agency 2013
- NASA Postdoctoral Program (NPP) 2015

Workshop and Conference Session organization

- 2022: Astrobiology Science Conference (AbSciCon), Atlanta, Georgia from 15-20 May 2022; Session ID 111482; “Detecting Life and Habitable Environments on Mars through Mineralogical Variations: A Synthesis of Applied, Experimental, and Theoretical Approaches”; Coorganized with D. Bower NASA-GSFC, D. Kao NASA-GSFC, and NW Hinman U. of Montana
- 2016: Witec Confocal Raman Imaging Workshop, Rutgers University – Newark, April 5-6, 2016; Co-organizer, Newark NJ
- 2013: Analog Sites for Mars Missions II: past, present and future missions to Mars, Chair and organizer, August 5-7, 2013, Washington DC - 60 international and domestic attendees

@ Rutgers University

- 2021-present: RU-N Scholastic Standing Committee
- 2021-present: RU-N Sexual Harassment and Prevention Committee
- 2017-2018: Graduate student committee member and ad hoc committee member
- 2017: Rutgers Day
- 2015, 2017, 2018: Graduate student retreat writing workshop
- 2016: Departmental Seminar Series fall
- 2015: Dissertation Fellows Workshop II, speaker/discussion leader

Courses Taught

- 2021: Planetary Exploration and Astrobiology 460:240 (offered for first time)
- 2014 to 2020: Planet Earth 460:103:01
- 2015 to 2021: Rocks and Minerals 460:323 (redesigned)
- 2019: Guest lecturer @ Earth and Planetary Sciences, Rutgers University – New Brunswick: Astrobiology 460:225
- 2019: Guest lecturer @ Essex County College, NASA Community College Aerospace Scholars Program

Postdocs and Students Supervised

Postdocs:

2016 - 2018, Allison Enright
2015 - 2017, Kosala Sirisena
2015 - 2016, Inoka Hasanthi Widanagamage

Graduate Students:

2020 - present; Pia Sen, NSF Bridges to Doctorate graduate fellow (MS; Primary Supervisor M.G.)
2018 - present; Ifeoma Ugwuanyi, Graduate Student Fellow; Transform Research Assistantship at Rutgers-Newark (PhD; Primary Supervisor M.G.)
2017 - 2021; Ashley Murphy (PhD; Primary Supervisor M.G.)
2015 - 2017, Steven Ramirez (MS; Primary Supervisor M.G.)

2021 - present, David Davis, Primary Y. Rosenthal & R. Sherrell DMCS, RU-NB
2021 - present, Ying Yao, Primary Y. Gao DEES, RU-N
2020 - present; Klaudio Peshtani; Primary L. Slater DEES, RU-N
2016 - 2021, Omanjana Goswami; Primary A. Rouff DEES, RU-N
2016 - present, Robert Bornhorst; Primary A. Kustka DEES, RU-N
2015 - present; Mike Kalczyński ; Primary A. Gates DEES, RU-N
2014 - present, David Shire; Primary A. Kustka DEES, RU-N

Undergraduate Students:

2020: Tanisha Flatts (NSF LSAMP supported)
2019: Sebastian Plasencia (NSF B2B Passaic County Community College supported), Joceline Fuentes-Maya (NASA's NJ Space Grant Consortium supported)
2018: Suah Yekeh (NSF REU and LSAMP supported), Audrey Miller (NSF REU supported)
2017: Allison Waldron (NSF LSAMP supported), Carlos Macazana (NSF REU supported)
2016: Brittany Washington (NSF REU supported), Allison Waldron (NSF LSAMP supported)
2015: Steven Potocniak, Mousa Zeidan (NSF LSAMP supported), Nancy Padilla (LSAMP supported)

Invited Seminars

1. Rutgers New Brunswick, Department of Biochemistry and Microbiology, Seminar Speaker (2022) Microbial Community Composition at Jotun Thermal Spring in the High Arctic, an Analog to Jezero Carbonates on Mars
2. Rutgers New Brunswick Earth and Planetary Sciences, Speaker at Rutgers NASA Astrobiology Institute Annual Assembly (2019); How can biological data and geologic data be integrated through evolutionary time?, New Brunswick, NJ
3. California Nano-System Institute UCLA (2019); Raman Microscopy in Characterization of Biosignatures in Cambrian Stromatolites, Los Angeles, CA
4. Glamoclija, M., Murphy, A., Taj-Eddine, K., Ori, G.G. (2019) Biosignatures in Precambrian and Cambrian Carbonate Rich Sedimentary Sequences of Anti-Atlas, Morocco. International Association of Sedimentologists Conference, Rome, Italy
5. Rutgers New Brunswick Earth and Planetary Sciences, Speaker at Rutgers NASA Astrobiology Institute Annual Assembly (2018); Astrobiological implications of biosignatures from geologically ancient stromatolites, New Brunswick, NJ
6. Department of Biology State University Montclair (2015), A guest lecture (graduate course) on Extremophiles, Montclair, NJ
7. Glamoclija, M., Bowden, R., Fogel, M., Steele, A., DeNatale, G., Troise, C., Piochi, M. (2015) Subsurface Geomicrobiology of the Campi Flegrei volcanic region as seen through the ICDP pilot drill hole, an invited speaker, 2015 Microbiology Symposium, Rutgers University- New Brunswick, New Brunswick, NJ
8. Department of Earth and Atmospheric Sciences, City College of New York - CUNY (2014); Geomicrobiology of extreme environments as terrestrial analogs to Mars, New York City, NY
9. Civil & Environmental Engineering & Department of Biological Sciences, University of Delaware (2014); Microbial ecology of hypersaline environments of White Sands National Monument, New Mexico, Newark, DE

10. Geochemistry Seminar, University of Maryland (2012); White Sands National Monument, New Mexico terrestrial analog to Mars, College Park, MD
11. Department of Geological Sciences, University of Missouri (2012); Microbial signatures from the evaporitic arid environments of White Sands National Monument, New Mexico, Columbia, MS
12. Department of Earth and Environmental Sciences, Rutgers University – Newark (2012); Microbial signatures from the evaporitic arid environments of White Sands National Monument, New Mexico, Newark, NJ
13. Department of Geology and Department of Chemistry, University of Cincinnati (2011): Microbial signatures from the evaporitic arid environments of White Sands National Monument, New Mexico and Geomicrobiological methods for life signatures in extreme environments. Cincinnati, OH
14. Department of Geological Sciences, University of El Paso (2011): Microbial signatures in Aeolian evaporates of White Sands National Monument (New Mexico) and their astrobiological implications. El Paso, TX
15. Geophysical Laboratory, Carnegie Institution of Washington (2010): Microbial signatures from the evaporitic arid environments of White Sands National Monument, New Mexico. Washington, DC
16. Smithsonian Museum of Natural History (2009): Biomarkers: preservation in Mars analog environments. Washington, DC
17. USGS (2008): Biomarkers: preservation in Mars analog environments; example of Chesapeake Bay impact structure. Reston, VA
18. Geophysical Laboratory, Carnegie Institution of Washington (2007): Life's signatures in hydrothermal environments; Terrestrial analogues for Martian habitats. Washington, DC
19. Department of Geological Sciences, Indiana University (2006): Life's signatures in hydrothermal environments; Terrestrial analogues for Martian habitats. Bloomington, IN
20. Humboldt University, Natural History Museum (2006): Life's signatures in hydrothermal environments; Terrestrial analogues for Martian habitats. Berlin, Germany
21. Lecture "Petrology of meteorites" at the 2006 National Science Olympiad, Indiana University, Bloomington, IN

Publications

PEER-REVIEWED:

1. Ugwuanyi, I.R., Bowden, R., Fogel, M., De Natale, G., Somma, R., Piochi, M., Mormone, A., Steele, A., Murphy, A.E., Glamoclija, M.: The Effect of Hydrothermal Subsurface Fluid Dynamics on Microbial Diversity Structure and Function at Solfatara-Pisciarelli Hydrothermal System, Italy (submitted to *Environmental Microbiology* 09/21)
2. Aptekmann, A.A., Buongiorno, J., Giovannelli, D., Glamoclija, M., Ferreiro, D.U., Bromberg, Y., mebipred: identifying metal-binding potential in protein sequence. (*Accepted to Bioinformatics* 01/22) <https://www.biorxiv.org/content/10.1101/2021.08.12.456141v1>
3. Kminek, G. and COSPAR SSAP Working Group: Planetary Protection: Updating the Draft Test Protocol in the Light of Almost Two Decades of Research. Mars Extant Life: What is Next? (Accepted to *Astrobiology*, 02/22)
4. Yao, Y., Glamoclija, M., Murphy, A.E., Gao, Y. Characteristics of Microplastics in Ambient and Indoor Air in Northern New Jersey. (*In Press Environmental Research* 10/21)
5. Murphy, A.E., Jakubek, R.S., Steele, A., Fries, M.D., Glamoclija, M. (2021) Raman spectroscopy provides insight into carbonate rock fabric based on calcite and dolomite crystal orientation. *J Raman Spectroscopy* <https://doi.org/10.1002/jrs.6097>
6. Murphy, A., Wieman, S.T., Gross, J., Stern, J.C., Steele, A., Glamoclija, M. (2020) Preservation of organic carbon in dolomitized Cambrian stromatolites and implications for microbial biosignatures in diagenetically replaced carbonate rock. *Sed. Geol.* doi.org/10.1016/j.sedgeo.2020.105777
7. Glamoclija, M., Ramirez, S., Sirisena, K., Widanagamage, I. (2019) Subsurface Microbial Ecology at Sediment-Groundwater Interface in Sulfate-Rich Playa; White Sands National Monument, New Mexico. *Front. Microbiol.* 10:2595. doi: 10.3389/fmicb.2019.02595
8. Cavalazzi, B., Barbieri, R., Gómez, F., Capaccioni, B., Olsson-Francis, K., Pondrelli, M., Rossi, A. P., Hickman-Lewis, K., Agangi, A., Gasparotto, G., Glamoclija, M., Ori, G. G., Rodriguez, N. & Hagos,

- M., (2019) The Dallol Geothermal Area, Northern Afar (Ethiopia) - An Exceptional Planetary Field Analog on Earth. *Astrobiology*. 19/4, 553-578
9. Widanagamage, I. H., Waldron, A. R. & Glamoclija, M., (2018) Controls on barite crystal morphology during abiotic precipitation. *Minerals*. 8, 11, 480.
 10. Mukherjee, P., Glamoclija, M. & Gao, Y. (2018) Insignificant impact of freezing and compaction on iron solubility in natural snow In : *Journal of Atmospheric Chemistry*. 75, 3, p. 247-270 24 p.
 11. Sirisena, K. A., Ramirez, S., Steele, A. & Glamoclija, M. (2018) Microbial Diversity of Hypersaline Sediments from Lake Lucero Playa in White Sands National Monument, New Mexico, USA. In : *Microbial Ecology*. 76, 2, p. 404-418 15 p.
 12. Cavalazzi, B., Glamoclija, M., Brack, A., Westall, F., Orosei, R., Cady, S.L. (2017). *Astrobiology, the Emergence of Life, and Planetary Exploration*. In Rossi, A.P.; van Gasselt, S. *Planetary Geology*, Berlin, Springer. p. 347-367
 13. Pondrelli, M., Rossi, A. P., Le Deit, L., Fueten, F., van Gasselt, S., Glamoclija, M., Cavalazzi, B., Hauber, E., Franchi, F. & Pozzobon, R. (2015) Equatorial layered deposits in Arabia Terra, Mars: Facies and process variability. In : *Bulletin of the Geological Society of America*. 127, 7-8, p. 1064-1089 26 p.
 14. Pondrelli, M., Rossi, A.P., Le Deit, L., Fueten, F., van Gasselt, S., Glamoclija, M., Cavalazzi, B., Hauber, E., Franchi, F., Pozzobon, R. (2014) Equatorial Layered Deposits in Arabia Terra, Mars: Facies and process variability. In: *Geology*. DOI: 10.1007/978-3-319-04364-7_67
 15. Stern, J. C., McAdam, A. C., Ten Kate, I. L., Bish, D. L., Blake, D. F., Morris, R. V., Bowden, R., Fogel, M. L., Glamoclija, M., Mahaffy, P. R., Steele, A. & Amundsen, H. E. F. (2013) Isotopic and geochemical investigation of two distinct Mars analog environments using evolved gas techniques in Svalbard, Norway. In : *Icarus*. 224, 2, p. 297-308 12 p.
 16. Agee, C. B., Wilson, N. V., McCubbin, F. M., Ziegler, K., Polyak, V. J., Sharp, Z. D., Asmerom, Y., Nunn, M. H., Shaheen, R., Thiemens, M. H., Steele, A., Fogel, M. L., Bowden, R., Glamoclija, M., Zhang, Z. & Elardo, S. M. (2013) Unique meteorite from early Amazonian Mars: Water-rich basaltic breccia Northwest Africa 7034. In : *Science*. 339, 6121, p. 780-785 6 p.
 17. Steele, A., McCubbin, F. M., Fries, M., Kater, L., Boctor, N. Z., Fogel, M. L., Conrad, P. G., Glamoclija, M., Spencer, M., Morrow, A. L., Hammond, M. R., Zare, R. N., Vicenzi, E. P., Siljeström, S., Bowden, R., Herd, C. D. K., Mysen, B. O., Shirey, S. B., Amundsen, H. E. F., Treiman, A. H. & 2 others, (2012) A reduced organic carbon component in martian basalts. In : *Science*. 337, 6091, p. 212-215 4 p.
 18. Glamoclija, M., Fogel, M. L., Steele, A. & Kish, A. (2012) Microbial Nitrogen and Sulfur Cycles at the Gypsum Dunes of White Sands National Monument, New Mexico. In : *Geomicrobiology Journal*. 29, 8, p. 733-751 19 p.
 19. Dohm, J. M., Miyamoto, H., Ori, G. G., Fairén, A. G., Davila, A. F., Komatsu, G., Mahaney, W. C., Williams, J. P., Joye, S. B., Di Achille, G., Oehler, D. Z., Marzo, G. A., Schulze-Makuch, D., Acocella, V., Glamoclija, M., Pondrelli, M., Boston, P., Hart, K. M., Anderson, R. C., Baker, V. R. & 20 others, (2011) An inventory of potentially habitable environments on Mars: Geological and biological perspectives. In: *Analog for Planetary Exploration*. Geological Society of America, p. 317-347 31 p. (Special Paper of the Geological Society of America; vol. 483).
 20. Glamoclija, M., Marinangeli, L. & Komatsu, G. (2011) Harmakhis vallis source region, mars: Insights into the recent geothermal history based on geological mapping. In : *Planetary and Space Science*. 59, 11-12, p. 1179-1194 16 p.
 21. Steele, A., McCubbin, F. M., Fries, M., Glamoclija, M., Kater, L. & Nekvasil, H. (2010) Graphite in an apollo 17 impact melt breccia. In : *Science*. 329, 5987, 1 p.
 22. Szyrkiewicz A., Pratt L M., Glamoclija M., Moore C.H., and Bustos D. (2010) The origin of coarsely crystalline gypsum domes in a saline playa environment at the White Sands National Monument, New Mexico. In: *Journal of Geophysical Research, Earth Surface*. doi:10.1029/2009JF001592.
 23. Szyrkiewicz, A., Ewing, R. C., Moore, C. H., Glamoclija, M., Bustos, D. & Pratt, L. M. (2010) Origin of terrestrial gypsum dunes-Implications for Martian gypsum-rich dunes of Olympia Undae In : *Geomorphology*. 121, 1-2, p. 69-83 15 p.
 24. Glamoclija, M., Steele, A., Fries, M., Schieber, J., Voytek, M. A. & Cockell, C. S. (2009) Association of anatase (TiO₂) and microbes: Unusual fossilization effect or a potential biosignature? In : *Special Paper of the Geological Society of America*. 458, p. 965-975 11 p.

25. Cockell, C. S., Gronstal, A. L., Voytek, M. A., Kirshtein, J. D., Finster, K., Sanford, W. E., Glamoclija, M., Gohn, G. S., Powars, D. S. & Horton, J. W. (2009) Microbial abundance in the deep subsurface of the Chesapeake Bay impact crater: Relationship to lithology and impact processes. In : Special Paper of the Geological Society of America. 458, p. 941-950 10 p.
26. Szykiewicz, A., Moore, C. H., Glamoclija, M. & Pratt, L. M. (2009) Sulfur isotope signatures in gypsiferous sediments of the Estancia and Tularosa Basins as indicators of sulfate sources, hydrological processes, and microbial activity In : *Geochimica et Cosmochimica Acta*. 73, 20, p. 6162-6186 25 p.
27. Dohm, J. M., Anderson, R. C., Barlow, N. G., Miyamoto, H., Davies, A. G., Jeffrey Taylor, G., Baker, V. R., Boynton, W. V., Keller, J., Kerry, K., Janes, D., Fairén, A. G., Schulze-Makuch, D., Glamoclija, M., Marinangeli, L., Ori, G. G., Strom, R. G., Williams, J. P., Ferris, J. C., Rodríguez, J. A. P. & 2 others (2008) Recent geological and hydrological activity on Mars: The Tharsis/Elysium corridor. In : *Planetary and Space Science*. 56, 7, p. 985-1013 29 p.
28. Glamoclija, M., and Basu, A., (2007) Comparative Geology of Earth, Mars, and Moon during the First ~1.5Ga of their Evolution, In: *Transactions, Mining, Metallurgical and Geological Institute*, 103, 1&2, pp. 30-82 p.
29. Schieber, J., and Glamoclija, M. (2007) Microbial Mats Built by Iron Bacteria: A Modern Example from Southern Indiana. In: P. Eriksson et al. (Eds.), *An Atlas of microbial mat features preserved within the clastic rock record*, 233-244 p.
30. Ivanov, M. A., Korteniemi, J., Kostama, V. P., Aittola, M., Raitala, J., Glamoclija, M., Marinangeli, L. & Neukum, G. (2005) Major episodes of the hydrologic history in the region of Hesperian Planum, In : *Journal of Geophysical Research E: Planets*. 110, 12, p. 1-28 28 p., E12S21.
31. Glamoclija, M., Garrel, L., Berthon, J. & López-García, P. (2004) Biosignatures and bacterial diversity in hydrothermal deposits of Solfatara Crater, Italy. In : *Geomicrobiology Journal*. 21, 8, p. 529-541 13 p.

WHITE PAPER NASA AND NASEM, PLANETARY SCIENCE AND ASTROBIOLOGY DECADAL SURVEY 2023-2032

1. Hand, K.P., Phillips, C.B., Chyba, C.F., Toner, B., Katija, K., Orphan, V., Huber, J., Cavanaugh, C.M., Carlson, M., Christner, B., Templeton, A., Seewald, J., Hofgartner, J.D., Amend, J.P., Orcutt, B.N., Bartlett, D.H., Falkowski, P., Anderson, R., Spear, J.R., Shank, T., Fischer, W.W., Hazen, R.M., Hoehler, T., D'Hondt, S., Pitesky, J., Lynch, K., Shock, E.L., Craft, K., Boyd, E., House, C.H., Reysenbach, A.L., Glass, J., Fike, D., Baross, J.A., Gogarten, J.P., Kaçar, B., El-Naggar, M., Murray, A.E., Dupont, C., Scully, J., Rothschild, L., Trembath-Reichert, E., Klein, F., Cohen, P.A., Gile, G.H., Lloyd, K., Dekas, A., Delaney, J.R., Skidmore, M., Buongiorno, J., Rogers, K., Hofmann, A., Brazelton, W.J., Anbar, A., Manalang, D.A., Stevenson, B., Neuer, S., Nordheim, T., Shapiro, R., Bradley, A.S., Mikucki, J., Hara, E., Brown, M.E., Glamoclija, M., Reyes, C., Sánchez-Román, M., Farmer, J.D., Giovannelli, D., Suel, G., Trumbo, S., Cameron, M., Osburn, M., Bradley J.A., Garcia-Pichel, F., Steen, A.D., Marlow, J., Trubl, G., Robinson, K., Caro, T., Fulfer, V., Parker, C.W., Feyhl-Buska, J., Roussel, A. (2020) On the Past, Present, and Future Role of Biology in NASA's Exploration of our Solar System. *Biology and Solar System Exploration NASA and NASEM, Planetary Science and Astrobiology Decadal Survey 2023-2032, White Paper #299*

EXTENDED ABSTRACTS FROM LUNAR AND PLANETARY SCIENCE CONFERENCES AND ASTROBIOLOGY SCIENCE CONFERENCES:

1. Sephton, M.A., Freeman, K.H., Hays, L., Thiessen, F., Benison, K., Dworkin, J.P., Glamoclija, M., Gough, R., Onofri, S., Peterson, R., Quinn, R.C., Russell, S., Stueeken, E., Velbel, M., Zolotov, M., and the MSR Temperature-Time Tiger Team (2022) The Effects of Temperature and Time on Samples Returned From Mars. *AbSciCon, Georgia, AT, AbSciCon #2204*
2. Murphy, A.E., Glamoclija, M., Blake, D., Sharma, S., Beegle, L.W., Sobron, P., Simon, K., Van Hoesen, D., Shkolyar, S., Yingst, R.A. (2022) Determining Pixl, Sherlock, & Supercam's Ability To Identify Dolomite Phases & Potential Biosignatures In Cambrian Microbialites. *LPSC, Houston, TX, AbSciCon #2204*
3. Murphy, A.E., Bartley, J.K., Reid, R.P., Glamoclija, M. (2022) The Effects of Biofilm in Burial Dolomitization and Potential Mineralogical Biosignatures: An Experimental Study Using Modern Bahamian Stromatolites. *AbSciCon, Georgia, AT, AbSciCon #2204*

4. Steele, A., Benning, L.G., McCubbin, F.M., Siljeström, S., Hauri, E., Wang, J., Kilcoyne, D., Grady, M., Verchovsky, A., Smith, C., Freissinet C., Szopa, C., Glavin, D.P., Burton, A., Fries, M., Rodriguez-Blanco, J.D., Glamoclija, M., Rogers, K.L., Mikhail, S., Zare, R., Dworkin, J.P., Bhartia, R. (2019) Characterization of the Organic Inventory of the Tissint Meteorite: Implications for Sample Return, AbSciCon, Seattle, Absc # 509-4
5. Murphy, A., Gross, J., Stern, J.C., Wieman, S.T., Glamoclija, M. (2019) Biosignature Alteration in Dolomitized Cambrian Stromatolites and Implications for Interpreting Carbonate Diagenesis on Mars. AbSciCon, Seattle, Absc # 509-2
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