

## Final project report

<i>Project ID</i>	2002/1.09
<i>Title</i>	Transport and storage of Antarctic Fishes
<i>Principal investigator</i>	Mariella Morbidoni
<i>Institution</i>	CNR – Dipartimento Terra Ambiente
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<i>Duration</i>	2 years
<i>Assigned funding</i>	49.000,00 Euro

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### Activities and results

Italian biological research in Antarctica has significantly advanced during the last 25 years, as shown by the publications on several topics. One of the most interesting topic refers to the study of evolution and adaptation of Antarctic notothenioid fishes, which are known to have peculiar characteristics, not found in temperate and Arctic species. To date research has been carried out through collection performed in Antarctica by researchers who have participated in the PNRA campaigns. Part of the samples have been used for experiments carried out *in loco*, while a large part of the samples has been retrograded to Italy and distributed to several laboratories also active within PNRA. However, many biologists have requested to work in Antarctica in order to be able to carry out experiments and treatments *in vivo*, taking advantage of the equipment and technology available at Terra Nova Bay Station. Biochemical, physiological and molecular studies on Antarctic fish often require advanced techniques and equipment not available in Antarctica. In addition, it is difficult to foresee future advancement in these fields without exploiting the large body of knowledge produced by new approaches such as genomics and proteomics. Following the example of other European countries, the main scientific institutions involved in polar research in Italy can organise aquaria for rearing specimens of the marine Antarctic fauna in a reasonable time.

The principal results of the present project can be summarized as follows:

- Set-up of optimal conditions for rearing fish
  - Set-up of optimal rearing conditions
  - Selection of the most resistant fish species especially in relation to feeding and adaptation to life conditions in the aquaria
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### Products

#### A – papers in scientific magazines

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#### B – book chapters

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#### C - proceedings of international conferences

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#### D – proceedings of national meetings and conferences

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#### E – thematic maps

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#### F – patents, prototypes and data bases

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## Programma Nazionale di Ricerche in Antartide (PNRA)

**G – exhibits, organization of conferences, editing and similar**

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**H - formation (PhD thesis, research fellowships, etc.)**

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### Research units

Research Unit 1

M. Morbidoni Tecnologo CNR- DTA, Roma

D. Beatrici Tecnico DTA Polarnet-CNR, Roma

E. Gallo Tecnico DTA Polarnet-CNR, Roma

Research Unit 2

C. Verde Ricercatore IBP-CNR, Napoli

M. Balestrieri Ricercatore IBP-CNR, Napoli

D. Giordano Dottoranda IBP-CNR, Napoli

G. di Prisco Consulente IBP-CNR, Napoli

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**Date:**

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