

### QUALIFICATIONS

BSc, Dip.Pl.Sci., Massey University,  
Palmerston North, NZ (1982/84)

MAppI.Sci., Lincoln University, Canterbury,  
NZ (1988)

PhD, Massey University (1995)

### PROFESSIONAL AFFILIATIONS

International Society for the study of Harmful  
Algae (ISSHA)

The Royal Society of New Zealand

Australasian Society for Phycology and Aquatic  
Botany

### ROLE AT CAWTHRON

Lesley is Programme Leader for the Seafood  
Safety and the CAW Nationally Significant  
Database (NSD) programmes, both funded by  
the NZ Ministry for Science and Innovation.

The Seafood Safety programme focuses on  
ensuring water quality for the growing of  
shellfish and safety of seafood for consumption,  
whether for the local or export markets.  
Research includes the development and  
validation of novel detection methods for  
micro-algae and chemical characterisation of  
marine biotoxins, biotoxin toxicology to meet  
regulations (carried out by AgResearch) and  
monitoring and control strategies for biotoxins.

The NSD programme funds the Cawthron  
Culture Collection of Microalgae, which  
underpins the research carried out in the  
Seafood Safety programme. Cryopreservation  
of this nationally-significant collection is  
underway.

### SPECIAL INTERESTS & ACHIEVEMENTS

- Taxonomy, physiology and ecology of marine  
micro-algae, particularly toxic bloom formers  
and benthic and epiphytic genera.
- Tech transfer of DNA probe technologies for  
phytoplankton monitoring.
- Cryopreservation of micro-algae.
- Mass cultures for biotoxin production and  
extraction.
- 90 published papers; 45 reports/popular  
publications.



### SELECTED PUBLICATIONS

Rhodes L 2011. World-wide occurrence of  
the toxic dinoflagellate genus *Ostreopsis*  
*Schmidt*. *Toxicon* 57(3): 400-407.

Rhodes L, Smith K, Selwood A, McNabb P,  
Molenaar S, Munday R, Wilkinson C,  
Hallegraeff G 2011. Production of pinnatoxins  
E, F and G by scrippsielloid dinoflagellates  
isolated from Franklin Harbour, South  
Australia. *New Zealand Journal of Marine and  
Freshwater Research*. Short communication  
(accepted).

Casteleyn G, Leliaert F, Backeljau T, Debeer A-  
E, Kotaki Y, Rhodes L, Lundholm N, Sabbe K,  
Vyverman W. 2010. Limits to gene flow in a  
cosmopolitan marine planktonic diatom. *Proc.  
National Academy of Sciences* 107: 12952-  
12957.

Rhodes L, Smith K, Selwood A, McNabb P,  
van Ginkel R, Holland P, Munday R 2010.  
Production of the cyclic imine, pinnatoxin, by a  
peridinoid dinoflagellate isolated from  
Northland, New Zealand. *Harmful Algae* 9:  
384-389.

Rhodes L, Smith K, de Salas M 2007. DNA  
probes, targeting large sub-unit rRNA, for the  
rapid identification of the paralytic shellfish  
poison producing dinoflagellate, *Gymnodinium*  
*catenatum*. *New Zealand Journal of Marine and  
Freshwater Research* 41:385-390.

Rhodes LL, McNabb P, de Salas M, Briggs L,  
Beuzenberg V, Gladstone M 2006. Yessotoxin  
production by *Gonyaulax spinifera*. *Harmful  
Algae* 5: 148-155.

Rhodes L, Smith J, Tervit R, Roberts R,  
Adamson J, Adams S, Decker M 2006.  
Cryopreservation of economically valuable  
marine micro-algae in the classes  
Bacillariophyceae, Chlorophyceae,  
Cyanophyceae, Dinophyceae, Haptophyceae,  
Prasinophyceae and Rhodophyceae.  
*Cryobiology*, 52: 152-156.