

 Inhalt archiviert am 2024-06-16



Implementation of high-throughput genomic approaches to investigate the functioning of marine ecosystems and the biology of marine organisms

Berichterstattung

Projektinformationen

MARINE GENOMICS

ID Finanzhilfvereinbarung: 505403

[Projektwebsite](#) 

Projekt abgeschlossen

Startdatum

1 März 2004

Enddatum

31 August 2008

Finanziert unter

Sustainable Development, Global Change and Ecosystems: thematic priority 6 under the Focusing and Integrating Community Research programme 2002-2006.


Gesamtkosten

Keine Daten

EU-Beitrag

€ 10 000 000,00

Koordiniert durch

FRANCE INNOVATION
SCIENTIFIQUE ET TRANSFERT
 France

Dieses Projekt findet Erwähnung in ...



Final Report Summary - MARINE GENOMICS (Implementation of high-throughput genomic approaches to investigate the functioning of marine ecosystems and the biology of marine organisms)

Research on the biology of marine organisms is among the European fields of interest for more than a century; however, the acquired knowledge is fragmented and marine biologists cannot benefit from the findings to the maximum possible extent.

The MARINE GENOMICS EUROPE (MGE) project aimed to reduce knowledge fragmentation and establish a network of experts to allow for exchange of scientific expertise and technological resources in the field of marine biology. Thus, understanding of the functioning of marine ecosystems and the biology of marine organisms would be enhanced and innovative genomic approaches could be implemented.

The project focused on four types of activities, namely the consortium management, the elaboration of joint research efforts, the integration of the developed platforms and technologies and the dissemination and communication of MGE findings. Collaboration with major European centres was established and resulted in the initiation of numerous research attempts. Moreover, a plan to ensure long-term integration, beyond the project lifetime, was implemented and the following priorities were identified to facilitate future sectoral progress:

1. maintenance of scientific coordination and application of an educational programme;
2. support of common infrastructures and databases;
3. mobilisation of joint research schemes.

Several initiatives were funded and completed as part of MGE. Firstly, actions were taken to provide broad access to existing genomic, proteomic and bioinformatic technological platforms (TP) and various related publications were produced. In addition, high-throughput genomic and proteomic tools were developed for integrated research projects, while efforts in the fields of comparative, functional and environmental genomics were maximised. An overview table of all developed microarrays, including information on future potential uses, was available on request. Future collaborations were facilitated because of the maximised transfer of knowledge on samples' preparation and technologies' application. Access on TP was planned

to continue after the project completion given that funding was secured.

In addition, specific research activities were undertaken to increase and coordinate knowledge on marine bacteria, algae, fish and shellfish and the evolution and development of diversity. Moreover, marine phytoplankton growth conditions were simulated in the laboratory, so as to examine global gene expression focusing on environmental stress conditions and to characterise functions of identified regulatory genes. The obtained data were useful for the future determination of the physiological status of natural oceanic populations.

Similarly, molecular tools towards the identification of gene function in fish were successfully developed using marine fish cell lines and embryos. Techniques were also identified and resources were generated to bridge the gap of regulatory model systems between insects, nematodes and vertebrates. The development of relevant tools would ensure optimal use and interpretation of genomic data that were anticipated to be available in the future. In addition, the unbalance between experimental information and available data was overcome through the adaptation and application of medium throughput protein expression methods.

In addition, a bioinformatics platform was constructed to provide general hardware and software support to all research groups of the MGE consortium. The tools were developed under an open source license and were accessible via the internet, along with necessary data, documentation and training courses. The development and update of MGE website was critical for the successful communication between the participating scientists and the general public.

Furthermore, the project mobilised women participation through the provision of fellowships, awards and grants. Exploratory workshops were organised for the promotion of cross-node interaction and the participation of students and post-doctoral researchers was encouraged in order to ensure long-lasting penetration of the project. Finally, various courses were planned as part of the implemented training and education programme and targeted dissemination activities were undertaken, including meetings and conferences.

Verwandte Dokumente



[Final Report - MARINE GENOMICS \(Implementation of high-throughput genomic approaches to investigate the functioning of marine ecosystems and the biology of marine organisms\)](#)

Letzte Aktualisierung: 3 Oktober 2012

Permalink: <https://cordis.europa.eu/project/id/505403/reporting/de>

European Union, 2025

