

Dr Peter Nichols

Peter Nichols is based in the CSIRO Division of Marine and Atmospheric Research and leads new initiatives with signature lipid technology and environmental applications, and on marine oils, with particular emphasis on omega-3 oils. The oils research has involved detailed characterization of fish-derived and novel microbial oils, process development for the utilization of oils, and more recently development of novel land plant sources of long-chain omega-3 oils by a CSIRO Food Futures Flagship team. Transfer of this know-how to industry and the wider community has been an ongoing pursuit. This research has led to better utilization of substantial national fisheries resources and wastes. He has contributed to the development of the Australian marine oils industry, with CSIRO research resulting in novel national and international marine oil products (wax ester, omega-3 and shark liver oils).



Other innovations have been the development and use of unique chemical (lipid) signatures in microbial ecology, environmental (e.g., faecal pollution) and food-chain studies within the CSIRO Wealth from Oceans Flagship, and new discoveries and applications in marine microbial biotechnology. He has worked closely with a number of Australian and overseas Universities and agencies including actively supervising and mentoring postgraduate students. International collaboration has occurred across these research fields, including sponsoring sabbaticals and visits by overseas scholars. Away from research Peter is active in masters rowing and coaching young rowers, and also maintains a passion for snorkeling for abalone in southern Tasmania.

Prior to joining CSIRO in 1986, Peter completed his BSc (Hons) and PhD at the University of Melbourne (1983). His PhD topic was 'Biological markers in the marine environment' and his supervisor was Dr Basil Johns. He then undertook postdoctoral studies at Florida State University working with Prof David C White with research topics covering marine microbial ecology, bio-films, bioremediation and sea-ice microbial ecology; during this time he was responsible for a diverse range of research in a large University laboratory and also established the use of FT-IR spectroscopy in microbial ecology and undertook two expeditions to Antarctica and participated in 50 under-ice dives.

Other details: 240 Scientific papers, 74 Conference proceedings and invited or other papers, 390 Reports to industry and agencies, 260 conference/other presentations. Five patent applications filed (three completed).

Student supervision: 14 PhD students completed up to 2007, with 6 underway; 1 MSc student completed; 13 BSc(Hons) students completed; 9 CSIRO vacation scholars.

Editorial boards: Marine Biotechnology, J. Microbiological Methods.

Referee - 20 leading international and national journals.

Fifteen **major field expeditions**, with six as cruise or field team leader. Lecturer in Departments of Chemistry, Agricultural Science, Biotechnology and IASOS at University of Tasmania.

Conference and other committees:

Australian Organic Geochemistry Conference, Hobart, 1989 & 2002,

RACI 11AC, Hobart, 1991,

Int. Marine Biotech. Conf. (IMBC)2000,

Int. Symp. ? Interface between Analytical Chemistry and Microbiology

ISIAM2000. Int. Soc. Fats, Technical Program Committee 2009.

Int. Soc. Plant Lipids, Local Organizing Committee, 2010.

SCAR Group of Specialists in Southern Ocean Ecology 1988-1995.

RACI Tasmanian Branch, Committee 1989-2000, Treasurer: 1990-2000.

Research Vessel Franklin User Committee, chairman 1992-1996.

Executive Committee, Australasian Section AOCS, 1999-present, Vice-president 2000-2002, 2002-2006 President, 2006-present Past-president.

CSIRO Biomining Scientific Steering Committee 1999-2005.

Australian Biotechnology, Tasmanian Branch Committee 2004-present.

Scientific Advisor, Omega-3 Center 2007-present.

FSANZ, Food Composition Advisory Group 2008-present.

Science in Schools (with DMSC, Vic) 2008-present.



Peter Nichols (middle) with AMSA President Anth Boxshall (left), and Patti Virtue (nominator of Peter for this Award).