A USERS' GUIDE FOR SMEs IN THE BIOTECHNOLOGY FIELD

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PREFACE

By Martin Bangemann, Member of the European Commission

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PREFACE

In the present emerging global market, new technological advance represents one of the main ways to guarantee EU competitiveness. This is why new technologies constitute a key for our future economic development. Among those, information technologies and biotechnology probably present the biggest opportunities.

Modern biotechnology is one of these key emerging technologies which Europe must harness successfully to sustain economic growth and competitiveness. Today, biotechnology related sectors employ between 300,000 and 400,000 people in 1995. In 2005 this could rise to as much as 3,000,000.

The emergence of new technologies is presenting challenges to both industry and the public sector. Some of these technologies have far reaching implications for a large number of industrial sectors, creating wealth and employment, resulting in the increased competitiveness of Europe’s economy.

Modern biotechnology in its many guises has developed pharmaceutical products which are viewed as medical milestones. The direct benefits for human beings are without precedence. Human insulin (against diabetes), Interferon (against cancer) and EPO (=erythropoietin, against blood deficiencies) are amongst the most famous. Biotechnology doesn’t, however, only encompass health care and diagnostics. For example, food products with higher nutritional values and longer shelf lives as well as dietary and hypo-allergenic products are now being developed. For example, a strain of rice is now being developed which those with gluten allergies could consume. Furthermore, the application of modern biotechnological techniques will have environmental implications: pollution from industry, households and agriculture can indeed be significantly reduced.

A strong European research base is vital to the continued success of this fledgling, innovative industry. However, the ability to commercially exploit research in this area is also of prime importance. Europe has made important progress in recent years, but still lags behind the USA in most indicators of economic performance. Unless substantial steps are taken now by those actors involved (industry, venture-capital firms, public authorities, and academia) the gap will only
continue to widen in the short, medium and long term. In this, the role of SMEs is of crucial importance, especially because biotechnology firms, by their nature, are often start-ups where new products are developed. Therefore, it is up to public authorities and venture-capitalists, at both the national and European level to help engender a more conducive external business environment for SMEs to succeed and grow.

With this in mind, DGIII has decided to launch the first edition of this Users’ Guide to encourage industrial operators to make the most of this irreversible trend in our societies, fully aware that opportunities inherent in the field of modern biotechnology are immense both in economic and social terms and that SMEs have a unique and important role to play in this area.

This Users’ guide on biotechnology for small and medium-sized enterprises (SMEs) aims at providing to the industry practical views on the responsible authorities (Member States and European Union) and on the fundings (Venture-Capital, Framework Programme, etc.) available in this area.

The European Commission’s role here is, therefore, to identify, for the European SMEs, both the European/National programmes and the actors (both private and public, at national and European level) who can enhance the global transfer of information and expertise to SMEs, helping them to secure a business environment which will grow into the next century, creating jobs and improving the environment in which we live.

Martin Bangemann

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INTRODUCTION

This Users’ Guide for small and medium sized enterprises (SMEs) in the biotechnology field is based upon a number of key factors which have been highlighted in the Commission’s Green Paper on Innovation.

* The identification of the biotechnology sector as one of dynamic growth and importance for Europe.

* The importance of innovative SMEs within the sector.

* The difficulties which technologically innovative SMEs face in obtaining suitable venture capital.

* A lack of awareness amongst many SMEs as to the supportive EU and national programmes aimed at assisting SMEs.

* Competition from the USA, where conditions for the development of the biotechnology sector are particularly favourable.

The objective therefore of this Users’ Guide is to provide SMEs with an easy to understand and yet comprehensive guide which:

* Identifies and explains the various European and national programmes which can be of significant assistance to SMEs in the biotechnology field.

* Identifies and explains sources of funding - both in the programmes and from commercial sources.

* Provides a comprehensive and detailed listing of competent authorities, useful contacts, trade associations etc.

As such, this guide can be seen as a contribution to the implementation of the Commission’s First Action Plan for innovation in Europe.
SECTION 1. EUROPEAN PROGRAMMES

1.1 Introduction and Purpose

For SMEs involved in biotechnology, substantial assistance can be obtained via several European programmes. Whilst this assistance predominantly takes the form of funding, it also covers important areas such as facilitating transnational partnerships, promoting scientific exchanges, sponsoring research and improving technology transfer.

Most of the major European schemes are set up within multi-annual Framework Programmes. 1998 marks the transitional year between the Fourth and Fifth Framework Programmes. Therefore, this Guide provides a detailed listing of the schemes currently available under the Fourth Framework Programme and an indication of anticipated changes once the Fifth Framework Programme is agreed.

All programmes have the common aim of improving the scientific and technical base of the European Community’s businesses to enable them to be compete more effectively in the global market. The programmes also exist as extensions of national initiatives, complementing and enhancing the work being done in the Member States.

They seek to address three major weaknesses perceived to be present in Europe, when compared to its competitors:

- A low level of investment in R&D.

- A lack of co-ordination between the various levels of R&D activities, programmes and strategies.

- A limited capacity to transfer scientific and technical knowledge through to industry and commerce.

Finally, it should be noted that the application procedures, rules, eligibility and criteria can vary significantly within each programme. It is also important to note that, in the majority of cases, these programmes are operated via intermediaries in the Member States. That is, either national governments, local authorities, other public bodies, banks or Venture Capital companies. Their assistance should be sought in formulating an application proposal.

1.2 The Fourth Framework Programme 1994 - 1998

The Fourth Framework Programme has been running since 1994 and will continue through to 1998. The European Union allocated an overall budget of ECU 13,100 million which was increased by ECU 115 million in September 1997. Most of the European Union funding is provided at the 50% level which assumes that industry or research organisations will be providing an equivalent amount. For the individual programmes, the Commission and expert advisors draw up an agenda or Work Programme, identifying priorities and topics for the areas of research.
The Fourth Framework Programme has brought together universities, research centres and private companies to support fundamental research of the highest quality, paying particular attention to projects which have a direct impact on competitiveness and quality of life.

1.2.1 Structure of the Fourth Framework Programme

The research and technological development (RTD) programmes as part of the EU Fourth Framework Programme, are available to private and public companies, research institutes and universities. The programmes encompass research in all areas of technology ranging from Information and Communication Technologies, to Socio-Economic Research. Projects must involve two or more parties and generally at least one of the parties must be from an EU Member State.

The programmes are divided into four sections of activity as illustrated in Table 1.1.

**TABLE 1.1 FOURTH FRAMEWORK PROGRAMME ACTIVITIES**

First Activity Research, Technological Development and Demonstration Programmes

Second Activity Cooperation with Third Countries and International Organisations

Third Activity Dissemination and Optimisation of Results

Fourth Activity Stimulation of the Training and Mobility of Researchers

The First Activity covers seven areas of research, one of which is life sciences and technologies. Biotech2, Biomed2 and FAIR programmes all lie within this area of research. Table 1.2 clearly outlines all the areas of research within the First Activity of the Fourth Framework Programme.

**TABLE 1.2 A BREAKDOWN OF THE THEMES AND SUBJECTS UNDER THE FIRST ACTIVITY**

1 INFORMATION AND COMMUNICATION TECHNOLOGIES

   a Telematics applications
   b Advanced communication technologies and services
   c Information technologies

2 INDUSTRIAL TECHNOLOGIES

   a Industrial and materials technologies
   b Standards, measurements and testing

3 ENVIRONMENT

   a Environment and climate
   b Marine sciences and technologies

4 LIFE SCIENCES AND TECHNOLOGIES

   a Biotechnology
The Second Activity of the Fourth Framework Programme encourages co-operation with researchers in countries outside the EU/EEA. The RTD programme implementing this activity is called INCO (Cooperation with third countries and International Organisations). INCO is the major programme under this activity.

INNOVATION is the programme which covers the Third Activity and is aimed at the dissemination and exploitation of research findings and results. The Innovation programme has a specific remit to foster the financing of innovation and has developed specific actions in this area such as I-TEC, FIT and LIFT.

The Fourth Activity concentrates on researchers and their training and mobility, through the Training and Mobility of Researchers (TMR) Programme.

The six programmes mentioned are dealt with in more detail later on in sections 1.2.3 to 1.2.8.

1.2.2 Implementation of the Fourth Framework Programme

For some of the RTD programmes, Technology Stimulation Measures for SMEs (TSMEs) have been implemented specifically to encourage SMEs to participate in the Fourth Framework Programme.

TSMEs are based on the Co-operative Research or CRAFT actions which began in 1991. Their aim is to help SMEs prepare proposals for Exploratory Awards (research projects) and to aid those companies with little or no resources for research, to employ a third party to carry out the research on their behalf. Information on these measures and assistance with participating in them is available through the CRAFT Network of Focal Points, established in each EU Member and Associated State.

Those programmes which do not incorporate TSMEs have alternative support measures for SMEs such as concerted actions and demonstration projects. These horizontal measures are available through the Fourth Framework Programme and are available to provide aid with implementing the individual RTD programmes.

The activities of the Fourth Framework contain the following programmes which could be of interest to an SME in the biotechnology field.

1.2.3 Biotech 2

The full title of this programme is *Specific research, technological development and demonstration programme in the field of biotechnology*, 1994-1998.
The main objective of this programme is to bring together the wide range of opportunities arising out of the advances in molecular and cellular biology and to facilitate the carrying through to industry of added value products and processes, as well as increasing the resultant social benefits.

Activities within RTD are centred around objectives requiring and addressed by concertation (in immunology, trans-disease vaccinology, structural biology) and objectives treated by means of horizontal activities (e.g. ethical, legal, social aspects, public perception). Research actions are varied in order to facilitate the transfer of results into both industrial and social benefits. Those economic sectors, such as the pharmaceutical, chemical, agricultural and food, which depend heavily on biotechnology are given close attention to ensure continued development and growth.

The Biotech programme is also promoting the Biotechnology Industrial Platforms (see section 1.4.4), and the "Biotechnology and Finance" forum (see section 1.4.5).

Support for Biotech 2 is available for shared-cost RTD projects, demonstration projects, SME support measures, certain areas of concerted actions and accompanying measures such as seminars, conferences, training and studies.

**1.2.4 Biomed 2**

The full title of this programme is *Specific research, technological development and demonstration programme in the field of biomedicine and health, 1994-1998*.

The objective of Biomed 2 is to enhance co-ordination between research and development activities and their application in industry. The ultimate aim of Biomed 2 is to improve the health of citizens within the Community and increase competition in the health industry across all Member States.

Research under this programme has, to a great extent, been focused in the areas of pharmaceuticals, biomedical engineering, neurological research and those diseases with major socio-economic impact (e.g. cancer, AIDS, infectious diseases, age-related problems, occupational and environmental health), human genome, public health research and biomedical ethics. Horizontal activities such as the ethical, social and legal implications of this research are also given considerable attention. Research activities are encouraged to build upon and complement investments already made in the biomedical and health industries. A synergy of national efforts with research from all the above mentioned disciplines have combined to achieve this aim.

For certain areas of research, support is available for shared-cost projects, demonstration activities, concerted actions, research within thematic networks, standardisation activities as well
The Fisheries, Agricultural and Agro-industrial Research (FAIR) programme includes agro-industry food technologies, forestry, aquaculture and rural development. It covers the period of 1994 - 1998.

The programme has four main objectives:

1. To continue the competitiveness of Europe’s agro-industry and primary production through developing new technologies, taking into account customer needs.
2. To improve the quality of agriculture, forestry and fish products particularly food products.
3. To contribute to implementing policies for agriculture, rural development, fisheries, environment and the internal market.
4. To encourage closer ties between production and the use of biological primary materials.

The research covers many areas and specialised subjects. For example, the integrated production and processing chains including the biomass and bioenergy chains, ‘green’ chemical and polymer chains and forestry-wood chains; processing methodologies, enlarging chemical and physical processes, bioprocessing and control systems; genetic science and advanced technologies for nutritious foods; agriculture, forestry and rural development; fisheries and aquaculture.

There is also opportunity under the FAIR programme for establishing European networks and horizontal activities such as demonstration projects, the ethical, legal and social aspects, along with specific measures to support SMEs.

Support is also available under the FAIR programme for shared-cost RTD projects, research within thematic networks, SME support measures and demonstration projects. For some areas, concerted actions are available as are accompanying measures (studies, training, seminars, conferences).
This is a specific programme to encourage cooperation with third countries (i.e. non EU/EEA countries) and International Organisations (INCO) and has two major aims:

1. To strengthen scientific and technical capabilities within the EU/EEA through cooperation with third countries.

2. To contribute to the solution of particular problems in third countries through the support and coordination of EU/EEA researchers with those in the third countries concerned.

There are three major instruments for achieving these aims:

1. Calls for research proposals in sectors of importance to Central and Eastern European Countries (CEEC) and the New Independent States (NIS) of the former Soviet Union (INCO-Copernicus, INTAS) and in sectors of importance to developing countries (INCO-DC).

2. Financial support to encourage the participation of CEEC/NIS research institutions in the Activity 1 programmes.

3. Negotiation of scientific and technical (S&T) agreements which provide reciprocal access for EU researchers to RTD programmes in certain industrialised countries (US, Canada, Australia, South Africa).

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Funding
ECU 575 million

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1.2.7 Innovation

The Innovation Programme aims at disseminating and exploiting research findings and results, with specific emphasis upon SMEs. SMEs are given help within the Innovation Programme to prepare proposals for projects which can be submitted for approval on a continuous basis. They are evaluated in batches every three to four months.

The objectives of the Innovation programme are two fold:

1. To achieve maximum exploitation and dissemination of results from EU research programmes and convert them into innovations.

2. To aid transferral of technologies which can support and enhance national and regional initiatives. Thus encouraging a trans-European dimension within these initiatives.

SMEs can utilise the Innovation programmes in three ways:

Innovation Relay Centres: These IRCs are independent businesses which act as technology consulting offices and can provide advisory services. Euro Info-Centres can be contacted for the
**Dissemination of Technology**: This activity focuses on the need for industries to absorb and adopt the new technologies across the Member States and to exchange experiences and information.

**Financial Assistance**: This measure includes both direct and indirect support through a network of intermediaries (e.g., European Venture Capital Association, European Association of Security Dealers, Innovation and Technology Equity Capital (I-TEC), The European Investment Fund, Help Desk on Innovation Financing).

**Innovation Management Techniques**: In addition, SMEs may benefit under Innovation Management Techniques (IMTs). IMTs are designed to:

- Promote effective use of techniques and management methods by SMEs.
- Harmonise methodologies and disseminate good practices among SMEs.
- Strengthen the professionalism of public and private consultants in this field.

Part of the ECU 352 million allocated to the programme is held in reserved scientific and technical support of other policies. This reserve is awarded on a competitive basis. An additional 1% of the first activity budget is kept for dissemination and exploitation of research activities.

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**Funding**: ECU 352 million

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**1.2.8 The Training and Mobility of Researchers**

This programme, entitled *Specific Research and Technological Development Programme in the Field of the Training and Mobility of Researchers - 1994-1998* (TMR), promotes the development of human resources in the field of research.

Activities include Research Networks which involve five participants from at least three countries, working on common, co-ordinated research for a clearly defined RTD project. Also included is access to large scale facilities and to Training Through Research which covers grants for researchers wishing to work in another EU Member State.

**Run by**: DGXII

**Funding**: ECU 792 million

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**Email**: Tmr-info@dg12.cec.be
1.3 Fifth Framework Programme 1998 - 2002

1.3.1 Introduction

1998 - 2002 will be a period of rapid change for Europe as several crucial decisions and changes are decided. For example, the move to a single currency, the opening of accession negotiations, reform of the structural funds and the Common Agricultural Policy. In response to this scenario, the Fifth Framework Programme will have a degree of flexibility, leaving scope for new themes to be introduced. It will also have speedier procedures and simplified access to programmes. This will improve the implementation of the programmes and attract greater participation from the Member States. The new framework, as explained in 1.3.2 will also be much more user friendly for SMEs - providing easier access to RTD and associated finance.

Several changes from the previous programmes are anticipated including a more consolidated approach to research efforts, incorporating new topics and changing the whole organisation of European research. These changes should encourage better support for the creation of new ideas which address the realities of society's demands and reinforce links with organisations which can enhance the exploitation of European research results.

1.3.2 The Structure of the Fifth Framework Programme

The proposed programmes within the Fifth Framework are organised around four themes which reflect the framework's main priorities:

1. Unlocking the resources of the living world and the ecosystem.
2. Creating a user-friendly information society.
3. Promoting competitive and sustainable growth.
4. Preserving the ecosystem.

And three horizontal programmes:

1. Confirming the international role of Community research.
2. Innovation and participation of SMEs.
3. Improving human potential.

The horizontal programmes are comprised of specific activities which are linked to their objectives. These activities ensure coherence in their equivalent activities carried out under the thematic programmes.

The horizontal programmes are concerned with innovation and the participation of SMEs, allowing easier access to research activities and their results. They also aim to develop technology transfer mechanisms and simplify the decision making process by incorporating qualified majority voting into the system. Easier access to finance for innovation will also be
addressed especially to encourage the participation of SMEs.

1.3.3 Implementation of the Fifth Framework Programme

The Fifth Framework Programme will be more selective about which research topics are awarded funding so as to ensure a greater and more effective concentration of resources. It will also be more transparent with greater co-ordination and exchange of information between the Commission and national/regional levels. This will help engender a more rapid response time in pressurised or emergency situations. Thus, this process will allow for the unexpected and will improve the social impact of research activities.

1.3.4 Proposed Budget for the Fifth Framework Programme

A budget of ECU 16.3 billion has been proposed by the Commission to finance activities under the Fifth RTD Framework Programme for the period 1998-2002. This budget represents an increase of ECU 3.1 billion (+23.5%) from the Fourth Framework Programme (1994-1998).

Of the ECU 16.3 billion proposed, a sum of ECU 14.8 billion is to be reserved for RTD activities under the EC Framework Programme. These proposed figures represent the maximum level of funding available for activities under the Fifth Framework Programme. The proposed allocation of resources is shown in Table 1.3.

**TABLE 1.3 PROPOSED BUDGET FOR FIFTH FRAMEWORK PROGRAMME FOR RTD ACTIVITIES**

<table>
<thead>
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<td><strong>First activity Thematic programmes</strong></td>
<td><strong>First activity Thematic programmes</strong></td>
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<td>Unlocking the resources of the living world and the ecosystem</td>
<td>3,925 MECU</td>
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<tr>
<td>Creating a user-friendly information society</td>
<td>3,925 MECU</td>
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<td>Promoting competitive and sustainable growth</td>
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<td><strong>Second activity Horizontal programme</strong></td>
<td><strong>Second activity Horizontal programme</strong></td>
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<td>Confirming the international role of Community research</td>
<td>491 MECU</td>
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<td><strong>Third activity Horizontal programme</strong></td>
<td><strong>Third activity Horizontal programme</strong></td>
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<td>Dissemination and optimisation of results</td>
<td>350 MECU</td>
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<td><strong>Fourth activity Horizontal programme</strong></td>
<td><strong>Fourth activity Horizontal programme</strong></td>
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<td>Improving human potential</td>
<td>1,402 MECU</td>
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**Direct actions**

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<td>Joint Research Centre</td>
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**TOTAL**

14,833 MECU
1.4 Additional Programmes and Initiatives Outwith the Framework Programmes, Relevant to SMEs within the Biotechnology Sector

1.4.1 SMEAP 3C (1997-2000)

The Third Multi-annual SME Programme (SMEAP 3C 1997-2000) fits within the framework of the Integrated Programme. This Third Programme, therefore, provides the legal and budgetary basis for the Community's specific SME policy actions. As such, it forms part of the Commission's Confidence Pact on Employment and provides for concrete actions which help to exploit SMEs full potential for job creation. For example, helping to increase the number of SMEs participating in the Internal Market and promoting their internationalisation. The third Multi-annual SME Programme will produce a huge multiplier effect throughout the Union as a whole.

The budget allocated is approximately ECU 127 million. The programme exists to help ensure better information transfer to SMEs, to internationalise and stimulate competitiveness, to enhance access to research, enhancing innovation and training. It also aims to promote an entrepreneurial spirit within SMEs. Finally, the programme exists to enhance the Communities knowledge of the needs of SMEs, thus improving its own policies towards SMEs.

Through the scheme the Commission also aims to improve the financial environment for enterprises by:

* support for the development of mutual guarantee schemes, in particular through the European Association of Mutual Guarantee Schemes
* encouraging the growth of EASDAQ
* improving access to private Venture Capital.

SMEs can also benefit from SMEAP 3C through:

- Euro Info Centres: This network comprises 232 Euro Info Centres (ECIs) in the European Union and 20 Correspondence Centres (EICCs) which provide information and advice to businesses on Community legislation and programmes. These also act as 'First Stop Shops', directing SMEs requests to the most appropriate source, including other Community networks. 37 centres particularly interested in the field of R&D and technology are members of the EIC R&D group.

- Co-operation Networks (BC-Net and BRE Net): These networks help businesses develop transnational financial, commercial or technical partnerships with other SMEs.

- Europartenariat: SMEs are able to utilise business fairs held twice a year under the auspices of this programme. These fairs are always held in regions in receipt of Structural Fund assistance. The objective is to provide a meeting place for SMEs and other businesses to foster transnational actions.

- Interprise: Is based on the successful formula of the Europartenariat programme to back local,
regional and national initiatives. Again it's objective is to stimulate contacts between business managers and encourage co-operation between SMEs. At least three different Member States must be involved.

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<tr>
<td>Contact</td>
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1.4.2 COST

European Co-operation in the Field of Scientific and Technical Research (COST), provides a flexible framework for coordinating pre-market research projects. The framework encourages co-operation between industry, especially SMEs, scientific institutes, universities and national research centres. The programme works closely with INCO.

COST operates in the Member States as well as Iceland, Norway, Switzerland, the Czech Republic, Slovakia, Hungary, Poland, Romania, Estonia, Slovenia, Croatia, Malta and Turkey. Its activities cover a wide spectrum including, biotechnology, food technology, agriculture and medical research.

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<td>Contact</td>
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1.4.3 EUREKA

EUREKA is a scheme which promotes collaboration amongst European companies and research institutes involved in advanced technology projects. It is aimed at facilitating industry led, market driven, collaborative projects in all sectors of technology with the objective of introducing new products, processes and services with world market relevance.

Medical and Biotechnology are specified research fields covering:

- medical technologies
- agro-biotechnology
- food processing
- genetic engineering of plants
- biotechnology processes
- animal breeding.

In order to qualify for EUREKA projects must comply with EUREKA objectives, involve more than one European country, demonstrate benefits, use advance technologies, have a market
orientation and have appropriately qualified participants with adequate financial commitment including public funding.

Five umbrella organisations act as focal points for analysis and generation of innovative project ideas. These are:

- FAMOS
- Eurolaser
- Eurocare
- Euromar
- Euroenviron

For SMEs, the initial point of contact with Eureka is through National Project Co-ordinators (NPC). Their task is to provide information for proposing and launching projects. They will also assist in finding transnational partners for project proposals.

Any SME wishing to launch a Eureka project must go through six steps. These are:

* Find a partner using existing contacts, NPC or the Eureka database.
* Develop and propose the project using forms obtained from the NPC.
* Submit the project to the NPC for their evaluation and approval.
* Once the project is approved, seek public funding.
* Gain endorsement from the High Level Group (HLG) as to the Eureka status of the project.
* The endorsed project is announced by Ministerial Conference.

SMEs may also join an existing project as a new partner. This process involves five steps:

* Identify an existing suitable project via NCP or Eureka database.
* Contact the lead partner and begin negotiations for entry.
* Define participation, roles and formalise an agreement.
* Inform NCP and Eureka Secretariat.
* Notify HLG and update database.

The Secretariat is based in Brussels.

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1.4.4 Industrial Platforms
SMEs wanting to move products from bench trials to a market launch will find this programme helpful. The purpose of creating Industrial Platforms is to facilitate and speed up the transfer process.

Industrial Platforms are technology driven industrial groupings established on the initiative of industry around specific areas or projects of the Biotechnology EC programme. The main objective of Industrial Platforms is to maximise the technology transfer from academia to the industrial sector. Industrial Platforms are open to any European company interested, irrespective of their participation in a particular project. Industrial platforms are not only recipients of the results stemming from the Community’s Biotechnology projects. They often provide contractors and commission services with expert advice on industrially relevant topics.

Table 1.4 lists the Industrial Platforms currently running.

**TABLE 1.4 INDUSTRIAL PLATFORMS**

<table>
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<tr>
<th>Industrial Platforms</th>
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<tr>
<td>ACTIP - Animal Cell Technology Industrial Platform</td>
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<td>BACIP – Bacillus subtilis Genome Industrial Platform</td>
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<tr>
<td>BBP – Biotechnology for Biodiversity Platform</td>
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<td>FAIP – Farm Animal Industrial Platform</td>
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<tr>
<td>HAE 2000 – Healthy Aging Europe</td>
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<tr>
<td>IPM – Industry Platform for Microbiology</td>
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<td>IVTIP – In Vitro Testing Industrial Platform</td>
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<td>LABIP – Lactic Acid Bacteria Industrial Platform</td>
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<td>PIP – Plant Industry Platform</td>
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<td>SBiP – Structural Biology Industrial Platform</td>
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<tr>
<td>TEP – Tissue Engineering Platform</td>
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<tr>
<td>YIP – Yeast Industry Platform</td>
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</tbody>
</table>

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**Address**    DG XII  
**Tel.**    +32 2 296 29 65  
**Fax**    +32 2 299 18 60  
**email:**    Stephane.Hogan@dg12.cec.be

1.4.5 Biotechnology and Finance Forum

The Commission Biotechnology programme and the European Association of Securities Dealers (EASD) have set up an ongoing "Biotechnology and Finance" forum. This forum should allow
the development of links between the scientific, industrial researchers, biotech companies, etc.) and the financial communities (investors, etc.), thereby promoting the creation and development of biotechnology companies in Europe.

Under the umbrella of the Biotechnology and Finance forum, the Commission is willing to encourage the networking of key players in biotechnology entrepreneurial initiatives in order to develop interactions and contacts (such as through the first conference entitled, "Promoting Biotechnology Entrepreneurial Initiatives" on 12-14 May 1998).

The Commission contact is:

<table>
<thead>
<tr>
<th>Contact</th>
<th>Dr. P. de Taxis du Poêt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>DG XII-E-1, Biotechnology</td>
</tr>
<tr>
<td>Tel.</td>
<td>+32 2 295 40 43</td>
</tr>
<tr>
<td>Fax.</td>
<td>+32 2 299 18 60</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:Philippe.de-Taxis-du-Poet@dg12.cec.be">Philippe.de-Taxis-du-Poet@dg12.cec.be</a></td>
</tr>
</tbody>
</table>

The EASD contact is:

<table>
<thead>
<tr>
<th>Contact</th>
<th>Ms A-M Lamodièrè</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>56, rue des Colonies, box 15, Brussels, B-1000</td>
</tr>
<tr>
<td>Tel.</td>
<td>+32 2 223 03 07</td>
</tr>
<tr>
<td>Fax.</td>
<td>+32 2 227 65 24</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:easd@tornado.be">easd@tornado.be</a></td>
</tr>
</tbody>
</table>

1.4.6 Promotion, Co-operation and Information for SMEs

The specific interests of SMEs are overseen by Directorate General XXII Enterprise Policy, Distributive Trades, Tourism and Co-operatives, and this DG runs an active programme for SMEs.

A total of ECU 112.2 million was allocated to the action programme for promotion, Co-operation and Information, 1993-1999. The existence of the European Economic Interest Grouping (EEIG), which is the legal instrument for co-operation, reinforces the Union’s action in the field of partnership. A Grouping acquires full legal status when its registration is published in the Official Journal of the European Communities. It has rights in all Member States encompassing industrial property rights, contracts, legal proceedings and property.

The existence of the European Economic Interest Grouping (EEIG), which is a legal instrument for co-operation, reinforces the Union’s actions in the field of partnerships. A grouping acquires full legal status when its registration is published in the Official Journal of the European Communities. It has rights in all Member States encompassing industrial property rights, contracts, legal proceedings and property.
1.4.7 BRE-Net (Bureau de Rapprochement des Entreprises) and BC Net (Business Co-operation Network)

SMEs seeking a partner - whether in their own region, nation, transnationally or in third countries should use either the BRE Net or the BC Net. These networks cover all sectors of economic activity and all possible types of co-operation or partnership.

Therefore an SME may be able to find a partner from the existing database or, if not, add their needs to the system. The BC Net carries out research on a confidential basis, whilst the BRE Net is totally open.

For more information contact Unit B2 within DGXX of the European Commission:

**Contact Name:** BRE Help Desk  
**Address** European Commission, Directorate General XXIII - B2  
Rue de la Loi 200, - AN80, B-1040 Brussels  
**Tel.** +32 2 295 91 17  
**Fax** +32 2 296 42 71  
**email:** bre-helpdesk@dg23.cec.be

**Contact Name:** BC Help Desk  
**Address** European Commission, Directorate General XXIII - B2  
Rue de la Loi 200, - AN80, B-1040 Brussels  
**Tel.** +32 2 296 28 08  
**Fax** +32 2 296 25 72  
**email:** bcnet-helpdesk@dg23.cec.be

1.4.8 Europartenariat and Interprise

SMEs are able to utilise the business fairs held twice a year under the Europartenariat. These business fairs are always held in regions in receipt of Structural Fund Assistance. The objective is to provide a meeting place for SMEs and other businesses to foster transnational cooperation.

As well as the normal trade stands, there are discussion groups and meeting facilities.

SMEs can also benefit from the Interprise Programme which promotes and sponsors inter-regional initiatives and to promote partnerships. At least three regions must be involved - either nationally or transnationally and they may be extended to the CEECs.

Between 30-50% of the costs of initiatives under Interprise may be obtained from the Commission, with a maximum of 60,000 Ecus.

For further information on the two partnership instruments above please contact:

**Address** European Commission, Directorate General XXIII - B2
**1.5 The European Regional Development Fund and the European Social Fund**

**1.5.1 Introduction**

One of the principal aims of the European Union is to ensure that there is a reduction in economic disparities between the different regions of Europe. Greater economic and social cohesion is encouraged by channelling financial assistance and resources to the disadvantaged regions of Europe through a series of inter-related funds known as the Structural Funds. The Structural Funds consist of the European Regional Development Fund (ERDF), the European Social Fund (ESF), the European Agricultural Guidance and Guarantee Fund (EAGGF) and the Financial Instrument for Fisheries Guidance (FIFG). Assistance is also provided through the European Investment Bank and a number of additional financial instruments including the new Cohesion Fund for the most disadvantaged member countries - Portugal, Greece, Ireland and Spain.

It is possible for SMEs to gain access to funding under both the ERDF and ESF, but this access will be dependent upon two key factors:

- in general, location within an assisted area
- fit of proposed project within a specific programming document.

**1.5.2 Accessing ERDF and ESF**

As outlined above access by individual SMEs is dependent both upon location and fit of the proposed project within a specific programming document. Access may be as an individual SME, via programmes part funded by ERDF/ESF or via business parks, research centres etc which have been funded by ERDF. ESF funds are awarded specifically for training projects.

Given the largely location specific nature of these funds, specific programmes under ERDF/ESF are dealt with in Section 4 National Programmes.

**SECTION 2. OTHER SOURCES OF FINANCE**

**2.1 Introduction**

A recent survey of some 450 European biotech SMEs identified access to finance and credit as a major limiting factor on company growth and development. Most research areas involved both
high resource demands, which SMEs were unable to fund internally and a high level of risk - making them unattractive to outside investors.

The ‘First Action Plan for Innovation in Europe’, adopted by the Commission at the end of 1996, identified the lack of early stage capital (the finance required to get an innovative venture off the ground) – as one of the main barriers to innovation in Europe. High growth innovative companies, acknowledged as essential sources of new jobs, frequently face special difficulties in tapping into existing sources of venture capital in their early stages. Two important reasons are:

* Venture capital operators find it difficult and costly to assess the prospects of these companies because of the technology involved.
* Venture capital operators participate in the management of companies in which they invest – but technologically innovative companies demand high levels of management attention over a long period of time.

It is this funding need which was clearly recognised by the European Commission, when it adopted, on 5 May 1997, on the initiative of Commissioner Christos Papoutsis, a Communication entitled ‘European Capital Markets for SMEs: prospects and possible obstacles to the progress’. This Communication constituted a continuation of the Commission’s efforts to stimulate the creation and development of such markets in the EU.

In addition, a more global reflection on barriers to the development of European risk capital markets is currently going on and should be presented at the European Council of Cardiff in June 1998. Some of its main objectives are to:

* Explore the potential barriers to the listing of SMEs on capital markets.
* Start a Europe-wide debate on the appropriate conditions for access to equity finance.
* Describe and draw attention to the progress made by various initiatives in the European Union, such as EASDAQ, Euro NM and AIM (c.f. section 3.5).
* Outline the actions the Commission is currently taking, and intends to take in the future, to overcome the barriers of the development of SME-oriented capital markets and ensure their smooth operation.

### 2.2 What is Venture Capital?

Venture Capital or private equity is defined as *a form of share capital provided by firms of full-time professionals, who invest alongside management in young, rapidly growing or changing privately owned companies which have the potential to develop into significant businesses in regional, European and global markets*. Since Venture Capital provides equity (share) capital to enterprises not quoted on a stock market, it is also referred to as private equity or unquoted investment.

The terms private equity and venture capital cover a wide spectrum of types of investments in unquoted companies. These range from the core capital for the launch, early development, expansion or restructuring of a business to acquisitions, the development of new products or technologies, the expansion of working capital or simply the reduction of an established
company’s debt. Venture Capital may also offer solutions to ownership issues, successions in family-owned companies, or the buy-out or buy-in of a business by experienced managers.

An important note to remember is that Venture Capital funding is not Grant Funding, and that there is a difference between a Commercial bank and a Venture capitalist.

* Banks will only put money in to a business when there is enough equity to give security and a potential income stream to amortise the debt.

* Banks will usually not want to be involved in the management of the Company.

* The Venture Capitalist is prepared to accept a much higher level of risk exposure and looks for a primary return by way of capital growth.

* Venture Capitalists may also opt to play a more active role in terms of management – particularly if they feel that their investment could be at risk.

* The SME must also recognise that it is surrendering to the Venture Capitalist, share capital and the legal and ownership implications of this act.

2.2.1 Accessing Venture Capital Finance

The following were noted as key elements in seeking Venture Capital:

* A good management team that has a wide range of skills and understands fully the technology. Certain crucial services may be subcontracted.

* Have a clear vision and mission statement.

* Avoid ‘mail-outs’ to a broad spectrum of Venture Capitalists.

* Elaborate on the possible outcomes of the technology and identify the marketable elements rather than the research effort put in.

* Check that the technology has a clear market focus.

* Remember that for the Venture Capitalist the most important objective is a marketable product and not R & D.

* Produce a first class Business Plan incorporating:
  - the Product
  - the Market
  - financial projections
  - management team
  - track record.

* Be aware of weaknesses in the technology and be ready for searching questions at the presentation.

* Give reasons for any gap in the business plan and have identified possible solutions.
* Remember that Venture Capitalists are essentially entrepreneurs and not research directors.

* Maintain continual contact with the Venture Capitalist approached and probe feedback.

* Try to use Venture Capitalists in your own national Member State before approaching those in another country.

These elements are normally combined in the following sequence of action:

1. After carefully selecting one or two Venture Capitalists, establish contact with them and then send a comprehensive and professional business plan covering the key elements outlined above.

2. The plan is then distributed within the Venture Capital firm and the project discussed (normally within two weeks of receiving the business plan).

3. If, following the first meeting, the project is of interest, one person from the Venture Capitalists is assigned the dossier and continues to examine the business plan. The SME management team must seek to answer any queries promptly. This stage is known as the ‘warming up session’ within the industry.

4. The team member, who is responsible for the dossier of the company looking for finance, gives a short presentation to their colleagues. Feedback is given on a document of up to 10-20 pages.

5. A thorough analysis and several negotiations with the management of the company concerned, is the next stage. A third party is also often asked their opinion of the project.

6. The final stage is the ‘shooting session’ in which the project is presented for the final decision. The company also gives a short presentation of its general profile and the technology or products concerned.

7. Immediately following this meeting there is an internal discussion and a decision is made on the investment.

This process typically takes approximately two months.

Since 1984, DG XIII/D has actively supported the establishment and development of the European Venture Capital Association (EVCA), which currently gathers together more than 350 professional venture capital operators. DG XIII/D represents the European Commission on the board of the EVCA.

### 2.2.2 Finding a Venture Capitalist

Table 2.1 lists firms identified by the Venture Capitalist sector as particularly active investors in biotechnology.

<table>
<thead>
<tr>
<th>Name of Venture Capitalist</th>
<th>Particularly good at investing in biotechnology firms</th>
<th>Have a long standing reputation of investing in biotechnology firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>✓</td>
<td></td>
</tr>
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TABLE 2.1 LIST OF VENTURE CAPITALISTS IDENTIFIED AS HAVING A KEY INVOLVEMENT IN THE BIOTECHNOLOGY SECTOR
2.3 Euro Tech and Seed Capital Pilot Action

In recognition of the difficulty which high technology companies, including biotechnology, have in accessing funds from the financial markets the European Commission has set up two schemes linked into the commercial sector. These are known respectively as EuroTech and Seed Capital Pilot Action.

2.3.1 Eurotech Capital

Eurotech capital is a Venture Capital programme run by DGII of the European Commission, which aims to promote private funding of transnational high technology projects. The scheme operates through a network of 14 private Venture Capital funds. Each fund has an investment capacity of at least 50 million ECU, of which at least 20% is allocated to companies involved in transnational high-technology projects. In return, the funds receive a financial contribution from the Commission (4%). Funding priority is given to SMEs seeking development finance, providing they have a transnational project.

<table>
<thead>
<tr>
<th>Name of Action</th>
<th>Run by</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUROTTECH Capital</td>
<td>DGII Financial Operations Service</td>
</tr>
</tbody>
</table>
2.3.2 Seed Capital

The European Commission implemented the seed capital pilot action in order to stimulate the supply of equity capital to innovative business projects, by supporting the creation of 23 specialised investment funds. These funds are independent entities, under private law, and responsible for their own investment decisions.

At the end of 1997, the 23 funds have invested 41.9 MECU in 346 new companies. Out of the 346 firms created since 1989, 267 are still in business (77%). The 267 firms still in business have created 2,382 permanent jobs. 8 of the 23 funds are specialised to make investments in the biotechnology sector. A list of the participating funds, as well as a last advanced report of the activities of the funds, can be obtained from:

Name of the Action: SEED CAPITAL
Run by DG XXIII
Contact Unit C.2
Fax 00 32-2-295.21.54

2.4 Innovation and Technology Equity Capital (I-TEC)

Innovation and Technology Equity Capital (I-TEC) is a new pilot scheme launched on 1 July 1997 in cooperation with the European Investment Fund. It is open to Venture Capitalists active in the EU and the Associated States that are aiming to make early stage high-tech investment. The I-TEC network today gathers 13 venture capital operators (expanding), which have collectively committed to invest more than 250 MECU in such projects.

The I-TEC contribution per selected Venture Capital fund is as follows:

up to 50% of the costs related to initial appraisal and hands on management of investment
the total I-TEC contribution per venture capital fund will not exceed 5% of the investments effectively made with a maximum of ECU 500,000
I-TEC contributions will be made available after actual investments have been made.
I-TEC benefits are open to Venture Capitalists who:

have organised a fund raising effort
have submitted an Investment Proposal to the EIF and have received a Letter of Intent from the EIF
undertake to invest at least 25% of the new capital raised in early stage investment in technologically innovative SMEs.
For further information and to obtain an updated list of I-TEC participants, please contact:

Name: Mr Marc Verlinden  
Address: European Commission, DGXIII D/4  
The Innovation Programme  
Rue Alcide de Gasperi  
L-2950 Luxembourg  
Tel: +352 4301 341 94  
Fax: +352 4301 345 44  
or alternatively:

Name: Mr Sieglinde Daetens  
Address: EVEA  
Tel: +322 715 00 29  
Fax: +322 725 07 04

2.5 Stock Markets

Historically, the traditional European stock exchanges have been more geared to the needs of larger ‘blue chip’ companies than those of smaller firms. During the 1980s there were initiatives for ‘second tier’ stock markets oriented more towards smaller firms. However, on the whole, these developments were not very successful, partly because of the stock market difficulties of 1987. As a result many promising European companies chose to be listed on US stock markets such as NASDAQ.

Nevertheless, the London Stock Exchange has now changed its rules permitting biotechnology SMEs to be entered on its main list as long as they meet one of the following requirements:

* Able to attract funds from investors.
* Intend to raise £10 million at the time of listing.
* Have a capitalisation of at least £20 million.
* State that they are developing an identified product to a marketable stage which will generate funds and that this is their primary reason for listing to raise funds to meet this end.

In addition, companies engaged in drug R&D must have two clinical trials regulated by a recognised international authority, signed collaborative agreements with other companies, proof that expenditure for R&D will exceed £20 million over a minimum of three years and that significant intellectual property has been created.

Additionally, three more tools have recently been created to contribute to the development of SMEs. Their aim is to develop and operate a well-regulated, pan-European stock market, which is liquid, efficient and fair, where fast-growing companies with international aspirations can raise capital from investors.
2.5.1 EASDAQ

In 1994, the European Commission (DG XII and DG FM) supported the creation of the EASD (European Association of Security Dealers), an association of 75 bankers and venture capital operators from across the European Union and the US. This organisation then went on to initiate the EASDAQ (European Association of Security Dealers Automated Quotations). Based in Brussels it is independent of the existing European stock markets and is authorised by the Belgium Banking and Finance Commission. EASDAQ is permitted to operate its trading system in all Member States. Members and intermediaries are required to have approval of their home states’ regulatory authority. Being an independently managed market, it is dedicated to serving the interests of growth companies and their investors.

EASDAQ has been closely modelled on NASDAQ, allowing companies a dual listing on both systems. All companies must comply with the information requirements of the Securities and Exchange Commission (SEC) in the US. The obligations and roles of its members and sponsors are explained in the EASDAQ document titled ‘Membership of EASDAQ’.

For more information contact:

Name: EASDAQ
Address: Rue des Colonies / Kilonienstraat 56 Box 15
Tel: +32 2 227 6520
Fax: +32 2 227 6567

2.5.2 EURO NM

Euro NM is designed to be a decentralised, pan-European stock market. It was created by the Brussels Stock Exchange, the Neuer Markt of Deutsch Börse AG, Le Nouveau Marché of Paris, and the New Market of the Amsterdam Stock Exchange, to strengthen the European dimension of their own national systems. It works to harmonise the rules and regulations and listing procedures of the national markets ensuring a degree of co-ordination whilst recognising subsidiarity.

It is in charge of setting up and promoting a network of regulated markets across Europe for fast growing companies. It is dedicated to innovative, high-growth companies and SMEs in general, and seeks to address the problem of difficulties in raising capital.

Contacts for more information on Euro NM are:

PARIS

Contact Name: Dominique Leblanc
Tel: +33 1 49 27 15 57

Contact Name: Yannick Petit
Tel: +33 1 49 27 15 06

BRUSSELS
2.5.3 The Alternative Investment Market (AIM)

The AIM in London is another public equity option for European SMEs in the area of biotechnology. Those SMEs which are new businesses and cannot meet the requirements for the LSE, have a more realistic chance of access to capital markets through AIM. Regulations are less strict with potential entrants needing to:

* Provide a prospectus.

* Meet audit requirements laid out in company law.

* Maintain obligations of publication of un-audited interim figures and directors’ dealings.

2.6 The European Investment Fund

The European Investment Fund (EIF) is an agency partnership between the European Investment Bank, the European Commission, private and public banking sectors.

EIF’s task is to support the development of trans-European networks of small and medium-sized enterprises, by providing loan guarantees and venture capital. EIF does not invest directly in individual companies but will provide funds for intermediary venture capitalists in the Member States. In doing so, the EIF pursues two objectives, i.e. to contribute to the development of European SMEs with a high growth and employment potential, and to add value to the equity interventions of private sector financial institutions on the venture capital market.

One common feature among national venture capital markets is that they all experience a relatively large funding gap in the early development stage as well as in technology investments. However, a number of venture capital companies are currently in the process of fund raising for investment vehicles which have a focus in this area. In this context, the arrival of the EIF on the equity market for SMEs sends a positive signal to the financial institutions and private investors
that are considering to "venture" into venture capital.

The EIF is authorised to commit Ecu 75 million of its own funds between 1996 to 1998 to equity participations. The key principles of its investment policy are to ensure that an experienced team of professional venture capital managers is in place, to invest only in funds that are of a sufficient size and to seek financial performance from its investments. The EIF will take minority stakes, on average 10 to 15%, in intermediate structures with a clear definition of their investment and exit strategies. Most participations will normally represent between Ecu 1 and 3 million.

In addition, the EIF collaborates with the European Commission on the implementation of I-TEC pilot projects. The EIF acts as an adviser to the Commission when identifying suitable venture capital funds specialising in early stage investment in high technology projects. In turn, I-TEC pilot projects will help reinforce venture capital markets in which the EIF operates by:

Providing extra support for smaller venture capital fund managers to help them raise new and bigger funds.

Giving extra confidence to private and institutional investors who are investing for the first time in these funds

As a part of the European Investment Bank’s Amsterdam Special Action Programme (ASAP), the EIB gave the mandate to the EIF to manage its Ecu 125 million "European Technology Fund" (ETF) Facility. This aims at improving the innovativeness and thus the competitiveness of eligible SMEs across the Union by facilitating investments in specialist venture capital funds which support the creation and development of high growth, technology oriented SMEs. This ETF facility will be managed by the EIF in a similar way to its own venture capital operations.

Finally, in early 1998 the Commission tabled a proposal for a Council decision on the Growth and Employment initiative to improve access to finance for SMEs to aid their investment activities. This initiative comprises a risk capital facility – "ETF Start-up", which will be managed by the EIF who shall select, make and manage investments in relevant specialised venture capital funds. The facility will reinforce the venture capital operations of EIF by targeting a segment of the venture capital market with a higher inherent investment risk, notably SMEs at establishment and early stages. Again, the EIF will not invest directly in individual companies but will provide funds to intermediary venture capital funds in the Member States. Smaller or newly established funds, funds operating regionally or funds focused on a specific sector such as information and communication technologies, health care and biotechnology or venture capital funds linked to research centres and science parks, will in turn provide risk capital for SMEs. A figure of Ecu 150-190 million is envisaged for this scheme over the period 1998-2000. It is expected that the Council of Member States, which must decide unanimously, will not adopt this proposal until mid 1998.

Direct applications to the Fund are welcome from venture capital promoters. In order to consider an investment opportunity, the EIF needs a detailed business plan or placing memorandum describing, inter alia, the size and characteristics of the proposed or existing venture capital fund, the management team and their track record, the legal structure, the investment and exit strategies and the involvement of other investors.

Name European Investment Fund
2.7 The European Investment Bank

The European Investment Bank (EIB) is an independent public institution of the European Union established to finance capital investments on a non-profit-making basis to promote the balanced development of the Community.

The main aim of the European Investment Bank (EIB) is to reduce inequalities between regions in the European Union to ensure economic and social cohesion of all Member States. It is a non-profit, autonomous institution within the European Union which borrows from the capital markets both within and outside the Community for the bulk of its resources. Tied into Community priorities, the EIB provides loans which can be used in association with national or Community grant aid. As part of this function it will support activities of SMEs.

In the framework of global loans, credits to SMEs can cover up to 50% of costs for any given project, and credit is granted in tranches of between ECU 20,000 and 12.5 million. Commercial projects last between 4-12 years. All projects must be both economically and technically viable.

For most SMEs, access to EIB finance will be through global loans which the Bank will make available via intermediaries. These intermediaries are banks, financial institutions or any financially sound agency which is able to conduct investment appraisal. Intermediaries can work at a national or regional level or be sector specific.

As a part of the European Investment Bank’s Amsterdam Special Action Programme (ASAP), it introduced the possibility of risk-sharing global loans benefiting SMEs, in which the Bank takes part of the risk that is usually taken fully by the intermediary institution. In addition, the ETF (European Technology Facility), which is also part of the ASAP, also supports SMEs, as this fund invests in venture capital funds throughout the Community.

Contact:

Name European Investment Bank
Address 100 blvd Konrad Adenauer
2950 Luxembourg
Tel + 352 43 791
Fax + 352 43 77 04

2.8 Improved Access to Finance for SME's under the Third Multi-annual Programme for SMEs

The Third Multi-annual Programme for SMEs forms part of the Integrated Programme for SMEs which was adopted by the European Commission on 10 July 1996. The Integrated Programme
provides the framework for a wide range of measures that aim to improve the financial environment for SMEs, including the exchange of best practice between Member States and the strengthening of Community actions in this field.

One of the main focuses of the Third Multi-annual Programme is the elimination of constraints and the improvement of access to funding by SMEs. Sponsorship is given to Loan Guarantee Schemes and to Mutual Guarantee Societies (MGS).

In an MGS several enterprises club together with the aim of providing mutual guarantees and thus better access to credit. It allows for the appraisal of risk by companies with direct experience in the relevant sector, spreads the risk among more parties, reinforces the negotiating power of the members and favours an effective allocation of public subsidies.

The scheme is more widespread in some parts of the European Union than others and the Commission, and in particular DGXII, actively encourages the promotion, development and expansion of MGSs in the EU. It works closely, therefore, with the European Mutual Guarantee Association.

For more information contact:

Name DG XXIII
Address Rudy Aernoudt
European Commission, DG XXIII.C.2
Rue de la Loi 200 (AN80 1/9)
B-1049 Brussels
Tel 32-2-295.91.86
Fax 32-2-295.21.54
e-mail Rudy.aernoudt@dg23.cec.be

Name European Mutual Guarantee Association (AEGM)
Address Sagasta, 15 7°
E-28004 Madrid
Tel 341 445 14 00
Fax 341 448 92 89

2.9 Exchange of Experience and Dissemination of Best Practice in Innovation Financing

The FIT Project - Each Member State has measures to support innovation financing. However, young innovative enterprises do not receive all the attention they deserve at the European level. Thus, this action aims to boost transnational information exchanges, in particular in the field of best practices for innovation financing. It does this by organising systematic exchanges of good practice in the financing of innovation between Member States’ policy makers and market
operators. Three subjects will be covered in workshops and dissemination activities in 1998 and 1999: guarantee mechanisms, technology rating and internal investors.

In addition, in order to increase the awareness of the importance of accessing innovation finance, the Commission is organising exchanges of experience and the dissemination of best practice. These exchanges take the form of sectoral workshops (biotechnology, information technology and advanced materials) or in a more general format (Innovation Programmes, a Round Table on Innovation, the creation of businesses and employment – Paris, December 1997 / Luxembourg, May 1998 / November 1998.

They also involve the creation of experimental networks of national operators (e.g. a network for technology rating bringing together innovation agencies and investors in four countries; networks for the establishment of a seed capital fund for the exploitation of microsystems or for the photovoltaic industries; networks for the spin-out and spin-off from research institutes and universities etc.).

Moreover, the Commission, under its measures to promote performance benchmarking in the Union, has launched a pilot project in the field of innovation financing.

For further information, please contact:

Name Mr. Marc Verlinden
Address European Commission, DGXIII D/4
The Innovation Programme
Rue Alcide de Gasperi
L-2950, Luxembourg
Tel + 352 4301 341 94
Fax + 352 4301 345 44

2.10 Measures under Discussion - Business Angels

Business Angels are often referred to as informal capitalists' and were pioneered in the UK by the National Westminster Bank. Essentially, the Bank lists individuals with capital who have expressed wish to be involved in new ventures. These investors are matched against investment 'needs' and the Bank acts as the intermediary.

A similar model is also operating in Sweden, the Netherlands and Finland. The Commission recognises the potential importance of a European register of ‘Business Angels’ for raising funding for SMEs. It is currently investigating the practicalities of setting up such a system.

For more information contact:

Name DG XXIII
Address Rudy Aemoudt
European Commission, DGXXIII C/2,
The Lift Project

Set up under the Innovation Programme, the LIFT (Links to Innovation Financing for Technology) project aims to bring together investors and promoters of technology projects, in particular those deriving from Community research. In its exploitation phase (from mid-1998), LIFT will make available to users a central Help Desk and a decentralised network based on existing bodies and accessible to researchers, businessmen, and investors. The help desk is to be operational by 1999.

2.11 The Growth and Employment Initiative

Following an initiative by the European Parliament, the Commission in January 1998 tabled a proposal for a Council decision aiming at the improvement of access to finance for innovative SMEs to support their investment activity, and thereby, stimulating the creation of employment. The Ecu 420 million initiative consists of three complementary facilities aimed at covering a broad range of needs, allowing the largest possible number of SMEs to be reached:

* ETF Start-up – a risk capital facility, managed by the European Investment Fund (see Section 2.6)

* Joint European Venture (JEV) – the provision of financial contributions for the establishment of transnational joint ventures between SMEs in the EU. The scheme will be accessible to SMEs through a network of banks in all the member states. The scheme will allow a maximum contribution of Ecu 100,000 per project to cover part (50%) of the expenditure incurred in the conception and the setting up of a cross-border joint venture and an aid (10%) on investment.

* SME Guarantee Facility, a guarantee scheme managed by the EIF, to increase the availability of loans to small or newly established firms, to be distributed through risk sharing with national guarantee schemes and mutual guarantee schemes. For SME guarantees in general, and for this facility in particular, the EIF delegates responsibility for the approval and administration of individual loans to intermediary financial institutions in the Member States. These institutions carry out financial evaluations of the investments according to their own credit procedures. This facility shall target SMEs with growth potential and will mainly be available to cover lending to SMEs with less than 100 employees.

It is expected that the decision on the proposal will be adopted by the Council of Member States, which must decide unanimously, by mid 1998. The JEV programme is already operative since the beginning of 1998 through a Commission Decision

SECTION 3. NATIONAL PROGRAMMES
3.1 Introduction and Purpose

Section 3 provides a guide for SMEs to national programmes aimed at assisting them in the biotechnology sector. As with the European programmes, much of this assistance is in the form of funding but there are also important elements covering partnerships, dissemination and exchange of information, technology transfer and training.

This section contains many programmes and thus the provision of detailed explanations is precluded. Therefore, in each case responsible organisations, contact names and numbers are given so that the user can gain for themselves full details of specific schemes. Users may also wish to refer to their National Trade Association for assistance or advice.

Depending upon the amount of information available for the specific Member State, each section has the following format:

.1 - Brief Background to the Industry
.2 - Current Actions and Programmes
.3 - Programmes at a glance
.4 - Support Organisations/Contacts

3.2 Austria

3.2.1 A Brief Background to the Industry

Traditionally the Austrian industry is strong in fermentation with several well recognised microbiology and biochemistry research institutes. Many multi-national companies have been attracted to Austria, most of who are in the pharmaceutical sector. Biotechnology is considered a priority, although R&D spending has been relatively low at 1.3% of GNP. The recognised obstacle for biotech development is that there is limited risk capital.

In 1995, Austria had 40 firms active in biotechnology, 10 of which were in the healthcare/pharmaceutical sector.

Public biotechnology R&D is based in more than 15 university research institutes and four non-university research institutes.

3.2.2 Current Actions and Programmes

There are a number of projects currently running and these cover the following areas: yeast cell biology, plant molecular biology, biomembranes, cell differentiation, iron channels, allergies, lipoproteins in health and disease, genetic modifications of cells and animals, cell communication, microvascular injury and repair.

The organisations which are supporting the projects to the sum of ECU 15m include:
* The Ministry for Science and Research
* The Ministry of Agriculture and Forestry
* The Ministry of the Environment, Nationalised Industries and Transport
* The Ministry of Health and Consumer Protection
* The Austrian Science Foundation - this foundation on its own, provided ECU 5m per year.

About 40% of the R&D in Austria is funded from government ministries or direct funding programmes. The breakdown of public research is roughly 54% for health aspects, 27% on biomass and renewable raw materials and 27% on agricultural topics. From companies there has been equal support for both health and agricultural applications.

Two funds of particular relevance to SMEs in the Biotechnology Sector are:

* The Austrian Science Fund - (FWF)
* The Industrial Research Promotion Fund - (FFF).

Austrian Science Fund (FWF) was set up in 1967 and its main objective is the promotion of basic research in Austria. The research and funding responsibilities are as follows:

* Funding of precisely defined research projects by individual applicants or groups of applicants from all scientific areas, with the basic proviso that they enhance further development in such areas.
* Funding of young scientists and scholars.
* Stimulation of European research co-operations.
* PR work in the service of scientific research and helping to ensure appropriate dissemination and exploitation of the results of research projects.
* Involvement in research and technology consultancy within Austria.

Industrial Research Promotion Fund (FFF) is a sister organisation to the FWF and deals particularly with applied research and development. It provides an objective evaluation of each project’s chances of success, co-operates with know how transfer agencies and helps in the search for joint research ventures. FFF also offers young researchers many interesting programmes.

The FFF has also been commissioned to manage the Innovation and Technology Fund (ITF) with respect to projects involving a large element of research and development. Projects involving technology transfer and technology diffusion are mainly supported through this fund.

The FFF pursues the following objectives:

* The promotion and financing of industrial research and innovation.
* The implementation of the Austrian government’s technology policy.
* The stimulation of joint national and international research.
* The promotion of research in sectors where little research is carried out.
* The promotion of technology transfer and diffusion (through ITF).
### 3.2.3 Programmes at a Glance

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<thead>
<tr>
<th>Programme:</th>
<th>General Programme</th>
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<tbody>
<tr>
<td>Sponsor:</td>
<td>The Industrial Research Promotion Fund</td>
</tr>
<tr>
<td>Scope:</td>
<td>This programme is open for all industrial research and development projects by companies, research working groups, research institutes and individual researchers. The precondition for support from the fund is technical quality and risk, and strong evidence that the results of the project can be exploited commercially. 80% of this programme is utilised by small and medium-sized enterprises.</td>
</tr>
<tr>
<td>Contact:</td>
<td>Herbert Wotke Chief Executive, Industrial Research Promotion Fund Tel: +43 1 512 45 84 43 Fax: +43 1 512 45 84 41 Email: <a href="mailto:mailbox@fff.telecom.at">mailbox@fff.telecom.at</a></td>
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<tr>
<th>Programme:</th>
<th>Relay Programme Science - Industry</th>
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<tbody>
<tr>
<td>Sponsor:</td>
<td>The Austrian Science Foundation and the Industrial Research Promotion Fund</td>
</tr>
<tr>
<td>Scope:</td>
<td>Basic scientific research in Austria is supported by the above two foundations. FFF has developed a programme in which companies are involved in projects as &quot;observers&quot; right from the basic research stage. As in a relay race, the projects are taken over by companies as they approach the marketing stage, when they are supported by FFF.</td>
</tr>
<tr>
<td>Contact:</td>
<td>Herbert Wotke Chief Executive, Industrial Research Promotion Fund Tel: +43 1 512 45 84 43 Fax: +43 1 512 45 84 41 Email: <a href="mailto:mailbox@fff.telecom.at">mailbox@fff.telecom.at</a></td>
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<tr>
<th>Programme:</th>
<th>Young Researchers Programme</th>
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<tr>
<td>Sponsor:</td>
<td>The Industrial Research Promotion Fund</td>
</tr>
<tr>
<td>Scope:</td>
<td>This programme sets out to support the involvement of young researchers in joint projects with companies. The objective behind the programme is to increase co-operation between science and industry. This is a very popular programme with SMEs in that they can develop their own research and development facilities. It also enables many young researchers to find jobs in the field of industrial research.</td>
</tr>
<tr>
<td>Contact:</td>
<td>Herbert Wotke Chief Executive, Industrial Research Promotion Fund Tel: +43 1 512 45 84 43 Fax: +43 1 512 45 84 41 Email: <a href="mailto:mailbox@fff.telecom.at">mailbox@fff.telecom.at</a></td>
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<tr>
<th>Programme:</th>
<th>Timber Research Programme</th>
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<tr>
<td>Sponsor:</td>
<td>The Industrial Research Promotion Fund</td>
</tr>
<tr>
<td>Scope:</td>
<td>The timber industry in Austria is too strongly orientated towards raw materials. With this programme the FFF aims to encourage research and development projects and joint ventures in a sector where there is still inadequate research.</td>
</tr>
</tbody>
</table>
Programme: Domestic Water Research Programme

Sponsor: The Industrial Research Promotion Fund

Scope: The environment programme is carried out in collaboration with the Ministry for the Environment, the main aim is to encourage better management of water resources. From 1997 onwards one of the main points of emphasis will be the problem of eliminating nitrates and sulphates from the water of old large-scale sewage farms.

Contact: Herbert Wotke Chief Executive Industrial Research Promotion Fund Tel: + 43 1 512 45 84 43 Fax: + 43 1 512 45 84 41 Email: mailbox@fff.telecom.at

Programme: Technology Transfer Programme

Sponsor: The Industrial Research Promotion Fund

Scope: The FFF is the main co-ordinator of the Innovation and Technology Transfer Programme in Austria. Support is given to either companies or agencies for technology transfer projects

Contact: Herbert Wotke Chief Executive Industrial Research Promotion Fund Tel: + 43 1 512 45 84 43 Fax: + 43 1 512 45 84 41 E mail: mailbox@fff.telecom.at

The Austrian Science Fund (FWF), grants research projects that are clearly defined and of limited duration in the following categories:

* Individual Projects
* Joint Research Projects
* Special Research Programs
* Contact Projects Science-Industry
* Fellowship Programs
* Contributions to Publishing Costs
* Programs involving the Funding of Individual Researchers

Programme: Individual Projects

Sponsor: The Austrian Science Fund (FWF)
Individual projects are defined as a research project of up to 36 months duration. This tends to be the most popular category under which proposals are submitted to the FWF. In 1996 the FWF approved 382 individual projects. The validity of an individual research project to be granted is assessed on the basis of the significance of the research project for the development of the sciences in Austria.

Prof. Schmidt Austrian Science Fund Tel: + 43 1 505 67 40
Mrs Glueck Tel: + 43 1 505 67 23

The above two programmes are aimed at projects of a particularly high standard and of medium- to long term duration. Referees from the international scientific community judge the merits of a proposed FSB or SFB based on scientific criteria. Upon completion of the review process the FWF decides upon funding at an annual meeting. After a period of 2-4 years, those projects awarded funding under FSP and SFB are evaluated again by a group of independent international experts.

Prof. Schmidt Austrian Science Fund Tel: + 43 1 505 67 40
Mrs Glueck Tel: + 43 1 505 67 23

This programme was designed to promote centres of scientific research in a particular field of inquiry. Special emphasis is placed on promoting highly qualified graduate students by establishing close contacts with experienced, active and internationally renowned scientists as well as by integrating them into ongoing research work. The programme is designed specifically to train promising researchers at a few selected research facilities. The FWF board devotes one annual meeting to the establishment of new trainees. Interim evaluations are conducted at regular intervals. No time limits are set for the trainees and this programme can also run in parallel to other FWF projects or programmes.

Prof. Schmidt Austrian Science Fund Tel: + 43 1 505 67 40
Mrs Glueck Tel: + 43 1 505 67 23

The FWF promotes young post-graduates within the context of three programmes:

1. Drwin Schrödinger Fellowships: These offer highly qualified Austrian citizen (up to the age of 35), the opportunity of working in leading foreign research institutions and research programmes.

2. Lise Meitner Fellowships: These offer well-qualified foreign students (up to the age of 35), the opportunity to carry out research in Austria.

3. Charlotte Bühler Habilitation Fellowships: This is a targeted research campaign aimed at the rising generation of female university lecturers and encourages young female scientists (up to the age of 40) to seek qualification as university lecturers.
Contact Projects Science – Industry

Sponsor: The Austrian Science Fund (FWF)

Scope: In 1995 the FWF introduced a new type of grant in collaboration with the Industrial Research Promotion Fund (FFF), and was aimed at economically relevant basic research. Virtually all the FWF funding categories can be considered with a view to becoming Contact Projects. Contact Projects require interested companies to pay a so-called "observer fee" per annum. In return the company receives regular information on the progress of the project. If a Contact Project Science - Industry scheme is successful, the company may submit a follow up project to the Industrial Research Promotion Fund.

Programmes for Funding of Outstanding Researchers

Sponsor: The Austrian Science Fund (FWF)

Scope: The FWF in collaboration with the Federal Ministry of Science announced two programmes in 1995 aimed at the funding of individual researchers. These include the START Programme and the Wittgenstein Award. The decisions for such programmes are made by an international jury.

* START: This programme aims to provide very highly qualified young scientists from all disciplines, the opportunity of planning their research work. It enables such students to set up their own working group on a long term basis and with a broad degree of financial security.

* Wittgenstein: The Wittgenstein Award is intended to guarantee a maximum of freedom and flexibility to researchers from all disciplines who are undertaking cutting-edge research in order to facilitate further exceptional progress in their work.

ERDF Programmes

Sponsor: The European Community Finance is being provided by the European Regional Development Fund (ERDF) and the European Social Fund (ESF), and this Community finance will contribute a quarter of total expenditure under the programme.

Scope: The European Commission has approved an operational programme under the SME Community Initiative for Austria. The overall aim of the programme is to strengthen the competitiveness of Austrian SMEs in Objective 1,2 and 5b regions and in particular:

- to encourage SMEs to take a long term perspective and engage in strategic planning
- to promote the use of advanced telematics in SMEs
- to facilitate the adoption of cleaner, more energy efficient production technologies in SMEs

To achieve these objectives, resources will be made available for the following types of actions:
- information campaigns to increase awareness of SMEs
- provision of expert advice to SMEs on strategic planning, on the use of advanced telematics and on clean and energy-efficient production technologies
- pilot and demonstration projects (for example setting up of telecottages)
- development of long distance training courses
- the provision of training support for the introduction of new technologies (environmental technologies and telematics applications in SMEs)

This programme forms part of the implementation of the Community’s SMEs initiative.

Contact: Mr Markus Beclin The Ministry of Economic Development Tel: +43 222 71100/2213
Fax: +43 222 71100/5403

Mr Georg Panholzer The Ministry of Economic Development Tel: +43 222 71100/2213
Fax: +43 222 71100/5403

Programme: Viennese Innovation and Technology Subsidy
Sponsor: Viennese Economic Advancement Fund (VEAF)
Scope:

This programme caters for:
- industrial and commercial projects in the area of basic research, which includes all project specific research and development activities, including the construction of pilot and demonstration units.
- small and medium sized businesses and in particular the economic transfer of research results.
- projects which are based on the purchase of exploitation rights (licences), as long as definitive further development has already taken place or will at some stage in the future.

30% of the finance available is allocated to SMEs with a maximum of 250 employees and 20% to larger companies for research and development.

15% of the finance available is allocated to SMEs with maximum of 50 employees for economic transfers. The maximum subsidy for economic transfer is ATS 750,000. In principle a maximum of ATS30 million per research and subsidy per year can be granted.

The target area for the fund is Vienna.

Contact: Wiener Wirtschaftsdienst Förderungsfonds, 2, Ebendorferstrasse, PO A-1082, Vienna, Austria
Tel: +43 1 4000

Programme: Innovation and Technology Grants
Sponsor: WIBAG
Scope:
The aim of this fund is to support internal regional strength through:
- subsidies for existing businesses.
- support for the establishment of new companies and in particular endogenous new start-ups or expansions.
It is specifically targeting product innovation or process innovation.

The subsidy area for this grant is Burgenland in the East of Austria.

A minimum of 10% financial assistance and a maximum of 20% is available with this fund.

**Contact:**
Wirtschaftsdienst, Burgenland, A.G - WIBAG, Tel: + 43 1 26 82 672 200
Dom Platz 4, PO - A-7000, Eisenstadt,
Vienna, Austria Fax: + 43 1 26 82 672 20 20

**Programme:**
Technology Programme for Small and Medium-Sized Enterprises

**Sponsor:**
ERP

**Scope:**
The principle aim of this programme is the promotion of investment projects that will improve a small firm's overall level of technology. Examples of such projects supported include:

- the introduction of new production methods or new products.
- the essential improvement in production methods or products.
- Investments leading to a considerable increase in the degree of processing.
- projects aimed at fundamentally improving areas such as information supply, storage and transport within a company.

Applicants eligible for funding include SMEs in the production industries and service industries closely associated with production with a maximum of 250 employees.

Costs not eligible for grant aid include the purchase of the actual site, second-hand investment materials, costs for redevelopment and finally, costs prior to application.

**Contact:**
Penngasse 5, 1010 Vienna, Austria Tel: + 43 1 534 64 40 02
Fax: + 43 1 534 64 40 15

### 3.2.4 Support Organisations/Contacts

**Name:** Austrian Society of Biotechnology (ÖGBT)

**Address:** Kleine Sperlgasse 1/37, 1030 Wien, Austria

**Telephone:** + 43 1 26 22 42

**Name:** Austrian Society for Genetics and Genetotechnology

**Address:** c/o Institut für Biotechnologie der Technischen Universität Graz, Petergasse 12, 8010 Graz, Austria

**Telephone:** + 43 316 873 84 18

**Name:** Innovation Centre

**Address:** Bureau for International Research and Technology Cooperation (BIT), Wiedner Haupstrasse 76, A-1040 Wien
Telephone: + 43 1 581 16 16 16
Contact: Mr. Manfred Horvat and Dr. Helegsha
Email: Klamm@bit.ac.at

NOTE: For a complete listing of Euro Info Centres, please contact DGXXIII Fax: + 32 2 295 7335

Name: Euro Info Centre
Address: Wirtschaftskammer Österreich, Wiedner Hauptstrasse, 63, Postfach 152, a-1045 Wien, Österreich.
Telephone: + 43 1 50 10 541 91
Fax: + 43 1 50 20 62 97
e-mail: eic@wk.or.at
URL: www.wk.or.at/ih_info/euroinfo/eurohome.htm
Contact: Mr. Heinz Kogler

Name: Euro Info Centre
Address: Industriellevereinigung, Schwarzenbergplatz 4, Postfach 61, A-1031 Wien, Österreich.
Telephone: + 43 1 71 13 524 05
Fax: + 43 1 71 13 529 14
e-mail: christian.mandl@voei.ada.at
URL: www.telecom.at/eic
Contact: Mr. Christian Mandl

Name: Euro Info Centre
Telephone: + 43 1 40 00 861 73
Fax: + 43 1 40 00 070 71
e-mail: eic@wwff.gv.at
Contact: Ms. Monika Kaschnitz

Name: Euro Info Centre
Address: Wirtschaftskammer Salzburg, Julius-Raab-Platz 1, A-5027 Salzburg, Österreich.
Ms. Martina Schernthanner

**Name:** Euro Info Centre  
**Address:** Wirtschaftskammer Oberösterreich, Mozartstrasse 20, A-4020 Linz, Österreich.
**Telephone:** + 43 7 32 78 004 79
**Fax:** + 43 7 32 78 006 42
**e-mail:** eicooe@wkooe.wk.or.at
**URL:** www.wk.or.at/w3wkooe
**Contact:** Mr. Robert Leitner

Mr. Peter Volker

**Name:** Euro Info Centre  
**Address:** Wirtschaftskammer Tirol, Meinhardstrasse 14, A-6020 Innsbruck, Österreich.
**Telephone:** + 43 5 12 53 102 21
**Fax:** + 43 5 12 53 102 75
**e-mail:** aw@tirol.wk.or.at
**Contact:** Mr. Peter Völker

Mr. Helmut Gaugitsch  
Mr. Wolfgang Mattes  
Mr. Manfred Schneider

Mr. Robert Leitner

**Name:** Federal Environment Agency  
**Address:** Umweltbundesamt, 5 Spittelauer Laende, A-1090 Vienna
**Telephone:** + 43 1 31 30 437 10
**Fax:** + 43 1 31 30 437 00
**Contact:** Mr. Helmut Gaugitsch  
Mr. Wolfgang Mattes  
Mr. Manfred Schneider

Mr. Robert Leitner

**Name:** National Environmental Protection Agency
**Telephone:** 00 43 1 71102 389
**Fax:** 00 43 1 713 93 31
3.3 Belgium

3.3.1 A Brief Background to the Industry

Belgium is a country rich in basic knowledge within the fields of life sciences and technology. Science policy since the 1980s has been progressively decentralised through successive state reform initiatives. The Federal state is particularly active in basic research through the networking of centres of excellence within common projects. Community authorities support academic research and help sustain these centres of excellence. Regional authorities focus on linking the centres with the profit sector through financing more market-orientated research. The total R&D expenditure for Belgium in 1991 was 1.6% of GNP.

In 1991 there were 67 biotechnology companies in the whole of the country, including a number of multi-nationals. The base of the industry lies in biomedical and agro-biotech products. A total of ECU 20m of venture capital was raised in 1994 by biotech and biomedical companies. Flanders has 29 companies while the Walloon region has 38 companies. Industrial R&D expenditure was approx. ECU 32m.

In 1991 Belgium had a total of 220 laboratories and 34 research institutes. The Ministry of Agriculture funds six of the institutes that carry out important research in agro-biotech. The Flemish public biotech R&D, was carried out at seven universities and 8 non-university centres and focused on various areas in biomedical R&D, agro-biotech and genetics. Within the Walloon region, public biotechnology R&D is carried out in nine universities and ten non-universities in total. Two biotechnology R&D centres were set up by the Walloon Region at the University of Liége and at the Agronomical Faculty at Gembloux. As a joint venture between the Walloon Region and the EU, two centres of excellence are being created at the Université Catholique de Louvain at Seneffe (CERTECH) and at the Université Libre de Bruxelles (CRB) at Charleroi.
The service entitled Biosafety and Biotechnology (SBB) is the Belgian focal point for the coordination of information exchange at the international (EU, OECD), at the federal (Public Health, Agriculture, Worker Protection, Economic Affairs, Internal and Scientific Affairs) and at the regional (Environment) levels in all scientific and advisory matters related to biosafety. The SBB represents the permanent secretariat of the Biosafety Advisory Council and can carry out expertise tasks in respect of regional legislation and the risk assessment of notification associated with Directive 90/220/EEC.

3.3.2 Current Actions and Programmes

Programmes fall into three categories within:

The Federal State

The Flemish Community

The French-speaking Community/Walloon Region.

**Federal State:** The Federal Office for Scientific, Technical and Cultural Affairs (OSTC) currently finances the IPA (Inter-University Poles of Attraction) with ECU 20m per year. 30% of this fund goes to the centres of excellence working in the life sciences area. The OSTC also supports the Belgian Co-ordinated Collections of Micro-organisms (BCCM).

**Flemish Community/Region:** During the 8-year period 1990-1998, Vlaams Actieprogramma Biotechnologie (VAB) is promoting co-operation between basic research institutes, universities and industry. They have a budget of ECU 33m with a further 55m in reserve for technical assessment and socio-economic impact studies. In 1996 the government formed "Vlaams Inter-universitair Instituut voor Biotechnologie" with funding for 5 years initially to stimulate strategic basic research in nine different university departments. This project orientated research, will fund 5-6 smaller research teams for 1996 with a budget of ECU 23m.

The Flemish Institute for the Promotion of Scientific Research in Industry (IWT) was established in 1991 and in 1995 it was allocated ECU 5.7m to promote the stimulation of pre-competitive and prototype R&D in the Flemish biotech and pharmaceutical industry, especially SMEs. A Biotech Venture Capital fund to stimulate the formation of spin-off companies, was also set up with an annual BEF 200 million (ECU 5m).

The Department of Education finances the centres of excellence through Concerted Action and is also in charge of distributing the funds of the former National Fund for Scientific Research within Flanders.

**French-Speaking Community/Walloon Region:** Concerted actions and funds of the Fonds national pour la Recherche Scientifique (FNRS) help to finance the centres of excellence in life sciences and technologies. The aim is to reinforce and promote industry, investing in biotechnology R&D and focusing on SMEs and the centres of excellence. During the period from 1990-1995, ECU 44m was provided to companies and ECU 24m to universities.

3.3.3 Programmes at a Glance - The Federal State

Programme: Inter-university Poles of Attraction - Phase IV
The Federal Office for Scientific, Technical and Cultural Affairs (OSTC/DWTC)

This programme aims at creating inter-university, high-level networks in fundamental research.

The programme has three objectives:

• providing advanced research teams with a critical mass of additional human and material resources.

• developing or creating collaboration between these teams and laboratories and other universities active in the same field or in allied fields.

• coaching and integrating Belgian teams into European or international networks in fundamental research.

The duration of the programme is January 1997 to December 2001.

Mr Van Langenhove
OSTC/DWTC
Tel: + 32 2 238 35 53
Email: vlan@belspo.be

The Flemish Community/Region

Vlaams Actie programma Biotechnologie

The Flemish Institute for R&D

This regional programme began in 1990 and runs until 1998. It aims predominantly at promoting cooperation between basic research institutes, universities and industry in the following sectors: plant genetics, microbiology, protein engineering and immunology. The budget stands at ECU 33m with an additional sum for technology assessment and socio-economic impact studies.

Mr Graham Delamére
The Flemish Institute for the Promotion of Scientific Research in Industry (IWT)
Tel: + 32 2 424 07 05 or + 32 2 425 86 57

Industrial Research Fund in Flanders (FIOV)

Vlaams Institut voor Biotechnologie (VIB)

Within the Flemish Region there exist two structured programmes aimed specifically at supporting the Biotechnology sector via the Universities and SMEs. One is organised via the VIA and the second via The institute for the Promotion of Scientific Research in Industry (IWT). The VIB Institute grants approximately BF 1 billion annually, and it aims at co-ordinating and supporting synergies between the Universities on scientific research. In addition, project-oriented research will fund 5-6 smaller research teams.

Mr Rudy Dekeyser
VIB
Tel: + 32 9 244 66 11
Fax: + 32 9 244 66 10
B-9053, Belgium
Email: rudy.dekeyser@vib.be

Research and Development Grant for the Flemish Region

The Flemish Institute for the Promotion of Scientific Research In Industry (IWT)

This Institute promotes pre-competitive and prototype R&D in the Flemish biotech and pharmaceutical industry, particularly amongst SMEs.
The promotion of spin-off companies is a very important part of this programme and an annual ECU 5 million venture capital fund, called the BIOTECH Fund is on reserve to this end. Funds are distributed via the Flemish Department of Education.

Contact: Ms Christine Claus IWT Tel: +32 2 223 00 33
Bischofshimlaan 25 Fax: +32 2 223 11 81
B-1000 Brussels Belgium

Programme: EAGGF - Mark/Processing Biological Products
Sponsor: Ministry of the Flemish Community
Scope: This programme is aimed at enterprises within the Flemish Region in the marketing and commercialisation of bio-products for:

- the expansion and optimisation of marketing structures for bio-products, control and labeling
- the creation of companies or plants for the processing of bio-products.
- Co-financing by the EAGGF of up to 15% of the eligible investment outside the objective 5B areas.

Eligible expenditure:

- building/acquisition of buildings
- new plant and equipment, including computer hardware and software
- overheads up to 12% of the costs mentioned under points 1 and 2 above.

Contact: Agricultural and Horticultural Department of the Flemish Community

Programme: ERDF Programme No 94.10.10.014
Sponsor: Ministerie van de Vlaamse Gemeenschap
Scope: The European Commission has approved an operational programme under the SME Community Initiative to promote economic development both in Limburgh and Kempen, affected by industrial decline and in Meetjesland and Westhoek-Middenkust, areas characterised by low economic development and an important fishery or agricultural sector.

The aim of the programme is to support the adaptation of SMEs to the single market by promoting technological innovation, it is hoped that SMEs will increase their competitiveness, and thereby promote job creation in the region.

The Community part-financing will amount to 31.10% of the total investment, the remainder being provided by national and regional authorities, and from private sources.

The main schemes covered by this programme are:

- sensitisation/awareness measures
- the support and implementation of innovative projects
- networking
- technical assistance.
The Walloon Community/Region

Programme: Subvention Entreprise - Research Programme
Sponsor: Direction Générale des Technologies, de la Recherche et de l‘Energie, Division des Aides aux entreprises – DGTRE
Scope: This programme is aimed at companies intending to sub-contract their market research to universities or research institutes.
This programme is co-financed by the European Commission and an SME can obtain between 50-70% funding if their application is successful.
Contact: Mr Marc Debruxelles
DGTRE
Avenue Prince de Liege 7
1 ere Etage
5100 Jambes (Namur)

Programme: R&D Programme - Environmental Technologies
Sponsor: Direction Générale des Technologies, de la Recherche et de l‘Energie, Division des Aides aux entreprises – DGTRE
Scope: This programme concentrates on assisting those companies interested in developing their level of technology for commercialisation reasons or in order to resolve environmental problems. Themes quoted under this scheme include: Prevention, Recycling, Treatment, Control.
Once an application is accepted, between 50-70% of the finance for the research required is available
Contact: Mr Marc Debruxelles
DGTRE
Avenue Prince de Liege 7
1 ere Etage
5100 Jambes (Namur)

Programme: "First-Entreprise"
Sponsor: Direction Générale des Technologies, de la Recherche et de l‘Energie, Division des Aides aux entreprises – DGTRE
Scope: The First Enterprise Programme encourages and supports collaboration between industry and universities. It is aimed at firms who are looking at strengthening their science and technology base through employing students from a
• Research Unit within a University
• Research Unit associated with a Superior Industrial Institute

• A Research Centre.

It is intended that such a traineeship would involve a significant transfers of knowledge.

Contact: Mr Marc Debruxelles
Programme: Responsible Innovation Technologique - RIT
Sponsor: Direction Générale des Technologies, de la Recherche et de l’Energie, Division des Aides aux entreprises – DGTRE
Scope: The above programme is focused at Industrial SMEs within the Walloon Region whose main objective is to increase their Human Resources in order that the SME as a result, can develop further Technology Innovation Projects.

Contact: Mr Marc Debruxelles
Programme: RIT Europe – Coopération Technologique entre PME
Sponsor: Direction Générale des Technologies, de la Recherche et de l’Energie, Division des Aides aux entreprises – DGTRE
Scope: The RIT Europe is aimed at SMEs looking to collaborate on a technology basis with one or more SMEs situated within another Member State. Finance is provided for employing an external consultant to complete an economic study on what SME would be the most appropriate to co-operate with and also the renumeration of one person for a year.

Contact: Mr Marc Debruxelles
Programme: Sectorial Studies
Sponsor: Direction Générale des Technologies, de la Recherche et de l’Energie, Division des Aides aux entreprises – DGTRE
Scope: This scheme focuses on SMEs within the Walloon Region looking to conduct a survey on the position of their company with regard to technology and the advances that have been made pertinent to their sector. This fund finances 80% of the costs in the hiring of an external consultant to complete such a study and to obtain the results.
Contact: Mr Marc Debruxelles DGTRE Tel: +32 (0) 81 32 16 50
Avenue Prince de Liege 7 Fax: +32 (0) 81 32 66 00
1 ere Etage
5100 Jambes (Namur)

Programme: Etudes Technico-Economique

Sponsor: Direction Générale des Technologies, de la Recherche et de l’Energie, Division des Aides aux entreprises – DGTRE

Scope: This programme is aimed at SMEs within the Walloon Region who are interested in analysing and improving their success rate both commercially and in respect of technology used if they were to introduce a new product or service on to the market. The fund finances such an external consultant.

Contact: Mr Marc Debruxelles DGTRE Tel: +32 (0) 81 32 16 50
Avenue Prince de Liege 7 Fax: +32 (0) 81 32 66 00
1 ere Etage
5100 Jambes (Namur)

Programme: External Feasibility Studies - Technical Support

Sponsor: Direction Générale des Technologies, de la Recherche et de l’Energie, Division des Aides aux entreprises – DGTRE

Scope: This programme is directed at SMEs based in the Walloon Region hoping to assess the technical feasibility of a product or a new process via a university research centre. The fund finances 80% of the research conducted.

Contact: Mr Marc Debruxelles DGTRE Tel: +32 (0) 81 32 16 50
Avenue Prince de Liege 7 Fax: +32 (0) 81 32 66 00
1 ere Etage
5100 Jambes (Namur)

Programme: Feasibility Study - Innovative Software

Sponsor: Direction Générale des Technologies, de la Recherche et de l’Energie, Division des Aides aux entreprises – DGTRE

Scope: This programme focuses on SMEs providing information in the industrial sector based in the Walloon Region, and who are looking to determine the technical and economic possibilities of developing a new piece of software. 80% of the costs of hiring an external consultant are paid by the fund if the application is successful.

Contact: Mr Marc Debruxelles DGTRE Tel: +32 (0) 81 32 16 50
Avenue Prince de Liege 7 Fax: +32 (0) 81 32 66 00
1 ere Etage
Programme: Technology Transfer - External Studies

Sponsor: Direction Générale des Technologies, de la Recherche et de l’Energie, Division des Aides aux entreprises – DGTRE

Scope: The Technology Transfer Programme is aimed at SMEs within the Walloon Region who are hoping to acquire a new technology that has been developed outside their enterprise and to this end participate in a "transfer of technology." The Fund supports the SMEs during the process by:

- conducting a technological evaluation of the transfer including an analysis of the cost that the SME would incur as a result.
- conducting an evaluation of possible partners.
- support with the actual transfer of technology.
- technical and judicial assistance.

Contact: Mr Marc Debruxelles
          Avenue Prince de Liege 7
          1 ere Etage
          5100 Jambes (Namur)

        Tel: + 32 (0) 81 32 16 50
        Fax: + 32 (0) 81 32 66 00

Programme: Research and Development Finance

Sponsor: Direction Générale des Technologies, de la Recherche et de l’Energie, Division des Aides aux entreprises – DGTRE

Scope: This programme attracts enterprises within the province of Hainaut who have submitted an application for the financing of an industrial research project to be developed or applied. The fund finances 80% of the costs, if successful, for SMEs. The respective SMEs must exploit fully the results obtained from the research within the province of Hainaut.

Contact: Mr Marc Debruxelles
          Avenue Prince de Liege 7
          1 ere Etage
          5100 Jambes (Namur)

        Tel: + 32 (0) 81 32 16 50
        Fax: + 32 (0) 81 32 66 00

Programme: Acquitech

Sponsor: Direction Générale des Technologies, de la Recherche et de l’Energie, Division des Aides aux entreprises – DGTRE

Scope: Enterprises based within the region of Hainaut can apply for a loan through this fund in order to acquire new technologies or research results. It also covers the finance necessary for acquiring a patent or a licence.

Contact: Mr Marc Debruxelles
          Avenue Prince de Liege 7
          1 ere Etage
          5100 Jambes (Namur)

        Tel: + 32 (0) 81 32 16 50
        Fax: + 32 (0) 81 32 66 00
Programme: **Assiste**

**Sponsor:**
Direction Générale des Technologies, de la Recherche et de l’Energie, Division des Aides aux entreprises – DGTRE

**Scope:**
This is aimed at all SMEs based within the region of Hainaut who have already received an advance loan through the Acquitech Programme and are now looking to establish the technical, commercial and financial standards in order to exploit their research results. 80% of the costs involved are covered by this fund.

**Contact:**
Mr Marc Debruxelles  
DGTRE  
Avenue Prince de Liege 7  
Tel: + 32 (0) 81 32 16 50  
Fax: + 32 (0) 81 32 66 00  
1 ere Etage  
5100 Jambes (Namur)

Programme: **Assiste II**

**Sponsor:**
Direction Générale des Technologies, de la Recherche et de l’Energie, Division des Aides aux entreprises – DGTRE

**Scope:**
This fund focuses on those SMEs that have been successful in obtaining funding from Assiste I and are hoping to take the results of their research one step further and complete the market research, find an appropriate partner and further evaluate the design of the product concerned and advance towards proceeding with intellectual property rights.

**Contact:**
Mr Marc Debruxelles  
DGTRE  
Avenue Prince de Liege 7  
Tel: + 32 (0) 81 32 16 50  
Fax: + 32 (0) 81 32 66 00  
1 ere Etage  
5100 Jambes (Namur)

Programme: **Stimule**

**Sponsor:**
Direction Générale des Technologies, de la Recherche et de l’Energie, Division des Aides aux entreprises – DGTRE

**Scope:**
Under this scheme SMEs based within the Hainaut region and who have obtained a loan under the Acquitech or Assiste schemes can repay just 50% of the finance received in the first year following the research study.

**Contact:**
Mr Marc Debruxelles  
DGTRE  
Avenue Prince de Liege 7  
Tel: + 32 (0) 81 32 16 50  
Fax: + 32 (0) 81 32 66 00  
1 ere Etage  
5100 Jambes (Namur)
**Programme:** Coprotech

**Sponsor:** Direction Générale des Technologies, de la Recherche et de l’Energie, Division des Aides aux entreprises – DGTRE

**Scope:** Coprotech is aimed at companies within the region of Hainaut, that have been successful in obtaining a loan for one of the research programmes mentioned above and are now hoping to exploit fully the results obtained. The fund will advance 50% of the costs involved in exploiting such results.

**Contact:** Mr Marc Debruxelles DGTRE

Avenue Prince de Liege 7
1 ere Etage
5100 Jambes (Namur)

**Programme:** Auditech

**Sponsor:** Direction Générale des Technologies, de la Recherche et de l’Energie, Division des Aides aux entreprises – DGTRE

**Scope:** This programme focuses on SMEs within the region of Hainaut, who are interested in completing an evaluation of their innovative capabilities, determining a strategy, measuring the technical implications and perspective economic implications and collaborating with Research Centres or other SMEs on such a study. If successful the fund finances 80% of the cost involved in employing an external consultant to conduct such an analysis.

**Contact:** Mr Marc Debruxelles DGTRE

Avenue Prince de Liege 7
1 ere Etage
5100 Jambes (Namur)

**Programme:** International Partners

**Sponsor:** Direction Générale des Technologies, de la Recherche et de l’Energie, Division des Aides aux entreprises – DGTRE

**Scope:** Those companies based within the region of Hainaut can benefit from this fund if proceeding with an economic development or research programme in collaboration with another firm based within the European Union. It is divided into two stages:

1. determination of an appropriate project and searching for an effective partner.

2. the launching of the project and final agreement with the partner to be involved.

**Contact:** Mr Marc Debruxelles DGTRE

Avenue Prince de Liege 7
1 ere Etage
5100 Jambes (Namur)

**Programme:** Lauréat - For SMEs located in Technological Centres
Sponsor: Bureau Economique de la Province de Namur

Scope: The purpose of this scheme is to share the costs borne by companies for starting-up and expanding their activities within the technological centres located in the Province of Namur. Technological centres are granted an annual lump-sum which they must redistribute to companies through a reduction in the costs of using the centres and/or their equipment. Incentives will be granted for a maximum duration of 1 year. Support may be extended for an additional year if the company demonstrates it obvious involvement in the development of the innovation.

The set of measures implemented by the Province of Namur to foster technological development of the Province include:

- environmental technology
- information technology

Sponsor: Economic Development Office of Namur

3.3.4 Support Organisations/Contacts

NOTE: For a complete listing of Euro Info Centres, please contact DGXXIII

Fax: +32 2 295 7335

Name: Euro Info Centre (Antennedu BE - 010 Liège)
Address: Stellenvermittlungsamt, Arbeitsbeschaffung-Form, Borngasse, 3-5, B-4700
Telephone: +32 87 74 21 80
Fax: +32 87 55 70 85
Contact: Mlle Brigitte Fijalkowski

Name: Euro Info Centre (Antienne de BE011 - Mons)
Address: Chambre de Commerce et d'Industrie du Tournaïs, Rue Beyaert, 75, B-7500
Telephone: +32 69 22 11 21
Fax: +32 69 21 27 84
Contact: Mlle Isabelle Walscap

Name: Euro Info Centre
Address: Kamer van Koophandel en Nijverheid van Antwerpen, Markgravenstraat, 12, B-2000 Antwerpen.
Telephone: +32 3 23 22 219
Fax: + 32 3 2336 442
Contact: Mr. Luc Luwel
Name: Euro Info Centre  
Address: Chambre de Commerce et d'Industrie de Bruxelles/Fabrimetal, Avenue Louise, 500, B-1050 Bruxelles.  
Telephone: +32 2 64 85 873  
Fax: +32 2 64 09 328  
Contact: M. Luc De Wolf  
Email ccibrussels@cci.be  

Name: Euro Info Centre  
Address: Euroguichet Hainaut-Est, Avenue General Michel,1E, B-6000 Charleroi.  
Telephone: +32 7 13 31 460  
Fax: +32 7 13 16 735  
Contact: M. Philippe Chèvremont  
Email heracles@heracles.charline.be  

Name: Euro Info Centre van de Vlaamse GMO's  
Address: Seminariestraat, 2, B-9000 Gent.  
Telephone: +32 9 26 78 630  
Fax: +32 9 26 78 696  
Contact: Mr. Johan Declerck  
Email cie@gomov.be  

Name: SPI. Euro Info Centre  
Address: Rue Lonhienne, 14, B-4000 Liège.  
Telephone: +32 4 22 01 111  
Fax: +32 4 33 01 120  
Contact: Mme. Monique Rover  
Email ipcm@mail.interpac.be  

Name: Euro Info Centre Hainaut  
Address: Site du Grand Homu, Rue St. Louise,82, B-7301 Homu (Mons).  
Telephone: +32 6 57 77 970
Fax: + 32 6 57 79 091
Contact: M. Thierry Maton

Name: Euro Info Centre Brussels Airport
Address: Kamer voor Handel en Nijverheid, Halle-Vilvoorde, Brucargo Gebouw 706, Lokaal 7614, B-1931 Zaventem.
Telephone: +32 2 75 19 056
Fax: + 32 2 75 17 811
Contact: Mr Tom Van Den Elzen
Email ccihv@cci.be

Name: Belgian Bio-industry Association
Address: Rue de Crayer 6, 1050-Bruxelles
Telephone: + 32 2 656 83 00
Fax: + 32 2 656 81 45
Contact: Mr Pierre Crooy

Name: Service of Biosafety and Biotechnology (SBB)
Address: Institute of Public Health (IPH), Rue Juliette Wystmanstraat 14, B-1050 Brussels, Belgium
Telephone: + 32 2 642 52 93
Fax: + 322 642 52 92
Web Page: http://biosafety.ihe.be
Email: helpsbb@sbb.ihe.be
Contact: Mr William Moens Mr Didier Breyer
e-mail:wmoens@sbb.ihe.be email:dbreyer@sbb.ihe.be

Federal State
Name: Ministry of Social Affairs, Public Health and the Environment
Address: Quartier Vésale Esplanade, Fourth Floor, B-1210, Brussels
Telephone: + 32 2 210 48 93
Fax: + 32 2 210 48 80
Name: Ministère des Classes Moyennes et de l'Agriculture Inspection Générale des Matières Premières et Produits Transformés
Address: Manhattan Centre, 8th Floor, Avenue du Boulevard 21, B-1210, Brussels
Telephone: + 32 2 208 32 11
Fax: + 32 2 208 38 66

Name: Belgian Federal Office for Scientific, Technical and Cultural Affairs (O.S.T.C.)
Address: Rue de la Science 8, B-1000, Brussels
Telephone: + 32 2 238 34 11
Fax: + 32 2 230 59 12
Web Site: http://www.belspo.be
Contact: Jacques Wautrequin - Secretary General

Name: Bpdrachthouder, Federale Diensten voor Wetenschappelijke Technische en Culturele Aangelegenheden
Address: Wetenschapstraat 8, B-1040, Brussels
Telephone: + 32 2 238 35 20
Fax: + 32 2 230 59 12
Contact: Mm Heer J D Brabandere

Region of Brussels - Capital
Name: Institut Bruxellois pour la Gestion de l'Environnement (IBGE)
Address: Gulledelle 100, B-1200, Brussels
Telephone: + 32 2 775 75 38
Fax: + 32 2 775 77 72

Name: Guichet Entreprises-Environnement
Address: Société de Développement Régional de Bruxelles, Rue Gabrielle Petit 6, B-1200, Brussels
Telephone: + 32 2 422 52 00

Walloon Region
Name: Direction Générale des Ressources Naturelles et de l'Environnement (DGRNE)
Address: Avenue Prince de Liege 15, B-5100 Jambes
Telephone: + 32 81 32 57 68
Fax: + 32 81 32 59 82

Name: Ministere Wallon de la Recherche, du Developement Technologie, des Sports et des Relations Internationales
Address: Direction de la Recherche, Avenue Prince de Liege, 2, 5100 Namur
Telephone: + 32 81 32 16 87
Fax: + 32 81 30 66 00
Contact: Mr Alain Moreau - Secteur Biotechnologies  Mr P Villers - Director

Name: Direction Generale Des Technologies, de la Recherche et de L’Energie
Address: Avenue Prince de Liege 7, 5100 Jambes
Telephone: + 32 81 32 12 11
Fax: + 32 81 30 66 00
Contact: Mr A M Straus - Director General

Name: Cabinet du Ministre de la Politique Scientifique
Address: Rue de la Loi 66, 1040 Brussels
Telephone: + 32 2 238 28 11
Fax: + 32 2 230 38 62
Contact: Mr Hassan Jijakli

Name: Cabinet du Ministre de l’Agriculture
Address: Rue Marie-Thereze 1, 1040 Brussels
Telephone: + 32 2 211 06 11
Fax: + 32 2 219 61 30
Contact: Mr Pinxten

Flemish Region
Name: Vlaames Instituut voor Biotechnologie - (VIB)
Address: Rijvisschestraat 118, 9052 Gent
Telephone: + 32 9 244 66 11
3.4 Denmark

3.4.1 A Brief Background to the Industry

The Biotechnology sector in Denmark is small but particularly strong in enzyme and yeast technology (dairy and brewing) and insulin production. Biotechnology is considered a priority research area and both public and private biotech R&D have improved significantly over the past ten years. A strategy for national research (including biotechnology) is being compiled by the Ministry of Research and Information and biotechnology will be of special interest.

Denmark collaborates actively with Sweden in the framework of a joint Danish-Swedish biotech centre based in the Copenhagen and Malmö-Lund areas. ECU 11,697.90 per year has been given to support projects in the following areas: cellular communication, DNA-RNA structure and function, plant biology and ecology. New initiatives planned from 1998 will include:

biotechnology in medical research, including genetic research.
a Research Council for Technical Sciences to support various activities.
a Research Council for Agricultural Sciences to support animal and plant science.
a Research Council for Natural Sciences to support biomolecular structures and molecular recognition.
a Danish Foundation for Basic Research to cover bioinformatics and plant biology.

Denmark has 55 companies active in the biotechnology sector, half of which are SMEs.
people are currently employed. The main areas that these companies specialise in cover chemicals, diagnostics, pharmaceutical and food. Danish biotech and biomedical companies raised approximately ECU 5 million of venture capital in 1994.

The Technical University of Denmark and the University of Copenhagen have chosen Biotechnology as one of their focus areas alongside many other universities in Denmark. The Biotechnological Institute and the Genetic Engineering Group are two non-profit making research institutes in the private sector, and have just recently merged. The Bioraf Denmark Foundation runs the Whole Crop Bio-refinery Project. There are a number of research centres and associations of researchers which lie at the centre of the biotech programme for Denmark and come under the Ministry of Food, Agriculture and Fisheries, The Ministry of the Environment and Energy and the Ministry of Health.

3.4.2 Current Actions and Programmes

The Third National R&D programme was launched in 1996 with funds of ECU 10m. A total of ECU 6.9m is to be allocated to research centres, whereas ECU 3.6 million is to be allocated to new centres in open competition.

Future programmes are to become more focused and will specialise on a particular sector or infrastructure within Biotechnology.

The Ministry of Research launched a special programme to give risk-taking younger scientists opportunities within the THOR Programme, which focuses on highly specialised research, and provides funding of ECU 11.4m for 4 years. 25% of the supported projects are expected to be within Biotechnology.

The Food Technology Programme (FOTEK) has an estimated share of Biotechnology funds of approximately ECU 2.1 million per year.

3.4.3 Programmes at a Glance

<table>
<thead>
<tr>
<th>Programme</th>
<th>Strategic Research Programmes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sponsor:</strong></td>
<td>The National Danish Research Foundation</td>
</tr>
<tr>
<td><strong>Scope:</strong></td>
<td>This Institute spends approximately ECU 11.4 million a year on biotechnology related projects. The focus from 1997 onwards includes plant biology and bio-informatics.</td>
</tr>
<tr>
<td><strong>Contact:</strong></td>
<td>Lisbeth Hede Tel:+45 33 92 97 00</td>
</tr>
<tr>
<td></td>
<td>Bredgade 43 Fax:+45 33 32 35 01</td>
</tr>
<tr>
<td></td>
<td>DK-1260 Kobenhavn Email:<a href="mailto:pg@forskraad.dk">pg@forskraad.dk</a></td>
</tr>
<tr>
<td></td>
<td>Denmark</td>
</tr>
<tr>
<td><strong>Programme:</strong></td>
<td>THOR</td>
</tr>
<tr>
<td><strong>Sponsor:</strong></td>
<td>The Ministry of Research and Information Technology</td>
</tr>
<tr>
<td><strong>Scope:</strong></td>
<td>This scheme is aimed at young scientists and encourages specialised research in a number of areas. It</td>
</tr>
</tbody>
</table>
is to run from 1997 to the year 2000 and will provide ECU11.4 million in the form of funding.

Contact: The Research Councils  Tel:+45 33 92 97 00

Programme: FOTEK 2
Sponsor: The Danish Research and Development Programme
Scope: This programme was started in 1990 and a total of DK525 million has been set aside for the programme by the Ministries of Agriculture and Fisheries, Business and Industry and Education.

The main goal of the FOTEK Programme is to strengthen the position of the of the Danish food industry on the international market. The programme subsidises a limited number of large basic research as well as framework programmes, commercially-oriented collaborative projects and various other activities.

FOTEK 2 focuses on 5 specific areas covering:

- Health and nutrition
- Quality
- New uses for food
- Environmentally sound production methods
- Consumer preferences and behaviour

This programme has no fixed duration but was reviewed in late 1997 with a view to adjusting the future course.

Contact: Charlotte Koltn  Tel:+45 33 92 97 00

Programme: Centre Contracts
Sponsor: "Erhvervsfremming Styrelsen" - The Danish Agency for Development of Industry and Trade
Scope: Centre Contracts are relatively long-term co-operative research and development projects between three parties: enterprises, authorised technological service institutes and research institutes. The cooperation secures the direct transfer of knowledge and skills between the participating organisations and helps to create dialogue between the business community and the technological service and research institutions. Grants are not made to individual enterprises. The scheme was initiated in 1995 to improve public/private interplay. The budget allocated for 1997 totaled approximately ECU1.7 million.

Contact: Danish Agency for Trade and Industry, Tel:+ 45 43 50 40 00
Tagensvej, DK-2200 Copenhagen N

Programme: Biotechnology Programmes
Sponsor: The Research Councils
Scope: The areas of priority for the Danish Research Councils and the total amount of funding they are eligible for are highlighted below:

- Molecular and Cell Gerontology - 1996-1999 (ECU 2 million)
- Genetics and proteomics - 1998-2002 (ECU 27.8 million)
• Xenoestrogens and Reproduction - (ECU 2.8 million)
• Bioresearch (glycochemistry and biology) - ECU 7 million
• Bioinformatics - 1998-2000 (ECU 1.5 million)

Contact: Mr Per Gronborg
Bredgade 43
DK-1260 Kobenhavn
Tel: +45 33 92 97 00
Fax: +45 33 32 35 01
Email: pg@forskraad.dk
Denmark

Programme: Erhvervs - Forsker - Danish Industrial PhD Fellowship Programme
Sponsor: The Danish Agency for the Development of Trade and Industry
Scope: This programme provides grants that permit private enterprises to employ Ph.D students to undertake research and development projects in co-operation with research institutes.
Contact: Ms Birgitte Rolf Jacobsen
Tel: +45 45 88 13 11

Programme: BIOTEK 2
Sponsor: Research Councils
Scope: This scheme will run until the end of 1999 and it is intended to 'strengthen the Institute's economic ability to finance biotechnological research'. 70 million DKR is allocated per year for this purpose.
Contact: M Lisbeth Hede
Bredgade 43
DK-1260 Kobenhavn
Tel: +45 33 92 97 00
Fax: +45 33 32 35 01
Email: pg@forskraad.dk
Denmark

Programme: ERDF Programme
Sponsor: The European Commission + National Authorities
Scope: The European Commission has approved an operational programme under the SME Community Initiative to promote economic development in areas suffering high unemployment and low income due to structural changes in the industrial and agricultural sectors.

The aim of the programme is to support the development and growth of SMEs, especially by improving their innovation rate and the general entrepreneurial climate. It is hoped that by supporting SMEs, economic growth will be generated, exports increased and jobs created in the region.

This programme will extend an already established national programme called the Ticketcard Scheme for Entrepreneurs. This scheme targets those entrepreneurs who have recently set up a business in a Danish Objective2 or 5B region, and who have received education and developed a business strategy with the help of the national Ticketcard scheme. The extended EU-Ticketcard will allow extra efforts to be put into continuing guidance and support for the newly established businesses. This programme is expected to improve the survival rate of SMEs, improve their competence and create jobs. The other scheme covered by this programme is titled Technical
Assistant.

The Community finances 50% of the total investment, the remainder being provided by national authorities.

**Contact:**

Niels Bjerning Hansen

Erfhervsfremme Styrelsen

Sondergade 25

DK-8600 Silkeborg

---

### 3.4.4 Support Organisations/Contacts

**Name:** The Association of Biotechnological Industries in Denmark (FBID) - Copenhagen

**Telephone:** + 45 44 44 88 88 Ext 2240/2303

**Fax:** + 45 44 44 42 82/98 36 22

**Name:** Danish Environmental Protection Agency

**Address:** Strandgade 29, DK-1401 Copenhagen

**Telephone:** + 45 32 66 01 00

**Fax:** + 45 32 66 04 79

**Contact:** Ms Rie Lorentzen

**Name:** Danish Research Councils - FIRST

**Address:** Bredgade 43, DK-1260, Kobenhavn K

**Telephone:** + 45 33 92 97 00

**Fax:** + 45 33 32 35 01

**Email:** puf@fsk.dk

**Contact:** Lisbeth Mortensen

**Name:** Odense University

**Address:** Odense Universitet, Campusvej 55, DK-5230 Odense M

**Telephone:** + 45 66 15 86 00

**Fax:** + 45 65 93 27 81

**Contact:** Prof Peter Roepstorff

**Name:** University of Copenhagen
Proteinlab, Panum Institut Bldg 6, Belgdamsvej 3, DK-2200 Kobenhavn Cph

Address: Proteinlab, Panum Institut Bldg 6, Belgdamsvej 3, DK-2200 Kobenhavn Cph
Telephone: + 45 35 32 73 37
Fax: + 45 31 35 18 95
Email: bono@biobase.dk
Contact: Dr Bodil Norrild

Ehrvervsfremme Styrelsen - Euro Centre

Address: Gregersenvej, Postbox 141, Taastrup, DK-2630
Telephone: + 45 43 50 40 00
Fax: + 45 43 71 63 60
Email: euro@dti.dk
Contact: Ms Inger Petersen

NOTE: For a complete listing of Euro Info Centres, please contact DGXXIII

Fax: + 32 2 295 7335

Euro Info Centre

Address: Danish Technological Institute, Gregersenvej, Postbox 141, DG-2630 Kobenhavn-Tastrup
Telephone: + 45 43 50 40 00
Fax: + 45 43 71 63 60
Email: euro@dti.dk
Contact: Mr Nils Thyssen

The Danish Ministry of Food, Agriculture and Fisheries

Address: Holbergsgade 2, 1057 Copenhagen K, Denmark
Telephone: +45 33 92 33 01
Fax: +45 33 14 50 42

Institute of Biotechnology

Address: Kogle Allé2, 2970 Horsholm, Denmark
Telephone: +45 45 16 04 44
Fax: +45 45 16 04 55
3.5 Finland

3.5.1 A Brief Background to the Industry

The strongest biotechnology area for Finland is enzyme technology which has built on its well-established fermentation technology and microbiological base. Finland also has a strong public research base and various science parks and biocentres have been set up around the universities. The R&D expenditure was 2.7% of GNP in 1997.

The number of companies active in biotechnology in Finland is between 60-70, many being situated in science parks. The science parks have been established with public funding and host public and private research units and companies. The SMEs favour pharmaceuticals and diagnostic test systems. Biotechnology relevant matters are handled by the Finnish Bioindustries under the auspices of the Chemical Industry Federation, Helsinki.

Six universities have strong research departments. Biomedicine is catching up with biotechnology and molecular biology as a research topic. In 1995 there were over 200 academic research groups and 19 biotech graduate school programmes founded. Four centres of excellence related to biotech and molecular and cell biology are also being given support.

3.5.2 Current Actions and Programmes

Project funding, allocated on the basis of free competition, plus national programmes, has promoted biotech throughout the public sector. The Technology Development Centre at the Ministry of Trade and Industry (TEKES) has run several programmes, investing approximately ECU 5-15 m per year in 1992-1997. In 1994 the Academy of Finland launched the Genome Research Programme to run until 2000. This programme will have ECU 7m invested in 20 research projects during the first three years. The Academy is organising an international evaluation of biotech and molecular biology in Finland, and the European Molecular Biology Organisation (EMBO) has agreed to be involved in the evaluation.

3.5.3 Programmes at a Glance

<table>
<thead>
<tr>
<th>Programme:</th>
<th>New Generation Food Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsor</td>
<td>Technology Development Centre (TEKES)</td>
</tr>
<tr>
<td>Scope:</td>
<td>The programme area covers new food processes, logistics, process control and automation as well as aspects concerning food products and health.</td>
</tr>
<tr>
<td>Funding:</td>
<td>ECU 20 million</td>
</tr>
<tr>
<td>Contact:</td>
<td>Dr Mervi Sibakov</td>
</tr>
<tr>
<td></td>
<td>TEKES PO Box 69 00101 Helsinki</td>
</tr>
<tr>
<td></td>
<td>Tel: +358 10 521 5823 Fax: +358 10 521 5905</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Programme:</th>
<th>Malting and Brewing Technology Programme</th>
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<tbody>
<tr>
<td>Scope:</td>
<td>The industry is running its own technology programme in co-operation with researchers at VTT Biotechnology and Food Research, VTT Automation and the Institute of Biotechnology of the</td>
</tr>
</tbody>
</table>
University of Helsinki. The programme encompasses the total production process for beer.

Contact: Dr Mervi Sibakov
Programme: Genome Research Programme
Sponsor: Academy of Finland, Technology Development Center (TEKES)
Funding: ECU 10 million invested in 20 research projects during the first three years.
Contact: Eeva Ikonen

3.5.4 Support Organisations/Contacts

Name: Technology Development Centre (TEKES)
Address: PO Box 69, 00101 Helsinki, Finland
Telephone: +358 105 21 5823
Fax: +358 105 21 5905
Email: Mervi.sibakov@tekes.fi
Contact: Dr Mervi Sibakov

Name: Ministry of the Environment
Address: PO Box 399, SF-00121, Helsinki, Finland
Telephone: +358 01 99 11
Fax: +358 01 99 1499
Contact: Ms Tuula Pehu

Name: Technical Research Centre of Finland
Address: PO Box 1500, 02044 VTT, Finland
Telephone: +358 9 456 5104
Fax: +358 9 455 2103
Email: hans.soderlund@vtt.fi
Contact: Hans Soderlund

Name: Academy of Finland
Address: Research Council for Natural Sciences and Engineering, PO Box 99, 00510 Helsinki, Finland
Telephone: +358 9 7748 8233
Fax: +358 9 7748 8393
Email: Eeva.Ikonen@aka.fi
Contact: Eeva Ikonen

Name: Finnish Bioindustries c/o Chemical Industry Federation
Address: Etelaranta 10, PO Box 4, 00131 Helsinki
Telephone: +358 9 1728 4314
Fax: +358 9 630 225
Email: Hannele.kuusi@kennia.ttlilot.fi
Contact: Hannele Kuussi

NOTE: For a complete listing of Euro Info Centres, please contact DGXXIII
Fax: +32 2 295 7335

Name: Euro Info Centre, The Finnish Foreign Trade Association
Address: Arkadiankatu, 2, PO Box 908, FIN-00101 Helsinki
Telephone: 358 9 1992
Fax: 358 204 695 535
Email: info@exports.finland.fi
Contact: Mr Taisto Sulonen

Name: Euro Info Centre North Finland, Ministry of Trade and Industry
Address: Regional Business Service Office in Oulu, Asemakatu, 37, FIN-90100 Oulu
Telephone: 358 8 316 02 20
Fax: 358 8 316 02 21
Email: riitta.heikkinen@oyt.oulu.fi
Contact: Ms Riitta Heikkinen

Name: Euro Info Centre TEKES, Technology Development Centre
Address: Malminkatu, 34, PO Box 69, FIN-00101, Helsinki
Telephone: 358 10 521 57 24
3.6 France

3.6.1 A Brief Background to the Industry

The government has traditionally encouraged co-operation between public and private research and, most importantly, promotes research into products of economic value. Since 1982, networks between the regions have been set up, called Centres for Innovation and Technology Transfer (CRITTS). CRITTS have an education and training function as well as being geared specifically to biological problems and technology transfer. The total R&D expenditure by France’s biotechnology sector in the early 1990s was 2.7% of GNP.

Approximately 100 dedicated biotechnology companies are based in France. 700 companies are involved in biotech-related activities, with biotech R&D concentrated in the major companies. It is estimated that since 1992 industrial spending has totalled ECU 400m annually.

Large national centres and institutes have been responsible for most of the public research. Universities are gradually becoming more important.

3.6.2 Current Actions and Programmes

The current BioAvenir Programme (1992-1997) is essentially a public-private co-operation between the government and Rhône Poulenc, a major French company. In total ECU 230million funding is provided by both. The main focus of the programme involves research on biological processes, medical research and agricultural research.

In 1995 a new strategy was introduced, which was to set up 14 scientific committees responsible for carrying out projects in 14 strategic programmes in the life sciences. Each programme was divided into seven priority areas to cover genetics, developmental biology, structural biology, environmental sciences and physiopathological mechanisms. Two horizontal programmes on bioinformatics and biotechnology were also introduced. Total funding for 1996 and 1997 totalled ECU 31m.

In addition, in 1996 the government placed biotechnology among its research priorities and announced public funding of approximately ECU 23m for 1997. A further ECU 230 million was spread over the next 5 years. These funds are additional to regular funding for public research agencies. These funds are to be supplemented by private finance of approximately ECU 76.2 million from the newly created Fonds Commun Placement pour Innovation. Moreover, a fiscal incentive is available as a 25% tax break on the total amount invested in new technologies including biotechnology. The French Research Ministry estimates that of the current 305 government funded biotech research projects, 18 could form the basis of new companies.
3.6.3 Programmes at a Glance

**Programme:** Technological Acquisition

**Sponsor:** Conseil Régional de Bretagne

**Scope:** This programme is aimed at encouraging the purchase of patents and licences within the Region of Brittany. The licence or attestation must correspond to a biotechnological process deemed interesting within the framework of the Britta Programme.

**Contact:** Monsieur Jean-Luc Grosbois
Conseil Regional de Bretagne-Innovation
D.DE-Sevice de l'innovation
283 Avenue du Général Patton
35031 Rennes Cedex

**Programme:** Industrial Research

**Sponsor:** Conseil Régional de Bretagne

**Scope:** The aim of this scheme is to support financially innovative industrial projects within Brittany in the fields of: food industry biotechnologies (BRITTA) and telecommunications and data processing.

**Contact:** Monsieur Jean-Luc Grosbois
Conseil Regional de Bretagne-Innovation
D.DE-Sevice de l'innovation
283 Avenue du Général Patton
35031 Rennes Cedex

**Programme:** Support for the Transfer of Technology

**Sponsor:** Agence Nationale de la Valorisation de la Recherche

**Scope:** This support programme for the transfer of technology is open to any research and innovation organisation independent of their size and activity sector in the whole of France. The programme finances up to 50% of expenditure on:

- market surveys
- technical feasibility
- realisation of models
- partner searching
- costs of industrial property
- acquisition cost
- studies and assistance
- cost of technological implementation

**Contact:** François Le Bihan Joël Durif André Rocca
Programme: **FRAT - Transfer of Technology**

Sponsor: The Department of Industry and Regional Development

Scope: The purpose of this scheme is to link public or private research laboratories to companies in order to improve the quality of their products and the efficiency of their production tools. The procedure is managed by the regional organisations within the eligible areas: Alsace, Aquitaine, Bretagne, Centre de France, Languedoc-Roussillon, Midi Pyrénées, Nord-Pas de Calais, Picardie, Provence-Alpes-Côtes-d’Azur.

Up to 50% of total eligible expenditures are covered including: general laboratory costs, essays, prototypes, and applied research.

Contact:

- **DRIRE Rhône-Alpes**
  - 146 rue Pierre Corneille
  - 69426 Lyon Cedex 03
  - Tel: +33 1 47 86 61 52 00
  - Fax: +33 2 31 74 64 51

- **DRIRE Basse-Normandie**
  - Résidence Héliitas
  - 27 Rue Saint-Ouen
  - 14039 Caen Cedex
  - Tel: +33 2 27 93 22 22

- **DRIRE Nord-Pas-de-Calais**
  - 941 Rue Charles Bourseul, BP 838
  - 559508 Douai Cedex

Programme: **APTE - Aid for European Technological Partnership**

Sponsor: Agence Nationale de Valorisation de la Recherche

Scope: The aim of this scheme is to assist enterprises looking for European partners in research and development projects and project preparation. Support can take place in two stages:

1. Stage 1: involves looking for a European partner.
2. Stage 2: involves finalising and presentation of the Eureka project.

Partners can be chosen from any EU Member State along with Iceland, Norway, Switzerland or Turkey.

Up to 75% of the expenditure involved is covered by the scheme. Within Stage 1 these could involve external consultancy expenditures involved by the applicant. Stage 2 costs are the same as those above, but may also comprise the costs of French or foreign juridical consultancy services.

Contact:

- **Robert Csukai**
  - ANVAR Picardie
  - 18 Rue Cormont
  - 8000 Amiens
  - Tel: +33 3 22 91 84 67
  - Fax: +33 3 22 92 05 47

- **Jean Francois Lafaye**
  - ANVAR Lorraine
  - 1 allée de Saint-Cloud
  - 21000 Dijon
  - Tel: +33 3 80 30 71 50
  - Fax: +33 3 80 30 23 02

- **Patrick Parayre**
  - ANVAR Bourgogne
  - 54603 Villers-Les-Nancy Cedex
  - Tel: +33 3 22 99 38 45 45
  - Fax: +33 3 80 30 23 02
Programme: Support for Innovation and Technology Transfer
Sponsor: Conseil Régional d’Ile-de-France
Scope: The purpose of this scheme is to allow SMEs in the Ile de France region to reduce their outside laboratory costs for developing innovative projects.

The scheme can be preceded by a feasibility study utilising an external consultant, of which 50% of the total cost will be covered, and 75% for companies of less than 1 year’s existence.

Contact: Mme Crousier Conseil Regional D’Ile-De-France Tel: + 33 1 53 85 53 85
33 Rue Barbet de Jouy Fax: + 33 1 53 85 53 89
75007 Paris

Programme: Secondment of a Researcher by the CEA or INSERM
Sponsor: Conseil Régional d’Ile-de-France
Scope: The purpose of this scheme is to encourage research in advanced techniques within the Ile-de-France Region by the secondment of a researcher from the CEA or INSERM, to an SME with a research or innovative programme.

Contact: Mme Crousier Conseil Regional D’Ile-De-France Tel: + 33 1 53 85 53 85
33 Rue Barbet de Jouy Fax: + 33 1 53 85 53 89
75007 Paris

Programme: Research and Transfer of Technology
Sponsor: Conseil Régional de Bourgogne
Scope: The aim of this programme is to promote technology transfer of research within public laboratories and regional companies within the area of Bourgogne. The fund will finance up to 50% of the research costs.

Contact: Mme Losserand Conseil Regional de Bourgogne Tel: + 33 3 80 44 34 50
Monsieur Degois 16 bis, Bd de Brosses Fax: + 33 3 80 44 33 00
BP 1332
21032 Dijon Cedex

Programme: Regional Fund Aid for Technology Transfer
Sponsor: Conseil Régional du Nord-Pas-de Calais
Scope: The purpose of this scheme is to provide financial support to SMEs in the Nord-Pas de Calais Region, in order to help them attract the scientific skills and external techniques they require to improve the quality of their products or performance and the competitiveness of their production tool.
Financial support within the programme covers 50% of the costs involved.

**Contact:** Mrs Laurence Marcotte  
The Regional Council of Nord-Pas de Calais  
Direction de l’Action Economique  
Centre Tournaire  
59555 Lille Cedex

**Programme:** Building of Centre for Technology Transfer

**Sponsor:** Conseil Général du Nord

**Scope:** The purpose of this scheme is to support the building of centres for technology transfer in order to reinforce the exchanges between SME and research laboratories. Eligible applicants include: SMEs, Universities, and colleges of University level.

**Contact:** Mr Jean Simon  
Conseil General Nord  
Direction de l’Action Economique  
43 Rue Gustave Delory  
59047 Lille Cedex

**Programme:** Access to Technology Transfer

**Sponsor:** Conseil Général du Nord

**Scope:** The aim of this programme is to promote the diffusion of innovation and technology transfer in SMEs within the North of France.

**Contact:** Mr Jean Simon  
Conseil General Nord  
Direction de l’Action Economique  
43 Rue Gustave Delory  
59047 Lille Cedex

**Programme:** Regional Funds for Technology Transfer

**Sponsor:** Conseil Régional de Haute Normandie

**Scope:** The purpose of this scheme is to facilitate technology transfer within regional companies in the region of Haute-Normandie by financing the costs involved in applying research or technical assistance. Funding is up to 50% of the total cost.

**Contact:** Mr Alain Derrot  
The DRIRE  
Tel: + 33 2 99 27 12 95  
Mme Gicquel  
Haute-Normandie Department  
Fax: + 33 2 99 27 11 11
Programme: A Regional Fund for Technology Transfer
Sponsor: Conseil Régional d’Alsace
Scope: This programme is aimed at SMEs within the craft industry, agro food stuffs and the industrial service sector within the Alsace region. It promotes the transfer of know-how and technology can finance up to 50% of the expenses involved.
Contact: Conseil Regional D’Alsace (R&D) Tel: + 33 1 03 88 15 68 67
Mission Recherche de Développement-Economie
35 Avenue de la Paix
BP 1006/F
67070 Strasbourg Cedex

Programme: Regional Fund for Technology Transfer
Sponsor: Conseil Régional de Provence-Alpes-Côtes d’Azur
Scope: This programme supports SMEs within the Provence-Alpes-Côte D’Azur Region that are interested in working with research centres to improve their level of performance. The fund finances between 25-50% of the costs involved.
Contact: Monsieur Courtial Conseil Regional de Provence Alpes Côte D’Azur Tel: + 33 4 91 57 50 57
Service des Initiatives Economiques
27 Place Jules Guesde
13481 Marseille Cedex 20

Programme: Regional Assistance for Technology Transfer
Sponsor: Conseil Regional de Corse
Scope: The programme aims at supporting SMEs in the elaboration and running of innovative projects on the island of Corsica. Funds available cover 50% of the costs involved.
Contact: Conseil Regional de la Corse Tel: + 33 4 95 23 77 00
Agence de Développement Economique de la Corse Fax: + 33 4 95 20 56 72
Auartier Saint-Joseph
19 Route de Sartene
20090 Ajaccio

Programme: Support of Innovative Programmes
Sponsor: Conseil Général de Haute-Vienne
This programme aims at supporting the adjustment of new products and the introduction of new techniques into the manufacturing process and promotes:

- collaboration with specialised research bodies
- the inclusion of real diversification
- the signing of a licence agreement with a public laboratory

**Contact:**
Madame Rubuyrol
Limoges Haute-Vienne
Developpement
19 Bld Victor Hugo
87000 Limoges

**Programme:** ERDF Programme
**INTERREG II F/I**

**Sponsor:**
The European Commission + National and Regional Authorities

This programme was established to support cross-border cooperation between Corsica and Tuscany by helping both regions develop synergies and to open up the economies of the beneficiary regions. These are located primarily in the region of Upper Corsica, which comes under Objective 1 and within the province of Livorno which comes under Objective 2.

Of potential interest to SMEs in the biotech sector is the provision for technology transfer made in cooperation with research and innovation centres

**Contact:**
Mme Marcori
DATAR
Equipe Affaires européennes
1 Avenue Charles Floquet
F-75007 Paris
Tel: + 33 1 40 65 11 58
Fax: + 33 1 40 65 12 39

**Various ERDF Programmes**

**Programme:**
The European Commission and National and Regional Authorities

In 1994 the European Commission adopted the single programming document (SPD) which gave indications for the use of the Community's Structural Funds contribution to Corsica up to the turn of the century.

Seven priorities were outlined of which one has special relevance. This priority is Economic Development - which includes measures to help SMEs adjust to their markets and gain access to financing and measures to stimulate new activities, particularly in the fields of advanced technology and related subcontracting sectors.

**Contact:**
DATAR
1 Avenue Charles Floquet
F-75343 Paris Cédex 07

Service Général aux Affaires Corses
9 Parc du Belvédère
Boîte Postale 229
3.6.4 Organisations/Contacts

ADEBIO

Address: 28, Rue Saint Dominique, F-75007 Paris, France.
Telephone: +33 1 44 18 95 53
Fax: +33 1 45 50 46 10
Contact: Mr. Alain Faure

Name: Organisation Nationale Interprofessionnelle des BioIndustries (ORGANIBIO)
Address: 28 Rue Saint Dominique, F-75007 Paris, France
Telephone: +33 1 47 53 09 12
Fax: +33 1 47 53 73 76
Contact: Mr Jean Lunel

Name: Ministère de l’Education Nationale et de la Recherche (MENESR)
Address: MST/DSTP 5, 77 Avenue Denfert-Rochereau, F-75014, Paris
Telephone: +33 1 40 51 20 20
Fax: +33 1 40 51 21 06
Contact: Prof P Printz

Name: Ministère de l’Agriculture, de la Pêche et de l’Alimentation Sous-dir. Recherche, Innovation et Réglementation
Address: 251, Rue de Margirard, F-75732, Paris Cedex 13
Telephone: +33 1 49 55 58 86
Fax: +33 1 49 55 59 48
Contact: M. Eric Schoonejans

Name: Ministère de l’Industrie, des Postes et Télécommunications de du Commerce Extérieur (MIPTCE)
Address: DGSI/SERBCO, 3 Rue Barbet de Jouy, F-75353, Paris
Telephone: + 33 1 45 65 39 68
Fax: + 33 1 45 56 30 92
Contact: Mr M Lelong

NOTE: For a complete listing of Euro Info Centres, please contact DGXXII

Fax: + 32 2 295 7335

Name: Euro Info Centre
Address: Ministère de l'Industrie, de la Poste et des Télécommunications, 20 Avenue de Ségar, F-75353, Paris
Telephone: + 33 1 43 19 28 16
Fax: + 33 1 43 19 60 37
Contact: Mr Denis Lagniez

Name: Chambre de Commerce et d'Industrie de Paris (BRIST)
Address: 2 Rue de Viarmes, F-75040, Paris Cedex 01
Telephone: + 33 1 45 08 35 39
Fax: + 33 1 45 08 39 79
Contact: Mr Giles Wurmser
Email: wur@ccip.fr

Name: Route des Hautes Technologies (RHT)
Address: Espace Colbert II, 8 Rue Sainte Barbe, F-13231 Marseille Cedex 01
Telephone: + 33 49 11 40 560
Fax: + 33 49 11 40 570
Contact: Mr Christian Dubarry
Email: rht@rht.cr-paca.fr

Name: Association Inter-Régionale sur la Recherche Européenne (AIRE)
Address: RN-25 Lieu dit le Ramponneau, F-80260 Poulainville (Amiens)
Telephone: + 33 32 24 37 218
Fax: + 33 32 24 37 202
Contact: Mrs Nathalie Gerard
Email: cri aire @ pratique.fr
3.7 Germany

3.7.1 A Brief Background to the Industry

The chemical and pharmaceutical industries are Germany’s strengths. However, with smaller firms lacking finance, larger companies being risk averse and the general public having a hostile attitude, biotechnology has only recently been actively encouraged by the government to capitalise on these strengths. In 1995 the Research Minister organised BioRegio-Wettbewerb. This scheme was a competition between Regions supporting joint projects with industry and research institutes. R&D expenditure for Germany in 1992 was 2.5% of GNP.

The few larger multinationals involved prefer investing in the medical and pharmaceutical sectors, whereas the smaller companies concentrate on agricultural and environmental applications. SMEs have had difficulties in securing Venture Capital for biotechnology, achieving less than 1% (ECU 40m) of total investment in 1994.

In addition to the university institutes, there is a range of publicly funded research centres which cover all areas of basic biotech research.

3.7.2 Current Actions and Programmes

Biotechnology 2000 brings together research centres, university institutes and companies working on projects as a joint effort. Spending on direct funding of research centres and industry in 1996 was ECU 110m. The Research Minister has promised ECU 530m per year from 1996 for biotech related R&D, which includes institutional funds. During 1993-1997, bio-informatics will receive ECU 12m.

3.7.3 Programmes at a Glance

Programme: Biotechnology 2000
Bundesministerium für Bildung, Wissenschaft (BMBF) - German Ministry for Education, Science, Research and Technology

**Scope:**
The purpose of the scheme is to increase the German presence in the biotechnological field. It is intended to allow the potential of biotechnology to be opened up for the economy. It aims to encourage companies, institutes of higher education and R&D establishments to undertake research and development projects in a wide variety of fields. The projects must be associated with a high economic/technical risk and applications should be made before the project begins. Priority will be given to multipurpose research projects.

**Funding:**
Grants are given to commercial firms for up to 50% of eligible costs. Subject to certain conditions. SMEs and firms in the New Federal States could receive as much as 60%. Eligible costs include R&D expenses, material, personnel, third-party services, travel, depreciation on project-specific equipment. The budget stands at 330 million DM per year.

**Contact:**
It is recommended to get in touch with the relevant authorities before official application us made.

**Programme:** Technology Participation

**Sponsor:** Kreditanstalt für Wiederaufbau

**Scope:**
The scheme runs until the end of December. It aims to support technology-oriented investments by strengthening the equity-capital basis. Innovation projects concentrate on applied research and development up to the stage of commercial production. Other projects are centred on market penetration, and introducing the product to the market. Applicants must have been founded within the past ten years and must have the necessary business administrative and technical know-how. Those firms in the old federal states must have less than 51 employees and a turnover of up to DM 10 million. In the new federal states, less that 251 employees and up to 40 million DM turnover.

**Funding**
The budget for this programme is 3 million DM. Applications can be made for capital costs linked to research and development and investment costs linked to market penetration. This incentive may be combined with other public funded programmes and those of the KfW/BMBF. Businesses in the old federal states can apply for up to 75% and those in the new federal states and Berlin (East) may get as much as 85%.

**Contact:**
Applications to be made on printed form KfW 141660, Programme No 115 or 116.

**Programme:** Technology/Innovation Consultancy (Brandenburg)

**Sponsor:** Ministerium für Wirtschaft, Mittelstand und Technology

**Scope:**
To increase the innovation potential and competitiveness of SMEs, through technical and/or business administrative consultation services aimed at manufacturing technically new products or the application of improved production processes. The firm’s registered headquarters as well as business premises should be situated in Brandenburg.

**Funding**
A grant for up to 50% of consultation costs can be applied for with a maximum of 20,000DM per business per year. It can not be combined with other public funds.

**Programme:** FUTOUR - Technology Oriented Business Start Ups

**Sponsor:** Bundesministerium für Bildung, Wissenschaft, Forschung und Technologie

**Scope:**
This programme should become a secondary incentive of the trial programme ‘Technology Oriented Business Start-up in the New Federal States’. The programme is awaiting approval from the EU Commission, however applications will be accepted now. It aims to facilitate the start-up of technology oriented businesses, based on innovative products, production procedures or technical services - feasibility analysis and the conception phase, R&D phase
and after-development phase. The measures must be carried out in the New Federal States or Berlin (East). The programme runs through to the end of 1999. Business founders should own at least 51% of the firm, and scientific and technical institutions should own at least 26% of the firm. Eligible applicants must be less than 3 years in business with up to ten employees.

**Funding**

Grants or silent partnerships will form the financial aid. For conception phase of a project, up to 50,000DM or 65% can be obtained, the R&D phase - 300,000DM or 70% and for the after-development phase - up to 500,000DM.

**Programme:** SME Berlin  
**Sponsor:** DG XVI  
**Scope:** This SME initiative for Berlin is to support SMEs in the Land’s Objective 1 and 2 regions. It comprises of the following measures: development of quality assurance systems and support for technology transfer, support for environmental and energy management, assistance for moves into international markets, financial support.

**Funding**

The Union will contribute 43% to the overall estimated costs from ERDF and ESF. The remaining 57% will be met by national public authorities and private sector backers.

**Contact:** Senatsverwaltung für Wirtschaft und Technologie des Landes Berlin. Referat II C  
Martin-Luther Str. 105  
D-10825 Berlin  
Tel: + 49 30 783-1  
Fax: + 49 30 783 8281

Senatsverwaltung für Arbeit und Frauen des Landes Berlin  
Referat VA, Storkower Str 134  
D-10407 Berlin  
Tel: + 49 30 4214-0  
Fax: + 49 30 4214 2090

**Programme:** SME Sachsen  
**Sponsor:** DG XVI  
**Scope:** The European Commission has approved a programme under the SME initiative for the Objective 1 region of the Free State of Sachsen to assist with the adaptation of SMEs throughout the area. It assists SMEs with market access, introduction of new technology, environmental protection and technical assistance.

**Funding**

The union will contribute 43% of total investment of which 87.6% will come from ERDF and 12.4% from ESF.

**Contact:** Sächsisches Staatsministerium für Wirtschaft und Arbeit  
Budapester Strasse 5  
D-01069 Dresden  
Tel: + 49 351 564-0, -8046  
Fax: + 49 351 564 8189

**Programme:** SME Nordrhein-Westfalen  
**Sponsor:** DG XVI
This Programme, covering both Objective 2 and 5b eligible areas in the Region, is designed to assist with the ongoing adaptation process of the SME sector. The measures are: improvement of management and organisation, support of technology and innovation, measures for improvement of the environment, facilitating access to new markets.

The Union will contribute 25% to the overall estimated costs which will come from the ERDF. It is complementary to vocational training measures under the Objective 2 Single Programming Document and the ADAPT Community Initiative.

Ministerium für Wirtschaft, Mittelstand und Technology und Verkehr des Landes Nordrhein-Westfalen
Harold Str.
D-40213 Düsseldorf 4

Venture Capital Technology-Oriented Businesses (Hamburg)
Wirtschaftsbehörde Hamburg
The programme aims to help improve the equity basis of young technology oriented businesses. It contributes to the appraisal costs incurred by the participant in risk evaluation and by helping with management support. It is open to SMEs in the commercial sector with less than 26 employees, a turnover up to 10 million DM and working in technology.

Financial help is given for appraisal costs and personnel costs, up to 70% in the first year, 50% in the second and 30% in the third year. Maximums of 15,000DM for personal appraisal plus 50,000DM for third-party services. For evaluation basis, there is a maximum of 130,000DM pa.

Information is available at the Wirtschaftsbehörde Hamburg, Abt. Strukturförderung.

TPW Technology Programme Economy
Ministerium für Wirtschaft und Mittelstand, Technology, Nordrhein-Westfalen
The purpose of the scheme is to develop, introduce and disseminate new products and procedures through obtaining new technical solutions, transferring of new products and procedures, developing business related adjustment measures, appropriation of technical know-how. The Programme is open to SME commercial businesses, technology-oriented business start-ups and independent professionals.

Grants are given for between 25,000 - 500,000DM or 20%-50%, depending on measures and size of business, for investment costs and other expenses which arise in relation to solving technical problems.

Before formal application is made, details of the project may be sent for preliminary appraisal to the Zentrum für Innovation und Technik, Dohne 54, 45468 Mülheim/Ruhr.

Modern Technology
Ministerium für Wirtschaft, Technologie und Verkehr, Schleswig-Holstein
The scheme is aimed at technical projects relating to the environment, energy, communications, information medicine, oceanology and bio-techniques. It encourages modern production techniques, and the development and purchase of technical know-how. Larger firms are also eligible for funding, if the measures in question are of special importance to the firm.
For fundamental research, SMEs can obtain grants of up to 60%, larger firms of up to 50%. For applied research, 30% for SMEs and 25% for larger firms. Grants cover expenses for materials, outside R&D services, personnel, travelling, special plants, special working fund and services. They also cover pilot and demonstration projects.

Applications should be to the Technologi-Transfer-Zentrale, Schleswig-Holstein.

Technology and Innovation Incentive
Ministerium für Wirtschaft und Angelegenheiten, Mecklenburg-Vorpommern
The programme encourages the development and implementation of new technologies as well as pilot projects related to new technologies, employment of innovation assistants, technology related consultancy as well as the mediation of information and registration of patent rights. Eligible applicants include commercial enterprises as well as non-university research establishments and in some cases private inventors as well.

Grants can be obtained for between 35%-80% of costs depending on the measures and type of establishment. The incentive may be combined with other public funds up to the respective incentive ceiling.

Applications should be made on a printed form before the project has begun.

SME-Credit 2.3 Technology
Investitionsbank Nordrhein-Westfalen
The scheme aims to increase the innovation capability and competitiveness as well as the attractiveness of jobs through the application of new, progressive procedures and setting up of new production lines. Private individuals, SMEs and independent professionals engaged in technical or natural science activities in the Nordrhein-Westfalen area may apply to the scheme. (The Rechaz/Objective 2 Region has different conditions).

Loans of between DM 100,000-500,000 at the current rate of interest can be obtained for project specific investment costs. Subsidised interest rates (between 2.5% and 5% below the capital-market rate) are possible depending upon the location.

Applications should be made on a printed form through the SME’s respective local bank.

Incentives for SMEs (Technical consultancy)
Rarionalisierungskuratorium der Dt. Wirtschaft, Bremen
The purpose is to promote the innovative ability of SMEs by providing technical consultancy.

Grants up to DM 200 can be applied for, consisting of a maximum of five one hour consultancy sessions at DM 40 each.

No printed forms are needed for applications to the Wirtschaft.

FTP-Research & Technology
Ministerium für Wirtschaft, Saarland
Strengthening of efficiency and competitiveness, supporting structural changes, improvement of work and training situations are all primary aims of this scheme.
3.7.4 Support Organisations/Contacts

Deutsche Forschungsgemeinschaft (DFG)
Address: Kennedyallee 40, 5300 Bonn 2
Telephone: +49 02 28885-1
Fax: +49 02 28 8852221

BioGenTec NRW (North-Rhine Westphalia)
Address: Eupener Straße 159, D-80963 Köln
Telephone: +49 221 9498 240
Fax: +49 221 9498 2444
Contact: office@biogentec.de

DECHHEMA eV- German Society for Chemical Apparatus
Address: Subject Group Biotechnology, Theodor-Heuss-Allee 25 60486 Frankfurt
Telephone: +49 069 7564 366
Fax: +49 069 7564 201
Contact: Dr Rolf Marris

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Telephone: + 49 069 7654 163
Fax: + 49 069 7564 169
Contact: Dr R Marquardt
isb@dechema.de

Name: Association of German Biotechnology Companies (VBU)
Address: c/o Dechema eV, Frankfurt/M
Telephone: + 49 069 7564 366 & 262 for Dr Rosenbaum
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Contact: Dr Maris & Dr V Rosenbaum

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Fax: +02 28 57 2094
Contact: Dr Heidenhof (Project Group PI) or email: information@bmbf.bund400.de

Name: Verband der Chemischen Industrie e.V. (VCI)
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Contact: Dr Hans-Jürgen Klockner

Name: Federal Ministry for Research and Technology
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Fax: +49 228 57 36 05
Contact: Dr Ekkehard Warmuth
Profile: This contact point is for information on national and regional programmes for example the
BioRegio Contest.

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Fax: +30 46 320 12
Contact: Dr Lutz Müller-Kuhrt

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Telephone: +49 202 36 24 27
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Fax: 49 208 300 04 29
Contact: Ms Hannelore Kraft

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Fax: 49 228 104 158
Contact: Ms Ellen Oesterreich

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Fax: 49 89 511 62 90
3.8 Greece

3.8.1 A Brief Background to the Industry

The General Secretariat for Research and Technology (GSRT), currently within the Ministry of Development, is responsible for stimulating the biotechnological sector as one of the three priority areas in science and technology. In 1993 R&D expenditure totalled 0.5% of GNP, compared to the EU average of 2%. Biotechnology activity is focused on the health and agro-food sectors, of which agrofood is the most active. Recent industrial R&D has been in molecular breeding and bioprocessing. A dozen universities are working in plant biotech and microbiology and two independent research institutes - Institute of Molecular Biology and Biotechnology (IMBB) and the Hellenic Pasteur Institute - are significant players in the field of immunodiagnostics. There are also a number of other Institutes active in biotechnology in Greece.

3.8.2 Current Actions and Programmes

The current operational programme for Research and Technology (EPET II 1994-1999) aims at enhancing the R&D activities within the production sector and creating closer links between public and private research. It supports the following major schemes: EKVAN - Programme of Research Consortia for Improving Industrial Competitiveness. 11% of which is dedicated to health and agriculture in the biotech sector. PENED - Programme for Enhancing Research Human Potential. 4.4% of the budget of this training and mobility programme is reserved for biotechnology. YPER - Programme of Targeted Research Fellowships. 7.3% of which is spent to finance biotechnology projects. SYN - Co-Financing Programme. Technology transfer scheme. 2.7% of which is reserved for biotechnology projects. The GSRT also allocates matching funds as a percentage of the remaining budget on the Greek side, of the R&D projects which are carried
out in the public research sector on a yearly basis for R&D organisations, and are funded by the Community Framework Programme for RTD.

3.8.3 Programmes at a Glance

<table>
<thead>
<tr>
<th>Programme:</th>
<th>Research and Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsor:</td>
<td>The European Commission, Greek Authorities and the Private Sector</td>
</tr>
<tr>
<td>Scope:</td>
<td>The European Commission has approved an operational programme to develop Greece's technological and economic capacity and thereby encourage productive investment, thus increasing the value-added nature of its products and services. The European Community supports 54-58% of the total investment, the rest of which is covered by the Greek authorities and the private sector. The scheme comprises a number of sub programmes which cover: • industrial research, technology transfer and innovation • improving and restructuring of research infrastructure • human resources • implementation</td>
</tr>
<tr>
<td>Contact:</td>
<td>The General Secretariat for Research and Technology</td>
</tr>
<tr>
<td></td>
<td>Messogion 14</td>
</tr>
<tr>
<td></td>
<td>GR-115 10 Athens</td>
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<table>
<thead>
<tr>
<th>Programme:</th>
<th>An SME Initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsor:</td>
<td>The European Commission, Greek Authorities and the Private Sector</td>
</tr>
<tr>
<td>Scope:</td>
<td>The European Commission has approved a programme under the Community INITIATIVE on SMEs which is designed to help SMEs in Greece improve their international competitiveness. This programme mainly focuses on measures to initiate financial management, the promotion of sub-contracting, the development of modem organisational methods and the improved competitiveness of enterprise clusters. The Community co-finances 53% of the projects alongside Greek authorities and the private sector. The main priorities of the scheme include: • the modernisation of enterprises and the promotion of enterprise clusters. • the development of the commerce and distribution sector • the development of the SME services sector, support structures and financial engineering. • the development of human resources. • technical assistance to implement the programme.</td>
</tr>
<tr>
<td></td>
<td>Mr Pantelis Angelopoulos</td>
</tr>
<tr>
<td></td>
<td>Ministry of the Economy</td>
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<td></td>
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<tr>
<td></td>
<td>Syntagma Square</td>
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<td></td>
<td>Fax: +30 333 23 67</td>
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<tr>
<td></td>
<td>GE-10180 Athens</td>
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<table>
<thead>
<tr>
<th>Programme:</th>
<th>EKVAN - Programme of Research Consortia for Improving Industrial Competitiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsor:</td>
<td>The General Secretariat for Research and Technology</td>
</tr>
<tr>
<td>Scope:</td>
<td>This programme focuses on national R&amp;T efforts in high priority sectors and aims at strengthening the links between the various research and technological organisations with the production sector through R&amp;D projects. It also enhances the participation of the production sector in the overall research effort in Greece. A special action in the above programme was dedicated to the support of regional R&amp;D activities (specifically in Northern Greece and the Aegean Islands).</td>
</tr>
<tr>
<td>Contact:</td>
<td>The General Secretariat for Research and Technology</td>
</tr>
<tr>
<td></td>
<td>Tel:+301 77 14 162 77 10 693</td>
</tr>
</tbody>
</table>
Programme: YPER - Programme of Targeted Research Fellowships

Sponsor: The General Secretariat for Research and Technology

Scope: The aim of this programme is to support industrial research and innovation activities while giving the opportunity to young researchers to support their doctoral theses

Contact: The General Secretariat for Research and Technology
Informatics Department

Te1:+301 77 14 162 77 10 693
Fax:+ 301 77 10 693
web page http://www.gsrt.epmhs.gr

Programme: SYN - Co-Financing Programme

Sponsor: The General Secretariat for Research and Technology

Scope: This programme promotes active collaboration between public research institutions and potential users of the research results. It covers priority, high-technology areas.

Contact: The General Secretariat for Research and Technology
Informatics Department

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web page http://www.gsrt.epmhs.gr

3.8.4 Support Organisations/Contacts

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Name: The General Secretariat of Research and Technology of Greece

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Contact Name: Dr George Karacis

Name: Benaki Phytopathological Institute
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Name: Euro Info Centre
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Contact Name: Mr George Drouboukis

Name: Euro Info Centre
Address: Association of Industries in Thessaly and in Central Greece, El. Venizelou Road, 4, GR-38221, Volos
Telephone: +30 421 28111/29407
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Contact Name: Ms Stella Vaina
3.9 Ireland

3.9.1 A Brief Background to the Industry

Ireland has an excellent university base of biological and medical training and research, and the number of biotechnology companies continues to grow. Agriculture and Food Research Agencies have a strong presence in the different areas of R&D. There are approximately 170 companies with biotech interests in Ireland, many of them with foreign ownership. There is an estimated 45,000 people employed in biotech related companies. Industrial activities focus on diagnostics, bio-pharmaceutical, plant and animal biotech, as well as food applications. Irish biotech companies raised less than ECU 5m of Venture Capital in 1994.

3.9.2 Current Actions and Programmes

The National Biotechnology Programme was set up in 1987 with the objective of developing commercially oriented biotechnology research in Irish universities. This programme resulted in the creation of Bioresearch Ireland (BRI), a contract research organisation engaged in the commercialisation of existing biotechnology and developing the expertise and facilities needed for biotech R&D. BRI has specialised Biotechnology Centres on the campuses of five Irish Universities. The specialisations were chosen on the basis of the expertise in each university and on the commercial significance of the topics. Three agencies influence biotechnology in Ireland:

- **Bioresearch Ireland** - as outlined above.
- **IDA Ireland** - which encourages inward investment.
- **Forbairt** - the Irish development agency.

Programmes of relevance for biotech SMEs in Ireland fall under two categories: National Operational Programmes under the European Community Support Framework for Ireland (1994-1999). These cover a range of activities, including support for direct R&D by companies; co-operation between industry and tertiary educational institutions; R&D salary subventions; specific research in the areas of food and drink; and environmental monitoring and marine resources. Decisions on the apportionment of such funding, available under seven main programme headings, are made at national level and are administered by National Agencies. In total, some ECU428.88 million of funding is available to Ireland for R&D related activities over the period to 1999. SMEs are specifically targeted in the guidelines.

**Innovation and State Support Programmes**, under Research and Development, aim of these programmes is to increase awareness of science, technology and innovation; highlight the benefits to Ireland which can be gained through these activities; introduce people of all ages to exciting developments in science and technology; and encourage learning through enthusiastic participation in science and technology-based activities in the home, in school and at work. The programme is managed by Forfas. In addition, the Irish Government, recognising the growing importance of SMEs and their specific problems, introduced a number of programmes to help companies devise and implement innovation strategies. The range of State support available to innovating firms is divided into four main categories: Research and Development, Making and Improving Products, Recruitment and Training of Technical Personnel and Market Identification & Development.

3.9.3 Programmes at a Glance

| Programme: Industrial Development: Sub-Programme for R&D. Industry R&D Initiative (Measure 1) |
Sponsor: European Commission and Irish Government

Scope: Open to all firms and brings under a single heading all financial support for company-led R&D. Guidelines and support will ensure that SMEs have equal access to this source of funding. Collaborative projects or joint ventures, enabling groups of SMEs to undertake more large-scale, commercially-oriented projects, are eligible under this initiative, as is the more active development of international linkages through the EUREKA initiative.

Funding: • Up to 50% of costs of approved company-led projects. IR£88 million will be available in grant support for this initiative between 1994-1999

Contact: Noel McCarthy Forbairt Tel: + 353 1 837 0101
Barry O’Connell IDA Ireland Tel: + 353 1 668 6633
Michael Leydon Shannon Development Tel: + 353 61 361 555
Jim Harrington Udaras na Gaeltachta Tel: + 353 91 592 011

Programme: Industry/Tertiary Level Co-operation Services (Measure 2)

Sponsor: European Commission and Irish Government

Scope: The actions in Measure 2 are predominantly aimed at increasing tertiary education and industry co-operation and aim to develop the technological capabilities of companies through the provision of specialist expertise, graduates and services.

Funding: The total budget is IR£137 million. Support is available for:

• Technology transfer actions • Techman: salary subvented up to IR£17,500 per firm over 3 years for experienced specialists. R&D tasks eligible • Techstart: subvents salary of newly qualified technical graduates up to IR£5,000 for one year. R&D tasks eligible; technology service, such as audits and product development.

Contact: Ray McSherry (Technology Transfer) Forbairt Tel: + 353 1 837 0101
Liam Bradley (Techstart) Forbairt Tel: + 353 1 837 0101
Harry Murphy Forbairt Tel: + 353 1 837 0101

Programme: Human Resource Development (Measure 3)

Sponsor: European Commission and Irish Government

Scope: This measure is designed to improve the ability of industry to manage the process of research and technological development. It also provides advanced research and development training for graduates.

Funding: There is a budget of IR£13 million for:

• Postgraduate training in the research, planning and management of innovation • Firms seriously committed to the planning and implementation of substantial changes to improve their R&D Capacities.

Contact: Martin Lyes Forbairt Tel: + 353 1 837 0101

Programme: Research Support
Sponsor: European Commission and Irish Government

Scope: Funding will be available for higher education-industry co-operative research projects

Funding: Available in 1995: IR£1.5 million

- Basic Research Grants: IR£1.0 million
- Strategic Research Grants IR£1.5 million
- Applied Research Grants IR£0.84 million

Funding in subsequent years will be of similar magnitude.

Contact: Martin Lyes Forbairt Tel: + 353 1 837 0101

Programme: Sub-Programme for Food Industry: Research and Development (Measure 3) Sub-measure (I)

Sponsor: European Commission and Irish Government

Scope: This measure will provide grant-aid for the development of in-company R&D in the food industry (including beverages.) It provides the same type of assistance to the food industry as is provided to other industrial sectors under the R&D Sub-Programme Measure 3.

Funding: Measure 3 has a budget of IR£57 million (includes funding for Institutional R&D).

Contact: Noel McCarthy Forbairt Tel: + 353 1 837 0101
Michael Leydon Shannon Development Tel: + 353 61 361 555
Jim Harington Udaras Na Gaeltachta Tel: + 353 91 592 011

Programme: Feasibility Study Grants

Sponsor: Irish Government

Scope: The scheme aims to:
- help businesses and individuals evaluate the viability of manufacturing a completely new product or exploring a new market opportunity
- cover cost incurred by companies in negotiating with research partners and in preparing joint R&D proposals for submission to the EU.

Funding: Grants of up to 50% of eligible costs are available, to a maximum of IR£15,000 grant per project.

Contact: Forbairt Regional Offices Tel: + 353 1 660 5544
Ronan Breslin Forbairt Tel: + 353 1 837 0101

Programme: Research and Development

Sponsor: Irish Government

Scope: Technical Support Services
Biotechnology Opportunities

Contact: Bioresearch Ireland

Grants may be available to individuals, groups or companies based in Ireland towards the cost of
feasibility studies on product development and market research

Tax Relief on Incremental Expenditure on R&D may be claimed against profits in the year in which expenditure is incurred. For qualifying companies there is a quadruple deduction for incremental R&D expenditure. Companies who have not received an R&D grant or who have received one not exceeding IR£50,000 qualify. This benefit is available for three years.

Royalties and other income received for the use of patents are exempt from income and corporation tax. This only applies to inventions devised in Ireland.

Programme: Making and Improving your Product
Sponsor: Irish Government
Scope: Firms can obtain a range of consultancy services and also up to 50% grant towards the set-up costs for joint ventures or licensing arrangements.

Tax relief is available to individuals for investment in companies carrying out certain trading operations in manufacturing and some service companies. The maximum amount that can be raised by associated companies will be IR£1 million and the amount invested in eligible shares is subject to a IR£25,000 limit in any one year.

Seed Capital Scheme

Relief is provided in respect of an individual’s investment in a new business venture in an approved trading area.

Programme: Recruitment and Training of Technical Personnel
Sponsor: Irish Government
Scope: Services to the Firm are available for:

- Personnel Services
- Consultancy Services
- Recruitment and Training Services

Grants are available for:
- Personnel
- Training
- Development

Contact: Forbairt Information Desk
Contact: FAS Services to Business Section
Contact: Shannon Development
Programme: Market Identification and Development

Sponsor: Irish Government

Scope: The following services are available:

- Marketing Information and Promotional Activities
- Marketing Personnel
- Market Development

Grants are available for: Marketing Sales Development

Contact:

The Client Service Desk
Tel: +353 1 206 6223

3.9.4 Support Organisations/Contacts

Name: An Bord Trachtala - established 1991
Address: Merrion Hall, Strand Road, Dublin 4
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Name: Animal and Plant Health Association
Address: Franklin House, 140 Pembroke Road, Dublin 4
Telephone: +353 1 660 3350
Fax: +353 1 686 672
Email: ALPHA@IOL.IE
Contact: Mr D.O’Brien
        Dr C.O’Reilly
        Mr E Teehan

Name: Bord Iascaigh Mhara (Irish Sea Fisheries Board)
Address: PO Box No 12, Crofton Road, Dun Laoghaire, Co Dublin
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Contact: Mr A Gannon
Mr J Somers

Name: BioResearch Ireland - established 1987
Address: Forbairt, Glasnevin, Dublin 9
Telephone: + 353 1 837 0177
Fax: + 353 1 837 0176
Email: breslind@biore-irl.ie
Contact: Man Dir: Dr Jim Ryan
Mrkt Mgr: Mr Seamus O'Hara

Name: DEVCO Ireland-State Agencies Development Co-Op Organisation - est 1975
Address: Marshalsea Court, 23 Merchants Quay, Dublin 8
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Contact: Ms B Howard

Name: Environmental Protection Agency
Address: Ardcavan, Wexford
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Contact: Mr L Mc Cumiskey

Name: Euro Info Centre
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Contact: Ms Margaret Hogan

Name: Euro Info Centre
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Fax: + 353 61315 634
Contact: Ms Nuala O ‘Carroll

Name: Euro Info Centre
Address: Cork Chamber of Commerce, 67/69 South Mall, Cork.
Telephone: + 353 21 509 044
Fax: + 353 21 271 347
Contact: Ms Renata Murphy

Name: Euro Info Centre
Address: Galway Chamber of Commerce and Industry, Commerce House, Merchants Road, Galway.
Telephone: + 353 91 562 624
Fax: + 353 91 561 963
Contact: Mr Jarlath Feeney

Name: FAS - The Training and Employment Authority - established 1988
Address: 27-33 Upper Baggot Street, Dublin 4
Telephone: + 353 1 668 5777
Fax: + 353 1 660 0079 / 668 2691
Contact: Dr J Lynch Mr G Pyke

Name: Fisheries Research Centre
Address: Marine Institute, Castleknock, Abbotstown, Dublin 15
Telephone: + 353 1 821 0111
Fax: + 353 1 820 5078
Contact: Dr D Griffith

Name: Forbaírt - established 1994
Address: Glasnevin, Dublin 9
Telephone: + 353 1 808 2000
Fax: + 353 1 808 2020
Email: infodesk@forbaírt.ie
<table>
<thead>
<tr>
<th>Contact:</th>
<th>Mr Alan Dixon - Head of Corporate Communications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Health and Safety Authority - established 1989</td>
</tr>
<tr>
<td>Address:</td>
<td>10 Hogan Place, Dublin 2</td>
</tr>
<tr>
<td>Telephone:</td>
<td>+ 353 1 662 0400</td>
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<tr>
<td>Fax:</td>
<td>+ 353 1 662 0417</td>
</tr>
<tr>
<td>Contact:</td>
<td>Mr T Walsh</td>
</tr>
<tr>
<td>Name:</td>
<td>Health Research Board</td>
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<tr>
<td>Address:</td>
<td>73 Lower Baggot St, Dublin</td>
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<tr>
<td>Telephone:</td>
<td>+ 353 1 676 1176</td>
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<td>Fax:</td>
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<td><a href="mailto:hrb@hrb.ie">hrb@hrb.ie</a></td>
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<tr>
<td>Contact:</td>
<td>Dr J V O’Gorman - Chief Executive</td>
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<tr>
<td>Name:</td>
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<td>Wilton Park House, Wilton Place, Dublin 2</td>
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<td>Fax:</td>
<td>+ 353 1 603 4040</td>
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<tr>
<td>Contact:</td>
<td>Mr K Mc Gowan Mr A Condon</td>
</tr>
<tr>
<td>Name:</td>
<td>Industry Research &amp; Development - established 1992</td>
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<tr>
<td>Address:</td>
<td>Confederation House, 84-86 Lower Baggot Street, Dublin 2</td>
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<td>Telephone:</td>
<td>+ 353 1 605 1608</td>
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<td>Fax:</td>
<td>+ 353 1 661 1095</td>
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<tr>
<td>Contact:</td>
<td>Mr Richard Kavanagh MD Ms Carole Meyers</td>
</tr>
<tr>
<td>Name:</td>
<td>Irish Business and Employers Confederation (IBEC)</td>
</tr>
<tr>
<td>Address:</td>
<td>Confederation House, 84-86 Lower Baggot St, Dublin 2</td>
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<tr>
<td>Telephone:</td>
<td>+ 353 1 6601011</td>
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<tr>
<td>Fax:</td>
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</tr>
<tr>
<td>Contact:</td>
<td>Mr Tony O’Brien - President Mr T Barry and Mr T Kilduff - Vice Presidents Mr John Dunne -</td>
</tr>
</tbody>
</table>
3.10 Italy

3.10.1 A Brief Background to the Industry

The Italian Government promotes biotechnology by providing subsidies to companies and research institutes and the associations which bring the two together. Two organisations, the Consiglio Nazionale delle Ricerche (CNR) and Ministry of University and Research (MURST) manage programmes. The CNR programmes strengthen the research base, and the MURST programmes support pre-competitive research in the interests of industry. Between 1991 and 1994, the number of biotech companies in Italy increased from 135 to 210, 58 of which concentrate on equipment and engineering, while 75 specialise in marketing only. The majority of the companies are based around Milan. Two out of three SMEs have received finance from venture capitalists, approximately ECU3 million was raised in 1993 alone. The main areas of expertise include health products, agri-food products, fine chemicals and environmental protection products and equipment. Ten science and technology parks are planned for southern Italy and other industrially disadvantaged areas following a government initiative which granted ECU 780m. The Inter-university Consortium for Biotechnologies (CIB) was founded in 1987 by seven universities. By January 1997, participation had grown to 19 universities and one national
institute. CNR has a network of research institutes which covers the whole country. In 1996 the National Agency for New Technology, Energy and the Environment (ENEA) spent ECU 18m on R&D.

3.10.2 Current Actions and Programmes

The ‘National Programmes’ are in fact instruments, provided for by a National law (No 46 of 1982) on the implementation of interventions in those sectors of the economy which have national importance’. They precede any research action of the CNR Targeted Projects and their contents are precisely defined by the by the Civil Service. The research is then carried out by either single firms, or groups of firms, or by firms associated with public research bodies. National Research Programmes originated truly under the auspices of the State through specific projects. Therefore, the findings of such research are State property, and the State regulates them and assigns them for a consideration to firms for commercialisation. In April 1994 MURST adopted a Plan for the period 1994-1998 which provides for the following priorities in biotechnological research: the study of fundamental biological processes at molecular and cellular level. the study of the most important genomes, including innovative sequencing methods. bio-computer science. the applications of molecular genetics to human health, agriculture, chemical industry and the environment. The CNR is currently preparing for the following draft programmes which are to run for five years:

- **The Biotechnology Project**: This programme is to cover six areas and the requested budget is ECU 66 million. The subjects include: molecular engineering and structural biology, environmental biotechnology, modifications of cells, cellular systems and organisms, fermentation processes, bioconversion, bioseparations and agro-industrial biotechnology, biotechnology for drug production and control of cellular differentiation, biosensors and diagnostic biotechnology.

- **The Genetic Engineering Project**: A requested budget of ECU 30 million and is to encompass four main areas: human genome, gene therapy, RNA technologies for diagnostics and animal models for the study of development.

- **A Strategic Project in the Field of Biology**: This programme is subsequent to a Target Project on the reproduction of animals of zootechnical interest, and has a requested budget of ECU450,000.

- **Gene Therapy Project**: The Ministry of Health is running this three year project with a budget of ECU3 million.

- **Plant Biotechnology**: Is a project funded by the Ministry of Agriculture at a budget of ECU15 million. Law No 46/1982 provides for several means of supporting research and other innovative activities in firms. In particular, it provides for the Technological Innovation Fund (FIT) run by the Ministry of Industry, Commerce and Crafts, and the Applied Research Fund (FRA) run by IMI for the Ministry of University and of Technological and Scientific Research. The interventions to support the FIT are mainly loans given to the firms at concessionary rates in order for them to carry out innovation projects. Conversely, the FRA operates through several instruments: research projects independently presented by the firms can obtain subsidies, partly at concessionary rates, partly as sunk capital; National Research Programmes (PNRs) relevant to subjects considered to be of priority interest can receive funding of up to a 100% for research and training. The results of which are State property with the potential of being handed over to firms. The structure of the support instruments is under revision to make it conform to Community norms; contributions to small and medium sized firms for research programmes and services assigned to laboratories recognised by the MURST. Funding up to 50% of expenses incurred, up to a limit of 200 million Lire can be applied for; financing of technological transfer initiatives and of the relevant training to small and medium sized firms including those in Scientific and Technological Parks.

3.10.3 Programmes at a Glance
Funding Programmes

Programme: National Authorities

Sponsor:

Scope: Funding is given to research projects submitted by companies, partly as a loan at facilitated rates of interest and partly as a grant.

Contact: Dr Vincenzo Lungagnani Assobiotec Tel: + 39 2 26 81 03 06/ 26 81 Via Academia 33 Fax: + 39 2 26 81 02 84 20131 Milano

National Programme of Research and Training (PNR&F) in Advanced Biotechnology

Programme: National Programme of Research and Training (PNR&F) in Advanced Biotechnology

Sponsor: The Ministry of University and Scientific and Technological Research (MURST)

Scope: This scheme covers projects considered of priority interest which receive 100% of the funding for the research and training projects. Results become the property of the State, with the possibility of being sold on to the companies.

Contact: MURST Ministero dell’Università e delle Ricerca Scientifica e Tecnologica, Lungotevere Thaon di Revel, I-00196 Roma

Financial Contributions to SMEs

Programme: Financial Contributions to SMEs

Sponsor: MURST

Scope: Contributions cover up to 50% of costs incurred up to a limit of 200 million lire and are granted to SMEs for research projects and services entrusted to labs recognised by the Ministry of University and Scientific and Technical Research.

Contact: Eugenia Marino Tel:+39 6 599124 80 Fax:+39 6 5991 23 68
MURST Ministero dell’Università e delle Ricerca Scientifica e Tecnologica (MURST)
piazzale Kennedy
20 00144
Roma

Technology Transfer

Programme: Technology Transfer

Sponsor: National Authorities

Scope: The funding of technology transfer and related training initiatives undertaken by SMEs is covered, including those operating within Science and Technology Parks.

Contact: Dr Vincenzo Lungagnani Assobiotec Tel: + 39 2 26 81 03 06/ 26 81 Via Academia 33 Fax: + 39 2 26 81 02 84 20131 Milano
Programme: **ERDF - Research and Technological Development**

Sponsor: The European Commission and National and Regional Authorities

Scope: This operational programme was approved in order to support technological research, development and innovation in the Mezzogiorno regions. The Community co-finances 58.43%, the remainder of which is provided by the national and regional authorities and the private sector. The scheme focuses on four sub-programmes: 1. Training - particularly at a high level and relevant infrastructure, the establishment of infrastructure and facilities for science faculties, with a view to narrowing the gap between the south and the centre/north of the country in this field and increasing student intake in these faculties in the Mezzogiorno compared with other disciplines. 2. Research and Innovation - this involves support for government controlled research centres (The National Agency for New Technology, Energy and the Environment (ENEA), the Consiglio Nazionale delle Ricerche (CNR), the Anton Dohrn Zoological Station for Marine Biology and Biotechnology Research and more) and soft loans and subsidies to promote industrial research via the fund for applied research which is open to industrial enterprises and SMEs in particular. 3. Dissemination of innovation - this is essentially technology transfer and covers the promotion of science and technology parks, in particular with a view to supporting innovative SMEs initiatives and financing for a large-scale programme for the construction of science and technology parks in the Mezzogiorno region. 4. Technical assistance.

Contact: MURST Ministero dell'Università e delle Ricerca Scientifica e Tecnologica, Lungotevere Thaon di Revel, I-00196 Roma

Programme: **ERDF Programme for SMEs**

Sponsor: The European Commission and National Authorities

Scope: This programme falls under the SME Community Initiative designed to maximise the role of SMEs, particularly in the South of the Country. The Community co-finances 30% of total investment, the balance is covered by National authorities and private agencies. The scheme is divided into 5 sub-programmes details of which can be obtained in the appropriate programme document.

Contact: Ministero dell’Industria, Commercio e Artigianato Tel: + 39 6 47 05 20 22 Direzione Generale della Produzione Industriale Fax: + 39 6 47 44 04 8 Via Molise, 2 I-00100 ROMA

3.10.4 Support Organisations/Contacts

**Name:** Assobiotec

**Address:** Via Academia 33, 20131 Milano

**Telephone:** + 39 2 26 81 03 06/26 81 02 08

**Fax:** + 39 2 26 81 02 84

**Contact:** Dr Vincenzo Lungagnani

**Name:** MURST

**Address:** P.Le Kennedy 20, I-00144 Roma
Telephone: +39 6 59 91 24 80
Fax: +39 6 59 91 23 68
Contact: Dott.ssa Caterina Dolcetti

Name: Facoltà di Medicina e Chirurgia
Address: Dpt. Scienze e Tecnologie Biomediche, Università di Milano, Via Celoria 2, I-20133 Milano
Telephone: +39 2 26 66 498
Fax: +39 2 26 63 030
Contact: Prof Michele Perrella

Name: Ministero Della Sanita
Address: Via Sterra Nevada 60, I-00144 Rome
Telephone: +39 6 59 94 42 09
Fax: +39 6 59 94 42 49
Contact: Dr Luigi Binetti

Name: Camera di Commercio di Torino/Alps
Address: Via S Francesco da Paola 24, I-10123 Torino
Telephone: +39 11 57 16 517
Fax: +39 11 57 16 375
Email: innovation.r.c' st.alpcom.it
Contact: Mr Pier Luigi Modotti

Name: Consorzio MIP Politecnico di Milano/LARICE
Address: Via Rombon,11, I-20134, Milano
Telephone: +39 22 15 15 00
Fax: +39 22 15 23 09
Email: larice@mailer.mp.polimi.it
Contact: Mr Angelo Gatto

Name: ENEA/IRENE
Address: via Don Fiammelli, I-40100 Bologna
Name: **Consorzio Pisa Ricerche/RECITAL**
Address: Piazza Alessandro D'Acona 1, I-56127 Pisa
Telephone: +39 50 90 62 60
Fax: +39 50 54 00 56
Email: recital@cpr.it
Contact: Ms Cinzia Giachetti

Name: **CNR-UTIBNoT/CIRCE**
Address: Via Tiburtina 770, I-00159, Roma
Telephone: +39 64 99 32 449
Fax: +39 64 07 58 15
Email: utibnot@irmreti.ced.rm.cnr.it
Contact: Ms Maria Saveria Cinquegrani

Name: **Tecnopolis CSATA Novus Ortus/IRIDE**
Address: Parco Scientifico Tecnolpolis Novus Ortus, I-70010 Valenzano (Bari)
Telephone: +39 80 87 70 238
Fax: +39 80 87 70 361
Email: iride@vm.csata.it
Contact: Mr Francesco Surico

Name: **Consorzio Catania Ricerche/MEDIA**
Address: Viale A Doria 8, I-95125 Catania
Telephone: +39 95 22 19 21
Fax: +39 95 33 97 34
Email: media@dipmat.unict.it
Contact: Mr Salvatore Pignataro
3.11 Luxembourg

3.11.1 A Brief Background to the Industry

No information supplied.

3.11.2 Current Actions and Programmes

No information supplied.
3.11.3 Programmes at a Glance

**Programme:** SME Programme (1994-99)

**Sponsor:** The European Commission and National Authorities

**Scope:** The European Commission has approved a Community Initiative Programme for Luxembourg to assist SMEs in adapting to market conditions and to environmental requirements. It covers the Objective 2 and 5b regions of Luxembourg. The Community co-finances 25% of the total investment, the remainder of which is provided by national authorities and the private sector.

**Contact:** Mme Elizabeth Mannes-Kieffer, Ministère de l’Économie, Tel: +352 478 41 38

Bd Royal 19-21

L-2914 Luxembourg

**Programme:** Objective 5b - 1994-1999

**Sponsor:** The European Commission and National Authorities

**Scope:** The European Commission approved an SPD describing measures aimed at developing vulnerable rural areas in the Grand Duchy of Luxembourg. The interventions cover the following zones: the cantons of Clervaux, Vianden and Wiltz as well as the communes of Beckerich, Ell, Rambrouch, Redange and Wahl in Redange canton. The total community subsidy is at a level of ECU 6 million. The scheme focuses on four priorities of which the second relates to SMEs.

**Contact:** Ministère de l’Agriculture, de la Viticulture et du Développement Rural, Rue de la Congrégation 1, Tel: +352 46 40 27

L-2913 Luxembourg

3.11.4 Support Organisations

**Name:** Ministère des Affaires Culturelles

**Address:** 29 rue Aldringen, L-2944 Luxembourg

**Telephone:** +352 478 52 16 / 52 19

**Fax:** +352 470 264

**Contact:** Dr P Decker

**Name:** Centre de Recherche

**Telephone:** +352 46 66 44 412

**Fax:** +352 46 66 44 413

**Contact:** Dr L Hoffmann

**Name:** Ministere de la Sante, Division de la Pharmacie et des Medicaments

**Address:** Rue C M Spoo 10, L-2546 Luxembourg
3.12 The Netherlands

3.12.1 A Brief Background to the Industry

Since the early 1980s, the Netherlands has encouraged innovation in high-technology areas. Biotech R&D has grown from the strong food sector and science-based agricultural sector. There
is a high level of collaboration between universities and industry. In the early 1990s the total R&D expenditure was 1.9% of GNP. Currently there are 290 companies in the biotech industry, with an expected 25% increase in the next medium term. Food, agriculture, environment and pharmaceutical applications are the four major areas. Research involves liaison with foreign industries, universities and institutes. There is a general open exchange of information about food and ingredients created by modern biotechnology. The total number of industrial and academic scientists involved in biotechnology in The Netherlands is estimated to be between 3,000-4,000. Most of the 290 companies conduct their own biotech research, particularly in the fields of food, agriculture, pharmaceutical applications and the environment. Companies co-operate extensively with universities and research institutes, as well as other R&D companies.

3.12.2 Current Actions and Programmes

Dutch companies participated in almost one-third of all European EUREKA projects and there is good participation in the Dutch biotech programmes as well. There are several subsidies available for industrial R&D and feasibility studies. Risk-associated loans for product development of high risk, high technology projects are available under the TOK scheme. This scheme is an extension of the support for industrial research and development, and offers a fixed interest loan with a pay back period that is linked to commercial success over 10 years. The government offers help with the wages of personnel involved in qualified R&D through deductions from the wage tax.

3.12.3 Programmes at a Glance

<table>
<thead>
<tr>
<th>Programme:</th>
<th>TOK Scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsor</td>
<td>Senter</td>
</tr>
<tr>
<td>Scope:</td>
<td>This scheme is an extension of support for industrial research and development and offers a fixed interest loan with a pay back period that is linked to commercial success over 10 years. The project must involve substantial technical risk, be a new product for the Netherlands and the company must have a good track record and qualified management.</td>
</tr>
<tr>
<td>Funding:</td>
<td>Dutch companies can obtain a loan of up to Dfl 25 million per year, subject to a payback based upon the success of the company and its product.</td>
</tr>
</tbody>
</table>
| Contact:            | Mr van Terwisga
                       | Senter
                       | PO Box 30732
                       | 2500 GS The Hague
                       | Tel: +31 70 361 0341/361 0319
                       | Fax: +31 70 361 4430 |

<table>
<thead>
<tr>
<th>Programme:</th>
<th>PBTS - Industrial Technology Stimulation Programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsor</td>
<td>Senter</td>
</tr>
<tr>
<td>Scope:</td>
<td>There is no time limit fixed on the programme. Most of the research under the programme is between companies or between industry and research centres. The government has set aside ECU 11.5m for the period of 1995-1997.</td>
</tr>
<tr>
<td>Funding:</td>
<td>Up to 37.5% of costs is subsidised</td>
</tr>
</tbody>
</table>
| Contact:            | Mr van Terwisga
                       | Senter
                       | Tel: +31 70 361 0341/361 0319 |
ABON (Association of Biotechnology Research Schools) Research Programme

Sponsor: Dutch Government

Scope: The scheme will cover five years of research in five different research schools and be co-financed by industry. The research themes of the programme are structure-function relationships of proteins and of food-grade polysaccharides, resistance of plants, metabolic pathway engineering and integrated bioprocess development.

Funding: Dfl 17 million governmental grant

Contact: Dr Pieter Bos
Secretariat ABON
Kluver Laboratory for Biotechnology Delft
University of Technology
Julianalaan 67
2628 BD Delft
Tel: +31 15 278 63 16/23 59
Fax: +31 15 278 23 55
email: pieter.bos@stm.tudelft.nl

Human Genome Analysis Programme

Sponsor: NOW - Netherlands Organisation for Scientific Research

Scope: The programme runs from 1991-1997. It aims to study diseases which are hereditary and the ethical and social aspects which are connected with suffering from the diseases

Funding: Budget of ECU 450,000

Contact: Mr Maesseu
NWO
Tel: +31 70 344 0640
Fax: +31 70

MIBITON Support Scheme

Sponsor: MIBITON

Scope: Extensive biotech investments in specialised equipment and facilities with high safety standards.

Funding: Dfl 30 million

Contact: Dr H J Grande
PPS Mibiton
Vlietweg 16
2266 KA Feidschendam
Tel: 31 70 320 3527
Fax: 31 70 320 5765
e-mail mibiton@xs4all.nl

TNO Biotechnology R&D Programme

Sponsor: TNO - The Netherlands Organisation for Applied Scientific Research

Scope: This programme concentrates on six broad themes: bioconversion food and chemicals, bioconversion environment, biotechnology for health, biomonitoring and biosafety, functional proteins and carbohydrates, plant biotechnology.
Programme: **Resider II IJmond**

Sponsor: DG XVI

Scope: This programme will contribute to the economic and social conversion of the IJmond region. One of the main measures is the promotion of technologies and industrial development. Another is networking in the industrial and services sectors, assistance for SMEs, Venture capital etc. It covers the period of 1994-97.

Funding: The Community part-financing will amount to 35.15% of total investment, the remainder being provided by the national and local authorities and the private sector. Of the 35.15% from the Community, 81.22% will be funded from ERDF and 18.78% from ESF.

Contact: Ijmond Ijzersterk Project Bureau

Tel: + 31 251 223232

Haize Scheybeeck

Velserweg 2, NL - 1942 LD Beverwijk

Programme: **Netherlands Friesland, Objective 5b**

Sponsor: DG XVI

Scope: This programme is Community co-funded to ECU 68.7 million. It will be used to help increase levels of employment in SMEs in all sectors. One of its main priorities is enterprise development through the creation of research and information centres and encouragement of technology transfer to revitalise the existing industrial sites.

Funding: 26% of overall estimated costs will be contributed from the structural funds of which 63.31% comes from ERDF, 6.69% from ESF and 29.98% from EAGGF.

Contact: Provincie Friesland

Tel: + 31 58 292 5568

Programmamanagement 5b

Fax: + 32 58 292 5124

Postbus 20120

Tel: + 31 58 233 5555

NL - 8900 HM Leeuwarden

Fax: + 32 58 212 0607

Regionaal Bureau Arbeidsvoorsiening

ESF Projectbureau

Postbus 2202

NL - 8901 JE Leeuwarden

Programme: **Netherlands SME**

Sponsor: DG XVI
Scope: This programme aims to help SMEs to adapt to external influences in terms of new markets, internationalisation, new technologies and management. It is concerned with technological innovation, co-operation between SMEs and research centres and the exchange of projects between them.

Funding: 38.49% of the total investment will be funded by the Community, with the remainder being met by national authorities and the private sector. ERDF will contribute 96.26% and ESF the remaining 7.74% of the Community’s contribution.

Contact: Mrs de Jonge
Co-ordinator SME - Programme
Ministry of Economic Affairs
PO Box 20101
NL-2500 EC Den Haag

Tel: + 31 70 379 7332
Fax: + 31 70 379 6095

3.12.4 Support Organisations/Contacts

Name: Nationale Coöperatieve Raad voor land-en tuinbouw (NCR)
Address: PO Box 29774, 2502 LT DEN HAAG, The Netherlands
Telephone: + 31 70 338 2780
Fax: + 31 70 354 6643
Email: ncr@xs4all.nl

Name: Nefyto (Dutch Agrochemical Industry Association)
Address: PO Box 80523, 2508 GM DEN HAAG, The Netherlands
Telephone: + 31 70 351 4851
Fax: + 31 70 354 9766
Contact: Mrs MLC van Assen

Name: NIZO (Netherlands Institute for Dairy Research)
Address: PO Box 20, 6710 BA EDE, The Netherlands
Telephone: + 31 318 659511
Fax: + 31 318 650400
Email: info@nizo.nl
Contact: Prof Dr JTM Wouters

Name: NVZP (The Dutch Seed Trade Association)
Address: PO Box 909, 3700 AX ZEIST, The Netherlands
Telephone: +31 30 693 3135
Fax: +31 30 693 2951
Contact: Ir AC van Elsen

Name: Seminis Vegetable Seeds
Address: Wageningse afweg 31, 6702 PD WAGENINGEN, The Netherlands
Telephone: +31 317 422477
Fax: +31 317 415634
Email: tkramer@svseeds.nl
Contact: Dr Th Kramer

Name: TNO (Netherlands Organisation for Applied Research) [associated member]
Address: PO Box 360, 3700 AJ ZEIST, The Netherlands
Telephone: +31 30 694 4900
Fax: +31 30 694 4901
Email: vanderKamp@voeding.tno.nl
Contact: Drs JW van der Kamp

Name: VNCI (Dutch Chemical Association)
Address: PO Box 443, 2260 AK LEIDSCHENDAM, The Netherlands
Telephone: +31 70 320 9233
Fax: +31 70 320 3903
Contact: Drs PF Noordervliet

Name: Ministry of Volkshuisvesting Ruimtelijke Ordening en Milieubeheer (VROM)
(Allocation Spatial Planning and Environmental Management)
Address: Information Department, PO Box 20951, 2500 BZ DEN HAAG
Telephone: +31 70 339 48 93
Fax: +31 70 339 48 93

Name: Senter
Address: PO Box 30732, 2500 GS The Hague
Telephone: +31 70 36 10 310
NOTE: For a complete listing of Euro Info Centres, please contact DGXXIII

Fax: +32 2 295 7335

Name: Euro Info Centre, Kamer van Koophandel en Fabrieken voor Amsterdam
Address: De Ruyterkade 5, PO Box 2852, NL-1000 C, Amsterdam
Telephone: 31 20 523 67 06
Fax: 31 20 523 67 32
Contact: Mr Reinier de Koning

3.13 Portugal
3.13.1 A Brief Background to the Industry

The majority of publicly funded biotechnology research in Portugal is based in the Lisbon area and accounts for approximately 60% of all expenditure. In second place lies the Region of Oporta which accounts for 14% of R&D spending. Research tends to focus on food-related bio-processing and microbiology, crop improvements through genetic modification of specific traits, applied biochemistry and biophysics. Traditionally, research has been predominantly academic, and only 11% of the projects listed below involve industry.

Nonetheless, 1996 saw the emergence of an entrepreneurial bioscience sector and new companies were established and old ones restructured to become more biotech-oriented. Two Portuguese companies participated for the first time in the exploratory phase of the European Union’s 4th Framework Programme for SMEs.

A private institution called Innovation Agency (ADI), has been particularly instrumental within the biotech sector in promoting the development of new products, technologies and activities via industry/academic consortia, and breaking down, the traditional gaps between academic researchers and industrialists.

In addition to those sectors mentioned in the opening paragraph, the biotech industry is strong on biological waste treatment and bioconversion of energy.

There are ten research centres, 11 universities and two large institutes involved in research.

3.13.2 Current Actions and Programmes

The Portuguese National Institute of Scientific Research is setting up networks to promote links between universities, research centres and establish programmes. The main government bodies responsible include: The Foundation for Science and Technology, the Science and Technology Observatory and the Institute for International Co-operation in Science and Technology (ICCTI).

3.13.3 Programmes at a Glance

<table>
<thead>
<tr>
<th>Programme:</th>
<th>PRAXIS XXI</th>
</tr>
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<tbody>
<tr>
<td>Sponsor:</td>
<td>ICCTI - The Institute for International Co-operation in Science and Technology</td>
</tr>
<tr>
<td>Scope:</td>
<td>The main aim of this scheme is to strengthen the scientific and technological system’s foundations by supplying R&amp;D assistance. It directs research towards new technologies which will eventually support production modernisation. It continues the work of CIENCIA and STRIDE, similar previous programme.</td>
</tr>
<tr>
<td>Contact:</td>
<td>Mr Jorge Nascimento Tel: +351 8 47 10 22</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Programme:</th>
<th>PRAXIS XXI - Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsor:</td>
<td>ICCTI - The Institute for International Co-operation in Science and Technology</td>
</tr>
<tr>
<td>Scope:</td>
<td>The aim of the scheme within industry includes establishing:</td>
</tr>
</tbody>
</table>

- a connection between technological centres and industry, by providing technical training to employees, technological support and applied technological research.
- placing research within industry
- supporting co-operation between companies regarding innovation and technology.

Programme: PRAXIS XXI - Agriculture
Sponsor: ICCTI - The Institute for International Co-operation in Science and Technology
Scope: The main priorities within the sector of agriculture include supporting R&D and the spreading of technology in areas related to agricultural research.

Programme: PRAXIS XXI - Other Levels of Assistance
Sponsor: ICCTI - The Institute for International Co-operation in Science and Technology
Scope: Praxis XXI also intervenes at other levels covering:
- Financing of research units and research programmes in government laboratories
- Strengthening of overall infrastructure through the creation and enlarging of R&D Laboratories
- The development of Science and Technology Systems, thus, stimulating high quality research programmes and projects
- Promotion of research programmes and projects within the area of advanced technologies to support the diversification and modernisation of industry.
- Supporting the distribution of grants and the contracts of scientists.

Programme: ERDF SME Initiative
Sponsor: The European Commission and National Authorities
Scope: The European Commission has approved a programme under the SME Community Initiative. This programme's objective is to create conditions for strengthening the position of SMEs in the Internal Market so as to guarantee their role in the creation of wealth at regional and local levels. Another major objective is to encourage a collective awareness of the need to create new jobs in innovative areas, in line with the White Paper on Growth, Competitiveness and Employment.

The main schemes under the programme which are potentially of interest to biotechnology SMEs are:
- Training in advanced technologies for SME managers
- Facilities to improve SME access to finance and credit
- The creation of a Technical Information Centre for SMEs
- Grants for projects strengthening technological competence in SMEs by defining needs, providing technical support, transferring technology from science and technology institutes to SMEs.

The Programme is due to run until 31 December 1999.

Contact: Mr Eng Luís Durão
DGDR
Tel: +351 1 881 40 00
Fax: +351 1 888 11 11
The European Commission and National Authorities

The European Commission has approved an operational programme to support education and scientific and technical research in Portugal, building on the results of the previous programming period.

The Community finances 74.21% of total investment, the remainder of which is provided by the national, regional and local authorities and the private sector.

The main scheme under this programme of relevance to biotech SMEs are the:

- Sub-programmes for science and technology: involvement of industry in research and development; support for university research projects; an increase in the number of researchers; training of laboratory assistants and research centre managers, and an integration of researchers into industry by strengthening links between companies and universities.

Ministério da Educação
Gestão do ProdeplI
Pr. De Alvalade 12
P-1700 Lisboa

3.13.4 Support Organisations

**Name:** DGQA  
**Address:** Avenida Alm, Gago Coutinho 30 - 2º, P-1000 Lisbon  
**Telephone:** + 351 1/8 47 10 22  
**Fax:** + 351 1/8 47 30 01  
**Contact:** Mr Jorge Nascimento Fernandes

**Name:** Agência de Inovação SA  
**Address:** Av dos Combatentes 43-10º C/D, Edificio Greenpark, P-1600 Lisboa  
**Telephone:** + 351 17 27 13 65  
**Fax:** + 351 17 27 17 33  
**Email:** jperdigoto@adi.pt  
**Contact:** Mr João Perdigoto

**Name:** ISQ
Tagus Park, AP 119, P-2781 Oeiras
+ 351 14 22 81 18
ire@isq.pt
Mr Joao Serrai Perreira

Note: For a complete listing of Euro Info Centres, please contact DGXXIII
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Associação Industrial Portuense, Exponor P-4450, Leça da Palmeira
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eurog@telepac.pt
Mme Maria Helena Ramos

Banco de Fomento e Exterior, Av. Casal Ribeiro 59, P-1000 Lisboa
+ 351 1 35 60 144
manuel-lino@office.bfe.pt
Mr Manuel Lino

Secção Biotecnologia, Av Rovisco Pais, P-1000 Lisboa
+ 351 84 17 233
Mr Novais

R Campo Alegre 823, P-4100 Porto
+ 351 311 447
+ 351 2 60 99 157 CHECK
Contact: Prof A Quintanilha

Name: University of Minho
Address: Largo do Paço, Dep Engenharia Biológica, PT-4709 Braga
Telephone: +351 53 60 44 00
Fax: +351 53 60 44 92
Contact: Dr Manuel J Mota

Name: ICCTI - The Institute for International Co-operation in Science and Technology
Address: Avenue D Carlos I, 126 - 1st Floor, P-1200 Lisboa
Telephone: +351 1 397 90 21
Fax: +351 1 39 75 14 04
Contact: Mrs Margarida Garrido

Name: Sociedade Portuguesa de Inovação
Address: 242 Rua Julio Dinis, 2nd floor - Suite 208, P-4050 Porto
Telephone: +351 2 609 91 52
Fax: +351 2 609 91 64
Contact: Prof Augusto Medina

Name: IBET
Address: Apartado 127 - 2780 Oeiras
Telephone: +351 1 441 47 45
Fax: +351 1 441 12 77
Contact: Prof José Manuel Carrondo

Name: ICBAS - Instituto de Ciências Biomédicas Abel Salazar
Address: Largo do Profesor Abel Salazar, 2-4050 Porto
Telephone: +351 2 208 71 58
Fax: +351 2 200 19 18
Contact: Prof Maria de Sousa
3.14 Spain

3.14.1 A Brief Background to the Industry

Knowledge and technical skills in biotechnology within Spain have been built up gradually, and only recently have university researchers and companies started participating in joint projects. Nonetheless the industry is steadily growing with the main focus on agri-food.

250 companies in total are active in the biotech sector in Spain. Industrial activities focus on diagnostics, fine chemicals, antibiotics and plant breeding. 40% of new companies to the industry are working in agri-foods. In 1994 a Venture Capital fund of ECU 12m was created for biotech and biomedical companies.

The Biotechnology sector is predominantly centred around Madrid and Barcelona, and these cities have the largest concentration of universities and also the new National Centre for Biotechnology. Public research centres, institutes and universities are all very active in biotech R&D and play an important role within the sector. The public research sector is twice the size of the private sector in terms of employment.

3.14.2 Current Actions and Programmes

Since 1988, Spain has operated a National Biotechnology Plan. The national programmes focus on:

- agri-food R&D
- human and animal health
- bio-processing and environmental biotech.

These are integrated into various specific plans, mainly the Technological Development Plan for
Biotechnology, Chemical Technology and Advanced Materials (BQM Plan). The eligible areas for funding include: training, instrumentation & utilities, international relations (fellowships), the National Biotechnology Centre and R&D projects.

3.14.3 Programmes at a Glance

<table>
<thead>
<tr>
<th>Programme:</th>
<th>The RTD National Plan (1996-99)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsor:</td>
<td>Ministerio de Educación y Cultura</td>
</tr>
<tr>
<td>Scope:</td>
<td>This programme focuses particularly on the academic sector and public RTD organisations. It also involves some collaboration with companies.</td>
</tr>
<tr>
<td>Contact:</td>
<td>Dolores Cobo&lt;br&gt;Secretaría General del Plan Nacional de I+D&lt;br&gt;(Dpto de Calidad de Vida)&lt;br&gt;Comisión Interministerial de Ciencia y Tecnología&lt;br&gt;Rosasari Pino 14&lt;br&gt;E-28020 Madrid</td>
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<table>
<thead>
<tr>
<th>Programme:</th>
<th>The ATYCA Initiative (1997-99)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsor:</td>
<td>Ministerio de Industria y Energía</td>
</tr>
<tr>
<td>Scope:</td>
<td>This scheme consists of grant funding to companies, particularly SMEs, for RTD work. The programme has established some specific technological areas for preferential activity.</td>
</tr>
<tr>
<td>Contact:</td>
<td>Juan Carlos Malpaso&lt;br&gt;Dirección General de Tecnología y Seguridad Industrial&lt;br&gt;Ministerio de Industria y Energía&lt;br&gt;Paseo de la Castellana 160&lt;br&gt;E-28071 Madrid</td>
</tr>
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<table>
<thead>
<tr>
<th>Programme:</th>
<th>The Industrial Technological Development - Global Grant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsor:</td>
<td>The European Commission and National, Regional and Local Authorities</td>
</tr>
<tr>
<td>Scope:</td>
<td>The European Commission approved a global grant to the Centro para el Desarrollo Tecnológico Industrial (CDTI), with a view to developing the endogenous potential of Spanish Regions whose development is lagging. The purpose is to improve the technological capacity of the corporate sector and promote technology applications in industry. The Community provides 30.3% of the funding, which takes the form of subsidies, which will be reimbursable where a project is successful, so that the sums thus recovered may be reinvested. The scheme consists of three sub-programmes:</td>
</tr>
</tbody>
</table>
• Technology Projects - involving new products and processes in line with market requirements, business assimilation of innovative technologies, marketing of technology outside Spain

• Technology Services - which involves information, transfer and promotion of technology in the business community

• Technical assistance, monitoring and information.

**Contact:**

Ministerio de Economía y Hacienda
Dirección General de Planificación
Paseo de la Castellana 162
E-28046 Madrid

Centro para el Desarrollo Tecnológico Industrial (CDTI)
Edificio Cuzco IV
Paseo de la Castellana 141, 11°
E-28046 Madrid

**Programme:**
An ERDF SME Programme

**Sponsor:**
The European Commission and National Authorities

**Scope:**
This operational programme was approved under the SME Community Initiative and is designed to counteract problems due to a lack of competitiveness and economic vitality in SMEs in eligible areas under EU Objectives 1, 2 and 5B. The programme aims to improve the business environment and co-operation between SMEs, to boost technological awareness and access to information networks and to increase access to finance.

The areas that the programmes focus on include:

• The development of SME co-operation networks.

• Training in information technology and dissemination.

• Improvement of the overall business environment, services available and various intangibles.

• Increased financial assistance and advice, access to loans and other financial tools.

• Support for research and development.

**Contact:**

Instituto de la Pequeña y Mediana Empresa Industrial (IMPI)
Paseo de la Castellana 141
E-28071 Madrid

Tel: + 34 1 582 93 02

**Programme:**
Technological R&D Infrastructure Programme

**Sponsor:**
Diputación Foral de Guipúzcoa

**Scope:**
The purpose of this scheme is to facilitate technology transfers and R&D activities, and include investments in research units and technology transfer activities.

It is directed at non profit seeking organisations, public research centres of the Gobierno Vasco, universities, and sectorial centres of R&D in País Vasco within the Province of Guipúzcoa.

Mikel Idiazabel
Tel: + 34 43 48 22 23
The National Programme of Biotechnology

Ministerio de Educación

The purpose of this scheme is to promote the setting up and running of R&D projects in the areas of food and agriculture, animal and human sanitation, engineering of bio-technical processes and the environment. It is directed at Public or private investigation centres, universities, associated scientific investigators and non-profit making organisations.

José M Martinez Zapater
Plan Nacional de Biotecnología
Comisión Interministerial de Ciencia y Tecnología
Rosario Pino 14
E-28020 Madrid

3.14.4 Support Organisations/Contacts

Name: Asociacion de Bioindustrias
Address: Brus, 72 cth, 08009 Barcelona, Spain
Telephone: + 34 3 48 40 00
Fax: + 34 3 487 65 20
Contact: Mr Joan Guixer

Name: Secretaria General de Medio Ambiente
Address: Paseo de la Castellano 67, E-28071 Madrid
Telephone: + 34 1/5 97 74 88
Fax: + 34 1/5 97 85 13
Contact: Ms Eliza Barahona

Name: Centro para el Desarrollo Tecnológico Industrial
Address: Ministerio de Industria, Comercio y Turismo Edificio Cuzco IV, Paseo de la Castellana 141, E-28046 Madrid
Telephone: + 34 1 581 55 62/66
Fax: + 34 1 581 55 84/76
Contact: Dr A Beltran

Name: Secretaria General del Plan Nacional de I+D
Address: c/Rosario Pino 14-16, E-28020 Madrid, Spain
Telephone: + 34 1 33 60 400 (ext 656)
Fax: + 34 1 33 60 435
Contact: Dr J L Garcia Lopez

Note: For a complete listing of Euro Info Centres, please contact DGXXIII

Fax: + 32 2 295 7335

Name: Euro Info Centre
Address: Sodical, Edificio CEI, Parque Tecnológico de Boecillo, E-47151 Boecillo, Spain
Telephone: + 34 983 54 80 55
Fax: + 34 983 54 80 27
Email: hanna@europsa.sitecal.es
Contact: Mme Carolina Calvo Revilla

Name: Euro Info Centre
Address: Confederación Regional de Empresarios de Aragón, Plaza Roma F-1, 1a planta, E-50010 Zaragoza, Spain
Telephone: + 34 976 46 00 66
Fax: + 34 976 32 29 56
Email: Creacic@mail.sendanet.es
Contact: M Jorge Alonso Vallejo

Name: Euro Info Centre (Antene de Es 218-Llanera)
Address: Federación Asturiana de Empresarios, c/Dr Alfredo Maritnez 6, 2-a Planta, E-33005, Oviedo, Spain
Telephone: + 34 8 52 32 105
Fax: + 34 8 52 44 176
Email: empres@ibm.net
Contact: Mlle Maria Martin
Name: Universidad de Alicante
Address: OTRI Campus de San Vicente, Apdo de Correos 99, E-03080 Alicante
Telephone: +34 65 90 34 67
Fax: +34 65 90 34 64
Email: otri@ua.es
Contact: Mr José Valero Torres

Name: Instituto de Fomento de Andalucía
Address: Torneo 26, E-41002 Sevilla
Telephone: +34 54 90 00 16
Fax: +34 54 90 61 77
Contact: Mr Antonio Ramírez Mejías

Name: Ceneo-Cetema
Address: Ctra. Valencia, Km 7,300, E-28031 Madrid
Telephone: +34 13 31 24 00
Fax: +34 13 31 54 72
Email: jimana@cero.cetema.es
Contact: Julia Imana

Name: Telleria IMPI - Craft Focal Point
Address: Paseo de la Castellana 141, Edif Cuzco IV, E-28046, Madrid
Telephone: +34 1 582 93 98
Fax: +34 1 571 28 31/582 93 99
Contact: Mr Ignacio Atorrasagasti

Name: Universidad de Córdoba
Address: OTRI, Campus de Rabanaics, Ctra de Madrid dm 396, E-14071 Córdoba
Telephone: +34 57 21 80 22
Fax: +34 57 21 10 11
Email: otri@uco.es
3.15 Sweden

3.15.1 A Brief Background to the Industry

Sweden, with its strong industrial, high-tech background, has a good base for the development of its biotechnology sector. In 1986, the government recognised biotech R&D as one of the three top technical priority areas. In 1991 total public R&D spending reached 2.5% of GDP. Biotechnology research is supported from various different sources, ranging from the government to university research groups and to specialised independent research institutes. Development of technology for the commercial world is completely supported by industry. Under the Nordic Fund for Technology and Industrial Development, Sweden is collaborating with other Nordic countries and anticipates working closely with Denmark.

The strengths of the Swedish industry lie in bioprocess equipment, separation and hybridoma technology, medical devices and biomedical applications. Recently, the pharmaceutical industry has expanded its involvement and several science parks have attracted foreign companies. In 1992 the government set up a Venture Capital Companies scheme which in 1994 raised ECU 20m. There is a good mixture of large and small firms in the industry.

There has been several technology transfer centres created to help link university research departments to industry. The Centre for Life Sciences in the Novum Park at Huddinge is one. The Karolinska Institute at Stockholm is another. The Biomedical Centre at Uppsala and the Chemical Centre at Lund are two more.

3.15.2 Current Actions and Programmes

The Swedish Natural Science Research Council (NFR) estimated that in 1994 total public and private spending on biotech and biomedical research was ECU 170m. The estimate for 1996 is ECU 47m. The funding goes directly from the research councils and faculties to the research groups. Several foundations for research have been formed recently to strengthen basic biotechnology as well as some specialised areas. Structural biology, neurobiology, immunology and plant and animal biotech receive the majority of funding at present. The Strategic Research
Foundation has plans for several programmes which will be supported with ECU 8-15m each per year. Competence Centra is a programme run by the Technical Development Board (NUTEK), which includes biotechnology.

3.15.3 Programmes at a Glance

**Programme:** **Pilot Programme**

**Sponsor:** NUTEK (National Board for Industrial and Technical Development)

**Scope:** The main objective is to promote and encourage technology and knowledge transfer amongst SMEs. It is currently in its first year and will run for 3-5 years more. The only criteria companies have to meet is that they should have less than 250 employees.

**Contact:** Mrs Evy Jacobsson, NUTEK, Tel: + 46 8 681 9100

S-117 86 Stockholm Fax: + 46 8 19 6826

Sweden

**Programme:** **Competence Centre Programme**

**Sponsor**

NUTEK (National Board for Industrial and Technical Development)

**Scope:** The programme is an effort to develop university-industry interaction in Sweden. The aim is to achieve a stronger industrial impact and enhanced concentration of resources by creating multidisciplinary academic research environments in which industrial companies participate actively and persistently in order to derive long-term benefits. It is intended to run for between five and ten years.

Steffan Hjorth, NUTEK, Tel: + 46 8 681 9262

S-117 86 Stockholm Fax: + 46 8 19 6826

Sweden email: Staffan.Hjorth@nutek.se

**Programme:** **SME (1996-99)**

**Sponsor**

DG XVI

**Scope:** The European Commission has approved an operational programme under the SME Community Initiative designed to counteract problems of lack of experience in international markets, low levels of technical and managerial competence, poor access to information and expertise owing to remoteness, difficult access to capital, especially risk capital, in Sweden. The main schemes covered by this programme are: Market development for SMEs, strengthening the competitiveness of SMEs through the promotion of the use of new technologies and information technologies, Improving environmental standards and quality as a means to strengthen the competitiveness of SMEs.

**Funding:** 35.28% of overall estimated costs will be funded by the Union, 44.74% of which will come from ERDF and 55.26% from ESF.

**Contact:** Ms Karin Larsson, Ministry of Industry and Commerce, Tel: + 46 8 405 1000

Fax: + 46 20 4586

S-10333 Stockholm
<table>
<thead>
<tr>
<th>Name</th>
<th>Support Organisations/Contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NUTEK (National Board for Industrial and Technical Development)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Address</strong></td>
<td>S-10387 Stockholm, Sweden</td>
</tr>
<tr>
<td><strong>Telephone</strong></td>
<td>+46 8 681 9368</td>
</tr>
<tr>
<td><strong>Fax</strong></td>
<td>+46 8 19 9280</td>
</tr>
<tr>
<td><strong>Contact:</strong></td>
<td>Dr Magdelena Ehrstrom</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>NFR (Swedish Natural Science Research Council)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Address</strong></td>
<td>PO Box 7142, S-103 87, Stockholm, Sweden</td>
</tr>
<tr>
<td><strong>Telephone</strong></td>
<td>+ 46 8 454 4252</td>
</tr>
<tr>
<td><strong>Fax</strong></td>
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</tr>
<tr>
<td><strong>Email</strong></td>
<td><a href="mailto:mats@nfr.se">mats@nfr.se</a></td>
</tr>
<tr>
<td><strong>Contact:</strong></td>
<td>Dr Mats Johnsson</td>
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<table>
<thead>
<tr>
<th>Name</th>
<th>University of Umea</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Address</strong></td>
<td>Department of Microbiology, S-90187 Umea, Sweden</td>
</tr>
<tr>
<td><strong>Telephone</strong></td>
<td>+ 46 90 176751</td>
</tr>
<tr>
<td><strong>Fax</strong></td>
<td>+ 46 90 772630</td>
</tr>
<tr>
<td><strong>Contact:</strong></td>
<td>Prof Kerstin Straby</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Name</th>
<th>Institute of Food and Biotechnology (SIK)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Address</strong></td>
<td>PO Box 5401, S-40229, Goteberg / IDEON, S-223 70 Lund</td>
</tr>
<tr>
<td><strong>Telephone</strong></td>
<td>+ 46 31 35 5600 / +46 46 16 8820</td>
</tr>
<tr>
<td><strong>Fax</strong></td>
<td>+ 46 31 83 3782 / +46 46 18 8765</td>
</tr>
<tr>
<td><strong>Contact:</strong></td>
<td>Mr Guno Haska, Mr Magnus Glad</td>
</tr>
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<table>
<thead>
<tr>
<th>Name</th>
<th>TFR (Swedish Research Council for Engineering Sciences)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Address</strong></td>
<td>Box 7136, S-103 87 Stockholm, Sweden</td>
</tr>
<tr>
<td><strong>Telephone</strong></td>
<td>+ 46 8 454 4170</td>
</tr>
<tr>
<td><strong>Fax</strong></td>
<td>+ 46 8 454 4180</td>
</tr>
<tr>
<td><strong>Email</strong></td>
<td><a href="mailto:info@trf.se">info@trf.se</a></td>
</tr>
</tbody>
</table>
3.16 United Kingdom

3.16.1 A brief Background to the Industry

The UK Government has adopted policies to facilitate strong links and partnerships between academic and industrial sectors and encourage technology transfer. In the UK, biotechnology has a strong public research base. Scotland, England, Wales and Northern Ireland have Regional Programmes for biotechnology support. Biotechnology in the UK is well supported by the Department of Trade and Industry (DTI). The DTI is committed to improving business competitiveness at home and overseas. Additional activities are supported in Scotland by the Scottish Office Education and Industry Department (SOEID).
In 1996 an estimated ECU 286 million was spent by the biotechnology sector on industrial R&D, 75% of which was in biopharmaceuticals and diagnostics, with agrobiotech being the next largest group. In 1994 biotech and biomedical companies raised over ECU 300m in Venture Capital.

61 universities, 4 research centres and 14 other public research institutes are financed by Biotechnology Biological Sciences Research Council (BBSRC). In Scotland, the Scottish Enterprise has formed a Biotechnology Division to introduce commercial focus to programmes within universities and research institutes. Public research in Wales is largely carried out in the seven universities and several research institutes.

3.16.2 Current Actions and Programmes

Innovation is encouraged through schemes such as LINK, SMART, EUREKA and the EU Framework Programme on Biotechnology. In 1995, the Biotechnology means Business initiative was launched by the DTI with a four year programme and a budget of £17m.

3.16.3 Programmes at a Glance

<table>
<thead>
<tr>
<th>Programme</th>
<th>Sponsor</th>
</tr>
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<tbody>
<tr>
<td>The LINK Scheme</td>
<td>The different parts of this scheme have different sponsors. These are DTI, BBSRC, EPSRC, NERC, MRC and MAFF.</td>
</tr>
<tr>
<td>Sponsor</td>
<td>The LINK scheme aims to accelerate the exploitation of knowledge and to bridge the gap between science and the market place. It offers a well established framework for collaboration between the public and private sectors in support of science and technology in areas of strategic importance to the national economy.</td>
</tr>
<tr>
<td>Scope:</td>
<td>LINK comprises a number of programmes each of which supports a number of collaborative projects involving partners from industry and the research base lasting typically two to three years. Individual projects can also be supported outside of these main programme areas. So far over 120 projects have been supported. Government departments and research councils provide up to 50% of the eligible costs of a project with the balance coming from industry. Current programmes which are relevant to biotechnology include:</td>
</tr>
<tr>
<td>Funding:</td>
<td>Biological Treatment of Soil and Water (DTI, BBSRC, EPSRC, NERC, MAFF) 9m over five years</td>
</tr>
<tr>
<td>Contact:</td>
<td>Cell Engineering (DTI, BBSRC, MRC, MAFF) £15m over five years.</td>
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<td>Biochemical Engineering (DTI, BBSRC) £23m over eight years.</td>
</tr>
<tr>
<td></td>
<td>Applied Biocatalysis (DTI, BBSRC) £8m over five years.</td>
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<tr>
<td></td>
<td>Analytical Biotechnology (DTI, BBSRC)</td>
</tr>
<tr>
<td></td>
<td>See above</td>
</tr>
<tr>
<td>Programme:</td>
<td>Biotechnology Means Business (BMB)</td>
</tr>
<tr>
<td>Sponsor</td>
<td>Department of Trade &amp; Industry</td>
</tr>
</tbody>
</table>
Scope: BMB is a package of measures recognising the growing economic importance of biotechnology. It is designed to improve UK competitiveness and provide the necessary advice and expertise to transfer technological advances into practical processes.

Scheme: **Biotechnology Exploitation Platform (BEP) Challenge**

The BEP Challenge helps to anchor the benefits of publicly funded research in the UK. BEP aims to encourage the effective management of intellectual property by universities and facilitate their commercial exploitation. Any organisation using or exploiting biotechnology is eligible to apply. BEP Challenge applications will be evaluated on the credibility of the business plan, the quality and experience of the team in intellectual property management, the commercial potential of the technology and the extent to which the government support will stimulate new collaborative and intellectual property and leverage from the private sector.

The BEP challenge closed in November 1997 and there is no further funding available at the present.

Funding: Maximum of 50% costs (up to £250,000) from the DTI which must be matched from non public sector funds. BEPs must be self financing within four years.

Contact: BEP Challenge Secretariat
Biotechnology Directorate
DTI, Room 116
151 Buckingham Palace Road
London SW1W 9SS

BMB Helpline
PO Box 83
Didcot
Oxon OX11 0TJ
Tel: +44 800 432100
Fax: +44 1235 432997

Programme: **Biotechnology Mentoring and Incubators (BMI) Challenge**

The BMI Challenge aims to encourage intermediaries to address the management and business skills required by emerging biotechnology companies and to encourage the provision of incubators and specialist business mentoring services to help young biotechnology companies grow. Organisations may apply individually or on a collaborative basis. Applications will be judged on their contribution to the growth of the British biotechnology sector, the degree of innovation and the wider benefits.

Funding: Under the three year initiative, up to £5 million will be made available. BMI Challenge winners will be offered up to £500,000 towards the cost of a demonstrator project.

Contact: BMI Challenge Secretariat
Biotechnology Directorate
DTI, Room 1.092
151 Buckingham Palace Road
London SW1W 9SS

Programme: **Small Firms Merit Award for Science and Technology (SMART)**

Sponsor Department of Trade & Industry

Scope: The SMART scheme helps SMEs and individuals to research, design and develop technologically innovative products and processes for the national benefit.

The SMART scheme is now open only to companies in England. Different arrangements exist in Scotland, Wales and Northern Ireland.
Funding: SMART provides funding of 75% of project costs, up to a maximum of £45,000 to assist in technical and commercial feasibility studies and 30% to help the development of technological products. Companies may apply for SMART at either stage of a project, and the maximum grant available for one applicant is ECU 200,000.

For feasibility studies, companies must have fewer than 50 employees, annual turnover of less than ECU 7 million, and a balance sheet of less than ECU 5 million.

For development projects, companies must have fewer than 250 employees, annual turnover of less than ECU 40 million, and a balance sheet of less than ECU 27 million.

Contact: Local Government Office or local Business Link

Programme: Foresight Challenge

Sponsor Department of Trade & Industry

Scope: Stimulates partnerships between science and business to increase wealth creation and the quality of life. Challenge projects will be assessed on a competitive basis and those which best meet the Challenge criteria will be made the subject of Challenge Awards. Bidders are urged to consider the use to which project outputs can be put in order to serve the objectives of the Challenge Fund.

Challenge partnerships must involve one member from the science base and one from private sector business.

Funding: With a maximum of £4 million, grants of 50% of costs are available except for projects involving training. There is no limit on the size of project eligible for support. The main emphasis will be on helping resource projects with a total annual project cost within the range of £1-2 million over the three years 1996-1999.

Contact: Colin Bailey Chemicals & Biotechnology Directorate DTI 151 Buckingham Palace Road London SW1W 9SS Tel: +44 171 215 2914 Fax: +44 171 215 1379

Programme: SME Scottish Lowlands (1994-99)

Sponsor DG XVI, national and private

Scope: This programme is designed to implement the SME Community Initiative (1994-1999) and to contribute to the economic development of Scotland's Lowlands region. It aims to help SMEs in the region to adapt to the requirements of the single market and boost their international competitiveness. The emphasis of the measures in the programme is on SME interchange and co-operation.

Funding: The Community's co-financing amounts to 43.2% of the total investment, with the remainder being met by national and regional authorities and the private sector. 91.94% of the Community funding comes from ERDF and 8.06% comes from ESF.

Contact: Elizabeth Williamson SODD Tel: +44 131 244 0736 Victoria Quay Edinburgh EH6 6QQ

Technology and Knowledge Transfer Programmes

Programme: The Carrier Technology Programme (CTP)
Sponsor: Department of Trade & Industry

Scope: CTP is designed to encourage a wider diffusion and adoption of technology in the process industries. It transfers technology used in one industry or type of company to others where it is new and represents an extension of best practice. All UK companies are eligible to apply but collaboration must include at least two independent research organisations.

Funding: Grants are set at 50% of eligible costs

Contact: Steve Flynn, Engineering Industries Directorate, DTI, 151 Buckingham Palace Road, London SW1W 9SS, Tel: +44 171 215 2980, Fax: +44 171 215 1461

Programme: The Teaching Company Scheme (TCS)

Sponsor: Department of Trade & Industry

Scope: TCS enables firms to take advantage of the wealth of scientific, engineering, technological and business management skills and knowledge available in universities. Each TCS programme involves one or more high quality graduate working in a company for two years on a project which is central to the company's needs. They are jointly supervised by academics and industrialists. Over 70% of current programmes are with SMEs.

Funding: Part funded by means of a government grant to the university partner, the company also contributes to the direct costs of the programme. SMEs will generally contribute about 30% of direct costs.

Contact: Jacqui Long, Management Best Practice Directorate, 1 Victoria Street, London SW1H 0ET, Tel: +44 171 215 3867, Fax: +44 171 215 3933

Programme: College Business Partnership (CBP)

Sponsor: Department of Trade & Industry

Scope: An initiative based on the same principles and concepts as TCS but primarily involves further education colleges in partnerships with SMEs. Graduates of HNC/HNDs undertake year long projects involving technology which is both relevant and appropriate to the SME in which they work.

Funding: Each project is part supported by a DTI grant to the college, whilst the company contributes at least £6,500 to direct costs.

Contact: Elizabeth Dumbrell, Management Best Practice Directorate, 1 Victoria Street, London SW1H 0ET, Tel: +44 171 215 3871, Fax: +44 171 215 3933

Programme: Shell Technology Enterprise Programme (STEP)

Sponsor: Department of Trade & Industry

Scope: STEP is a Shell UK Ltd national placement scheme for undergraduates which is part funded by DTI. It aims to encourage SMEs to consider employing graduates and to provide
undergraduates with experience in a smaller firm through an 8 week placement during their final summer vacation, working on a technology based project identified by the company.

**Funding:**
Costs are shared between the host company and a local or national sponsor.

**Contact:**
John McGrath
11 Bridge Street
Tel: +44 171 936 3556
London EC4A 4AS
Fax: +44 171 936 3531

**Programme:**
Postgraduate Training Partnerships (PTP)

**Sponsor:**
Department of Trade & Industry

**Scope:**
An initiative jointly supported by DTI and Engineering and Physical Science Research Council (EPSRC) involving the annual recruitment into a partnership of up to 10 post graduate students (PTP Associates). The aim is to increase the output of high quality postgraduates with skills, experience and training relevant to the needs of industry. Most PTP Associates are registered for a higher degree (PhD) and undertake industrially relevant research projects in a Research, Technology & Development organisations.

**Funding:**
Most PTP Associates are supported by an EPSRC ‘Industrial CASE’ award.

**Contact:**
Rashmi Pandya
Management Best Practice Directorate
1 Victoria Street
Tel: +44 171 215 3868
Fax: +44 171 215 3933
London SW1H 0ET

### 3.16.4 Support Organisations/Contacts

#### GB

**Name:**
Department of Trade & Industry (Biotechnology Directorate)

**Address:**
Chemicals & Biotechnology Directorate
151 Buckingham Palace Road, London SW1W 9SS

**Telephone:**
+ 44 171 215 2914

**Fax:**
+ 44 171 215 1379

**Contact:**
Colin Bailey

**Name:**
Health & Safety Executive and Commission (HSE & HSC)

**Address:**
Rose Court, Ground Floor North, 2 Southwark Bridge, London SE1 9HS

H & S Laboratory, Broad Lane, Sheffield, S3 7HQ

St Hugh’s House, Trinity Road, Bootle, Merseyside L20 3QY

**Telephone:**
London: +44 1541 54500, Sheffield: +44 114 2892333, Bootle: +44 1541 54500

**Name:**
Department of the Environment, Transport and the Regions (DOETR)

**Address:**
Biotechnology Unit, Room B3.51, Romney House, 43 Marsham Street, London SW1P 3PY
NOTE: For a complete listing of Euro Info Centres, please contact DGXXIII

Fax: +32 2 295 7335

Name: Euro Info Centre Westminster
Address: London Chamber of Industry, 33, Queen Street, EC4R 1AP London.
Telephone: +44 171 489 1992
Fax: +44 171 489 0391
Contact: Ms Beth Raney Cucala

Name: The Ministry of Agriculture, Fisheries and Food (MAFF)
Address: Refer to Regional Service Centres
Email: webmaster@info.maff.gov.uk

MAFF Regional Service Centres

<table>
<thead>
<tr>
<th>Region</th>
<th>Address</th>
<th>Tel &amp; Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anglia</td>
<td>Block b, Government Buildings</td>
<td>Tel: +44 1223 462727</td>
</tr>
<tr>
<td></td>
<td>Brooklands Avenue, Cambridge CB2 2DR</td>
<td>Fax: +44 1223 455652</td>
</tr>
<tr>
<td>East Midlands</td>
<td>Block 7, Chalfont Drive, Nottingham NG8 3SN</td>
<td>Tel: +44 115 9291191</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fax: +44 115 9294886</td>
</tr>
<tr>
<td>Northern</td>
<td>Eden Bridge House, Lowther Street, Carlisle,</td>
<td>Tel: +44 1228 23400</td>
</tr>
<tr>
<td></td>
<td>Cumbria CA3 9DX</td>
<td>Fax: +44 1228 23400, ext. 468</td>
</tr>
<tr>
<td>North East</td>
<td>Government Buildings, Crosby Road, Northallerton, North Yorkshire DL6 1AD</td>
<td>Tel: +44 1609 773751</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fax: +44 1609 780 179</td>
</tr>
<tr>
<td>North Mercia</td>
<td>Berkeley Towers, Crewe, CW2 6PT</td>
<td>Tel: +44 1270 69211</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fax: +44 1270 669494</td>
</tr>
<tr>
<td>South East</td>
<td>Block A, Government Buildings, Coley Park, Reading RG1 6DT</td>
<td>Tel: +44 118 958 1222</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fax: +44 118 939 2399</td>
</tr>
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</tr>
<tr>
<td></td>
<td></td>
<td>Fax: +44 1905 763180</td>
</tr>
<tr>
<td>South West</td>
<td>Pydar House, Pydar Street, Truro, TR1 2XD</td>
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<th>Name:</th>
<th>Welsh Development Agency</th>
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</thead>
<tbody>
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<td>Technology Transfer Group, Principality House, The Friary, Cardiff CF1 4AE</td>
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<td>Telephone:</td>
<td>+44 1222 828 734</td>
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<tr>
<td>Fax:</td>
<td>+44 1222 640 030</td>
</tr>
<tr>
<td>Contact:</td>
<td>Jennifer Clark</td>
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</tbody>
</table>

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<thead>
<tr>
<th>Name:</th>
<th>Medical Research Council (MRC)</th>
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</thead>
<tbody>
<tr>
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<td>Telephone:</td>
<td>+44 171 636 5422</td>
</tr>
<tr>
<td>Fax:</td>
<td>+44 171 436 6179</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:rgu.group@headoffice.mrc.ac.uk">rgu.group@headoffice.mrc.ac.uk</a></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Name:</th>
<th>Natural Environment Research Council (NERC)</th>
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</thead>
<tbody>
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<td>Polaris House, North Star Avenue, Swindon, SW2 1EU</td>
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<tr>
<td>Telephone:</td>
<td>+44 1793 411500</td>
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<tr>
<td>Fax:</td>
<td>+44 1793 411 501</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:webmaster@nerc.ac.uk">webmaster@nerc.ac.uk</a></td>
</tr>
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<table>
<thead>
<tr>
<th>Name:</th>
<th>Biotechnology and Biological Sciences Research Council (BBSRC)</th>
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</thead>
<tbody>
<tr>
<td>Address:</td>
<td>Polaris House, North Star Avenue, Swindon, SW2 1UH</td>
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<tr>
<td>Telephone:</td>
<td>+44 1793 413 200</td>
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<td>+44 1793 413 201</td>
</tr>
<tr>
<td>Contact</td>
<td>Dr D Yarrow</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name:</th>
<th>BioIndustry Association (BIA)</th>
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</thead>
<tbody>
<tr>
<td>Address:</td>
<td>14/15 Belgrave Square, London SW1X 8PS</td>
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<td>+44 171 565 7190</td>
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<tr>
<td>Email</td>
<td><a href="mailto:admin@bioindustry.org.uk">admin@bioindustry.org.uk</a></td>
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<tr>
<td>Contact</td>
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Name: Centre for Innovation In Biotechnology - established in 1995
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Contact: Dr Jeremy Carmichael

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Contact: Mr RC Martin

Name: Industrial Development Board
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APPENDICES

Appendix 1. State of play of legislation in biotechnology

A - Legislation in force

I - Horizontal legislation


4) Council Directives 94/55 et 96/49 on the approximation of the laws of Member States with
regard to the transport of dangerous goods by road (94/55; O.J.L 319 of 12.12.1994, p.7) and by rail (96/49; O.J.L. 235 of 17.09.96, p25).

II - Vertical Legislation


5) Regulation 2232/96 of the European Parliament and of the Council of 28 October 1996 laying down a Community procedure for flavouring substances used or intended for use in or on foodstuffs (O.J.L 299/1 of 23.11.96).

III - Intellectual property


IV - Other Acts


Council Regulation (EC) n° 1139/98 of 26 May 1998 concerning the compulsory indication on the labelling of certain foodstuffs produced from genetically modified organisms of particulars other than those provided for in Directive 79/112/EEC (O.J.L 159/4 of 03.06.98).

B - Texts under discussion

I - Horizontal Legislation


II - Vertical Legislation


III - Intellectual property


C – Other relevant texts:


OJL 253 of 16 September 1997.

Appendix 2. National EU and Regulatory Authorities

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Organisation: Bundesministerium Für Gesundheit
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Fax: + 43 1 31 30 44 00

Organisation: Bundesstaatliche Anstalt für experim-pharmakologische und Balneologische Untersuchungen
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Organisation: Bundesministerium für Arbeit und Soziales
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Fax: + 43 1 71 10 02 190

Belgium
Organisation: Institute of Hygiene and Epidemiology Biosafety RDNA and Biotech
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Organisation: Ministère de la Santé Publique et de l’Environnement Inspection Générale de la Pharmacie, Secrétariat de la Commission de Médicaments
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Telephone: + 32 2 210 48 96
Fax: + 32 2 210 48 80
Organisation: Ministère de l'Agriculture
Contact Name: Dr Éric Liegeois
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Telephone: +32 2 208 32 11
Fax: +32 2 206 72 11

Organisation: Ministère de l'Emploi et du Travail
Contact Name: Jozef Costermans
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Organisation: Institut Bruxellois de Gestion et de l'Environnement - Brussels - Capital Region
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Organisation: Aminal - Flemish Region
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Organisation: Danish Environmental Protection Agency, Biotechnology
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Organisation: Sundhedsstyrelsen, Laegemiddelafdelingen
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*Mutual recognition and centralised procedures*
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Organisation: European Agency for the Evaluation of Medicinal Products (known as the European Medicines Evaluation Agency [EMEA])
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Organisation: Health & Safety Executive
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Address: Pacellistr. 141, 80333 München
Contact Name: Dr Joachim Feldges
Tel: +49 89 216 32 932
Fax: +49 89 216 32 600

GREECE
Organisation: Organismos Biomichanikis Idioktissias OBI
Address: 5 Pandanassis St, GR-15125 Paradissos, Amaroussio, Athens
Tel: +30 1 68 28 231

IRELAND
Organisation: The Patents Office
Address: 45 Merrion Square, Dublin 2
Tel: +351 1 661 41 44
Fax: +351 1 676 04 16

ITALY
Organisation: Ministero Industria Commercio e Artigianato DPGI, Ufficio Italiano Brevetti e Marchi
Address: Via Molise 2
00187 Rome
Tel: +39 6 47 05 30 43
Fax: +39 47 05 30 32

LUXEMBOURG
Organisation: Ministère de l’Economie, Service de la Propriété Intellectuelle
Address: 19-21 Boulevard Royal, L-2914 Luxembourg
Tel: +352 2 478 41 10
Fax: +352 2 478 41 55

NETHERLANDS

Organisation: Netherlands Industrial Property Office
Address: Postbus 5820 NL-2280 HV, Rijswijk
Tel: +31 70 39 86 655
Fax: +31 70 39 86 687

PORTUGAL

Organisation: Instituto Nacional da Propreiedade Industrial (INPI)
Address: Campo das Cebolas, P-1100 Lisboa
Tel: +351 1 88 81 101
Fax: +351 1 88 75 308

SPAIN

Organisation: Officina Española de Patentes y Marcas
Address: c/Panamá 1, E-28071 Madrid
Fax: +34 1 34 95 300

SWEDEN

Organisation: Patent-och registreringsverket
Address: Box 5055 Stockholm
Tel: +46 8 782 25 00
Fax: +46 8 66 60 286

UNITED KINGDOM

Organisation: The Patent Office
Address: Cardiff Road, GB-Newport, Gwent NP9 1RH
Telephone: +44 16 33 81 40 00
Fax: +44 16 33 81 44 44

UNITED KINGDOM

Organisation: The Patent Office
Address: 25 Southampton Buildings, Chancery Lane, London WC2A 1AY
Telephone: +44 16 33 81 40 00
Fax: +44 16 33 81 44 44

The European Patent Office

Address: D-80298 München, Erhardtstrasse 27
Tel: +49 89 23 99-0
Fax: +49 89 23 99-4650
Web Page: http://www.epo.co.at/epo

Branches and Sub-Offices of the European Patent Office

Organisation: Département de La Haye
Address: Patentlaan2, Posbus 5818 NL-2280 HV Rijswijk
Tel: +31 70 34 02 040
Fax: +31 70 34 03 016

Organisation: Agence de Berlin
Address: D-10969 Berlin
Second Address: Gitschiner Strasse 103, D-10969
Tel: +49 30 25 901-0
Fax: +49 30 25 901-840

Organisation: Agence de Vienne
Address: Schottenjeldgasse 29, Postfach 82, A-1072 Wien
Tel: +43 1 52 126-0
Fax: +43 1 52 126-5491
Appendix 4. Directorates and Units within the European Commission Working on Biotechnology and/or SME Projects

Secretariat General

<table>
<thead>
<tr>
<th>Directorate/Unit</th>
<th>Tel/Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>C (1) Secretariat of the European Group on Ethics in Science and New Technologies.</td>
<td>F 299 45 65</td>
</tr>
<tr>
<td>C (1) Secretariat of the Biotechnology Coordination Committee.</td>
<td>F 295 76 37</td>
</tr>
</tbody>
</table>

DG I External Relations

<table>
<thead>
<tr>
<th>Directorate/Unit</th>
<th>Principle Activities</th>
<th>Tel/Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>B (1)/B (2)</td>
<td>Defence of the EU interests vis-à-vis the US, promotion of EU/US relations through dialogue and negotiation</td>
<td>F 299 22 17</td>
</tr>
<tr>
<td></td>
<td>Relations with North America, Australia and New Zealand</td>
<td></td>
</tr>
<tr>
<td>D(3)</td>
<td>New technologies, intellectual property and public procurement</td>
<td>F 299 20 10</td>
</tr>
<tr>
<td></td>
<td>New technologies</td>
<td></td>
</tr>
<tr>
<td>G(2)</td>
<td>Takes a co-ordinate position concerning trade related aspects of biotechnology</td>
<td>F 299 10 46</td>
</tr>
<tr>
<td></td>
<td>WTO, OECD, commercial matters with respect to agriculture and fisheries; export credit policy; export promotion</td>
<td></td>
</tr>
<tr>
<td>M(2)</td>
<td>External relations in the research, science, nuclear energy and environmental field</td>
<td></td>
</tr>
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</table>

DG II Economic and Financial Affairs

<table>
<thead>
<tr>
<th>Directorate/Unit</th>
<th>Principle Activities</th>
<th>Tel/Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOS-A</td>
<td>Eurotech and JEV initiative</td>
<td>F + 352 4301 364 39</td>
</tr>
<tr>
<td></td>
<td>Growth and employment initiative and EIF</td>
<td>T 299 44 04</td>
</tr>
</tbody>
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### DG III Industry

<table>
<thead>
<tr>
<th>Directorate/Unit</th>
<th>Principle Activities</th>
<th>Tel/Fax</th>
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</thead>
<tbody>
<tr>
<td>E(1)</td>
<td>Foodstuffs legislation – Scientific and technical aspects</td>
<td>F 296 09 51</td>
</tr>
<tr>
<td>E(2)</td>
<td>Co-ordination of all questions of industrial policy, regulation and research related to biotech.</td>
<td>F 296 64 67</td>
</tr>
<tr>
<td>E(3)</td>
<td>Pharmaceutical products</td>
<td>F 296 15 20</td>
</tr>
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### DG V Employment, Industrial Relations and Social Affairs

<table>
<thead>
<tr>
<th>Directorate/Unit</th>
<th>Principle Activities</th>
<th>Tel/Fax</th>
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<tbody>
<tr>
<td>F(4)</td>
<td>Protection of workers against the risks related to exposure to biological agents at work, classification of biological agents according to their level of risk of infection</td>
<td>F 293 48 55</td>
</tr>
<tr>
<td>F(5)</td>
<td>Policy relating to Health and safety in the Biotech sector</td>
<td>F +35 2 430 1 332 48</td>
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### DG VI Agriculture

<table>
<thead>
<tr>
<th>Directorate/Unit</th>
<th>Principle Activities</th>
<th>Tel/Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.II(1)</td>
<td>Legislation relating to crop products and animal nutrition</td>
<td>F 29 5 78 32</td>
</tr>
<tr>
<td>B.II(2)</td>
<td>Harmonisation and development of legislation in veterinary medicine and animal husbandry</td>
<td>F 29 6</td>
</tr>
</tbody>
</table>

---
zootechnical legislation

C(2) Non food uses of agricultural products, analysis of animal feed market, impact of biotechnology in such sectors
Animal feed, non-food uses, and cereal substitutes

C(3) Management of problems for sugar, isoglucose and molasses, use of beet and cane for non-food purposes, use of sugar, isoglucose and molasses in the chemical and pharmaceutical industries
Sugar

H (1) International affairs concerning agriculture
GATT, WTO and United States

DG VII Transport

Directorate/Unit Principle Activities Tel/Fax
B(3) Co-ordination of safety technology and transport policy and the environment F 296 84 01

Safety, technology and road transport environment

DGXI Environment, Nuclear Safety and Civil Protection

Directorate/Unit Principle Activities Tel/Fax
E(2) Responsible for Directives 90/219/EEC and 90/220/EEC F 296 6233

Environmental control of industrial products and biotechnology

D(4) Biosafety Protocol negotiation F 296 95 57

Global aspects of environment

DGXII Science, Research and Development

Directorate/Unit Contact Name Principle Activities Tel/Fax
E(1) Etienne MAGNIEN Co-ordination of Biotechnology R&D programmes T 295 93 47

Biotechnology e.magnien@dg12.cec.be

E(1) Stephane HOGAN Information officer for BIOTECH II programme T 296 29 65
Biotechnology

**PhD** Philippe de Taxis Du Poët
Biotechnology research, Entrepreneurship, Industry and Finance

**Biotechnology**

**Philippe.de-taxis-du-Poët@dg12.be**

E(1)

**Béatrice LUCARONI**
Exploratory awards for SMEs

**Beatrice.lucaroni@dg12.cec.be**

E(1)

**Pieter-Jan BOUWMEISTER**
Responsible for biotechnology within area 4 of the FAIR programme

**Pieter.bouwmeister@dg1.2.cec.be**

E(2)

**Xabier GOENAGA**
Contact for SME initiative under the FAIR programme

**Agro-industrial research**

**Alfredo.aguilarromanillos@dg12.cec.be**
Demonstration activities

E(3)

**Umberto BERTAZZONI**
Co-ordination of BIOMED 2 SME Initiative

**u.bertazzoni@dg12.cec.be**

E(4)

**Alain VANVOSSEL**
Information Officer for biomedicine and Health Programme (BIOMED 2)

**Alain.vanvossel@dg12.cec.be**

E(5)

**José ELIZALDE**
Co-ordinates current ethical, social and legal aspects

**j.elizalde-perez@dg12.cec.be**

---

**DGXIII Telecommunications, Information Market and Exploitation of Research**

**Directorate/Unit**

**D(4)**

Co-ordination of technology transfer networks

**Tel/Fax**

F 293

5071

Innovation and technology transfer
DGXV Internal Market and Financial Services

Directorate/Unit

Principle Activities

Te
I/F
Fax

E(3)
Co-ordinates policy on intellectual and industrial property within the biotechnology sector
F
29
6
17
36

DGXVI Regional Policy and Cohesion

Directorate

Principle Activities

Tel/Fax

F(2)
Information and relations with other institutions
F 296 60 03

DGXXIII Enterprise Policy, Distributive Trades, Tourism and Co-operatives

Directorate

Principle Activities

Te
I/F
Fax

B(3)
Co-ordinates the accessing of funding for SMEs
F
29
5
21
54

Improvement of conditions for enterprise and market access

B(2)
Co-operation between SMEs at international and European level
F
29
5
17
40

SME Co-operation and transnational development

B(1)
Co-ordination of the Euro Info Centres which provide information to businesses and act as ‘first stop shops’, directing SMEs’ requests to the most appropriate source, including other Community networks.
F
29
5
73
35

EUROPEAN COMMISSION
**Organisation:** Unité Information des Enterprises, Directorate General XXXIII-B/1

**Address:** Rue d’Arlon 80
B-1040 Brussels

**Fax:** +32 2 296 1241

---

### Appendix 5. Industrial Platforms

<table>
<thead>
<tr>
<th>Name</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACTIP - Animal Cell Technology Industrial Platform</strong></td>
<td><strong>Dr Berthold Bödeker (Chairman)</strong></td>
</tr>
<tr>
<td><strong>Contact</strong></td>
<td><strong>Dr Helma Hermans (Secretariat)</strong></td>
</tr>
<tr>
<td>Bayer AG</td>
<td>Scientific Writing &amp; Consultancy</td>
</tr>
<tr>
<td>PH-TO-Biotechnology</td>
<td>PO Box 23 161</td>
</tr>
<tr>
<td>Friedrich-Ebert-Strasse 217</td>
<td>NL-3001 KD Rotterdam</td>
</tr>
<tr>
<td>D-42096 Wüppertal</td>
<td>tel: +31 10 4363 725</td>
</tr>
<tr>
<td>Tel: +49 202 36 76 73</td>
<td>fax: +31 10 436 1004</td>
</tr>
<tr>
<td>Fax: +49 202 36 75 24</td>
<td>Email: <a href="mailto:sciwrjco@wirehub.nl">sciwrjco@wirehub.nl</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BACIP - Bacillus Subtilis Genome Industrial Platform</strong></td>
<td><strong>Prof Dr Wim J Quax (Chairman)</strong></td>
</tr>
<tr>
<td><strong>Contact</strong></td>
<td><strong>Genencor International BV</strong></td>
</tr>
<tr>
<td></td>
<td><strong>PO Box 642</strong></td>
</tr>
<tr>
<td></td>
<td><strong>NL-2600 AP Delft</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Tel: +31 15 279 2268</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Fax: +31 15 279 2838</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Email: <a href="mailto:wquax@genencor.com">wquax@genencor.com</a></strong></td>
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</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BBP - Biotechnology for Biodiversity Platform</strong></td>
<td><strong>Dr. J.C. Reeves (Chairman)</strong></td>
</tr>
<tr>
<td><strong>Contact</strong></td>
<td><strong>National Institute of Agricultural Botany</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Huntingdon Road</strong></td>
</tr>
<tr>
<td></td>
<td><strong>GB-CB3 OLE Cambridge</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Tel: +44 1223 276 381</strong></td>
</tr>
</tbody>
</table>
Fax: +44 1223 277 602
E-Mail: jreeves.niab.hr@gtnet.gov.uk

Name  FAIP - Farm Animal Industrial Platform

Contact   Dr Jan WM Merks (Chairman)       Dr. Anne-Marie Neeteson (Secretariat)
Nederlands Varkensstamboek BV               Dilgtweg, 7
PO Box 43                                    NL-9751 ND Haren
NL-6640 AA Beuningen                         Tel: +31 2467 79 999
Tel: +31 2467 79 800                         Tel: +31 505 34 18 99
Fax: +31 2467 79 800                         Fax: +31 505 34 21 12
E-mail: neeteson@uni4nm.iaf.nl

Name  HAE 2000 - Healthy Aging Europe

Contact   Dr. Hannu Hanhijärvi (Chairman)       Dr. Markku Talvio
Group Vice President, R&D, OA/QC       (Secretariat)
Leaf Group Headquarters       EIM Ltd Oy
Burgemeester Rijnderslaan 26, P.O. Box       Managing Director, c/o Orion-
49                                    Pharma
NL-1180 AA Amstelveen                  P.O. Box 65
Tel: +31 20 656 21 00                 SF-02101 Espo
Fax: +31 20 656 21 66                 Tel: +358 9 429 36 27
                                      Fax: +358 9 429 20 20
                                      E-Mail: markku.talvio@orion.fi
                                      E-mail: hukka.salminitty@et.ttiitot.fi

Name  IPM - Industrial Platform for Microbiology

Contact   Dr Lisbeth Anker, Chairman       Mrs Anne-Maie Preels, Secretariat
Director for External Relations       IPM Secretariat
Quality Assurance & Regulatory Affairs       c/o Tech-Know Consultants SPRL
Novo Nordisk A/S                                    Avenue de l'Observatoire, 2 (C17)
Nielsteensensvej 1                              B-1180 Bruxelles
DK-2820 Centofte                              Tel/fax: +32 2 3720992
Tel: +45 44438057                                Email: priceam@mail.interpac.be
Fax: +45 444 38788
<table>
<thead>
<tr>
<th>Name</th>
<th>In Vitro Testing Industrial Platform (IVTIP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact</td>
<td>Dr. Ninna Berg (Co-Chairman)</td>
</tr>
<tr>
<td></td>
<td>Novo Nordisk A/S</td>
</tr>
<tr>
<td></td>
<td>Rue Général de Gaulle 62</td>
</tr>
<tr>
<td></td>
<td>DK-2880 Bagsvaerd</td>
</tr>
<tr>
<td></td>
<td>Tel: +45 44 42 24 59</td>
</tr>
<tr>
<td></td>
<td>Fax: +45 44 42 12 38</td>
</tr>
<tr>
<td></td>
<td>E-Mail: <a href="mailto:nib@novo.dk">nib@novo.dk</a></td>
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<table>
<thead>
<tr>
<th>Name</th>
<th>Lactic Acid Bacteria Industrial Platform (LABIP)</th>
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<tbody>
<tr>
<td>Contact</td>
<td>Dr. Beat Mollet (Chairman)</td>
</tr>
<tr>
<td></td>
<td>Nestle Research Center</td>
</tr>
<tr>
<td></td>
<td>Dept. Bioscience</td>
</tr>
<tr>
<td></td>
<td>Vers-chez-les-Blanc</td>
</tr>
<tr>
<td></td>
<td>P.O. Box 44</td>
</tr>
<tr>
<td></td>
<td>CH-1000 Lausanne 26</td>
</tr>
<tr>
<td></td>
<td>Tel: +41 21 785 89 30</td>
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<tr>
<td></td>
<td>Fax: +41 21 785 89 25</td>
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<table>
<thead>
<tr>
<th>Name</th>
<th>Plant Industry Platform (PIP)</th>
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<tbody>
<tr>
<td>Contact</td>
<td>Dr. Gert E. de Vries (Secretariat)</td>
</tr>
<tr>
<td></td>
<td>ProBio Partners</td>
</tr>
<tr>
<td></td>
<td>Meerweg 6</td>
</tr>
<tr>
<td></td>
<td>NL-9625 PJ Overschild</td>
</tr>
<tr>
<td></td>
<td>Tel: +31 596 566321</td>
</tr>
<tr>
<td></td>
<td>Fax: +31 596 566508</td>
</tr>
<tr>
<td></td>
<td>E-Mail: <a href="http://www.nord.bart.nl/~biotech/pipfront.htm">www.nord.bart.nl/~biotech/pipfront.htm</a></td>
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<tr>
<th>Name</th>
<th>Structural Biology Industrial Platform (SBIP) (tentative)</th>
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<tbody>
<tr>
<td>Contact</td>
<td>Dr. Werner Wolf (Chairman)</td>
</tr>
<tr>
<td></td>
<td>BTC-Biotechnology Consulting</td>
</tr>
</tbody>
</table>
### TEP - Tissue Engineering Platform

**Name**: Kreuzekstr.5

**Address**: D-82407 Wielenbach, Bingham, GB-NG13 8SS Notts.

**Contact**:
- **Dr. Axel Haverich** (Chairman)
- **Dr. Jean Cornier** (Steering committee)
- **Dr. A. Bader** (Steering Committee)

**Phone/Fax**:
- **Tel**: +49 881 4717
- **Fax**: +49 881 40954
- **Tel**: +44 1949 876 156
- **Fax**: +44 1949 876 156

**E-mail**:
- **werner_a_wolf@t-online.de**
- **biodigm@dial.pipex.com** or **mike@biodigm.com**

### YIP - Yeast Industry Platform

**Name**: Podbielskistrasse 280

**Address**: D-30659 Hannover, D-30159 Hannover

**Contact**:
- **Dr. Jose Garcia-Bustos** (Chairman)
- **Dr. Francois Gendre** (YIP Steering Committee)
- **Mrs. Anne-Maie Preels** (Secretariat)

**Phone/Fax**:
- **Tel**: +49 511 906 3510
- **Fax**: +49 511 906 3569
- **Tel**: +34 1 8070606
- **Fax**: +34 1 8070595

**E-mail**:
- **lebao@artificial-organs.de**
- **fgendre@www.tepral.fr**
- **anne.marie.prieels@skynet.be**

### Appendix 6. National Authorities Responsible for SME Policy

**AUSTRIA**

**Organisation**: Federal Ministry of Economic Affairs
Address: Stubenring 1
            Vienna

BELGIUM
Organisation: Ministère des Classes Loyennes, Service des Études
Address: Tour Sablon, 21ème étage
            rue J Stevens, 7
            B-1000 Brussels

DENMARK
Organisation: Ministry of Business and Industry
Address: Slotsholmsgade 10-12
            rue J Stevens, 7
            DK-1216 Copenhagen
Fax: + 45 33 12 37 78

FINLAND
Organisation: Ministry of Trade and Industry, Business Development Department
Address: Kluuvikatu 4A
            PO Box 230
            00171 Helsinki
Fax: + 358 9 160 2666

FRANCE
Organisation: Ministry of Industry
Address: DARPMI
            20 avenue de Ségur
            75353 Paris
Fax: + 33 1 43 19 27 06

GERMANY
Organisation: Federal Ministry of Economics, Policy Division of SMEs
GERMANY

Organisation: Verbrand der Chemischen Industrie e.v. (VIC)
Address: Abt. Wissenschaft und Forschung, Karlstrasse 21, 60329 Frankfurt
Contact: Dr Hans-Jurgen Klockner
Tel: +69 25 56 16 44
Fax: +69 25 56 16 20

GERMANY

Organisation: Analyti Con AG
Address: Gustav-Meyer, Allee 25, 13355 Berlin
Contact: Dr Lutz Müller-Kuhrt
Telephone: +69 30 46 30 7-107
Fax: +69 30 46 32 012

GERMANY

Organisation: Bayer AG
Address: Geschäftsbereich Pharma-Biotechnologie, Friedrich-Ebert Strasse 217, 42096 Wuppertal
Contact: Prof Peter J W Stadler
Tel: +69 202 36 24 27
Fax: +69 202 36 75 24

GREECE

Organisation: EOMMEX
Address: Xenias Street 16
Athens 11528
Fax: + 30 1 749 1250
IRELAND
Organisation: Department of Enterprise & Employment, Enterprise Programs Division
Address: Kildare Street Dublin 2
Fax: + 353 1 678 5664

ITALY
Organisation: Ministry of Industry
Address: Via Molise 200187 Rome
Fax: + 39 6 47 88 79 26

LUXEMBOURG
Organisation: Press & Information Service of the Government
Address: 43 Boulevard Roosevelt
L-2450 Luxembourg City
Luxembourg
Tel: + 352 478 2181
Fax: + 352 47 02 85

NETHERLANDS
Organisation: Ministry of Economic Affairs, Directorate for Entrepreneurship & Small Business
Address: Bezuidenhoutseweg 30
PO Box 20101
2500 EC The Hague
Fax: + 31 70 379 7403

PORTUGAL
Organisation: IAPMEI, International Department
Address: Rua Rodrigo da Fonseca 73
1279 Lisbon Cedex

SPAIN
Appendix 7. National Trade Associations

AUSTRIA

Organisation: Austrian Society of Biotechnology (ÖGBT)
Address: Kleine Sperlgasse 1/37 1030 Wein Austria
Tel: +43 1 26 2242

BELGIUM

Organisation: Belgian Bio-industry Association
Address: Mr Peirre Crooy Rue de Crayer 6 1050 Bruxelles
Tel: +32 2 656 9300
Fax: +32 2 656 8145
DENMARK
Organisation: FBID - The Association of Biotechnological Industries in Denmark
Contact: Jorn L Mahler, Executive Director (ext 2240) Knud Aunstrup, President (ext 2303)
Tel: +45 44 448888
Fax: +45 44 444282

FINLAND
Organisation: KT - Bio
Address: Ms H Kuusi c/o Chemical Industry Federation of Finland Eteläranta, 10 PO Box 4 FIN - 00131 Helsinki

FRANCE
Organisation: Organibio
Address: Mr J Lunel 28 Rue Saint Dominque F - 75007 Paris
Tel: +33 1 47 530912
Fax: +33 1 47 537376

GERMANY
Organisation: DFG Deutsche Forshungsgemeinschaft
Address: Kennedyallee 405300 Bonn 2
Tel: +49 02 28885-1
Fax: +49 02 28 8852221

GERMANY
Organisation: DECHEMA
Address: Dr Rolf Marris
Subject Group Biotechnology
Theodor-Heuss-Allee 25
60486 Frankfurt
Tel: +49 068 7564 366
Fax: +49 068 7564 201
GERMANY

Organisation: VBU - association of German Biotechnology Companies
Address: Dr Marris & Dr V Rosenbaum
c/o DEHEMA eV
Frankfurt/M
Tel: +49 068 7534 366 / 262 for Dr Rosenbaum
Fax: +49 069 7564 201

IRELAND

Organisation: Animal & Plant Health Association
Address: Mr D O'Brien, Dr C O'Reilly, Mr E Teehan
Franklin House
140 Pembroke Road
Dublin 4
Tel: +353 1 660 3350
Fax: +353 1 686 672

IRELAND

Organisation: BioResearch Ireland
Address: Dr Jim Ryan, Mr Seamus O'Hara
Forbairt
Glasnevin
Dublin 9
Tel: +353 1 837 0177
Fax: +353 1 837 0176

IRELAND

Organisation: IRDG Industry Research & Development Group
Address: Mr R Kavanagh, Ms C Meyers
Conferation House
84-86 Lower Baggot Street
Dublin 2
ITALY

Organisation: Assobiotec
Address: Mr V Lungagnani Via Accademia 33 I - 20131 Milano
Tel: +39 2 268 10306/268
Fax: +39 2 268 10284

NETHERLANDS

Organisation: NIABA
Address: Mr R van der Meer Vlietweg 16 PO Box 443 NL - 2260 AK Leidschendam
Tel: +31 70 327 04 64
Fax: +31 70 320 57 65

NETHERLANDS

Organisation: NCR - Nationale Coöperatieve Raad voor landen Tuinbouw
Address: Ir AL Breure
PO Box 29774
2502 LT Den Haag
Tel: +31 70 338 2780
Fax: +31 70 354 6643

NETHERLANDS

Organisation: Nefyto
Address: Mrs MLC van Assen
PO Box 80523
2508 GM Den Haag
Tel: +31 70 354 4851
Fax: +31 70 354 9766
NETHERLANDS

Organisation: NVZP - Dutch Seed Trade Association
Address: Ir AC van Elsen
PO Box 909
3700 AX Zeist
Tel: +31 30 693 3135
Fax: +31 30 693 2951

SPAIN

Organisation: Associacion de Bioindustrias
Address: Mr J Guixer C/Bruc N 72-74 6 Planta E-Barcelona
Tel: +34 3 4874000
Fax: +34 3 4876520

SWEDEN

Organisation: NUTEK - National Board for Industrial & Technical Development
Address: Dr Magdelena Ehrstrom
S-10387 Stockholm
Tel: +46 8 681 9368
Fax: +46 8 199 280

SWEDEN

Organisation: SIK - Institute for Food & Biotechnology
Address: Mr Guno Haska, Mr Magnus Glad
Ideon, Ole Romers vag 12
S - 223 70 Lund
Tel: +46 31 355600
Fax: + 46 31 833782

UNITED KINGDOM

Organisation: Confederation of British Industry (CBI)
on:

Address: Dr Janet Asherson Head of Health, Safety and Land Use Environmental Affairs Centre Point 103 New Oxford Street

London WC1A 1DU

Tel: +44 171 379 7400 ext 2915

Fax: +44 171 240 1578

UNITED KINGDOM
Organisation: Association of the British Pharmaceutical Industry (ABPI)
Address: Dr Jeff Kipling

Director of Science and Technology

12 Whitehall
London SW1A 2DY

Tel: +44 171 747 1408

Fax: +44 171 747 1413

UNITED KINGDOM
Organisation: BioIndustry Association (BIA)
Address: Dr John Sime Chief Executive 14/15 Belgrave Square London SW1X 8PS

Tel: +44 171 245 9911

Fax: +44 171 235 4759

UNITED KINGDOM
Organisation: British Agrochemicals Association Ltd (BAA)
Address: Tony Pike, Director

Dr Anne Buckenham, Deputy Director

4 Lincoln Court
Lincoln Road
Peterborough PE1 2RP

Tel: +44 349 225

Fax: +44 1733 62523
UNITED KINGDOM

Organisation: British In Vitro Diagnostics Association (BIVDA)

Address: Kit Madden
          Executive Director
          1 Queen Anne’s Gate
          London SW1H 9BT

Tel: +44 171 957 4633
Fax: +44 171 957 4644

UNITED KINGDOM

Organisation: British Society of Plant Breeders Ltd (BSPB)

Address: Dr Roger G Turner
          Chief Executive
          Woolpack Chambers
          Market Street
          Ely Cambs. CB7 4ND

Tel: +44 1353 664 211
Fax: +44 1353 661 156

Appendix 8. Contact List for Eurotech Capital

GED – Grupo de Empresas de Dessarrollo (SEPI) – Sofinnova
Spain                        France

The Spanish financial group operates through Sofinnova is an independent venture capital
a network of venture capital companies with
capital company with an investment capacity of ECU
an investment capacity of ECU 70 million
90 million, active in high technology,
and manages a venture capital fund of the
particularly information technology, health-
EBRD and the EU amounting to ECU 70
care and biotechnology. Its high-tech
million in Romania. The main activity of the
the main activity of the specialists invest in a minority stake and
specialists invest in a minority stake and
favour financing in the early stages of a
favour financing in the early stages of a
group is the provision of equity funding for
the management of the company, but most of the
SMEs and the management of funds
time has an active role on the board of
directors.

SOFINNOVA (F)

GED-GRUPPO DE EMPRESA DE
DESAROLLO (SEPI) (E).

Mr Jean-Bernard Schmidt
51 rue Saint Georges, F-75009 Paris
Mr. PUERTAS HERNANDEZ

8, Plaza Marques de Salamanca, E-28071
Madrid

Tel: (34) 91 396 1274; Fax: (34) 91 396 1034

Eurosud Capital
France/Italy

Eurosud Capital was formed by companies in regional equity finance. They have acquired a European dimension through forming this association with an investment capacity of ECU 80 million. This financial entity covers southern Europe, including five European frontier regions from Barcelona to Genoa, and it has also turned towards Morocco, Tunisia the Adriatic and eastern countries. The companies which constitute Eurosud Capital are Ligur Capital and Marche Capital for Italy, IRDI (in the Midi-Pyrénées region), SORIDEC (Languedoc Roussillon) and Sud Capital (Provence Côte d’Azur) for France and finally, Catalana d’Intictives CR for Spain. This grouping of venture capital companies also includes two associated members: SPPI in Tunisia and Moussahama SPPP in Morocco.

Società Finanziaria di Partecipazione (SOFIPA)
Italy

SOFIPA, was established in 1983 to provide equity capital, primarily to medium-sized companies in Italy. SOFIPA has circa ECU 160 million under management and invests across a broad range of industry sectors mainly in later stage opportunities, for example providing expansion capital or backing management buy-out and buy-ins. SOFIPA actively assists investee companies with their development plans and has an in-house Mergers & Acquisitions (M&A) division. SOFIPA has offices in both Rome and Milan and SOFIPA International, which invests outside of Italy, is located in Brussels.

Euroventures Benelux Team
Benelux

Euroventures Benelux manages two funds with an investment capacity of ECU 85 million and is a member of the largest independent pan-European venture capital network. Euroventures Benelux provides early stage and development capital and participates in buy-outs, turn-arounds and take-overs of companies with a European perspective without any preference of sector or industry. Both funds are now completely invested and Euroventures Benelux is concentrating on the exits of its investments. The result is that no new participations are being considered. A new initiative is located...
in the Information Technology sector.

**SOFIPA (I)**

Mr Mogavero  
Via Paisiello 39, I-00198 Rome  
Tel: (39) 6 8550300; Fax: (39) 6 85302559

**EUROVENTURES BENELUX (B-NL-L)**

Mrs VERMASSEN  
H Henneaulaan 336, B-1930 Zaventem  
Tel: (32) 2 7251838; Fax (32) 2 7214435  
E-mail: evbnlzav@tornado.be

Rothschild Bioscience Unit  
United Kingdom

The Rothschild Bioscience Unit (RBU) was established within Rothschild Asset Management in 1987 to act in an advisory capacity to Biotechnology Investments Ltd., a global oriented fund focused on start-up and early stage biotechnology companies. In 1994, RBU also became responsible for the management of the International Biotechnology Trust Plc. which invests in under-funded or under managed biotech companies with products that are already in clinical development and/or appear to have good commercialisation prospects. The RBU has at present ECU 435 million under direct management. The RBU team is multidisciplinary, with backgrounds in science, industry, finance and management, enabling it to provide comprehensive advice and support to investee companies. The investment team works with a number of internationally renowned scientific and industry consultants who help to assess new technologies and investment proposals as well as supporting investee companies. RBU operates on a global basis, covering North America, Europe South East Asia and the Far East.

**Gilde Investment Funds (NL)**

Gilde Investment Funds, founded in 1982, is a Dutch venture capital company independent of any financial entity with an investment capacity of ECU 750 million. Its hallmarks are its international investment strategy (Europe and the United States) and its active involvement in managing the companies it supports, with the aim of promoting rapid growth. Gilde provides classic venture capital focusing on the IT-sector (hard & software and communications). In addition Gilde invests in buy-out and buy-in situations. More than three-quarters of its investments are syndicated.

Rothschild Bioscience Unit  
United Kingdom

Mr T. ZEEUW  

Gilde Investment Funds  
Netherlands
Danish Development Finance Corporation (DDFC) Denmark

Danish Development Finance Corporation, founded in 1988, is a Danish venture-capital company independent of any financial entity, with an investment capacity of ECU 70 million.

DDFC’s investment strategy focuses primarily on three industries; life sciences, information technology and engineering. DDFC plays a role as an active sparring partner for the portfolio companies and takes active part in the internationalisation process.

Techno Venture Management (TVM) Germany

TVM is one of the leading independent German venture capital fund with a focus on technology investments. Areas of interest are computers, network technologies, software, tele-communications and medical/biotech. Founded in 1983, TVM manages several funds for investments in Germany, Western Europe and the USA. The total fund volume is of ECU 265 million. TVM’s headquarters are in Munich/Germany and other offices are located in Boston and Los Angeles/USA. TVM concentrates on international/multinational investments within Europe and the USA. Investments are usually syndicated with other European and US venture capital funds.

DANISH DEVELOPMENT FINANCE CORPORATION (DK)

Mr Kent Hansen
Gladsaxevej 376, DK-2860 Søborg
Tel: (45) 39660400; Fax: (45) 39661311
E-Mail: 101354.3700@compuserve.com

Alta Berkeley Associates United Kingdom

Alta Berkeley Associates is a privately-held venture capital group with an investment capacity of ECU 100 million. Its investment strategy focuses primarily on three industries: health-care, media/communications and information services. Investments in these areas are made on a Pan-European basis with no attempt to focus on any specific European country. Within these geographic and industrial parameters, companies are financed

FINOVELEC

Finovelec is a French joint-stock company with twin status as an innovative finance company and a venture company. Finovelec has an investment capacity of ECU 53 million and invests exclusively in high potential start-up or fast growing companies. The list of its investing areas includes electrical engineering, scientific and technical companies, robotics, telecommunications, medical appliances and biotechnologies. Investments are
at any stage of development, from start-up to geographically diversified (France, Europe, USA).

**ALTA BERKELEY ASSOCIATES (UK)**

*Mr SMITH*

9-10 Savile Row, London W1X 1AF

Tel: (44) 171 7344884

Fax: (44) 171 7346711

Email: hugh.smith@alta.berkeley.co.uk

**FINOVELEC (F)**

*Mr CHATAIN*

6 rue Ancelle, F-92200 Neuilly-sur-Seine

Tel: (33) 1 47476900; Fax: (33) 1 46407938

Sitra
Finland

SITRA is an independent public fund responsible to the Finnish Parliament and has an investment capacity of ECU125 million. SITRA’s role is to strengthen links between research and both the business sector. SITRA invests in Finnish and international high-tech companies and funds and finances management buy-outs and corporate venturing. It has also invested into several international funds like Advent GPE, AVIII, Euroventures Nordica II, HATT II, Baltic Venture Fund, Russian Technology Fund and Northwest Russia Regional Venture Fund. SITRA was established in 1967 and it has been the pioneer in the venture capital field in Finland.

**EUROVENTURES MANAGEMENT (S)**

*Mr JACOBSSON*

P O Box 7210, S-10388 Stockholm

Tel: (46) 8 247790; Fax: (46) 8 208997

E-mail: info@euroventures.se

ASSOCIATED MEMBERS

Horizonte Venture Management (Austria)

Horizonte, founded in 1985, is the first and presently largest venture capital company in Austria. It is majority-owned by the
management with minority stakes owned by Advent Intl. and FGG. Horizonte concentrates on technology-driven growth companies in and around Austria as well as investments in transition opportunities in the territory of former Yugoslavia. Funds under management currently amount to ECU 28 million.

HORIZONTE VENTURE MANAGEMENT (A)

Mr Krejs
Bauernmarkt 6, A-1010 Wien
Tel: (43) 1 53356010; Fax: (43) 1 53356014
E-mail: horizon@ping.at

Appendix 9. Innovation and Technology Equity Capital (I-TEC)

for technologically innovative SMEs

- List of selected venture capital operators -

- April 1998 -

Operator: Sofinnova Partners
Contact: Mr. Jean-Bernard SCHMIDT
Address: 51, rue Saint Georges
F-75009 PARIS
Fax: +33 1 45 26 78 92
Website: http://www.sofinnova.fr
Coverage: European Union +Associated States
Special focus: F
Invest. focus: Information technology; Life sciences; Healthcare; Biotechnology.

Operator: Alta Berkeley Associates
Contact: Mr. Hugh SMITH
Address: 9/10 Savile Row
W1X 1AF LONDON, UK
Fax: + 44 171 734 6711

e-mail: hugh.smith@alta-berkeley.co.uk

Coverage: European Union + Associated States

Invest. focus: Healthcare & life sciences; Media & communications; Information services.

Operator: Prelude Technology Investments

Contact: Dr. Robert HOOK

Address: Sycamore Studios, New Road
CB4 5PJ OVER, CAMBRIDGE, UK
Fax: + 44 1954 288099

e-mail: prelude@dial.pipex.com

Coverage: European Union + Associated States

Special focus: UK

Invest. focus: Life sciences (biopharmaceutical, healthcare); Physical sciences (electronics & computer related); Materials; Information sciences, software & communications.

Operator: MTI Partners

Contact: Dr. Paul CASTLE

Address: 99 Langley Road
WD1 3PE WATFORD, UK
Fax: + 44 1923 247783

e-mail: headoffice@mtifirms.com

Coverage: UK

Invest. focus: IT; Software; Communications; Electronic hardware & devices; Life Sciences; Materials technology.

Operator: Horizonte Venture Management

Contact: Dr. Franz KREJS

Address: Bauernmarkt 6,
A-1010 VIENNA
Fax: + 43 1 533 56014

e-mail: horizont@ping.at

Coverage: European Union + Associated States
Special focus: A

**Invest. focus:** Information technology (software, multimedia & networks); Biotechnology & medical (immunology & treatment of allergies); Microstructure technology (semiconductors, micro-nano engineering); Environmental technology.

**Operator:** *Capricorn Venture Partners*

**Contact:** Dr. Jos B. PEETERS

**Address:** Parijsstraat 74,
B-3000 LEUVEN

**Fax:** + 32 16 29 38 71

**e-mail:** capricorn@capricorn.be

**Coverage:** European Union + Associated States

Special focus: B (NL, D, F, L)

**Invest. focus:** Life sciences (biopharmaceutical, healthcare); Information & communication technologies; Electronic & computer related technologies; Materials.

**Operator:** *Technostart Beratungsgesellschaft für Beteiligungsfonds*

**Contact:** Mr. Michael MAYER

**Address:** Frisonistrasse 4,
D-71636 LUDWIGSBURG

**Fax:** + 49 71 41 9715910

**e-mail:** technostart-mayer@t-online.de

**Coverage:** European Union + Associated States

Special focus: D

**Invest. focus:** New Technologies in life science; Materials Physical sciences; Information technology.

**Operator:** *Technologieholding VC*

**Contact:** Mr. Falk STRASCHEG

**Address:** Lenbachplatz 3, D-8033 MÜNCHEN

**Fax:** + 49 89 5486 2299

**e-mail:** stracheg@technologieholding.de

**Website:** [http://www.technologieholding.de](http://www.technologieholding.de)
Coverage: European Union + Associated States

Special focus: D, A, F

Invest. focus: Information, communication & multimedia; Industrial automation & process engineering; Test & measurement; New material & chemical technology; Life science & biotechnology.

Operator: VCI - Beratung für Technologie Investitionen

Contact: Mr. Max RUEFF

Address: Eduard-Schmid-Strasse 7,
D-81541 MÜNCHEN

Fax: + 49 89 6510 26 52

e-mail: 100542.2611@compuserve.com

Coverage: D (A)

Invest. focus: Information & communication technologies; Industrial automation & process engineering; Medical & biotechnology.

APPENDIX 10. LIST OF THE INNOVATION RELAY CENTRES

<table>
<thead>
<tr>
<th>A</th>
<th>Bureau for International Research and Technology Cooperation (BIT)</th>
<th>Mr Manfred HORVAT</th>
<th>Technology Development Centre (TEKES)</th>
<th>Mr Matti SUPPONEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Wiedner Hauptstrasse 76</td>
<td>Telephone: 43158116160</td>
<td>Malminkatu 34</td>
<td>Telephone: 3581052151</td>
</tr>
<tr>
<td></td>
<td>A-1040 Wien</td>
<td>Fax: 431581161616</td>
<td>P.O. Box 69</td>
<td>Fax: 358105215904</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E-mail: <a href="mailto:klamm@bit.ac.at">klamm@bit.ac.at</a></td>
<td></td>
<td>E-mail: <a href="mailto:matti.supponen@tek.es.fi">matti.supponen@tek.es.fi</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B</th>
<th>Centre Relais Innovation de Wallonie (C.R.I.W.)</th>
<th>Mr Jean Claude DISNEUR</th>
<th>B.I.R.C. - Technopol Brussel-Bruxelles (a.s.b.l.)</th>
<th>Mr Jacques EVRARD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Avenue Prince de Liège 7</td>
<td>Telephone: 3281321269</td>
<td>Rue Gabrielle Petit 4 – Bte 12</td>
<td>Telephone: 3224220021</td>
</tr>
<tr>
<td></td>
<td>B-5100 Jambes (NAMUR)</td>
<td>Fax: 3281306600</td>
<td>B-1080 Bruxelles</td>
<td>Fax: 3224220043</td>
</tr>
</tbody>
</table>
|   |   | E-mail: jc.disneur@rw.be |   | E-mail: jacques.evrard@tech
Vlaams Innovatie Adviescentrum
(VIA) IWT Brussel
Bischoffsheimlaan 25
B-1000 Brussel

Mr Karel Derveaux

Telephone: 3222230033
Fax: 3222231181
E-mail: via@iwt.lrt.be

D Erhvervsfremme Styrelsen
K EuroCenter
Gregersenvej
Postbox 141
DK-2630 Taastrup

Ms Mette SKAKKEBAEK

Associate Member
PUF - Ministry of Research and Information Technology

Telephone: 4543504000
Fax: 4543716360
E-mail: euro@dti.dk

F ACTION RTDA
Centre Condorcet
162 rue A. Schweitzer
F-33600 Pessac

Mr Jacques PHALIPPOU

ATTELO
6, rue de Pont Moreau
B.P. 1004
F-57036 Metz Cedex 01

Telephone: 3355615170
Fax: 33556151175
E-mail: action@action.arcimedia.fr

Bretagne Innovation
18, place de la Gare
F-35000 Rennes

Mr Benoît NICOL

Chambre Régionale de Commerce et d'Industrie de Rhône-Alpes (ARIST)

Telephone: 33299674200
Fax: 33299676022
E-mail: benoit.nicol@orbi tel.fr

Chambre Régionale de Commerce et d'Industrie de Bourgogne (ARIST)
68, rue Chevreul - BP 209
F-21006 Dijon

Mr Ludovic DENOYELLE

Chambre de Commerce et d'Industrie de Paris (BRIST)

Telephone: 33380635266
Fax: 33380638558
E-mail: ld-arist-b@axnet.fr

Route des Hautes Technologies
Espace Colbert II

Mr Christian DUBARRY

Association Inter-Régionale sur la Recherche Européenne (AIRE)

Telephone: RN-25 Lieu dit Le Ramponneau

Mrs Nathalie GERARD

Telephone: wurg@ccip.fr
8, rue Sainte Barbe
F - 13231 Marseille Cedex 01

Fax : 33491140570
E-mail: rht@rht-cr-paca.fr

F-80260 Poulainville (Amiens)
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Associate Member

Mrs Françoise GIRAULT
Association Nationale de la Recherche Technique (ANRT)
16, avenue Bugeaud
F-75116 Paris Cedex

Telephone: 33153701070
Fax: 3314704250
E-mail: None

Association Nationale de la Recherche Technique (ANRT)-Europe
Telephone: Europe@anrt.ass.fr

16, avenue Bugeaud
Fax: 33491140570
E-mail: None

D Hessische Technologiestiftung
Abraham-Lincoln-Str. 38 - 42
D-65189 Wiesbaden

Telephone : 49611774294
Fax: 49611774313
E-mail: volker.schucht.hlt@de

Mr Volker SCHUCHT
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Telephone : 493411267480
Fax: 493411267464
E-mail: agil@zaix5.rz.uni-Leipzig.de

Niedersächsische Agentur für Technologie-Transfer und Innovation GmbH (NATI)
Vahrenwalder Str. 7
D-30165 Hannover

Mr Uwe JENSEN
Zentrum für Innovation &Technik in Nordrhein-Westfalen (ZENIT)
D-54568 Mülheim

Telephone : 492083000431
Fax: 492083000429
E-mail: wol@www.zenit.de

Steinbeis-Europa-Zentrum der Steinbeis-Stiftung
Haus der Wirtschaft
Willi-Bleicher-Str. 19
D-70174 Stuttgart

Dr Peter NIESS
VDI/VDE Technologiezentrum Informationstechnik GmbH
D-14513 Teltow/Berlin

Telephone : 493328435173
Fax: 493328435216
E-mail: gessner@vdivde-it.de

Mr Peter WOLFMeyer
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Telephone : 49208300431
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Mr Henning PENZHOlz

Telephone : 493411267480
Fax: 493411267464
E-mail: agil@zaix5.rz.uni-Leipzig.de

National Documentation Centre (NIHRF)
Hellenic Innovation Relay Centre
48 Vas. Konstantinou Ave
GR-11635 Athens

Telephone : 3017249209
Fax: 3017246824
E-mail: None

Ms Lela POULAKAKI
HELP Forward Innovation Relay Centre/Forth
Xenofontos 5
GR-10557 Athens

Telephone : 3017249209
Fax: 3017246824
E-mail: None

Mr. AC PAYATAKES

Telephone : 3017249209
Fax: 3017246824
E-mail: None

Dr Angela C. MICHALOPOU LOU

Telephone : 3017249209
Fax: 3017246824
E-mail: None
<table>
<thead>
<tr>
<th>Country</th>
<th>Organization</th>
<th>Contact Person</th>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luxembourg</td>
<td>LUXINNOVATION</td>
<td>Mr Serge POMMERELL</td>
<td>L-1615 Luxembourg-Kirchberg</td>
<td>352 436263</td>
<td>352432328</td>
<td><a href="mailto:serge.pommerell@sitet.lu">serge.pommerell@sitet.lu</a></td>
</tr>
<tr>
<td>Norway</td>
<td>EU Innovasjon - The IRC of Norway</td>
<td>Mr Andreas OSTERENG</td>
<td>Strindveien 4</td>
<td>4773597037</td>
<td>4773591299</td>
<td><a href="mailto:irc@indev.sintef.no">irc@indev.sintef.no</a></td>
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<tr>
<td>Portugal</td>
<td>Agência de Inovação S.A.</td>
<td>Mr. João PERDIGOTO</td>
<td>Av. dos Combatentes 43-10º C/D</td>
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<td>35117271733</td>
<td><a href="mailto:jperdigoto@adi.pt">jperdigoto@adi.pt</a></td>
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<tr>
<td>Spain</td>
<td>CENEMES - Universidad de Alicante OTRI</td>
<td>Mr José VALERO TORRES</td>
<td>Campus de San Vicente</td>
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<td>CNEO - CETEMA</td>
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<td>E-mail: <a href="mailto:jimana@ceno.cetema.es">jimana@ceno.cetema.es</a></td>
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European Commission Innovation Relay Centre Co-ordination Unit

DG XIII/D/3, EUFO 2158 c/o Cartermill International
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L-2920 Luxembourg L-1259 LUXEMBOURG

Fax: +352-4301-34009 Fax: +352-348030
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Copy of all EIMS reports, except those where the ISBN n° is given, can be ordered free of charge by sending a request to:

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