

antares

NEWSLETTER

October 2010

1

ANTARES

A new project for
Alternative Methods
and REACH

Alternative Non-Testing
methods Assessed for
REACH Substances

www.antares-life.eu

LIFE08
ENV/IT/00435



REACH legislation states that Non-Testing Methods (NTM) can be used within REACH

These methods include **Quantitative Structure-Activity Relationship (QSAR) models** and **read-across**. Before making an animal experiment the industry should verify if alternative methods exist.

However, so far there is a deep gap of knowledge on which methods are available and can be used in practice.

The **ANTARES project** aims to **reduce this gap assessing NTM as an alternative approach for the REACH legislation**.

The MAIN OBJECTIVES of ANTARES are:

- to verify the **possible use and performances** of the non-testing methods for REACH;
- to identify **requirements and constraints** originating from the REACH legislation which may affect the non-testing methods;
- to identify **safety assessment factors** for the non-testing methods;
- to identify the **best applicability criteria for a safer use** of the non-testing methods;
- to **integrate different non-testing methods**, achieving superior performances;
- to **disseminate** the results;
- to **promote** non-testing methods for legislative purposes.



The project is organized in 13 Actions:

Action 1

Survey of current methods for compliance to REACH legislation

Action 2

Identification of criteria for non-testing methods for REACH legislation

Action 3

Identification of suitable experimental databases/data sets for ecotoxicological, toxicological and environmental endpoints

Action 4

List of (Q)SAR models for ecotoxicological, toxicological and environmental endpoints for REACH, and their review

Action 5

Validation of non-testing methods

Action 6

Identification of boundaries for best use of models (applicability domain) and of the assessment factors

Action 7

Architecture for integration of different non-testing methods for best performances and coverage of applicability

Action 8 Communication and Dissemination

Action 9 Web Portal

Action 10 Project Management

Action 11 Monitoring

Action 12 Audit

Action 13 After-LIFE Communication plan

The MAIN RESULT will be a CHARACTERIZATION OF THE NON-TESTING METHODS SUITABLE FOR REACH

The OBJECTIVES



Promotion of non testing methods (NTM) for their use in the REACH context linking scientists, regulators and industries



**TO EVALUATE AND VALIDATE
EXISTING NTM FOR THEIR
APPLICATION ACCORDING TO
REACH NEEDS**



The BENEFICIARIES

1 ISTITUTO DI RICERCHE FARMACOLOGICHE MARIO NEGRI (Coordinator)



The MARIO NEGRI INSTITUTE FOR PHARMACOLOGICAL RESEARCH (IRFMN) is a not-for-profit biomedical research organization, founded in Milan in 1961, with research units also in Bergamo, at Ranica – near Bergamo – and at Santa Maria Imbaro, near Chieti. The Institute's main aim is to help defend human health and life.

Emilio Benfenati, ANTARES Coordinator and Head of the *Laboratory of Environmental Chemistry and Toxicology* at IRFMN, is coordinating, or has coordinated in the past, 13 EC projects, and is participating, or has participated, to 16 other EC projects, funded by the DG Research, Environment and Industry. These projects deal with a widespread variety of arguments, such as QSAR, toxicity, Information Technologies, dissemination of knowledge and results, integration of knowledge and collaboration establishment between in vivo, in vitro and in silico researcher communities. Within one of these projects, CAESAR, a software platform has been developed including available QSAR models for REACH. Within the project DEMETRA, a new software for regulatory purposes for pesticides has been developed.

2 ISTITUTO SUPERIORE DI SANITÀ



ISTITUTO SUPERIORE DI SANITÀ (ISS) is the leading technical and scientific public body of the Italian National Health Service.

Its activities include research, control, training and consultation in the interest of public health protection. The Institute conducts scientific research in a wide variety of fields, from cutting-edge molecular and genetic research to population-based studies of risk factors for disease and disability. Research priorities are based on those set forth in the National Health Plan.

3 POLITECNICO DI MILANO



POLITECNICO DI MILANO

The POLITECNICO DI MILANO University was established in 1863 and is now ranked as one of the most outstanding European universities in Engineering, Architecture and Industrial Design. The *Department of Electronics and Information* of the Politecnico di Milano is a unique environment that blends competences and disciplines usually mapped in separate CS and EE departments. At DEI cross-fertilization is instead a working reality where researchers are eager to tackle complex and challenging problems, contributing to shape key achievements in computer engineering, telecommunications, systems and control, electronics.



KnowledgeMiner
Software

of research, consulting, development, and application of unique self-organising, inductive, statistical learning modelling and knowledge discovery technologies. The company developed the KnowledgeMiner® software package, a distinguished commercial self-organising modelling and knowledge extraction from data tool.

4 FEDERCHIMICA



FEDERCHIMICA
CONFINDUSTRIA

FEDERCHIMICA is the abbreviated name of the Italian Federation of the chemical industry, founded in 1920. At the present time 1300 companies, with a total of 94,000 employees, are part of Federchimica. They are grouped into 16 Associations, which in turn are subdivided into 43 product groups. Federchimica is a member of Confindustria (General Confederation of the Italian Industry) and CEFIC (European Chemical Industry Council). Its primary objectives are the coordination and the protection of the role of the Italian chemical industry as well as the promotion of its development capacity.

5 KNOWLEDGEMINER

KNOWLEDGEMINER SOFTWARE is a

privately held company in the field of research, consulting, development, and application of unique self-organising, inductive, statistical learning modelling and knowledge discovery technologies. The company developed the KnowledgeMiner® software package, a distinguished commercial self-organising modelling and knowledge extraction from data tool.



The FIRST STEPS



KICK-OFF MEETING

Milan, February 10, 2010

The coordinator, IRFMN, gave an overview of the project summarizing all the actions planned for the entire duration of the project. A more detailed discussion was then focused on the activities planned for the first year in terms of active actions, deliverables and milestones.

The official project website domain was presented (www.antares-life.eu) together with a proposal for the website layout.

MONITORING VISIT

Milan, May 18, 2010

ANTARES was described to the External Monitoring Team (**Astrale GEIE Timesis**) in its general plan. Then, a more detailed description was given on the ongoing Actions.

No major issues appeared for the scientific actions. A detailed discussion was then focused on the contractual and management documents.

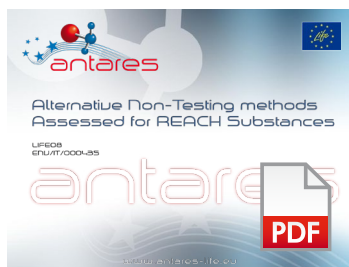


ANTARES PRESENTED AT ECHA

Helsinki, June 28-29, 2010

The ANTARES Project was presented by Emilio Benfenati (IRFMN), with the support of Ralf Knauf (Federchimica) and Frank Lemke (KnowledgeMiner), at the **European Chemicals Agency** headquarters in Helsinki.

All Action have been explained. In particular Action 1, 2 and 3 were examined showing some of the results already obtained. The given **presentation** is freely available in PDF format at the **ANTARES Web Portal**.





The **ANTARES WEB PORTAL** is available at

www.antares-life.eu

and its first version is organized into the following sections:

- **HOME** section, with direct links to *Objectives*, description of *Activities*, *Results*, *Beneficiaries*, and a brief introduction to the *LIFE Programme*.
- **EVENTS**, with information about meetings and dissemination activities.
- **RESOURCES**, with official documents and other project-related materials (presentations, posters).

Further areas, devoted in particular to SOFTWARE and DIDACTIC ACTIVITIES, will be published later.

antares LIFE08 ENV/IT/000435

LIFE promoting the USE of NON-TESTING METHODS

HOME EVENTS RESOURCES

OBJECTIVES PLANNED ACTIVITIES RESULTS LIFE PROGRAMME BENEFICIARIES

Alternative Non-Testing methods Assessed for REACH Substances

REACH legislation states that Non-Testing Methods (NTM) can be used within **REACH**. These methods include Quantitative Structure-Activity Relationship (QSAR) models and read-across. Before making an animal experiment the industry should verify if alternative methods exist. However, so far there is a deep gap of knowledge on which methods are available and can be used in practice. [\[READ MORE\]](#)

ANTARES Aims are to try to reduce this gap assessing NTM as an alternative approach for the REACH legislation.

The main objectives of the project ANTARES are:

- to verify the possible use and performances of the non-testing methods for REACH;
- to identify requirements and constraints originating from the REACH legislation which may affect the non-testing methods;
- to identify safety assessment factors for the non-testing methods;
- to identify the best applicability criteria for a safer use of the non-testing methods;
- to integrate different non-testing methods, achieving superior performances;

non-TESTING methods

QSAR models and READ-ACROSS

NEWS & EVENTS

Computational toxicology tools internal technical meetings series and basic training for EFSA Scientific staff
EFSA, Parma - Italy
Wednesday, October 27th, 2010

SECOND MEETING
Istituto Superiore di Sanità, Rome - Italy
Friday, October 15th, 2010

ANTARES presented at ECHA Headquarters
ECHA, Helsinki - Finland
Tuesday, October 19th, 2010

The **BOARD** of the Project

The ANTARES NOTICE BOARD has been produced in five large copies and installed at the participating partners sites to improve the visibility of the project.

antares ALTERNATIVE Non-TESTING METHODS ASSESSED FOR REACH SUBSTANCES LIFE 08 ENV/IT/000435

LIFE promoting the USE of NON-TESTING METHODS

AIM and OBJECTIVES

OSAR MODELS and READ-ACROSS

PROMOTION OF NON TESTING METHODS (NTM) FOR THEIR USE IN THE REACH CONTEXT LINKING SCIENTISTS, REGULATORS AND INDUSTRIES

to EVALUATE and VALIDATE existing NTM for their APPLICATION according to REACH needs

MAIN PROJECT ACTIVITIES

- Survey of current methods for the compliance to the REACH legislation.
- Identification of the criteria for the Non-Testing Methods for the REACH legislation.
- Identification of suitable experimental databases/data sets for the ecotoxicological, toxicological and environmental endpoints for REACH.
- List of (Q)SAR models for the ecotoxicological, toxicological and environmental endpoints for REACH, and their review.
- Validation of Non-Testing Methods (including read-across).
- Identification of boundaries for best use of models (applicability domain) and of the assessment factors.
- Architecture for integration of different Non-Testing Methods for best performances and coverage of applicability.
- Communication and dissemination initiatives.

The LIFE Programme

LIFE is the EU's financial instrument supporting environmental and nature conservation projects throughout the EU. Since 1992, LIFE has co-financed 3115 projects, contributing approximately €2 billion to the protection of the environment.

LIFE+ ENVIRONMENT POLICY AND GOVERNANCE supports technological projects that offer significant environmental benefits, for example process or efficiency improvements. This part of LIFE+ also helps projects that improve the implementation of EU environmental legislation, that build the environmental policy knowledge base, and that develop environmental information sources through monitoring (including forest monitoring).

CONSORTIUM and BENEFICIARIES

- COORDINATOR**
ISTITUTO DI RICERCHE FARMACOLOGICHE MARIO NEGRI
- ISTITUTO SUPERIORE DI SANITÀ
- FEDERAZIONE NAZIONALE DELL'INDUSTRIA CHIMICA
- POLITECNICO DI MILANO
DIPARTIMENTO DI ELETTRONICA E INFORMAZIONE
- KNOWLEDGEMINER SOFTWARE FRANK LEMKE

www.antares-life.eu

The Board is available for download (in PDF format) in the **Resources** area of the ANTARES Web Portal.

THE ANTARES NEWSLETTER PROVIDES REGULAR UPDATES AND INFORMATION ON NEWS FROM THE PROJECT.

The newsletter will be published every nine months, to highlight specific aspects and results on the project life and on the evaluation and assessment of alternative methods.

All numbers are published on-line at the ANTARES web portal.
