XIMENA C. ABREVAYA

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CURRENT POSITION

Senior Research Scientist – CONICET (permanent position). Astrobiologist, Instituto de Astronomía y Física del Espacio (IAFE), University of Buenos Aires - CONICET, Argentina (since 2013).

EDUCATION

2011 PhD in Biological Sciences, University of Buenos Aires, Argentina. Title of the Thesis: ´UV radiation effects on microorganisms for the elaboration of habitability models and the search for simple life forms in solar and extrasolar planets´. Advisor: Dr. E. Cortón (UBA – CONICET) Dr. P. Mauas (UBA – CONICET). Qualification: 10/10

2005 Licenciate in Biological Sciences (equivalent to MSc), University of Buenos Aires, Argentina. Title of the Thesis: ´Genetic Toxicology: the Micronucleus Test as a Biomarker of Damage in Genotoxicity induced by Metronidazole´ Advisor: Dr. M. Mudry (UBA-CONICET). Qualification: 10/10

AWARDS

National Award to Scientific Journalism, 2007. Ministry of Science, Technology and Productive Innovation of the Nation (MINCyT). Buenos Aires, Argentina.

FELLOWSHIPS

Postdoctoral fellow FAPESP (2013-2014) Topic: Stellar radiation and its influence over the biosphere of planetary bodies. Advisor: Prof. Dr. Jorge E. Horvath, Research Unit in Astrobiology, IAG, University of Sao Paulo, Sao Paulo, Brazil.

Postdoctoral fellow CONICET (2011-2013) Topic: UV habitability in extrasolar planets. Instituto de Astronomía y Física del Espacio – UBA - CONICET, Buenos Aires, Argentina.

Doctoral fellow University of Buenos Aires (2010-2011). Topic: UV habitability in extrasolar planets. Instituto de Astronomía y Física del Espacio – UBA - CONICET, Buenos Aires, Argentina.

Doctoral fellow ANPCyT (2007-2010). Topic: UV habitability in extrasolar planets. Instituto de Astronomía y Física del Espacio – UBA - CONICET, Buenos Aires, Argentina

PUBLICATIONS

List of selected publications (21 publications in refereed journals; 2 book chapters)

Figueredo, F.**,** Cortón, E., **Abrevaya, X.C.** (2015) *In situ search for extraterrestrial life: A Microbial Fuel Cell-Based Sensor for the Detection of Photosynthetic Metabolism*. ***Astrobiology*** 15: 717-727.

Abrevaya, X.C., Hanslmeier, A., Leitzinger,M., Odert, P., Mauas, P.J.D., Buccino, A. P. (2013) *UV Radiation of the young Sun and its Implications for life in the Solar System*. ***Central European Astrophysical Bulletin*** 37: 649-654.

Abrevaya, X.C. (2012) *´Features and applications of halophilic archaea´*. 123-158 pp In: ***Extremophiles: Sustainable Resources and Biotechnological Implications*** (Editor: Dr. Om V. Singh), Ed. Wiley

Lage, C., Dalmaso G., Texeira, L., Bendia A., Paulino Lima, I., Galante, D., Janot-Pacheco E., **Abrevaya X.C.**, Azua-Bustos, A., Pellizari V., Rosado A. (2012) *'Probing the limits of extremophilic life in extraterrestrial environment-simulated experiments´,* ***International Journal of Astrobiology*** 11: 251-256.

Abrevaya X.C.; Paulino-Lima I.G.; Galante D.; Rodrigues F., Cortón E., Mauas P.J.D.; de Alencar Santos Lage, C. (2011) *'Comparative survival analysis of Deinococcus radiodurans and the haloarchaea Natrialba magadii and Haloferax volcanii, exposed to vacuum ultraviolet irradiation'*, ***Astrobiology*** 11: 1034-1040.

Abrevaya X.C., Sacco N., Mauas P.J.D., Cortón E. (2011). *'High Ionic Strength Microbial Fuel Cell using Salt Tolerant Archaea'*, ***Extremophiles*** 15: 633-642.

Buccino A.P; Díaz R.F; Luoni M.L., **Abrevaya, X.C**.; Mauas P.J.D. (2011) *'Long-termchromospheric activity in southern M dwarfs: Gl 229 A and Gl 752 A'*, ***Astronomical Journal*** 141: 34 -41.

Abrevaya, X.C.; Mauas P. J. D.; Cortón E. (2010) *'Microbial fuel cells applied to the metabolically -based detection of extraterrestrial life'*, ***Astrobiology*** 10: 965-971.

ACADEMIC ADVISORY AND TEACHING

Advisor of the undergraduate student **in Biochemistry** of Giselle Di Guardo (internship), Facultad de Famacia y Bioquímica, University of Buenos Aires (2014-current).

Co-Advisor of the **Licenciatura Thesis in Biological Sciences (equivalent of MSc degree)** of Pablo N. Nuñez Pölcher (2014). University of Buenos Aires, Argentina. Topic: Synthesis of polymers in carbon electrodes and their potencial use in microbial fuel cells as photosynthetic metabolism biosensors.

Advisor of the **Licenciatura Thesis in Astronomy (equivalent of MSc degree)** of Matías Javier García (2014). National University of Córdoba, Argentina. Topic: Physical conditions on Exoplanets and microorganisms surviving in extreme environments.

Advisor of Laura da Silva **(internship from Université París Diderot**, París – University of Buenos Aires, Argentina) (2012) Topic: Effects of UV radiation on halophilic archaea.

Advisor of several internships of several **undergraduate students at University of Buenos Aires** (2010-to present) in topics related to Astrobiology.

Professor and responsible of the course ´**Introduction to Astrobiology´ at Astronomical Observatory of Córdoba, Universidad Nacional de Córdoba** (2012).

Invited professor at **General Biology and Zoology Course**. Favaloro University. 2009.

Advisor-Tutor of admission course to University of Buenos Aires, CBC-UBA. Program PACENI (Programa de Apoyo para el Mejoramiento de la Enseñanza en primer año de carreras de grado de Ciencias Exactas, Ciencias Naturales, Ciencias Económicas e Informática). Ministery of Education, Faculty of Exact and Natural Sciences, University of Buenos Aires (2009).

Teaching assistant . **Genetics Course** (2007 and 2009) and Genetic **Toxicology Course** (2002 and 2003) University of Buenos Aires.

PARTICIPATION IN EVENTS

In total **45**, including national and international events and schools, **8 invited talks** since 2013.

GRANTS AND FUNDING

Principal investigator of TGM -16126 : **Simulations on interplanetary transfer of life (lithopanspermia) and radiation. The Biosun Project**. Syncrotron Light National Laboratory (LNLS). Campinas, Brazil. (2014) and **Bilateral cooperation agreement Argentina-Austria.** MINCyT – BMWF (AU1012)**:** La influencia de la radiación UV del sol joven sobre la vida**.** (2012-2015).

Since 2007, **co-investigator of 13 projects** and awarded with **more than 10 grants to participate in conferences, workshops and schools**.

PROFESSIONAL MEMBERSHIPS

Member of the **International Astronomical Union** (IAU) (since 2012); Professional member of the **Argentinean Astronomical Association** (AAA) (since 2011).

SCIENCE OUTREACH/ JOURNALISM

Author of more than **30 articles** published in different mass media as newspapers, journals, and internet media (since 1999). **TV producer and scientific journalist** (2004-2005). **Editor, writer for internet media** (2006-2007).

LANGUAGES

English. Communicative and linguistic performance, reading, speaking and writing skills. Advanced level.

Portuguese. Communicative and linguistic performance, reading, speaking and writing skills. Intermediate level.

German. Basic level

Spanish. Native.