

Alix Dujardin

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Educational Background

January 2021 – present: Ph.D. in Biology and Chemistry – Origins Institute and Chemical Biology, McMaster University, Hamilton, ON, Canada, Supervisor Dr. Maikel Rheinstädter and Dr. Ralph Pudritz

2020: Master's degree in Bio-geosciences, specialized in paleontology, paleoenvironment, heritage, University of Rennes 1, France

2018: Bachelor of Biochemistry, University of Montpellier, France

2017: University technical diploma in biological engineering, University Technical Institute in Evreux, France

Publications

- 1) Dujardin, A., Himbert, S., Pudritz, R., & Rheinstädter, M. C. (2022). The Formation of RNA Pre-Polymers in the Presence of Different Prebiotic Mineral Surfaces Studied by Molecular Dynamics Simulations. *Life*, 13(1), 112.
- 2) Zou, X., Himbert, S., Dujardin, A., Juhasz, J., Ros, S., Stover, H. D., & Rheinstädter, M. C. (2021). Curcumin and Homotaurine Suppress Amyloid- β 25–35 Aggregation in Synthetic Brain Membranes. *ACS Chemical Neuroscience*, 12(8), 1395-1405.

Conference presentations

Oral

- 1) **August 3rd to 5th, 2022:** Origin of Life Early Career Network, Montreal, Canada (in person)
- 2) **June 5th to 10th, 2022:** Canadian Association of Physicists, in person, division W2-3 Biophysics outside the box (DPMB) (in person)
- 3) **June 7th to 9th, 2021:** Canadian Association of Physicists virtual congress, division Molecular and Cellular Biophysics (DPMB) (virtual)
- 4) **May 25th and 26th, 2021:** Origin Institute – Collaboration with Le Consulat Général de France in Toronto (virtual)
- 5) **April 5th to 16th, 2021:** American Chemical Society (ACS), division of Colloid & Surface Chemistry (virtual)

Poster

- 6) **December 6th, 2022:** Graduate Research Symposium, McMaster University (in person)
- 7) **August 26th and 27th, 2022:** Molecular origins of Life, Munich, Germany (virtual)
- 8) **August 26th and 27th, 2021:** Molecular origins of Life, Munich, Germany (virtual)
- 9) **May 25th to 28th, 2021:** 6th annual meeting of the Biophysical society of Canada (BSC) (virtual)
- 10) **April 7th to 9th, 2021:** 7th European Joint Theoretical/Experimental Meeting on Membranes (EJTEMM) (virtual)

Video

- 11) **September 14th to 17th, 2021:** Astrobiology Graduate Conference (AbGradCon), Tokyo, Japan (virtual)

Employment

January 2021 – present: Full time Ph.D. candidate in Biology and Chemistry – Origins Institute and Chemical Biology, McMaster University, Hamilton, ON, Canada, Supervisor Dr. Maikel Rheinstädter and Dr. Ralph Pudritz.

- Teaching Assistant
 - (1) **September – December 2022:** Teaching Assistant, McMaster University, BIOPHYS 1S03: Biophysics of Movement and the Senses: From microbes to moose
 - (2) **January – April 2022:** Teaching Assistant, McMaster University, BIOPHYS 3D03: Origins of life
 - (3) **September – December 2021:** Teaching Assistant, McMaster University, BIOPHYS 1S03: Biophysics of Movement and the Senses: From microbes to moose
 - (4) **January – April 2021:** Teaching Assistant, McMaster University, BIOPHYS 3D03: Origins of life; BIOPHYS 2S04: Explorations in Medical and Biological Physics

- **January 2020 – June 2020:** Research project, Supervisor Dr. Maikel Rheinstädter, Origins Institute, McMaster University, Hamilton, ON, Canada

Professional Societies

Member of the Canadian Association of Physicists (CAP) & the American Chemical Society (ACS)

Awards and Scholarships

December 2022: Exemplary composition for a scientific poster award (CA\$100)

June 2022: Chemical Biology Graduate Program Inclusive Excellence Award (CA\$15000)

April 2022: Chemical Biology Graduate Student Travel Awards (CA\$500)

February 2022: The James A. and Irene D. Morrison Memorial Scholarship. It was established in 1987 in memory of Professor Emeritus James A. Morrison who, until 1987, was Professor of Chemistry and Director of the Institute for Materials Research from 1969 to 1986. This scholarship is in preference given to students undertaking research in physical chemistry (CA\$4000)

Outreach

September 25, 2022: Soapbox science booth at the Royal Botanic Garden in Hamilton in the context of telling tales' event.

2022: Art and science project, in progress. Collaboration between the origin of life laboratory (McMaster University) and Eryn Foster (<https://artsplaceexhibits.weebly.com/eryn-foster.html>).

2022: Writing of three books "Life and its Origin", "Space and its Origin", and "Why Earth is a special Planet?" at destination of young and youth (7-13 years old), in progress. The goal of this project was to collaborate with the Origin Institute Graduate students and to extend the public of the Origin of life and space research for a young public.

2021-2022: Certificate of Completion McMaster Children and Youth University (in progress). This certificate provides opportunities to improve communication, knowledge mobilization and translation, leadership, organization, and adaptability skills while working with a younger population. I already did my 15 hours of training, we created and executed of engaging and interesting science workshops for a class of grade 5 and 6.

November 2021: Starting an Instagram account with my lab colleague to promote the research that are performed in the Membrane and Protein Dynamic/Origin Lab (60+ followers). 65% of our audience are students.

July 2021: Interview for La nature selon Boucar at Radio-Canada "The importance of water in the origin of life", in French, available at <https://ici.radio-canada.ca/ohdio/premiere/emissions/la-nature-selon-boucar/episodes/553155/rattrapage-du-samedi-24-juillet-2021>.

July 2021: Interview about My science work – Omniscience "Are we truly alone in the Milky Way?", available at <https://www.mysciencework.com/omniscience/truly-alone-milky-way> (2070 views)

April 2021: Design the cover page of ACS Chemical Neuroscience Zou, X., Himbert, S., Dujardin, A., Juhasz, J., Ros, S., Stöver, H. and Rheinstädter, M., 2021. Curcumin and Homotaurine Suppress Amyloid- β 25–35 Aggregation in Synthetic Brain Membranes. ACS Chemical Neuroscience, 12(8), pp.1395-1405

2013-2015: Volunteering in BF Skinner School, specialised establishment for autism. Using the strategy of action-reward to communicate with children (ABA method), I was working twice a month with children with different autism spectrum. I was helping the educators, since one educator had to be present per child. Seeing new people helped the children to excel in their activities, whether psychomotor or intellectual.