



EUROPEAN  
COMMISSION

Community Research



# The Marie Curie Actions

Training, mobility and career development opportunities for researchers



SIXTH FRAMEWORK  
PROGRAMME



I am pleased to present the European Commission's Marie Curie Actions for researchers.

These actions, which aim at developing training and mobility opportunities for researchers throughout their careers, are one of the most essential and visible means of developing the European Research Area. Launched in January 2000, the European Research Area is a vital way of improving Europe's attractiveness and performance.

The Commission has a long tradition of supporting the development of human resources in European research. This is the first time, however, that the actions in favour of the training and mobility of researchers have received such considerable attention, and that they are open to researchers of all ages, experience and nationality.

Researchers play an essential role in setting out the path for tomorrow's Europe: they contribute actively to our job market and our future competitiveness; they

ensure the circulation and exchange of ideas and knowledge; and they are a striking example of the diversity of our cultures and education systems.

This brochure is designed for a wide variety of people: for researchers at the early stages of their career and for those with more experience; for universities, businesses, and public authorities in Europe and throughout the world; but also for students, parents and teachers who are preparing the new generations for the challenges to come, and who need to be fully informed about future mobility and training opportunities.

Training and mobility offer a unique chance to acquire new skills, to participate in multinational teams and to experience the benefits of cultural diversity. This is the image Europe wants to portray of itself: that of an open and appealing continent, building on its manifold strengths.

I am confident that a wide range of researchers will benefit from the opportunities offered by the Marie Curie Actions.

Philippe Busquin  
European Commissioner for Research

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## Making all the right moves

Europe's competitiveness and growth depend on its ability to exploit to the full its resources of knowledge, skill and creativity. Tapping into these resources at European, national and regional level is necessary if Europe is to succeed in becoming the most dynamic knowledge-based economy in the world by 2010, a target set by the Member States at the European Council meeting in Lisbon in March 2000.

Making the most of European research potential is key to this process. Europe has an enviable reputation in the world of science thanks largely to its diverse, highly qualified research personnel and their rich intellectual capacity and know-how. Enhancing this reputation even further by investing in the future of our research community is a must if Europe is to compete successfully at international level.

To become truly competitive, Europe must increase the quantity and quality of its researchers, and boost their capacity to produce, share and exploit knowledge. This is also essential if Europe is to halt the 'brain drain' of scientists from the EU to other parts of the world – something which is depriving European science of valuable resources and research potential.

### Mobility and the ERA

The EU is responding to these challenges head on by creating what is known as the European Research Area (ERA). This aims to improve research in Europe through better coordination of national research policies and by increasing investment in the life-long training of researchers. The financial instrument for implementing the ERA is the Sixth Framework Programme for Research, otherwise known as FP6, which will run between 2002 and 2006 with an overall budget of €17.5 billion. €1.58 billion of this will be spent on enhancing human resources in European research. The objective is the development and transfer of research competencies, the consolidation and widening of researchers' career prospects and the promotion of excellence in European research.

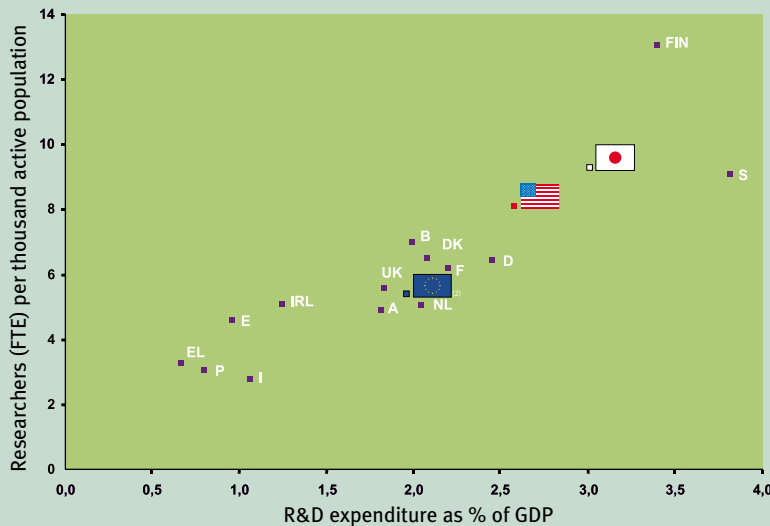
Mobility of researchers has always been fundamental to successful science. To excel, scientists need the freedom to work with colleagues elsewhere. Helping researchers take advantage of top-class training opportunities abroad improves Europe's skills base, boosts the attractiveness of research as a career option, and provides new paths for international collaboration. To date, however, many

legal, administrative and social obstacles are preventing European researchers from becoming truly mobile. These include funding issues, immigration restrictions, social security problems, and family concerns.

### Access all areas

The new human resources and mobility activities outlined in this brochure are a major step forward in addressing these problems, making the ERA as open and accessible as possible. Known collectively as the 'Marie Curie Actions', they are open to researchers of all levels of experience from the EU Member States, from the countries associated with FP6 and from third countries. All fields of scientific and technological research are covered and, as such, the actions are driven entirely by the research proposals submitted by the applicants.

R&D indicators by country, 1999 <sup>(1)</sup>



(1) Figures : Eurostat/OECD/Countries . Source : DG Research  
 (2) UE-15 does not include Luxembourg

### Counting on experience

The EU has a long track record of encouraging mobility in the field of education and training. For example, the EU's Erasmus programme, which provides assistance for university students to study abroad at a higher education institution in another European country, was set up in 1987 and is still going strong. Similarly, since 1984 researchers looking for opportunities to spend time working abroad have benefited from well-established schemes such as the Marie Curie fellowships and the Research Training Networks.

Making it easier for researchers to access training opportunities outside their home country is essential to maintaining the competitiveness and attractiveness of European research. Europe's unique diversity – both culturally and scientifically – is an asset which needs to be exploited. Encouraging co-operation and sharing knowledge through mobility programmes provide researchers with a breadth of vision and experience that results in better scientists and ultimately, better science.

#### Marie Curie Actions: what's in it for the EU?

- Mobility provides a European dimension to research and encourages trans-national co-operation and better use of resources.
- It enhances the flow of knowledge and expertise worldwide.
- Mobility promotes and recognises excellence in European research and will help make the European Research Area a reality.
- The opportunity to work in another country raises the international profile of researchers' careers.
- The Marie Curie Actions help to make Europe a more attractive option for research talent from all over the world.
- Mobility helps stop the brain drain effect.

#### What's in it for researchers?

- The Marie Curie Actions offer researchers the freedom and flexibility to benefit from world-class training opportunities outside their home country.
- They offer the chance to live and work in another country as part of an international, multicultural research team. At the same time, researchers improve their language skills and broaden their cultural understanding.
- Mobility helps researchers develop new, cutting-edge skills, which is the perfect way to boost career prospects.
- The Marie Curie Actions make it possible for researchers to network and share expertise with others in the same research field.
- The Marie Curie Actions encourage European researchers working abroad to return home to continue their career.

#### Who can apply?

- If you are a researcher, then there is a Marie Curie Action to suit you.
- The key factors determining who is eligible are research experience and excellence, not age. All levels are covered from researchers in the early stage of their career to world-class researchers with well-established scientific expertise and experience.
- Many of the schemes are open to promising researchers from outside the EU and the Associated States.
- The schemes are also open to businesses, universities and institutions active in research.

## Research institutes take the initiative

Universities, research organisations and businesses, including SMEs, active in research, from the Member States and associated countries which have signed up to FP6 can submit funding proposals to the Commission under the so-called 'Host-Driven Actions'. These are awarded to organisations willing to 'host' early-stage or more experienced researchers from another country for a period of time. The funding is used to attract researchers from another country to take part in a joint research project or to benefit from training activities geared specifically to their needs. There are four options:

### Marie Curie Research Training Networks

Research Training Networks provide training and research experience for researchers of any age or nationality by giving them the opportunity to spend up to three years in another country as part of an international research project. The size of the network varies according to the nature of the research activity, but will involve at least three partners from three different countries.

### Marie Curie Host Fellowships for Early Stage Research Training

In this case, funding is available for research institutes, organisations and businesses to provide researchers of any nationality or age at the start of their career with training opportunities of up to three years.

### Marie Curie Host Fellowships for the Transfer of Knowledge

Universities, research centres and businesses can apply to reinforce or develop new research competencies through the recruitment of experienced researchers, particularly for less-developed EU regions or the candidate countries. Other opportunities aim at enhancing mobility between academia and industry. Fellowships last for a maximum of two years and are open to all nationalities and ages.

### Marie Curie Conferences and Training Courses

Conferences and training courses are effective ways of learning, exchanging information and planning future projects. Marie Curie funding is available to help researchers of all nationalities and levels to take part.



Dr. Michael Udvardi from the Max Planck Institute of Molecular Plant Physiology in Potsdam, Germany, coordinates a network of nine research teams from seven Member States (Germany, Italy, Greece, Spain, United Kingdom, Denmark, The Netherlands) providing training in the new, multidisciplinary research field of functional genomics. The group is investigating the molecular and genetic basis of mutualistic symbioses (interactions between plants and soil microbes) that provide legumes, such as *Lotus japonicus*, with nutrients for growth. These symbioses are key to sustainable agriculture.

“Commission funding allowed us to hire 11 post-doctoral fellow or PhD students from several Member and Associated States. The funding has been very valuable in two ways: providing training in this new area of research, and in bringing specialised groups together that weren't collaborating before. The funding has been used for various activities including enabling trainees to spend time in a second network lab, and organising three one-week workshops where trainees can learn a new technology and network with other group members.”

# Researchers make the first move

The Marie Curie Actions offer numerous opportunities to individual researchers to participate in a research team in another country. Funding is available for researchers to move both within Europe and internationally. And, in an effort to enhance networking between researchers, the EU provides funding for researchers coming from third countries to train in Europe. Three types of 'Individual-Driven Actions' are available to researchers of all ages with at least four years' experience or who have a doctorate degree.

### Marie Curie Intra-European Fellowships

These fellowships are open to EU and Associated State researchers of all ages with at least four years' professional experience or a doctorate degree. The purpose is to give them the financial means to undertake advanced training through research or to acquire complementary skills at a European organisation most suited to their professional needs. This will give researchers the final boost to reach professional independence. Before applying for funding, researchers must find a research team willing to take them on for a one- to two-year stay.

### Marie Curie Outgoing International Fellowships

These fellowships allow researchers from EU and Associated States to broaden their international research experience. Outgoing International Fellowships allow researchers to work in research centres outside the EU and Associated States for up to two years, with a reintegration phase of up to one year in their home institution. Potential applicants must have at least four years' experience or a doctorate degree and must find a suitable research centre willing to take them.

### Marie Curie Incoming International Fellowships

Incoming International Fellowships target experienced researchers from outside the EU and Associated States who want to move to Europe to take part in research training. Again, fellows must have at least four years' experience or a doctorate degree and must agree a work programme with a European organisation before applying.



“The Marie Curie fellowships offer ideal conditions to carry out high-quality work,” says Dr. Mario Trottni, an Italian scientist working for two years at the University of Valencia in Spain on developing a set of techniques to protect the confidentiality of participants in statistical surveys. “The funding

gave me the freedom to focus exclusively on my research. My time in Spain has been a wonderful training experience, both scientifically and technically, but I think the most valuable part was that it allowed me to grow as an independent researcher.”

## Removing obstacles

As part of the European Union's Sixth Research Framework Programme, the share of funds available for human resources and the mobility of researchers has increased by over 50% to €1.58 billion. Key to the success of the schemes is the active involvement of all parties in the research field, including the Member States, the countries associated with FP6, universities, businesses and, naturally, the researchers themselves. Making sure

European researchers are well informed about the opportunities and making it as easy as possible for them to get involved is a critical first step. With this in mind, the Commission and the Member States have put in place two new initiatives which will make the mobility experience worry-free for both the researcher and his or her family:

## Promoting excellence

The Marie Curie Actions also focus on the promotion and recognition of excellence in European research. Three initiatives have been set up to capitalise on the best achievements of world-class European researchers and to lead them towards independence. The goal is to increase the visibility and attractiveness of research as a career option and to promote results to the scientific community. These measures also encourage world-class European researchers who have moved to other countries to return to Europe in order to continue their research careers.

### Marie Curie Grants for Excellent Teams

The aim is to create transnational research teams led by a researcher who has the potential to reach excellence in a particular scientific field. This action will target European research teams who are working on cutting-edge and interdisciplinary research in the EU Member States or associated countries.

### Marie Curie Chairs

World-class researchers working in fields of key importance for Europe are the primary focus here. These are newly-created research and teaching positions in a university or research institute. Chair-holders will train postgraduate students and supervise doctorate theses.

### Marie Curie Excellence Awards

To highlight the outstanding research achievements of former Marie Curie fellows, a series of scientific awards will be set up. Five of these will be on offer annually during FP6 to recognise the excellence of researchers who have benefited from a Community mobility scheme for the training of researchers.



Dr. Mark Huyse from the University of Leuven in Belgium has more experience than most organising Marie Curie summer schools. Last September, in the French village of Les Houches, he organised his ninth gathering on the subject of exotic beams in nuclear physics for a group of young PhD students. The Marie Curie grant funded 50 researchers to

attend the nine-day event. “This is an ideal place for young researchers to hear from international experts working in the field and to network with others carrying out similar research. We have now established an active network of former participants who can offer advice to researchers on both their science and their careers.”

**Marie Curie Mobility Internet Portal** giving information on Union and national legislation related to mobility as well as details of all funding opportunities and job vacancies at European, national and regional levels. This portal will develop into a single resource for researchers looking to take advantage of the various schemes on offer.

**European Network of Mobility Centres** will provide more practical, personalised assistance to researchers and their families moving abroad. The experts on hand in the Mobility Centres will help national and foreign researchers to deal with legal and administrative matters, such as taxation, visas, accommodation, child care, schools, and job opportunities for partners.

## Return and Reintegration

### Your future lies in Europe

One of the major stumbling blocks to research mobility is a fear some researchers have that they will miss opportunities at home if they spend time working abroad. Researchers who have been out of their national research system for a considerable time often experience difficulty in securing a position when they eventually return to their home country. More experienced researchers sometimes find that spending time in another research institute abroad can be disadvantageous to career advancement and that their work abroad is not adequately appreciated by their home institute.

The Marie Curie Actions both recognise and aim to solve these problems. A number of innovative measures have been put in place to make mobility more attractive by reducing negative impacts on a researcher's career and making it easier for fellows to continue their professional scientific career in Europe after a training period abroad. The 'Return and Reintegration Mechanisms' will also support researchers who have been working outside Europe for a long time and who want to return to Europe.

There are two new measures available, each in the form of a grant to the research institute that will employ the returning researcher:

#### European Reintegration Grants

These grants are open to researchers from EU Member States or associated candidate countries who have taken part in a Marie Curie scheme for at least two years. The purpose is to help researchers develop their scientific careers after working abroad. The grant goes towards the cost of undertaking a research project in a Member State or associated candidate country. Researchers apply for these grants in the final year of their fellowship programme.

#### International Reintegration Grants

The second type of grant aims to encourage researchers who have been working outside Europe for at least five years to return to Europe to share their knowledge and expertise. These grants last between one two years and help finance a well-defined research programme undertaken in either a Member State or associated candidate country.

For more information on the Marie Curie Actions, please visit our website at:

<http://europa.eu.int/mariecurie-actions>



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