
Current Research Position

- Australia Awards Endeavour Post-doctoral Research Fellow
 - University of Hawaii (Mentor: Mike Mottl)
 - University of Washington (Mentor: John Baross)

Refereed Publications

- **Aditya Chopra** and Charles H. Lineweaver (2016), *The Case for a Gaian Bottleneck: the Biology of Habitability*, *Astrobiology*, 16, 1, 7-22 (<http://bit.ly/gaianbottleneck>).
- **Aditya Chopra** (2016), *What is the history of elements in the Universe?*, Chapter Section in the *Astrobiology Primer 2.0.*, *Astrobiology*, 16, 8, 561-653 (<http://bit.ly/AstroBioPrimer2>).
- *Charles H. Lineweaver and Aditya Chopra* (2012), *Habitability of Earth and Other Earths: Astrophysical, Geochemical, Geophysical and Biological Limits on Planet Habitability*, *Annual Review of Earth and Planetary Sciences*, Vol. 40, 597-623 (<http://is.gd/annrevlc12>)
- Charles H. Lineweaver and **Aditya Chopra** (2012), *What can life on Earth tell us about life in the universe?* In J. Seckbach (Ed.), *Genesis - In The Beginning: Precursors of Life, Chemical Models and Early Biological Evolution*, 799-815, Springer. ISBN 978-94-007-2940-7. (<http://is.gd/etlife12>)
- **Aditya Chopra**, Charles H. Lineweaver, Jochen J. Brocks and Trevor R. Ireland (2010), *Palaeoecophylostoichiometrics: Searching for the Elemental Composition of the Last Universal Common Ancestor*, in *Australian Space Science Conference Series: 9th Conference Proceedings. Full Refereed Proceedings DVD*, National Space Society of Australia Ltd, ISBN 13: 978-0-9775740 (www.tinyurl.com/ACetal10)
- **Aditya Chopra** and Charles H. Lineweaver (2009), *The major elemental abundance differences between Life, the Oceans and the Sun*, in *Australian Space Science Conference Series: 8th Conference Proceedings. Full Refereed Proceedings DVD*, National Space Society of Australia Ltd, ISBN 13:978-0-9775740-2-5 (www.tinyurl.com/ACCL08)
- **Aditya Chopra** (2009), *What is Life made of?*, *The Australian National University's Undergraduate Research Journal*, Volume 1, 1-6, ISSN 1837-2872
- **Aditya Chopra**, John Baross and Charles H. Lineweaver (in prep.), *Early biospheres on Earth.*
- **Aditya Chopra** and Charles H. Lineweaver (in prep.), *A reference elemental composition of life.*
- **Aditya Chopra**, Charles H. Lineweaver, John Baross and Mike Mottl (in prep.), *Can elemental abundances be used to identify the most likely site for the origin of life?*
- **Aditya Chopra**, John Baross and Charles H. Lineweaver (in prep.), *The stoichiometric evolution of life in the universe*, in Richard Gordon & Alexei Sharov (Eds.) *Habitability of the Universe before Earth*, Series: *Astrobiology: Exploring Life on Earth and Beyond*.

A comprehensive list of publications, talk and poster presentations, and activities related to teaching, media, outreach and administrative activities at http://www.adi.life/publications_activities.html

Honours & Awards

- "Best Oral Presentation" Gordon Research Seminars on the Origins of Life in 2016.
- Recipient of Australia Awards Endeavour Post-doctoral Research Fellowship in 2015.
- "Best Postgraduate Oral Presentation" Runner Up, 2015 Australian Space Science Conference.
- Awarded 2014 Resident of the Year at UniLodge ANU.
- Student of the Year Finalist at the 2013 ANU Alumni Awards.
- Best Talk Prize at the 2014, 2012 and 2011 Stromlo Student Christmas Seminars.
- Australian delegation member of 2014 Commonwealth Science Conference (India) and 2013 Lindau Nobel Laureate Meeting (Germany).

- 2012 Robert Hill Memorial Prize for displaying excellence in research, good communication skills, proven publications record, and the ability to communicate research to a broad audience.
- "Best Postgraduate Oral Presentation" at the 2012 Australian Space Science Conference.
- 1st Prize and Audience Favourite Prize at the 2012 "3 Minute Thesis Competition" at ANU (represented the university at the national competition).
- Vice-Chancellor's 2011 Award for Community Outreach recognising the contributions of the Student Outreach Team at the Research School of Astronomy and Astrophysics at ANU.
- Community Spirit Award from UniLodge ANU for outstanding contributions during 2011.
- Best Poster Award for two posters presented at the 2011 European Workshop on Astrobiology.
- 3rd prize at *The Space Factor* student contest at the 2011 European Workshop on Astrobiology.
- 2nd prize for poster presented at the ANU 2010 ResearchFest.
- Australian Postgraduate Award for PhD studies commencing in 2009.
- Honours Year Scholarship at the Australian National University in 2008.
- Fluor Foundation scholarship by Scholarship America in 2008.
- 'Best Chemical OH&S Poster' in 2007 at the University of Western Australia in 2008.
- Summer Research Scholarship at the Australian National University in 2007.
- 'Most Promising Science Communicator', Western Australian 2004 CSIRO Student Research Scheme

Grant Activity

- \$5000 from the 34th International Geological Congress for field trip to Pilbara & Shark Bay in 2016.
- \$1500 from NASA JPL to participate in the 2016 Planetary Science Summer School (Uranus Mission Concept Study, mentored by Team-X at the Jet Propulsion Laboratory, California, USA).
- \$2300 from the organising committee to present a talk and poster at the 2016 Gordon Research Conference and Seminars on the Origin of Life in Galveston, USA.
- \$2700 to undertake an Executive Education Course (ANU Crawford School of Public Policy) in 2015.
- \$2500 from the Australian Academy of Science and ANU to participate at the 2014 Commonwealth Science Conference in India and 2015 Global Young Scientists Summit in Singapore.
- \$2500 from the Uwingu Fund and ISSOL to present at the 2014 Origins Meeting in Nara, Japan.
- \$6800 from the Aust. Academy of Sci. to participate in the 2013 Lindau Nobel Laureate Meeting.
- \$200 from the Humboldt Foundation to present at the Humboldt Colloquium in Sydney, Australia.
- \$700 from the local organising committee and RSES, ANU to present at the 2012 Australian Space Science Conference in Melbourne, Australia.
- \$2500 from the Astronomical Society of Australia and RSES, ANU to present at the 2012 Astrobiology Science Conference in Atlanta, USA.
- \$500 from the Geological Society of Australia to present at the 2012 IGC in Brisbane, Australia.
- \$600 from CSRIO and ANU to support education and outreach activities during the 2011 National Science Week Experimenton at the CSIRO Discovery Centre, Canberra, Australia.
- \$2500 from the Australian Centre for Astrobiology, International Society for the Study of the Origin of Life and Astrobiology Society, and ANU (Vice-Chancellor's HDR travel grant) to present at the 2011 Origins Conference in Montpellier, France.
- \$400 from the European Astrobiology Network Association to present at the 2011 European Workshop on Astrobiology in Cologne, Germany.
- \$400 from the ANU Student ANU Student Recruitment Office to present to present guest lectures at 3 high schools in Perth, Australia.
- \$700 from RSES and ANU to cover travel expenses for field work to study hydrothermal vent fluids at the Kermadec Arc submarine volcanoes (off the coast of New Zealand) on-board *RV Tangaroa*.
- \$3500 from the LOC to participate in the 2011 Astrobiology Winter School in Hawaii, USA.
- \$100 from RSES to participate in a science communication workshop by the Australian National Centre for Public Awareness of Science in Canberra, Australia in 2010.
- \$400 from RSES and LOC to present at the 2010 Aust. Space Science Conf. in Brisbane, Australia.
- \$1600 from RSES and RSAA for demonstration flights for the EARTHRISE program.
- \$3600 from the organising committee and RSES to present at the 2010 Astrobiology Graduate Conference in Tällberg, Sweden.

- \$550 from the Geological Society of Australia and RSES to present at the 2009 Australian Space Science Conference and 2010 Australian Earth Sciences Convention in Australia.
- \$2300 from ANU (Vice-Chancellor's HDR travel grant) and the NASA Astrobiology Institute to present a talk and poster at the 2010 Astrobiology Science Conference in Texas, USA.
- \$2000 from the organising committee to present a poster at the 2010 Gordon Research Conference and Seminars on the Origin of Life in Galveston, USA.
- \$2700 from the organising committee to present a poster at the 2009 NASA Astrobiology Graduate Conference in Washington, USA.
- \$3800 from RSES and the organising committee to attend the 2009 International Astrobiology Summer School in Santander, Spain.
- \$1100 by RSAA to participate in the 2008 ASA Harley Wood Winter School in Perth, Australia.

Education & Research Experience

Australia Awards Endeavour Post-doctoral Research Fellow **2016**

- University of Washington (Mentor: John Baross) & University of Hawaii (Mentor: Mike Mottl)

PhD student: Planetary Science Institute, Australian National University **2009 - 2015**

- *The Origin and Evolution of Life on a Pale Blue Dot: Astrophysical, Geochemical and Biological Constraints on Habitability* (Supervisor: Charles H. Lineweaver)

Bachelor of Science (1st class Honours), Australian National University **2008**

- Undertook research under the supervision of Charles H. Lineweaver studying the elemental abundances of life on Earth, the Oceans and the Sun.
- Performed analysis of the elemental composition of *E. coli* to identify resources required for future studies of the elemental composition of bacteria and archaea.
- Completed courses in Planetary Geology, Astrophysics, Chemistry and Science Communication.

Bachelor of Science: University of Western Australia **2005 - 2007**

- Consistently achieved High Distinctions for the 2nd and 3rd years with GPA of 6/7.
- Completed courses in Chemistry, Mathematics, Physics, Astronomy and Biology.

Secondary Education: Rossmoyne Senior High School, Perth, Australia **2004**

Research (3 month project): with Prof. John Watling, University of WA **2007**

Performed elemental analyses of marine sponges and studied nutrient uptake in mussels to identify relationships between metabolic pathways and the composition of its environment.

Summer Research Scholarship: with Dr. Charles H. Lineweaver, ANU **2007**

Research on the abundance of elements in organisms in the context of the origin and evolution of life.

Undergraduate Researcher: with Dr. Susan Barker, UWA **2005-2007**

Identified genes contributing to beneficial symbiosis between plants and fungi.

Student Research Scheme: with Dr. Patrick Finnegan, UWA **2004**

Investigation of mitochondrial protein synthesis to confirm the identity of transcription factor cDNA.

Professional Memberships

(Student status until 2015)

Geological Society of Australia

Geochemical Society

Astronomical Society of Australia

International Society for the Study of the Origin of Life and Astrobiology Society