

QUALIFICATIONS

PhD, Biochemistry, Otago University, 1997
 MSc, Marine Science, Otago University, 1991
 BSc, Biochemistry, Otago University, 1988

PROFESSIONAL AFFILIATIONS

New Zealand Royal Society
 New Zealand Society of Biochemistry and Molecular Biology
 Associate Investigator, MacDiarmid Institute for Advanced Materials and Nanotechnology
 New Zealand National Energy Research Institute (NERI)

ROLE AT CAWTHRON

The areas of research Mike is involved in draw on his extensive experiences with the latest biochemical and molecular biological techniques from other fields to address energy and sustainability issues.

- Algal biology, high value & commodity products from algae
- Algal and cyanobacterial production and harvesting systems
- Redox biochemistry and bioenergetics
- Biological hydrogen production, biomass to bioenergy
- Photosynthetic microbial fuel cells
- Renewable energy, integrated value chain design

SPECIAL INTERESTS & ACHIEVEMENTS

Member of the RSNZ President's Panel on Energy 2005-2007

Inaugural member of the Oxygen Group (Ministry of Science Think Tank Group) 2004-2008

Organising Committee of the Asia-Oceania Algal Innovation Summit

SELECTED PUBLICATIONS

Esson D, Wood S, Packer MA 2011. Harnessing the self-harvesting capability of benthic cyanobacteria for use in benthic photobioreactors. *App Micro Biotech Express*. Accepted for publication July 2011.

Packer MA 2010. Buffering the pH of cosmetic creams containing Biovert Enzymes Preservative System. For Carol Priest Natural Cosmetics. Cawthron Report 1807.



Packer MA, Beuzenberg V 2010. Supreme Biotechnologies Technology for Business Growth Report: data to support the development of a prototype-scale *Haematococcus pluvialis* Algal Farm. For Supreme Biotechnology Ltd. Cawthron Report 1731.

Packer MA 2009. Algal capture of carbon dioxide; biomass generation as a tool for greenhouse gas mitigation with reference to New Zealand energy strategy and policy. *Energy Policy*. 37 3428-3437.

Packer MA 2009. Cryopreservation of PhotonZ Corporation algae. Cawthron Report 1713.

Packer MA, Beuzenberg V 2009. Smart Start Report on Isolation of *Haematococcus pluvialis*. for Supreme Biotechnology Ltd. Cawthron Report 1630.

Packer MA, Hemish J, Mignone JL, John S, Pugach I, Enikolopov G 2005. Transgenic mice overexpressing nNOS in the adult nervous system. *Cell Mol Biol (Noisy-le-grand)*. 51(3):269-77.

Packer MA, Stasiv Y, Benraiss A, Chmielnicki E, Grinberg A, Westphal H, Goldman SA, Enikolopov G 2003. Nitric oxide negatively regulates mammalian adult neurogenesis. *Proc Natl Acad Sci U S A*. 100:9566-71.

Packer MA, Murphy MP 1995. Peroxynitrite formed by simultaneous nitric oxide and superoxide generation causes cyclosporin-A-sensitive mitochondrial calcium efflux and depolarisation. *Eur J Biochem*. 234(1):231-9.

Packer MA 1994. Protoplast formation from single cells and small tissue fragments of wild *Porphyra* fronds (Rhodophyta). *Bot Mar* 37. 2:101-108.