

QUALIFICATIONS

PhD, University of Otago, 2003
PgDipSci, University of Otago, 1998
BSc, University of Otago, 1997
PADI Divemaster

PROFESSIONAL AFFILIATIONS

Society for Cryobiology

ROLE AT CAWTHRON

Serean leads the cryopreservation programme at Cawthron which aims to develop methods for cryopreserving sperm, eggs and larvae of New Zealand's commercially important shellfish species. She is also developing triploidy induction methods for these species and co-leads a project to develop direct toxicity assessment assays for use in ecotoxicology. Serean leads the development of methods for micro-algae cryopreservation for species in Cawthron's Micro-algae Culture Collection, and has been involved with the Department of Conservation's Kakapo Recovery Programme developing a method to cryopreserve Kakapo sperm.

SPECIAL INTERESTS & ACHIEVEMENTS

- Cryobiology
- Reproduction and developmental biology in aquatic species
- Marine biotechnology
- Conservation biology
- Ecotoxicology

SELECTED PUBLICATIONS

Adams SL, Smith JF, Tervit R, McGowan LT, Roberts RD, Janke AR, King NG, Gale SL, Webb SC 2011. Cryopreservation of Molluscan Sperm: Pacific Oyster, Green-lipped Mussel, and Paua Abalone, in: Tiersch, T.R., Green, C.C. (Eds.), *Cryopreservation in Aquatic Species*, 2nd Edition. World Aquaculture Society, Baton Rouge, Louisiana, pp. 562-573.

Adams SL, Tervit HR, Salinas-Flores L, Smith JF, McGowan LT, Roberts RD, Janke AR, King NG, Webb SC, Gale SL 2011. Cryopreservation of Pacific Oyster Oocytes, in: Tiersch, T.R., Green, C.C. (Eds.), *Cryopreservation in Aquatic Species*, 2nd Edition. World Aquaculture Society, Baton Rouge, Louisiana, pp. 616-623.



Adams SL, Tervit HR, McGowan LT, Smith JF, Roberts RD, Salinas-Flores L, Gale SL, Webb SC, Mullen SF, Critser JK 2009. Towards cryopreservation of Greenshell™ mussel (*Perna canaliculus*) oocytes. *Cryobiology* 58: 69-74.

Woods SA, Rhodes L, Adams SL, Adamson JE, Smith KF, Smith JF, Tervit HR, Cary SC 2008. Maintenance of cyanotoxin by cryopreserved cyanobacteria in the New Zealand culture collection. *New Zealand Journal of Marine and Freshwater Research* 42: 277-283.

Salinas-Flores L, Adams SL, Lim MH 2008. Cholesterol addition and removal in Pacific oyster oocytes does not improve cryopreservation success. *Cryoletters* 29 (5):391-398.

Adams SL, Smith JF, Roberts RD, Janke AR, King NG, Tervit HR, Webb SC 2008. The application of sperm cryopreservation in selective breeding of the Pacific oyster, *Crassostrea gigas* (Thunberg). *Aquaculture Research* 39:1434-1442.

Moy GW, Springer SA, Adams SL, Swanson WJ, Vacquier VD 2008. Extraordinary intraspecific diversity in oyster sperm bindin. *PNAS* 105(6): 1993-1998.

Salinas-Flores L, Adams SL, Lim MH. 2008. Determination of the membrane permeability characteristics of Pacific oyster, *Crassostrea gigas*, oocytes and development of optimized methods to add and remove ethylene glycol. *Cryobiology* 56: 43-52.

Salinas-Flores L, Adams SL, Wharton DA, Downes MF, Lim MH 2008. Survival of Pacific oyster, *Crassostrea gigas*, oocytes in relation to intracellular ice formation. *Cryobiology* 56: 28-35.

Adams SL, Hessian PA, Mladenov PV 2006. The potential for cryopreserving larvae of the sea urchin, *Evechinus chloroticus*. *Cryobiology* 52: 139-145.