Roger Everett Summons
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Born: Sydney, Australia, mid 20th century

CURRENT POSITION
SCHLUMBERGER PROFESSOR OF GEOBIOLOGY

PROFESSIONAL EMPLOYMENT

7/2001-6/2015	**PROFESSOR OF GEOBIOLOGY,** MIT
1995-July 2001	**CHIEF RESEARCH SCIENTIST**, AGSO-Geoscience Australia, Research Coordinator. Petroleum geochemistry and biogeochemistry
July, 1983 to November, 1995	**PRINCIPAL AND SENIOR PRINCIPAL RESEARCH SCIENTIST,** BMR AND AGSO**.** Management of a research team studying the composition and origin of petroleum and the biogeochemical carbon cycle.
May, 1983 to July, 1987	**SENIOR RESEARCH SCIENTIST,** BUREAU OF MINERAL RESOURCES**.** BAAS BECKING GEOBIOLOGY LABORATORY. Geomicrobiology
November, 1977 to May, 1983	**RESEARCH OFFICER,** RESEARCH SCHOOL OF BIOLOGICAL SCIENCES, ANU**.** Mass spectrometry, studies of carbon metabolism and phytohormones
October, 1973 to November, 1977	**RESEARCH FELLOW AND POSTDOCTORAL FELLOW,** RESEARCH SCHOOL OF CHEMISTRY, ANU**,** mass spectrometry, chemical synthesis
1972 to 1973	**FELLOW IN GENETICS,** STANFORD UNIVERSITY MEDICAL SCHOOL, Organic mass spectrometry, analysis of meteorites

EDUCATION

1969-1971	**DOCTOR OF PHILOSOPHY IN CHEMISTRY** University of NSW, Wollongong University College.
1964-1968	**BACHELOR OF SCIENCE (HONS. CLASS 1), MAJOR IN CHEMISTRY** University of NSW, Wollongong University College.

MEMBERSHIPS OF LEARNED SOCIETIES AND RESEARCH ALLIANCES

1972 - 1998	Member and Fellow of the Royal Australian Chemical Institute
1968 - 2001	Treasurer, Public Officer, Member of ANZSMS National Committee & Conference Organising Committees for 1996 and 1998.
1985 - 1988	Member The Precambrian Palaeobiology Research Group, Dept. UCLA
1988 - 2006	The Geochemical Society, Associate Editor Geochimica et Cosmochimica Acta
1992 - 1996	IGCP Project 320: Neoproterozoic Events and Resources
1993 - 2004	Petroleum Exploration Society of Australia
1994 - present	European Association of Organic Geochemists
1998	Convenor and Chair, Australian Organic Geochemists Conference, Canberra
1998 - present	Member of NASA Astrobiology Institute Ames Research Center lead team
1998 - 2004	Member of NASA Astrobiology Institute Harvard-MIT-WHOI
1999 - 2001	Member of ODP Australia SCICOM
4/1999 - 10/1999	Guest Investigator, Woods Hole Oceanographic Institution
6/1999 - present	Adjunct Professor, Earth and Planetary Sciences, Macquarie University, Sydney
2000 - 2001	Adjunct Scientist, Woods Hole Oceanographic Institution
2001	NASA Taskforce-Biomarkers for Mars Exploration
2001 - present	Geological Society of America
2001 - present	American Geophysical Union

2007- present	Adjunct Professor, Curtin University, Perth
2010-2014	Visiting Professorial Fellow, The University of New South Wales

AWARDS

1968	Wollongong College - University of NSW Peter Beckmann Memorial Prize, Chemistry III & NSW Geological Survey Prize, Geology I
1969-1972	Wollongong College - University of NSW Comm. Postgraduate Scholarship
1988	Best paper Award by the Organic Geochemistry Division, Geochemical Society
1989	Australian Academy &Royal Society Guest Fellowship, Bristol University UK
1998	PESA Australian Lecturer, Petroleum Explorationists Society of Australia
1998	Fellow of the Australian Academy of Science
2001	Morrison Lecturer, Australian and New Zealand Society for Mass Spectrometry
2002	Australian Organic Geochemistry Medal
2003	Alfred E Treibs Medal of the Geochemical Society and Fellow of the Geochemical Society
2005	Halpern Lecturer and Inaugural Halpern Medallist University of Wollongong
2006	Fellow, American Geophysical Union
2008	Alexander von Humboldt Research Prize
2008	Fellow, Hanse-Wissenschaftskolleg, Delmenhorst, Germany
2008	Fellow of the Royal Society of London
2008	Moore Scholar, GPS Division, Caltech, Pasadena, California
2008	Doctor of Science, *Honoris Causa*, University of Wollongong
2011	Best paper Award by the Organic Geochemistry Division, Geochemical Society
2012	Fellow of the American Academy of Microbiology
2013	Honorary Fellow of the Hanse-Wissenschaftskolleg, Delmenhorst, Germany
2014	Inaugural Fellow, Australian and New Zealand Society for Mass Spectrometry
2015-6	Cox Visiting Professor, Earth, Energy and Environmental Sciences, Stanford University, Stanford, California.
2016	Visiting Fellow, Hanse-Wissenschaftskolleg, Delmenhorst, Germany & Uni Bremen

SERVICE

Board of Associate Editors – Geochimica et Cosmochimica Acta (1992-2005), Astrobiology, Geobiology
Student Awards Committee, European Association of Organic Geochemists 2001- 2012
NSF Working Group on Methane Hydrates and Climate Change 7/2002-3; NSF Working Group on Biogeosciences
NAS/NRC Committee on Origin and Evolution of Life (COEL) 3/2003-2005
NAS/NRC Committee on Limits of Life (LIMITS) 2004-2005
NAS/NRC Committee on Mars Astrobiology 2005-2007
NASA Co-chair of the Organic Contamination Panel providing guidelines for the Mars 2020 Rover
Member of the NASA Astrobiology Institute Executive Council 2007-current
Member of the steering committee for the Simons Foundation Origins of Life Collaboration (SCOL) 2013-current
Member of the MIT Faculty Committee on Campus Planning 2015-current

RESEARCH CAREER SUMMARY

I was trained in organic chemistry and, in my early career, followed evolving interests in natural product chemistry and mass spectrometry. As a NASA-sponsored postdoctoral fellow in the Genetics Department at Stanford University (1972-1973), I worked under the supervision of Professor Joshua Lederberg and Dr Alan Duffield. Among other issues, I investigated the use of mass spectrometric methods and stable isotope labelled compounds for quantification of 'biosignature' compounds such as amino acids. This work, although primitive by today's standards, was conducted at the time of the Viking exploration of Mars under the rationale that analogous methods might be adapted to subsequent flight instruments for remote detection of life beyond Earth. Associated studies were conducted on the Murchison meteorite in order to clarify the composition of meteoritic amino acids, organic acids and the possible nature of their precursors.

During subsequent postdoctoral appointments at the Australian National University (1973-1983), I continued to follow interests in mass spectrometry as an analytical tool and began an extended series of investigations into plant hormones.

In 1983, I took up a position as Senior Research Scientist at the Baas Becking Geobiological Laboratory (a consortium of scientists from The Bureau of Mineral Resources and CSIRO) and was charged with the broad task of studying the habitat and nature of Australia's petroleum deposits. Over the next 18 years I led numerous investigations to characterise novel hydrocarbons and other kinds of biomarker lipids, understand their origins in specific taxa, their isotopic compositions, their burial histories and ultimately the environmental conditions that have prevailed on Earth in various sedimentary settings where organic matter has been preserved. Our research on ancient sediments is aided by complementary studies of extant microbes living in modern, microbially-dominated ecosystems. This research has led to new insights into the early history of life on earth for which no comparable record of visible fossils exists.

In 2001 I was offered the opportunity to establish a new research and teaching program in geobiology at the Massachusetts Institute of Technology. The academic environment at MIT provides a degree of scientific autonomy and topic diversity not previously accessible. I currently lead the MIT Team of the NAI and summaries of current projects are here: http://summons.mit.edu/ and http://www.complex-life.org/

CITATIONS http://scholar.google.com.au/citations?user=r_rY4-MAAAAJ&hl=en

Citation indices	All	Since 2011
Citations	20878	9838
h-index	72	52
i10-index	261	178

ADVISING

FORMER ADVISEES
Freshmen Include: Michele Lee, Erika Granger, Thanhlong Lam, Ahmet Musabeyoglu

Course 12 & UROP: Sarah Slotznick, Christian Hagedorn

Graduate Students
Monica C. Byrne (MS), David A. Fike (PhD), Alexander S. Bradley (PhD), Robin Kodner (with Andrew Knoll Harvard PhD), James P. Saenz (JP with Timothy Eglinton), Jacob Waldbauer (JP with Penny Chisholm), Amy E. Kelly, Lindsay E. Hays, Birgit Nabbefeld (with K Grice Curtin Univ PhD), Xiaolei Liu (with K.-U. Hinrichs Uni-Bremen), Sara Lincoln (with Ed DeLong), Jon Grabbenstatter, Aimee Gillespie, Marie Giron, Christian Illing (visiting from the University of Muenster, Germany), Baroumi Marwa (visiting from the University of Tunis, Tunisia), Arijit Chattopadhyay (visiting from Dept. of Earth Sciences, IIT Bombay, India), Katherine French (MIT-WHOI JP)

Postdoctoral Fellows
Emmanuelle Grosjean (Geoscience Australia), Cao Changqun (NIGPAS), Gordon D. Love (UC Riverside), Solveig Bühring (Univ. Bremen), D'Arcy R. Meyer-Dombard (Univ. Illinois, Chicago), Neal S. Gupta, David Doughty (Newman Lab), David Johnston (Harvard), Sabine Mehay (Schlumberger), James Saenz (MPI Dresden), Christian Hallmann (MPI Jena), Paula Welander (Stanford Univ.), Phoebe Cohen (Williams College), Zhang Hua (NIGPAS), Julio Sepulveda (Univ. Colorado), Florence Schubotz (Univ. Bremen), Kristen Miller, Benjamin Kotrc (Industry), Genming Luo (CUG Wuhan), David Gold (Caltech)

UROP
Augusta Dibbell, Elisabetta Corradi (Wellesley), Sarah Hurley (Wellesley) Brian Lee (Chemistry Dept), Kim

Barker, Kelden Pehr, Madonna Yoder

Freshmen Advisees 2011
Maria A Cassidy, Jad El Khoury, Sarah N Leu, Ogheneovie O Orieka, Tuyen N Phung, Laura R Stilwell Joan C Weaver

Freshmen Advisees 2012
Delphine Kaiser, Michelle Dutt, Hannah Wood, Lien Che-Cheng

Freshman Advisees 2013
Nils Brode-Roger, Libby Koolik, Brian Tom, Brian Axelrod, Hayley Sypniewski

Freshman advising 2014/15 Terrascope: Advisees: Laura tenKate, Oghenefejiro Oruerio, Nick Schwartz, Luna Gonzalez, Angela Leong, Wendi Guraziu, Jake Burga

Thesis committees
Li Ling Hamady (JP), David Wang (JP), Kyle Peet (C&EE), Benjamin Srain Chavez (University of Concepcion, Chile), Tamsyn Garby (University of NSW), Jesse McNichol (MIT-WHOI JP Biology), Mirna Slim (EAPS)

CURRENT ADVISEES

Postdoctoral Fellows and Associates: Xiaolei Liu, Shane O'Reilly, Ainara Sistiaga, Heather Throckmorton, Lily Momper, Tyler Mackey

Thesis advisor: Ross Williams, Emily Matys

Thesis committee: David Wang (Shuheo Ono), Sharon Newman (Tanja Bosak), Laurence Lai (CE)

Advisor to visiting students:
MaryBeth Wilhelm, Georgia Tech,

TEACHING

12.007 Geobiology and the history of the Earth: a Spring Semester undergraduate introductory class co-taught with Tanja Bosak since 2006

12.458 Molecular Biogeochemistry: A graduate class on organic geochemistry taught each Fall Semester.

12.S493 Current topics in organic geochemistry: graduate seminar Fall and Spring semesters