# A USERS' GUIDE FOR SMES IN THE BIOTECHNOLOGY FIELD

May 1999

# **PREFACE**

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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<sup>1</sup>.

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 hypoallergenic 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

<sup>&</sup>lt;sup>1</sup> Europabio – 'Benchmarking the Competitiveness of Biotechnology in Europe'. (June, 1997)

national and European level to help engender a more conducive external business environment for SMEs to succeed and grow.

With this in mind, DG III 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 the industry with practical views on the responsible authorities (Member States and European Union) and on the funding (Venture-Capital, 5<sup>th</sup> 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.

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#### INTRODUCTION

This Users' Guide for small and medium sized enterprises (SMEs)<sup>2</sup> in the biotechnology field<sup>3</sup> is based upon a number of key factors, which have been highlighted in the Commission's Green Paper on Innovation<sup>4</sup>.

- 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.

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As defined in commission Recommendation 96/280/EC of 3 April 1996 *Concerning the Definition of Small and Medium Sized Enterprises* as published in OJ/L/107/4 of 30/04 97.

Biotechnology is taken to be 'The integration of natural sciences and engineering in order to achieve the application of organisms, cells, parts thereof and molecular analogues for products and services.'
- European Federation of Biotechnology Yearbook 1989.

<sup>&</sup>lt;sup>4</sup> COM (95) 688 final.

# 1. SECTION 1: EUROPEAN PROGRAMMES

# 1.1. Introduction and Purpose

For SMEs involved in biotechnology, substantial assistance can be obtained via several European programmes<sup>5</sup>. 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. In the beginning of 1999, the Fifth Framework Programme has been launched, which follows the 1994-1998 Fourth Framework Programme. Therefore, this Guide provides a short summary of the activities under the Fourth Framework Programme and a detailed listing of the schemes currently available under the Fifth Framework Programme. All programmes have the common aim of improving the scientific and technical base of the European Community's businesses to enable them to 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<sup>6</sup>.

A comprehensive listing of EU Commission Directorates General with an involvement in Biotechnology and the SME sector is given in Section 4.

<sup>6</sup> See Sections 1 and 2.

# 1.2. The Fourth Framework Programme 1994 - 1998<sup>7</sup>

The Fourth Framework Programme has been running from 1994 to 1998. The European Union allocated an overall budget of ECU 13,100 million, which was increased by ECU 115 million in September 1997.

The Fourth Framework Programme in the field of biotechnology has brought together universities, research centres and private companies to support research of the highest quality, paying particular attention to projects, which have a direct impact on competitiveness and quality of life. Abstracts of funded projects are available via the CORDIS database and the information contact persons in DGXII-B (see Section 4).

# 1.3. The 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 implemented. 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<sup>8</sup> has a degree of flexibility, leaving scope for new themes to be introduced. It also has 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 have been made, 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 that address the realities of society's demands and reinforce links with organisations, which can enhance the exploitation of European research results.

The final year of the Fourth Framework Programme is overlapping with the first year of the Fifth Framework Programme.

European Parliament and Council Decision No 1999/182/EC of 22 December 1998 concerning the Fifth Framework Programme of the European Community for research, technological development and demonstration activities (1999-2002)

# 1.3.2. Structure of the Fifth Framework Programme

The seven specific programmes within the Fifth Framework include four Thematic Programmes which reflect the Framework's main research priorities:

- 1. Quality of life and management of living resources.
- 2. A user-friendly information society.
- 3. Competitive and sustainable growth.
- 4. Energy, environment and sustainable development.

# And three horizontal programmes:

- 1. Confirming the international role of Community research.
- 2. Promotion of innovation and encouragement of participation of SMEs.
- 3. Improving human research potential and the socio-economic knowledge base.

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 second horizontal programme is concerned with innovation and the participation of SMEs, allowing easier access to research activities and their results. It also aims to develop technology transfer mechanisms. 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 13,700 million Euro has been agreed for the implementation of the European Community section of the Fifth Framework Programme. Combined with the 1,260 million Euro allocated to the Euratom programme, this brings the global budget for research during 1999-2002 to 14,960 million Euro. (This represents an increase, in absolute terms of 4,61% compared to the Fourth Framework Programme.)

TABLE 1.3 PROPOSED BUDGET FOR FIFTH FRAMEWORK PROGRAMME FOR RTD ACTIVITIES9

Indirect actions	Million euro	
	(Current Prices)	
First activity (Thematic programmes)		
Quality of life and management of living resources	2,413	
User-friendly information society	3,600	
Competitive and sustainable growth	2,705	
Energy, environment and sustainable development		
- Environment and sustainable development	1,083	
- Energy	1,042	
Second activity (- Horizontal programme)		
Confirming the international role of Community research	475	
Third activity(- Horizontal programme)		
Promotion of innovation and encouragement of SME participation	363	
Fourth activity(- Horizontal programme)		
Improving human research potential and the socio- economic knowledge base	1,280	
Direct actions		
Joint Research Centre (JRC)	739	
MAXIMUM OVERALL AMOUNT	13,700	

For more information, click <a href="http://www.cordis.lu/fp5/src/budget.htm">http://www.cordis.lu/fp5/src/budget.htm</a>

# 1.3.5. The Structure of the Thematic Programme "Quality of Life and Management of Living Resources"

The programme is primarily built around **six specific key actions** that are goal-oriented and problem solving. The key actions are targeted at identifiable socio-economic and market needs, such as improving quality and safety of food; controlling infectious diseases; harnessing the power of the cell; health and environment; sustainable agriculture, forestry and fisheries, integrated rural development, sustainable development; and promoting healthy ageing. A unique feature of key actions is their response to Community policy objectives, in areas like agriculture and fisheries, industry, consumer protection, environment and health.

In addition, the **generic activities** of the programme aim to build up through RTD the knowledge base in identified areas of strategic importance for the future, in relation to chronic and degenerative diseases, genomes,

<sup>&</sup>lt;sup>9</sup> Excluding money going to the Euratom Framework Programme.

neurosciences, public health, persons with disabilities, and ethical and socioeconomic issues surrounding the life sciences. Support for research **infrastructures**, dissemination and exploitation of results, training and an increased role for SMEs, and entrepreneurship are also an integral part of the programme.

The following represents a short overview of the programme structure and contents. More detailed information can be found in the Workprogramme<sup>10</sup>.

#### **Six key actions**:

#### 1. Food, Nutrition and Health

To improve the health of European citizens by providing safe, healthy and varied food products. RTD priorities include the development of safe and flexible manufacturing processes and technologies, the detection and elimination of infectious and toxic agents throughout the food chain, and gaining a more profound understanding of the role of food in promoting and sustaining health.

# 2. Control of Infectious Diseases

To combat established, emerging or re-emerging infectious diseases, linked to old, new or mutated infectious agents in humans or animals. RTD priorities include vaccine development; strategies to identify and control infectious diseases; and aspects of public health and care delivery systems.

# 3. The "Cell Factory"

To help the Community's enterprises exploit the advances made in life sciences and technology, particularly in the fields of health, environment, agriculture, agro-industries and high value-added products. RTD priorities include developing innovative health-related processes and products; energy-efficient bioremediation and waste biotreatment processes; and new biological processes from cell factories.

#### 4. Environment and Health

To tackle environmentally related health issues. RTD priorities include diseases and allergies related to or influenced by the environment; risk assessment and risk management processes to reduce causes and harmful environmental health effects.

A copy of the workprogramme can be requested from the general contact point given in Appendix 4 or from LIFE@dg12.cec.be.

# 5. Sustainable Agriculture, Fisheries and Forestry, and Integrated Development of Rural Areas including Mountain Areas

To implement innovative approaches to production and exploitation and to improve the quality of life, RTD should concentrate on: *Competitiveness and its direct implications for employment in rural and coastal areas*, especially in light of the need to adapt to the evolution of the Common Agricultural and Fisheries Policies, to the evolving world trade situation and globalisation of the markets, to E.U. enlargement and to the limited availability of natural resources; *Reduction of the vulnerability of the relevant sectors* through the diversification of production, taking full advantage of Europe's proven technological skills to develop new products and services from natural resources; *Response to societal demands* for sound environmental practices, sustainable use of renewable resources and for products complying with consumer health and environmental requirements.

# 6. The Ageing Population and Disabilities

To promote an improved quality of life and to raise awareness of the factors contributing to healthy ageing and independence in old age. RTD priorities include age-related illnesses and health problems to prevent, treat or delay onset; determinants of healthy ageing and the mechanisms leading to disability; demographic and epidemiological research on ageing and disability trends; delaying the onset of disability and improving the social and physical environment of older persons; delivery and financing of health and social care services to older persons.

Research and Technological Development Activities of a Generic Nature

In contrast to the mission-oriented and problem-solving key actions, which place the emphasis on the linkage between discovery <u>and</u> exploitation, RTD activities of a generic nature aim to build up the knowledge base in chosen areas of strategic importance, and to explore related ethical and socioeconomic issues. Interaction between research laboratories and industry will be promoted. The networking of projects involving core centres and associated laboratories will be encouraged in order to create a critical mass, to promote interactions between basic and applied research and to ensure maximum transfer of knowledge to and from industry and undertakings.

The generic research activities are:

- 7. Chronic and Degenerative Diseases, Cancer, Diabetes, Cardiovascular Diseases and rare Diseases
- 8. Research into Genomes and Diseases of Genetic Origin
- 9. Neurosciences
- 10. Public-health and Health-services Research (including drug-related problems)

#### 11. Research relating to Persons with Disabilities

# 12. Biomedical Ethics and Bioethics in the context of Respect for Fundamental Human Values

#### 13. Socio-economic Aspects of Life Sciences and Technologies

# 14. Support for Research Infrastructures

Support for Research Infrastructures

This action will concentrate on creating **thematic networks** in the various fields of research as a means of stimulating infrastructure operators to cooperate and pool resources among themselves, as well as with users of the infrastructure. In addition, it will support **RTD projects,** on developments that could be of widespread significance for enhancing infrastructure provision, in the following fields: biological information resources; biological collections; pre-clinical research facilities; clinical research facilities; facilities for aquaculture and fishery research. It should be noted that this action will not provide support for the construction and operation of research infrastructures, or for the collection of data. The latter activities will be addressed through an open call.

#### 1.3.6. Specific SME Measures

In addition to their shared cost, collaborative research projects, such as R&D, demonstration or combined projects, the thematic programmes, in cooperation with the horizontal programme on "Promotion of innovation and encouragement of SME participation", offers specific measures to encourage participation of SMEs in the framework programme. These are:

# SME co-operative research projects (CRAFT)<sup>11</sup>

Co-operative Research Projects (CRAFT) is a specific measure for small and medium sized enterprises (SME). It allows SMEs with similar technical problems but insufficient research means to engage third parties for carrying out research on their behalf. The third parties, called "RTD Performers" can be Academic Institutions, Companies or Research Organisations.

And

**SME** exploratory awards

Detailed information on the specific conditions applying to CRAFT and Exploratory Awards (SME eligibility conditions, evaluation criteria, and special contractual conditions) should be obtained through the Information Package for "SME Specific Measures", to be obtained through the SME helpdesk (tel: +32-2-295-7175; FAX: +32-2-295-7110; e-mail:sme-helpdesk@dg12.cec.be; website: http://www.cordis.lu/sme)

Exploratory awards are granted to SMEs to cover part of the costs of preparing a Step 2 proposal, i.e. a proposal for a future shared cost action (e.g. CRAFT, research, demonstration or combined project).

# 1.4. Additional Programmes and Initiatives outside 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<sup>12</sup>. 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<sup>13</sup> 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 Euro 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<sup>14</sup>
- encouraging the growth of EASDAQ<sup>15</sup>

The Integrated Programme sets out the overall framework of Community Enterprise Policy and was adopted by the Commission on 3 June 1994 (COM (94) 207 final of 3.6.1994). The third Multi-annual SME programme (1997-2000) was adopted by Decision of the Council of 9 December 1996 (OJL 6 of 10 January 1997, page 25).

This Pact was the result of a report presented by the Commission to the Madrid European Council in 1995, calling for a more ambitious policy in favour of SMEs (CSE(95) 2087). The conclusions of the Madrid Council endorse the approach outlined in the report and the Commission was encouraged to put the main objectives behind the report, into practice as soon as possible. This four year programme was subsequently announced by the Commission as part of the 'European Confidence Pact on Employment'.

<sup>&</sup>lt;sup>14</sup> See Section 2.8.

• 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.<sup>16</sup>

Co-operation Networks (BC-Net and BRE Net)<sup>17</sup>: 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**<sup>18</sup>: 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.

Run by	DGXXIII
Funding	Euro 127 million
Contact	Mario Bellardinelli DGXXIII/B
Fax	+32-2-296-4332

#### 1.4.2. COST

European Co-operation in the Field of Scientific and Technological Research (COST), provides a flexible framework for co-ordinating nationally funded research projects. The framework encourages co-operation between industry, including SMEs, scientific institutes, universities and national

<sup>15</sup> See Section 2.5.1

<sup>&</sup>lt;sup>16</sup> Contact details for EICs and EICCS can be found in Section 3.

<sup>&</sup>lt;sup>17</sup> See Section 1.4.8.

<sup>&</sup>lt;sup>18</sup> Initiative to Encourage Partnership among Industries and/or services in Europe. See Section 1.4.9.

research centres. It works mainly in the area of non-competitive research and that of public utility.

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.

Run by	DGXII
Contact	COST Secretariat DGXII/B
Fax	+32-2-2964289
email	dominique.wislez@dg12.cec.be

#### 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.

The Medical and Biotechnology fields cover among others:

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

In order to qualify for EUREKA label, 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.

Umbrella initiatives act as focal points for analysis and generation of innovative project ideas.

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 NPC or Eureka database.
- Contact the main partner and begin negotiations for joining the project.
- Define participation, roles and formalise an agreement.
- Obtain the support of the involved NPCs.
- Notify the High Level Group (HLG) and update database.

The Secretariat is based in Brussels.

Contact	Mrs Ilona Vass
Address	EUREKA Secretariat, Rue Neerveld 107, B-1200 Brussels
Tel.	+32-2-7770950
Fax	+32-2-7707495

#### 1.4.4. Industrial Platforms

SMEs wanting to move products from bench trials to a market launch will find participation in a platform 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 industry relevant topics.

Table 1.4 lists the Industrial Platforms currently running<sup>19</sup>.

**Table 1.4 Industrial Platforms** 

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

### The Commission contact is:

Contact	Mr Stéphane Hogan
Address	DG XII-B
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 under the Fourth Framework Programme (1994-1998) 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

<sup>&</sup>lt;sup>19</sup> Appendix 6. provides a list of contacts for each Industrial Platform.

(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 second conference has taken place in Lyon on the 26<sup>th</sup> to the 29<sup>th</sup> of March 1999.

The Commission contact is:

Contact	Dr. P. de Taxis du Poët
Address	DG XII-B
Tel.	+32 2 295 40 43
Fax.	+32 2 299 18 60
Email:	Philippe.de-Taxis-du-Poet@dg12.cec.be

#### The EASD contact is:

Contact	Ms A-M Lamodière
Address	56, rue des Colonies, box 15, Brussels, B-1000
Tel.	+32 2 223 03 07
Fax.	+32 2 227 65 24
Email:	Easd@easd.com

# 1.4.6. European Biotechnology Node for Interaction with China (EBNIC)

EBNIC was set up with support from INCO-DC to facilitate collaboration between European and Chinese biotechnologists from both academia and industry. Its activities aim at increasing direct contact between scientists on both sides, and include the organisation of workshops, the extension of visits, the setting up of databases to help with the identification of potential collaborators, and the maintenance of a website (<a href="http://www.ebnic.org">http://www.ebnic.org</a>).

# 1.4.7. Promotion, Co-operation and Information for SMEs

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

A total of Euro 112.2 million was allocated to the action programme for Promotion, Co-operation and Information, 1993-1999<sup>20</sup>. 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.

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# 1.4.8. Co-operation Networks: BRE (Bureau de Rapprochement des Entreprises) and BC Net (Business Co-operation Network)

These networks are formed by public and private institutions and are present in EU and non-EU countries (BC-NET in 40 countries, BRE in 75). They help businesses develop transnational financial, commercial or technical partnerships with other SMEs.

SMEs looking for a partner, whether in their own region or country or internationally, can benefit from the services provided by members of the BC-NET or BRE networks.

Members to these networks give advice and distribute information on business co-operation (BRE) and provide value-added business consultancy services (BC-NET). These networks cover all sectors of economic activity and all possible types of co-operation or partnership.

The way in which an SME may find a partner is the following: after contact is established with a network member, the latter advises the SME on how to present its co-operation offer/search. The data is then introduced into a database to which members of both networks are connected on-line. Information provided by BRE correspondents is always of a non-confidential nature, whilst BC-NET members may work with confidential data.

Membership of BRE is free, whilst for BC-NET a €1,000 annual fee must be paid. Consequently, the information provided by BRE correspondents must be provided free, whilst BC-NET members can charge their clients for their services.

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<sup>&</sup>lt;sup>20</sup> 'The Multi-annual Programme of Community measures to intensify the priority areas and ensure the continuity and consolidation of policy for enterprise, in particular SMEs in the Community' (COM (93) 1801 23/04/93 p2)

For more information on the BC-NET/BRE networks, please contact DG XXIII of the European Commission:

Contact Name:	BRE Help Desk
Address	European Commission, Directorate General XXIII - B2 Rue de la Loi 200, - G-1 1/114, B-1049 Brussels
Tel.	+32 2 295 91 17
Fax	+32 2 296 42 71
Email:	bre-helpdesk@dg23.cec.be

Contact Name:	BC-NET Help Desk
Address	European Commission, Directorate General XXIII - B2 Rue de la Loi 200, - G-1 1/105, B-1049 Brussels
Tel.	+32 2 296 28 08
Fax	+32 2 296 25 72
Email:	Bcnet-helpdesk@dg23.cec.be

### 1.4.9. Europartenariat and Interprise

EUROPARTENARIAT: SMEs are able to attend business events held twice a year under this programme. These events 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. On average, around 2.000 SMEs participate per event. Biotechnology is often one of the sectors covered.

INTERPRISE: These events are based on the successful formula of the Europartenariat programme to back local, regional and national initiatives. Again the objective is to stimulate contacts between business managers and encourage co-operation between SMEs. At least three different Member States must be involved. The events, of which around 30 are organised per year, are of a relatively smaller size (100 - 150 SMEs). The event focuses on specific sectors, and a number of these include biotechnology.

A grant to support the costs of initiatives under Interprise may be obtained from the Commission, with a maximum of €60.000. For further information on the two partnership instruments above, please contact:

Address	European Commission, Directorate General XXIII - B2 Rue de la Loi 200, - G-1 1/005, B-1049 Brussels
Tel.	+32 2 296 50 03
Fax	+32 2 296 29 04

# 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<sup>21</sup> and a number of additional financial instruments including the new Cohesion Fund for the most disadvantaged member countries - Portugal, Greece, Ireland and Spain.

# 1.5.2. Accessing ERDF and ESF

Research and development projects in the field of biotechnology can get funding from the European Regional Development Fund (ERDF) and the European Social Fund (ESF). This is non reimbursable assistance channelled through development programmes drawn up in partnership between Member States and the European Commission. Therefore the available money is national and European at the same time.

Projects can only be financed in particular areas, called the "eligible areas". These are selected on the basis of various criteria which are applied throughout the EU territory.

People interested in getting ERDF and ESF assistance have to refer to national or regional authorities once the areas and the programmes have been decided. The Commission does not participate in the selection of the projects.

ERDF and ESF are two of the four EU Structural Funds, through which the EU aims to reduce economic and social imbalances between its regions.

A comprehensive list of fact sheets summarising each of the development programmes so far co-financed by the European Community can be found on the Website of Directorate General XVI of the European Commission. (<a href="http://inforegio.cec.eu.int">http://inforegio.cec.eu.int</a>). More information can be obtained directly from the Member States at the addresses indicated on this Website. Calls for

<sup>&</sup>lt;sup>21</sup> See Section 2.7.

proposals can be made in different ways in the media by the national authorities.

Given the largely location specific nature of these funds, specific programmes under ERDF/ESF are dealt with in Section 3 National Programmes<sup>22</sup>.

<sup>&</sup>lt;sup>22</sup> Community initiatives are dealt with in more detail under Section 3.- National Programmes.

#### 2. Section 2: Other Sources of Finance

#### 2.1. Introduction

A recent survey<sup>23</sup> 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'<sup>24</sup>, 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<sup>25</sup>'. This Communication constituted a continuation of the Commission's efforts to stimulate the creation and development of such markets in the EU.

The Commission's Innovation Programme (DGXIII/D) has created a website providing SMEs with guidance on different sources of finance for innovation, as well as lists of investors and financiers participating in the various community support schemes (http://www.cordis.lu/finance/home.html).

Survey conducted by the European Association for Bio Industries (Europa-Bio) to identify SME priorities and the major obstacles affecting their competitiveness.

<sup>&</sup>lt;sup>24</sup> COM(96) 589 final.

<sup>&</sup>lt;sup>25</sup> COM(97) 187 final.

# 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' <sup>26</sup>. 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 into 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 Capitalist 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<sup>27</sup>:

<sup>27</sup> Recommendations developed in discussion with EVCA and various Venture Capitalists.

<sup>&</sup>lt;sup>26</sup> European Venture Capital Association (EVCA).

- 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.

The Commission's Innovation Programme (DGXIII/D) has provided a guide on how to approach Venture Capital on the web (http://www.cordis.lu/finance/home.html).

Since 1984, DGXIII/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. DGXIII/D represents the European Commission on the board of the EVCA.

# 2.2.2. Finding a Venture Capitalist

Table 2.2 lists firms identified by the Venture Capitalist sector as particularly active investors in biotechnology<sup>28</sup>.

TABLE 2.2 LIST OF VENTURE CAPITALISTS IDENTIFIED AS HAVING A KEY INVOLVEMENT IN THE BIOTECHNOLOGY SECTOR

	Name of Venture Capitalist	Particularly good at investing in biotechnology firms	Have a long standing reputation of investing in biotechnology firms
1	31	✓	✓
2	Advent Ltd	✓	

<sup>&</sup>lt;sup>28</sup> SMEs interested in identifying potential Venture Capitalists should contact EVCA, Minervastraat 6, Box 6, B-1930 Zaventem, Belgium. (Tel. 32-2-720.60.10)

3	Advent Int	✓	✓
4	Alta Berkley		
5	Atlas Group	✓	✓
6	Danish Development Finance Group (invest mostly in Denmark)	<b>√</b>	✓
7	Electra	✓	
8	Euro Continental	✓	<b>✓</b>
9	Euro Ventures	✓	
10	Finovelec - France with US links - Medical Science Partners	<b>~</b>	
11	Sofinnova – France	✓	
12	Rothschild – Bioscience – UK	✓	✓
13	Shroeder Ventures	✓	✓
14	GIMV – Flemish	✓	✓
15	TVM - German also in Boston	✓	
16	Apax Partners – London ✓		
17	Technology Leaders – Wain – US	<b>→</b>	

# 2.3. Eurotech 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 (THTPs). The scheme operates through a network of 14 private Venture Capital funds<sup>29</sup>. Each fund has an investment capacity of at least 50 million Euro, 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. At present, the Network has an investment capacity of more than 2,4 billion Euro and has earmarked more than 230 million Euro to SMEs developing THTPs. SMEs interested in securing financing from members of the 'Eurotech Capital' Network should contact them directly.

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For a list of contacts see Appendix 9.

Name of Action	EUROTECH Capital
Run by:	DGII Financial Operations Service
Contact:	Joël Berger – European Co-ordinator, Luxembourg
Tel:	+352 4301- 36 246
Fax:	+352 4301- 36 439
Website:	http://europa.eu.int/comm/dg02/fos/etc200.htm

# 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	European Commission, DG XXIII
Contact	Unit C.2
Fax	+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 co-operation with the European Investment Fund. It is open to Venture Capitalists active in the EU and the Associated States<sup>30</sup> that are aiming to make early stage high-tech investment. The I-TEC network today<sup>31</sup> gathers 28 venture capital operators (expanding), which have collectively committed to invest more than 250 million Euro in such projects. The total investment capacity of these funds is 1.3 billion Euro.

<sup>&</sup>lt;sup>30</sup> Iceland, Israel, Liechtenstein, Norway.

Contact list of I-TEC operators is given in Appendix 10.

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 Euro 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, most of which invest in biotechnology, please visit the following website: <a href="http://www.cordis.lu/finance/home.html">http://www.cordis.lu/finance/home.html</a>, or 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
Email	Marc.Verlinden@lux.dg13.cec.be

# 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 XIII/D and DG XXIII) 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**

Contact Name:	Dominique Valschaerts
Tel:	+32 2 509 13 40
Contact Name:	Anne Vleminckx
Tel:	+32 2 509 13 88

#### **FRANKFURT**

Contact Name: Günter Femers		
Tel:	+49 69 21 01 34 70	
Contact Name:	Rainer Riess	
Tel:	+49 69 21 01 34 70	

#### **AMSTERDAM**

Contact Name:	Paul Arlman	
Tel:	+31 20 550 40 04	

#### 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 that are new businesses and can not 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 that 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 was authorised to commit ECU 75 million of its own funds between 1996 to 1998 to equity participation. 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 participation will normally represent between Euro 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 Euro 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.

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		
Address	43, Avenue J.F. Kennedy, L-2968 Luxembourg		

Tel	+ 352 42 6688/1
Fax	+352 42 6688 200

### 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 nonprofit-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 that can be used in association with national or Community grant aid. As part of this function it will support activities of SMEs. Further information on EIB loans is available at: <a href="http://www.eib.org/">http://www.eib.org/</a>

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 blocks of between Euro 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 that the Bank will make available via intermediaries. These intermediaries are banks, financial institutions or any financially sound agency that 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 SMEs under the Third Multi-annual Programme for SMEs

The Third Multi-annual Programme for SMEs forms part of the Integrated Programme for SMEs. 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 DGXXIII, 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 1	turther	ıntorma	tıon, p	lease	contact:
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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		
Email	Marc.Verlinden@lux.dg13.cec.be		

#### 2.10. 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.

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		
Email	Marc.Verlinden@lux.dg13.cec.be		

#### 3. 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<sup>32</sup>.

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<sup>33</sup>

<sup>32</sup> See Appendix 8 for a list of the relevant Trade Associations.

A list of National Authorities dealing specifically with SME policy is included in Appendix 7.

#### 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 whom 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 health care/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 Euro 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, provides Euro 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, cooperates 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

Programme:	General Programme			
Sponsor:	The Industrial Research Promotion Fund			
Scope:	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.			
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:	Relay Programme Science - Industry				
Sponsor:	The Austrian Science Foundation and the Industrial Research Promotion Fund				
Scope:	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 "observers" 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.				
Contact:	Herbert Wotke Chief Executive	Herbert Wotke Chief Industrial Research Tel: + 43 1 512 45 84 43			

Programme:	Young Researchers	Programme		
Sponsor:	The Industrial Research	The Industrial Research Promotion Fund		
Scope:	This programme sets out to support the involvement of young researchers in joint projects with companies. The objective behind the programme is to increase cooperation 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.			
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:	Timber Research Pr	ogramme		
Sponsor:	The Industrial Research	The Industrial Research Promotion Fund		
Scope:	programme the FFF a	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.		
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:	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	Industrial Research	Tel: + 43 1 512 45 84 43

Executive	Promotion Fund	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)		
Scope:	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.			
Contact:	Prof. Schmidt	Prof. Schmidt Austrian Science Fund Tel: + 43 1 505 67 40		
	Mrs Glueck		Tel: + 43 1 505 67 23	

Programme:	Joint Research Programmes (FSP) and Special Research Programmes (SFB)
Sponsor:	The Austrian Science Fund (FWF)

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

Programme:	Graduate Programme		
Sponsor:	The Austrian Science Fund (I	FWF)	
Scope:	field of inquiry. Special em students by establishing clo renowned scientists as well programme is designed spe research facilities. The FWF new trainees. Interim evalua	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.	
Contact:	Prof. Schmidt	Austrian Science Fund	Tel: + 43 1 505 67 40
	Mrs Glueck		Tel: + 43 1 505 67 23

Programme	Fellowship Programme			
Sponsor:	The Austrian Science Fund (FWF)			
Scope:	. , , , , ,	The FWF promotes young post-graduates within the context of three programmes:		
		1. <i>Drwin Schrödinger Fellowships</i> : 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:	Prof. Schmidt Austrian Science	e Fund Tel: + 43 1 505 67 40		
	Mrs Glueck	Tel: + 43 1 505 67 23		

Programme:	Contact Projects Science	Contact Projects Science – Industry		
Sponsor:	The Austrian Science Fund (I	FWF)		
Scope:	Research Promotion Fund research. Virtually all the F becoming Contact Projects. called "observer fee" per and the progress of the project. I	In 1995 the FWF introduced a new type of grant in collaboration with the Industresearch Promotion Fund (FFF), and was aimed at economically relevant by research. Virtually all the FWF funding categories can be considered with a view becoming Contact Projects. Contact Projects require interested companies to pay a called "observer fee" per annum. In return the company receives regular information the progress of the project. If a Contact Project Science - Industry scheme is success the company may submit a follow up project to the Industrial Research Promotion Fundament		
Contact:	Prof. Schmidt	Austrian Science Fund	Tel: + 43 1 505 67 40	

Mrs Glueck Tel: + 43 1 505 67 23
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Programme:	Programmes for Funding	g of Outstanding Research	ers
Sponsor:	The Austrian Science Fund (I	FWF)	
Scope:	programmes in 1995 aimed START Programme and the	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.	
	all disciplines, the oppo	aims to provide very highly q rtunity of planning their resea own working group on a long ty.	arch work. It enables such
	freedom and flexibility to	enstein Award is intended to researchers from all disciplines facilitate further exceptional pro-	who are undertaking cutting-
Contact:	Prof. Schmidt	Austrian Science Fund	Tel: + 43 1 505 67 40
	Mrs Glueck		Tel: + 43 1 505 67 23

Programme:	ERDF Programmes	ERDF Programmes	
Sponsor:	Development Fund (ER		ided by the European Regional Fund (ESF), and this Community order the programme.
Scope:	Community Initiative for	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 promote the use of	<ul> <li>to promote the use of advanced telematics in SMEs</li> <li>to facilitate the adoption of cleaner, more energy efficient production technologies in</li> </ul>	
	To achieve these objectives, resources will be made available for the following type actions:		available for the following types of
	<ul> <li>provision of expert a telematics and on cle</li> <li>pilot and demonstrated development of long</li> <li>the provision of the</li> </ul>	prior and demonstration projects (for example setting up of teleschages)	
	This programme forms p	part of the implementation of the	ne 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 711000/2213 Fax: + 43 222 71100/5403

Programme:	Viennese Innovation and Technology Subsidy
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Sponsor:	Viennese Economic Advancement Fund (VEAF)
Scope:	This programme caters for:
	<ul> <li>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.</li> </ul>
	<ul> <li>small and medium sized businesses and in particular the economic transfer of research results.</li> </ul>
	<ul> <li>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.</li> </ul>
	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 Wirstschaftservice Förderungsfonds, 2, Ebendorferstrasse, PO A-1082, Vienna, Austria  Tel: + 43 1 4000

Programme:	Innovation and Technology Grants
Sponsor:	WIBAG
Scope:	<ul> <li>The aim of this fund is to support internal regional strength through:</li> <li>subsidies for existing businesses.</li> <li>support for the establishment of new companies and in particular endogenous new start-ups or expansions.</li> <li>It is specifically targeting product innovation or process innovation.</li> <li>The subsidy area for this grant is Burgenland in the East of Austria.</li> <li>A minimum of 10% financial assistance and a maximum of 20% is available with this fund.</li> </ul>
Contact:	Wirtshaftservice, Burgenland, A.G - WIBAG, Dom Platz 4, PO - A-7000, Eisenstadt, Vienna, Austria  Tel: + 43 1 26 82 672 200  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:
	<ul> <li>the introduction of new production methods or new products.</li> </ul>
	<ul> <li>the essential improvement in production methods or products.</li> </ul>
	<ul> <li>Investments leading to a considerable increase in the degree of processing.</li> </ul>
	<ul> <li>projects aimed at fundamentally improving areas such as information supply, storage and transport within a company.</li> </ul>
	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 Genetechnology
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 1581 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				
Address:	Wiener Wirtschafsförderungsfonds, Ebendorferstrasse 2, A-1082 Wien, Österreich.				
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.				
Telephone:	+ 43 6 62 88 884 00				
Fax:	+ 43 6 62 88 885 82				
e-mail:	Mschernthanner@sbg.wk.or.at				
URL:	www.sbg.wk.or.at/euro/eic.html				
Contact:	Ms. Martina Schernthanner				

Name:	Euro Info Centre
Address:	Wirtschafskammer 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

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			

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		

Name:	National Environmental Protection Agency
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Telephone:	00 43 1 71102 389
Fax:	00 43 1 713 93 31
Contact:	Dr Sabenna Ecker

Name:	BIT - The Bureau for International Research and Technology Co-operation			
Address:	Wiedner Haupstrasse 76, Postfach 37, A-1042, Vienna,			
Telephone:	+ 43 1 5811 616/103			
Fax:	+ 43 1 5811 616/16			
Contact:	Dr Sabine Herlitschka			

Name:	Ministry for Consumer Protection		
Telephone:	+ 43 1 71172 4845		
Fax:	+ 43 1 713 79 52		
Contact:	Mr Michael Haas		

## 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 1995 was 1.59% of GNP.

In 1997 there were 52 biotechnology companies in the whole of the country, including a number of multi- nationals. Flanders has 18 companies while the Walloon region has 25 companies. 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. In 1997 the industrial R&D expenditure was approx. FEB 8621 million.

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 co-ordination 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:

(1) The Federal State

- (2) The Flemish Community
- (3) 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 Euro 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 Euro 33m with a further 55m in reserve for technical assessment and socioeconomic impact studies. In 1996 the government formed "Vlaams Interuniversitair 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 Euro 23m. Today the Flanders Interuniversity Institute for Biotechnology is an autonomous biotech research institute that combines nine university departments and five associated laboratories. More than 700 scientists conduct research programmes in the following areas: cancer, neurodegenerative and cardiovascular diseases, gene therapy, developmental biology, microbiology, protein structure, and plant biotechnology. In addition to strategic research VIB actively validates the research results through patent applications, industrial collaborations and spin-off companies. The first spin-off company, DevGen, was founded in DevGen analyses genes and their functions involved in various aliments. Its research is based on the model system C. elegans. One year later VIB established its second spin-off company, CropDesign, active in the agro biotech sector. VIB seeks a well-founded social dialogue through information, research and education. The government of Flanders grants VIB a yearly contribution of BEF 947 million.

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 (Euro 5m).

The Department of Education finances the centres of excellence through Concerted Actions 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 year 1997, 375

million FEB was provided to companies and 470 million FEB to universities in the Walloon region.

## 3.3.3. Programmes at a Glance - The Federal State

Programme:	Inter-university Poles of Attraction – Phase IV				
Sponsor:	The Federal Office for Scientific, Technical and Cultural Affairs (OSTC/ DWTC)				
Scope:	This programme aims at creating inter-university, high-level networks in fundamen research.				
	<ul> <li>The programme has three objectives:</li> <li>Providing advanced research teams with a critical mass of additional human and materia resources.</li> <li>Developing or creating collaboration between these teams and laboratories and othe universities active in the same field or in allied fields.</li> </ul>				
	<ul> <li>Coaching and integrating Belgian teams into European or international fundamental research.</li> <li>The duration of the programme is January 1997 to December 2001.</li> <li>This programme has an annual budget of BEF 325 million dedicated to the biology of the cell, with 53 teams belonging to 12 different networks in the neuroscience – visual perception.</li> </ul>				
Contact:	Mr Van Langenhove	OSTC/ DWTC	Tel: + 32 2 238 35 53		
			Email: vlan@belspo.be		

## The Flemish Community/Region

Programme:	Vlaams Actie programma Biotechnologie			
Sponsor:	The Flemish Institute for R&D			
Scope:	This regional programme began in 1990 and runs until 1998. It aims predominantly at promoting co-operation 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.			
Contact:	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	

Programme:	Industrial Research Fund in Flanders (FIOV)		
Sponsor:	Vlaams Institut voor Biotechno	ologie (VIB)	
Scope:	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.		
Contact:	Mr Rudy Dekeyser	VIB Rijvisschestraat 118 Box 1 B-9053, Belgium	Tel: + 32 9 244 66 11 Fax: + 32 9 244 66 10 Email: rudy.dekeyser@vib.be

Programme:	Research and Development Grant for the Flemish Region		
Sponsor:	The Flemish Institute for the Promotion of Scientific Research In Industry (IWT)		
Scope:	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 Bischoffsheimlaan 25 B-1000 Brussels Belgium	Tel: + 32 2 223 00 33 Fax: + 32 2 223 11 81

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		

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	<ul> <li>the support and implementation of innovative projects</li> <li>networking</li> <li>technical assistance.</li> </ul>	
Contact:	Ministerie van de Vlaamse Gemeenschap, Administratie Economie Markiesstraat 1 B-1000 Brussels  Tel: + 32 2 507 38 64 Fax: + 32 2 502 47 02	

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

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

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	DGTRE 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:	Responsable 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	DGTRE 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:	RIT Europe – Co-opération 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	DGTRE 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:	Sectorial Studies		
Sponsor:	Direction Générale des To aux entreprises – DGTRE	echnologies, de la Recherche et	de l'Energie, Division des Aides
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 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:	Etudes Technico-Economique
Sponsor:	Direction Générale des Technologies, de la Recherche et de l'Energie, Division des Aides aux entreprises – DGTRE

Scale:	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 place. The fund finances such 80% of such a study that would be completed by 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 St	External Feasibility Studies - Technical Support		
Sponsor:		Direction Générale des Technologies, de la Recherche et de l'Energie, Division des Aides aux entreprises – DGTRE		
Scope:	technical feasibility of a pr	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 - Innova	tive 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 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:	Technology Transfer - External Studies			
Sponsor:	Direction Générale des Technologies, de la Recherche et de l'Energie, Division des Aides aux entreprises – DGTRE			
Scope:	hoping to acquire a new tech	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:		
	<ul> <li>conducting a technological evaluation of the transfer including an analysis of the cost that the SME would incur as a result.</li> </ul>			
	conducting an evaluation of possible partners.			
	support with the actual transfer of technology.			
	♦ technical and judicial assistance.			
Contact:	Mr Marc Debruxelles	DGTRE 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 Develo	pment Finance	
Sponsor:	Direction Générale des T aux entreprises – DGTRE	echnologies, de la Recherche et	de l'Energie, Division des Aides
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	DGTRE 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 T aux entreprises – DGTRE	echnologies, de la Recherche et	de l'Energie, Division des Aides
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	DGTRE 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 Techraux entreprises – DGTRE	nologies, de la Recherche et c	le l'Energie, Division des Aides	
Scope:	advance loan through the A technical, commercial and file	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 1 ere Etage 5100 Jambes (Namur)	Tel: + 32 (0) 81 32 16 50 Fax: + 32 (0) 81 32 66 00	

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

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 Aquitech 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 1 ere Etage 5100 Jambes (Namur)	Tel: + 32 (0) 81 32 16 50 Fax: + 32 (0) 81 32 66 00

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

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

Programme:	International Partners
Sponsor:	Direction Générale des Technologies, de la Recherche et de l'Energie, Division des Aides aux entreprises – DGTRE

Scope:	proceeding with an econom another firm based within the 1. determination of an approximation of a proximation of a proximati	within the region of Hainaut of development or research proper European Union. It is divided in operiate project and searching for ect and final agreement with the part of the project and final agreement with the part of t	ogramme in collaboration with nto two stages:  an effective partner.
Contact:	Mr Marc Debruxelles	DGTRE 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:	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 (Antennede 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 Tournaisis, 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, Markgravestraat, 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	eic@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 Hornu, Rue St. Louise,82, B-7301 Hornu (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 Nijcerheid, 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
Web Site:	http://www.bba-bio.be
Contact:	Mr Pierre Crooy & Dr J Viseur

Name:	Service of Biosafety and Biotechnology (SBB)	
Address:	Institute of Public Health (IPH), Rue Juliette Wystmanstraat 14, B-1050 Brussels, Belgium	
Telephone:	ne: + 32 2 642 52 93	
Fax:	+ 322 642 52 92	
Web Page: <a href="http://biosafety.ihe.be">http://biosafety.ihe.be</a>		
Email:	helpsbb@sbb.ihe.be	
Contact:	Mr William Moens email:wmoens@sbb.ihe.be	Mr Didier Breyer email:dbreyer@sbb.ihe.be
	email.windens@sbb.ine.be	email.dbreyer@sbb.ine.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
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	Matieres Premieres et Produits Transformés
Address:	Manhattan Centre, 8 <sup>th</sup> 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 Dévelopement 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-Thérese 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		
Fax:	+ 32 9 244 66 10	+ 32 9 244 66 10	
Contact:	Mr Jo Bury - Director	Mr Rudy Dekeyser	

Name:	Vlaams Instituut voor de Bevordering van het Wetenschappeliijk
Address:	Bischoffsheimlaan 25, B-1000, Brussels

Telephone:	+ 32 2 223 00 33
Fax:	+ 32 2 223 11 81
Contact:	Ms Christine Claus

Name:	Administratie Milieu - Natur-, Land-en Waterbeheer (Animal)
Address:	Belliardstraat 14-18, B-1040 Brussels, Belgium
Telephone:	+ 32 2 550 20 19
Fax:	+ 32 2 550 20 15

#### 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. Euro 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. 3,130 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 5million 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 ECU3.6 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 Euro 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 Euro 2.1 million per year.

## 3.4.3. Programmes at a Glance

Programme:	Strategic Research Programmes		
Sponsor:	The National Danish Research Foundation		
Scope:	This Institute spends approximately Euro 11.4 million a year on biotechnology related projects. The focus from 1997 onwards includes plant biology and bio-informatics.		
Contact:	Lisbeth Hede	Lisbeth Hede Tel:+45 33 92 97 00	
	Bredgade 43	Fax:+45 33 32 35 01	
	DK-1260 Kobenhavn	Email:pg@forskraad.dk	
	Denmark		

Programme:	THOR	
Sponsor:	The Ministry of Research and Information Technology	
Scope:	This scheme is aimed at young scientists and encourages specialised research in a number of areas. It is to run from 1997 to the year 2000 and will provide Euro 11.4 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 adjusting the future course.	was reviewed in late 1997 with a view to
Contact:	Charlotte Kolln	Tel:+45 33 92 97 00

Programme:	Centre Contracts	
Sponsor:	"Erhvervsfremming Styrelsen" - The Danish A	gency for Development of Industry and Trade
Scope:	between three parties:enterprises, authorised institutes. The co-operation secures the direct participating organisations and helps to creat and the technological service and research in	operative research and development projects it technological service institutes and research at transfer of knowledge and skills between the te dialogue between the business community institutions. Grants are not made to individual 995 to improve public/private interplay. The ely ECU 1.7million.
Contact:	Danish Agency for Trade and Industry, Tagensvej, DK-2200 Copenhagen N	Tel:+ 45 43 50 40 00

Programme:	Biotechnology Programmes	
Sponsor:	The Research Councils	
Scope:	The areas of priority for the Danish Research are eligible for are highlighted below:  • Molecular and Cell Gerontology - 1996-19  • Genetics and proteomics - 1998-2002 (Eu  • Xenoestrogens and Reproduction - (Euro  • Bioresearch (glycochem & biology) – Euro  • Bioinformatics - 1998-2000 (Euro 1.5 milli	uro 27.8 million) 2.8 million) o 7 million)
Contact:	Mr Per Gronborg Bredgade 43 DK-1260 Kobenhavn Denmark	Tel:+45 33 92 97 00 Fax:+45 33 32 35 01 email:pg@forskraad.dk

Programme:	Erhvervs - Forsker - Danish Industrial F	PhD Fellowship Programme
Sponsor:	The Danish Agency for the Development of Tr	rade 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 Denmark	Tel: + 45 33 92 97 00 Fax: + 45 33 32 35 01 Email: pg@forskraad.dk

Programme:	ERDF Programme		
Sponsor:	The European Commission + National Authorit	ies	
Scope:	Community Initiative to promote economi	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 success 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 Assistance.		
	The Community finances 50% of the total in national authorities.	vestment, the remainder being provided by	
Contact:	Niels Bjerning Hansen Erhvervsfremme Styrelsen Sondergade 25 DK-8600 Silkeborg	Tel: + 45 87 20 40 60 Fax: + 45 87 20 40 77	

# 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
E-mail	http://www.fbid.dk

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

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Telephone:	+ 45 66 15 86 00
Fax:	+ 45 65 93 27 81
Contact:	Prof Peter Roepstorff

Name:	University of Copenhagen	
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	

Name:	Erhvervsfremme 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	

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Telephone:	+ 45 43 50 40 00
Fax:	+ 45 43 71 63 60
Email:	euro@dti.dk
Contact:	Mr Nils Thyssen

Name:	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	

Name:	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 2.9 % of GNP in 1998.

The number of companies active in biotechnology in Finland is between 70-80, 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 as well as biomaterials. 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 1998 there were approximately 180 academic research groups and 19 biotech graduate schools dedicated to biotechnology. Four centres of excellence related to biotech and molecular and cell biology are currently being given support. In December 1998, the Academy of Finland nominated 26 research groups Centres of Excellence for the years 2000-2005. Out of these, a total of 12 are related to biotechnology.

#### 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 1992-1998. In 1994 the Academy of Finland launched the Genome Research Programme to run until 2000. This programme has ECU 7m invested in 20 research projects during the first three years. A joint TEKES - Academy of Finland research programme on cell biology is running 1998-2000. Nationwide international evaluation of biotechnology and molecular biology research in Finland was carried out in 1997 conducted by the European Molecular Biology Organisation. According to the EMBO report, Finnish molecular biology is developing well and compares favourably with other large countries.

# 3.5.3. Programmes at a Glance

Programme:	New Generation Food Technology		
Sponsor	Technology Development Centre (TEKES)		
Scope:	The programme area covers new food processes, logistics, process control and		

	automation as well as	automation as well as aspects concerning food products and health.		
Funding:	ECU 20 million			
Contact:	Dr Mervi Sibakov	TEKES PO Box 69 00101 Helsinki	Tel: +358 10 521 5823 Fax: +358 10 521 5905	

Programme:	Malting and Brewing Technology Programme		
Scope:	at VTT Biotechnology a Biotechnology of the Un	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 University of Helsinki. The programme encompasses the total production process for beer.	
Contact:	Dr Mervi Sibakov	TEKES	Tel: +358 10 521 5823

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	Research Council for Natural Sciences and Engineering, PO Box 99, 00510 Helsinki, Finland	Tel: +358 9 7748 8233

# 3.5.4. Support Organisations/Contacts

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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.lkonen@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.ttlütot.fi	
Contact	Hannele Kuussi	

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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 Busienss 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	
Fax:	358 10 521 59 08	
Email	Marita.paasi@tekes.fi	
Contact:	Ms Marita Paasi	

#### 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 Euro 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 Euro 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 Euro 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 corrrespond to a biotechnological process deemed interesting within the framework of the Britta Programme.		
Contact:	Monsieur Jean-Luc Grosbois	Conseil Regional de Bretagne- Innovation DDE-Service de l'innovation 283 Avenue du Général Patton 35031 Rennes Cedex	Tel: + 33 2 99 27 10 10 Fax:+ 33 2 99 27 11 11

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	Tel: + 33 2 99 27 10 10 Fax:+ 33 2 99 27 11 11

Programme:	Support for the Transfer of Technology			
Sponsor:	Agence Nationale de la Valorisa	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	- Realisation of models		
	- Partner searching			
	- Costs of industrial property			
	- Acquisition cost			
	- Studies and assistance			
	- Cost of technological implementation			
Contact:	Francois Le Bihan ANVAR Pays de Loire 2 Rue Cornouaille 44000 Nantes Tel: + 33 2 40 93 97 98 Fax:+ 33 2 40 93 83 09	Joël Durif ANVAR Rhone-Alpes DRIRE 15 Rue des Colibris 38030 Grenoble Cedex 02 Tel:+ 33 4 76 69 34 41	André Rocca ANVAR Haute Normandie 65 Rue Orbe 76000 Rouen Tel: + 33 2 35 71 14 71 Fax: + 33 2 35 98 45 82	

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 Ile 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 DRIRE Basse-Normandie DRIRE Nord-Pas-de			
	146 rue Pierre Corneille	Résidence Hélitas	941 Rue Charles Bourseul, BP 838	
	69426 Lyon Cedex 03	27 Rue Saint-Ouen	559508 Douai Cedex	
	Tel:+ 33 1 4 78 61 52 00	14039 Caen Cedex	Tel:+ 33 3 27 93 22 22	
		Tel:+ 33 2 31 74 64 51		

Programme:	APTE - Aid for European Technological Partnership			
Sponsor:	Agence Nationale de Valorisation	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:			
	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 Technopole de Nancy-Brabois 1 allée de Saint-Cloud 54603 Villers-Les-Nancy Cedex Tel: + 33 2 99 38 45 45	Patrick Parayre ANVAR Bourgogne 12 Rue Jean Renaud 21000 Dijon Tel: + 33 3 80 30 71 50 Fax:+ 33 3 80 30 23 02	
		Fax:+ 33 2 99 38 56 51		

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 IIe 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 years existence.

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

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

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

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, inorder 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 Tournair 59555 Lille Cedex	Tel: + 33 3 28 82 75 23 Fax:+ 33 3 28 82 75 05

Programme:	Building of Centre for Technology Transfer	
Sponsor:	Conseil Géneral 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	Tel: + 33 3 20 63 57 42 Fax: + 33 3 20 63 57 34

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	Tel: + 33 3 20 63 57 42 Fax: + 33 3 20 63 57 34

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  Mme Gicquel	The DRIRE Haute-Normandie Department	Tel: + 33 2 99 27 12 95 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 uip to 50% of the expenses involved.		
Contact:	Conseil Regional D'Alsace (R&D) Mission Recherche de Développement- Economie 35 Avenue de la Paix BP 1006/F 67070 Strasbourg Cedex	Tel: + 33 1 03 88 15 68 67	

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 Cote D'Azur Service des Initiatives	Tel: + 33 4 91 57 50 57 Fax: + 33 4 91 57 51 51

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 Agence de Développement Economique de la Corse Auartier Saint-Joseph 19 Route de Sartene 20090 Ajaccio	Tel: + 33 4 95 23 77 00 Fax: + 33 4 95 20 56 72

Programme:	Support of Innovative	Programmes	
Sponsor:	Conseil Général de Haute-	Vienne	
Scope:	This programme aims at supporting the adjustment of new products and the introduction of new techniques into the manufacturing process and promotes:		
	- collaboration with specia		
	- the inclusion of real diver		
	- the signing of a licence ag	greement with a public laboratory	
Contact:	Madame Rubuyrol	Limoges Haute-Vienne	Tel: + 33 5 55 79 27 00
		Developpement 19 Bld Victor Hugo 87000 Limoges	Fax: + 33 5 55 77 60 71

Programme:	ERDF Programme	
	INTERREG II F/I	
Sponsor:	The European Commission + National and Regional Authorities	
Scope:	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 co-operation 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	Dipartmento per il Coordinamento delle Politiche Comunitarie Via del Tritone 142 I-00187 ROMA Tel: + 39 6 482 67 66

Programme:	Various ERDF Programmes
Sponsor:	The European Commission and National and Regional Authorities

In 1994 the European Commission adopted the single programming document (SPD) which Scope: 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 includs 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. DATAR Service Général aux Affaires Corses Contact: 1 Avenue Charles Floquet 9 Parc du Belvédere F-75343 Paris Cédex 07 Boîte Postale 229 F-20 179 Ajaccio CEDEX Tel: + 33 1 40 65 12 34 Tel: + 33 95 29 99 29 Fax: + 33 1 43 06 99 01 Fax: + 33 95 21 32 70

# 3.6.4. Support Organisations/Contacts

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Contact:	Prof P Printz

Name:	Ministère de l'Agriculture, de la Pêche et de l'Alimentation Sous-dir. Recherche, Innovation et Réglementation
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Contact:	M. Eric Schoonejans

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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	

Name:	French Associate Member Association Nationale de la Recherch	e Technique
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	Europe (ANRT)
Address:	16 Avenue Bugeaud, F-75116 Paris Cedex
Telephone:	+ 33 1 53 70 10 70
Fax:	+ 33 1 47 04 25 20

Name:	ANVAR (National Agency for the Promotion of Research)	
Address:	42 Rue Caumartin, F-75436 Paris Cédex 09	
Telephone:	+ 33 1 40 17 83 00 / 8549	
Fax:	+ 33 1 42 66 02 20	

### 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<sup>34</sup>

Programme:	Biotechnology 2000	
Sponsor:	Bundesministeruim für Bildung, Wissenschaft (BMBF) - German Ministery 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.	

<sup>34</sup> It is important to note that many Länder run their own programmes which are location specific ie an applicant may have to be headquartered in the Länder as well as planning the project there. There are also important differences between the Neues Länder and the older states of the FDR. These differences are clear in the Programme table.

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 2000. 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:	Bundesministerium für Bildung, Wissenschaft, Forschung und Technologie  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
Scope:	This Programme, covering both Objective 2 and 5b eligible areas in the Region, is designed to assist with the on going 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.
Funding:	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.

Contact:  Ministerium für Wirtschaft, Mittelstand und Technology und Verkehr des Landes Nordrh Westfalen Harold Str.	nein-
D-40213 Düsseldorf 4	

Programme:	Venture Capital Technology-Oriented Businesses (Hamburg)
Sponsor:	Wirtschaftsbehörde Hamburg
Scope:	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 then 26 employees, a turnover up to 10 million DM and working in technology.
Funding:	Financial help is given for appraisal costs and personnel costs, up to 70% in the first yesr, 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.
Contact:	Information is available at the Wirtschaftsbehörde Hamburg, Abt. Strukturförderung.

Programme:	TPW Technology Programme Economy
Sponsor:	Ministerium für Wirtschaft und Mittelstand, Technology, Nordrhein-Westfalen
Scope:	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.
Funding:	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.
Contact:	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.

Programme:	Modern Technology
Sponsor:	Ministerium für Wirtschaft, Technologie und Verkehr, Schleswig-Holstein
Scope:	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.
Funding:	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.
Contact:	Applications should be to the Technologi-Transfer-Zentrale, Schleswig-Holstein.

Programme:	Technology and Innovation Incentive
Sponsor:	Ministerium für Wirtschaft und Angelegenheiten, Mecklenburg-Vorpommern
Scope:	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.
Funding	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.
Contact:	Applications should be made on a printed form before the project has begun.

Programme:	SME-Credit 2.3 Technology
Sponsor:	Investitionsbank Nordrhein-Westfalen
Scope:	The scheme aims to increase the inovation 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 Rechar/Objective 2 Region has different conditions).
Funding	Loans of between DM 100,000-500,000 at the current rate of interest can be obtained for for project specific investment costs. Subsidised interest rates (between 2.5% and 5% below the capital-market rate) are possible depending upon the location.
Contact:	Applications should be made on a printed form through the SME's respective local bank.

Programme:	Incentives for SMEs (Technical consultancy)
Sponsor:	Rarionalisierungskuratorium der Dt. Wirtschaft, Bremen
Scope:	The purpose is to promote the innovative ability of SMEs by providing technical consultancy.
Funding	Grants up to DM 200 can be applied for, consisting of a maximum of five one hour consultancy sessions at DM 40 each.
Contact:	No printed forms are needed for applications to the Wirtschaft.

Programme:	FTP-Research & Technology
Sponsor:	Ministerium für Wirtschaft, Saarland
Scope:	Strengthening of efficiency and competitiveness, supporting structural changes, improvement of work and training situations are all primary aims of this scheme.
Funding	Grants for material costs, costs of external services, gross wages and salaries can be applied for for up to 400,000DM or 40%.
Contact:	Applications are to be made on a printed form to the Ministry.

Programme:	Technology Centres
Sponsor:	Investitionsbank des Landes Brandenburg
Scope:	The scheme aims to contribute to the restructuring of the Regional economic structure through the closing of technological gaps and the development of industrial areas by the setting up and development of technology/business start up centres as regional service and demonstration centres. It also provides for 'incubation' centres for technology oriented SMEs.
Funding	Grants of up to 75%, or a maximum of 330,000DM per year, can be applied for towards material and personnel costs, qualification measures for the centre's management personnel, individuals starting up technology oriented businesses, marketing expenses and consultancy costs.
Contact:	Applications are to be made on printed forms through the T. IN. A.

# 3.7.4. Support Organisations/Contacts

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

Name:	Deutsche Industrievereinigung Biotechnologie (DIB) – German Association of Biotechnology Industries
Address:	Karlstrasse 21, D-60329 Frankfurt am Main
Telephone:	+ 49 69 25 56 16 44
Fax:	+ 49 69 25 56 16 20
Contact:	Dr. Hans-Jürgen Klockner
E-mail	klockner@vci.de

Name:	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

Name:	DECHEMA 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

Name:	Informations Sekretariat Biotechnologie (ISB)
Address:	DECHEMA eV, Theodor-Heus-Allee 25, D-60486 Frankfurt
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
Fax:	+ 49 069 7564 201
Contact:	Dr Marris & Dr V Rosenbaum

Name:	Robert Koch Institute (RKI)
Address:	Postfach 65 02 80, D13302 Berlin
Telephone:	+ 49 030 4547-4
Fax:	+ 49 030 4547-2328

Name:	BMBF - German Ministery for Education, Science, Research and Technology
Address:	Referat Öffentlichkeitsarbeit, 53170 Bonn
Telephone:	+02 28 57 3061
Fax:	+02 28 57 2094
Contact:	Dr Heidenhof (Prject Group P1) or email: information@bmbf.bund400.de

Name:	Verband der Chemishchen Industrie e V.(VCI)
Address:	Abt. Wissenschaft und Forschung, Karlstrasse 21, 60329 Frankfurt
Telephone:	+69 25 56 16 44
Fax:	+69 25 56 16 20
Contact:	Dr Hans-Jürgen Klockner

Name:	Federal Ministry for Research and Technology
Telephone:	+49 228 57 36 69

Fax:	+4 9 228 57 36 05
Contact:	Dr Ekkehard Warmuth
Profile:	This contact point is for information on national and regional programmes for example the BioRegio Contest.

Name:	AnalytiCon AG
Address:	Gustav-Meyer-Allee 25, 13355 Berlin
Telephone:	+30 46 307 107
Fax:	+30 46 320 12
Contact:	Dr Lutz Müller-Kuhrt

Name:	Bayer AG
Address:	Geschäftsbereich Pharma - Biotechnologie, Friedrich-Ebert-Strasse 217
Telephone:	+49 202 36 24 27
Fax:	+49 202 36 75 24
Contact:	Prof Peter J W Stadler

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

Name:	Euro Info Centre, Zenit GmbH
Address:	Dohne 54, Postfach 10 22 64, D45468, Mulheim an der Ruhr
Telephone:	49 208 300 04 21
Fax:	49 208 300 04 29
Contact:	Ms Hannelore Kraft

Name:	Euro Info Centre, Deutscher Industrie - und Handelstag (DIHT)
Address:	Adenauerallee 148, Postfach 1446, D-53004, Bonn
Telephone:	49 228 104 621/22
Fax:	49 228 104 158
Contact:	Ms Ellen Oesterreich

Name:	Euro Info Centre, Industrie und Handelskammer für München und Oberbayern	
Address:	Max-Joseph Straße 2, D-80333, München	
Telephone:	49 89 511 62 09	

Fax:	49 89 511 62 90
Contact:	Mr Michele Fuhs

Name:	Euro Info Centre, NATI - Niedersächsische Agentur für Technologietransfer und Innovation
Address:	Vahrenwalder Straße 7, D-30165, Hannover
Telephone:	49 511 935 7121/2
Fax:	49 511 935 74 39
Contact:	Ms Christiane Fröchtling

Name:	Euro Info Centre, Europäisches Beratungs-Zentrum der Deutschen Wirtschaft
Address:	Gustav-Heinemann-Ufer 84-88, D-50968 Köln
Telephone:	49 221 37 08 621/623
Fax:	49 221 37 08 840
Contact:	Ms Jutta Zemke-Heyl

#### 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

Programme:	Research and Technology	
Sponsor:	The European Commission, Greek Authorities and the Private Sector	
Scope:	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 of a number of sub programmes which cover:  industrial research, technology transfer and innovation  improving and restructuring of research infrastructure  human resources  implementation
Contact:	The General Secretariat for Research and Technology Messogion 14 GR-115 10 Athens

Programme:	An SME Initiative		
Sponsor:	The European Commission, Greek Authorities and the Private Sector		
Scope:	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 modern 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.		
	Mr Pantelis Angelopoulos   Ministry of the Economy   Tel: + 30 333 23 61   Syntagma Square   Fax: + 30 333 23 67		
	GE-10180 Athens		

Programme:	EKVAN - Programme of Research Competitiveness	Consortia for Improving Industrial	
Sponsor:	The General Secretariat for Research and T	The General Secretariat for Research and Technology	
Scope:	strengthening the links between the various with the production sector through R&D projugroduction sector in the overall research eff	This programme focuses on national R&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&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&D activities (specifically in Northern Greece and the Aegean Islands).	
Contact:	The General Secretariat for Research and Technology Informatics Department	Tel:+301 77 14 162 77 10 693  Fax:+ 301 77 10 693  web page:http://www.gsrt.epmhs.gr	

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

# 3.8.4. Support Organisations/Contacts

Name:	The General Secretariat of Research and Technology of Greece		
Address:	Informatics Department, 14-18 Messogion Avenue, 1510 Athens		
Telephone:	+ 30 1 77 14 162 77 10 693		
Fax:	+ 30 1 77 10 6936		
Web Page:	http://www.gsrt.epmhs.gr		

Name:	The General Secretariat of Research and Technology of Greece			
Address:	National Documentation Centre, 14-18 Messogion Avenue, 1510 Athens			
Telephone:	+ 30 1 72 10 386 72 20 053			
Fax:	+301 72 46 824			
Contact Name:	Mr F Tsiboglou			

Name:	Hellenic Sugar Industry			
Address:	Department of Genetics and Breeding, 34 Mitropoleos Street, GR-546 23 Thessaloniki			
Telephone:	+ 301 31 79 86 10			
Fax:	+301 79 87 26, 22 82 21			
Contact Name	Dr George Karacis			

Name:	Benaki Phytopathological Institute	
Address:	8 Street Delta Str, GR-145 61 Kifissia, Attika	
Telephone:	+301 80 77 506 / 80 78 917	
Contact Name:	Mr Athanasios Alevizatos	

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

Name:	Euro Info Centre Eommex		
Address:	Hellenic Organisation of Small and Medium Sized Industries and Handicrafts, Aratou Street, 21, GR-26221 Patras		
Telephone:	+30 61 220248		
Fax:	+30 61 223496		
Contact Name	Mr Athanassious Katis		

Name:	Euro Info Centre
Address:	Piraeus Chamber of Commerce and Industry, Loudovicou 1-Pl.Odissou, GR-18531 Piraeus
Telephone:	+30 1 417 0529
Fax:	+30 1 417 4601
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
Fax:	+30 421 26394
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<sup>35</sup> 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

<sup>35</sup> Irish Gaelic for 'Development'.

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 ECU428.88million 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

The 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 Developi (Measure 1)	Industrial Development: Sub-Programme for R&D. Industry R&D Initiative (Measure 1)			
Sponsor:	European Commission	European Commission and Irish Government			
Scope:	R&D. Guidelines and s funding. Collaborative more large-scale, com	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 <b>EUREKA</b> initiative.			
Funding:	Up to 50% of costs	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	Noel McCarthy Forbairt Tel: + 353 1 837 0101			
	Barry O'Connell	Barry O'Connell   IDA Ireland   Tel: + 353 1 668 6633			
	Michael Leydon	Michael Leydon Shannon Development Tel: + 353 61 361 555			
	Jim Harrington	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 an industry co-operation and aim to develop the technological capabilities of companie 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	one year. R&D tasks eligible			
	Technology service, such as audits a	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 (M	Human Resource Development (Measure 3)			
Sponsor:	European Commission and Irish Governi	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:		<ul> <li>Postgraduate training in the research, planning and management of innovation</li> <li>Firms seriously committed to the planning and implementation of substantial changes</li> </ul>			
Contact:	Martin Lyes	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	Funding will be available for higher education-industry co-operative research projects			
Funding:	<ul> <li>Available in 1995:</li> <li>Basic Research Grants:</li> <li>Strategic Research Grants</li> <li>Applied Research Grants</li> <li>Research Scholarships.</li> <li>Funding in subsequent years will be of similar magnitude.</li> </ul>	<ul> <li>Basic Research Grants: <ul> <li>Strategic Research Grants</li> <li>Applied Research Grants</li> <li>Research Scholarships.</li> <li>Funding in subsequent years will be of</li> </ul> </li> <li>IR£1.5 million <ul> <li>IR£1.5 million</li> </ul> </li> <li>IR£1.5 million</li> <li>IR£1.5 million</li> </ul>			
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 Measure1.		
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		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	Feasibility Study Grants	
Sponsor:	Irish Government	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 Ronan Breslin	Regional Offices Forbairt	Tel: + 353 1 660 5544  Tel: + 353 1 837 0101

Programme	Research and Development	
Sponsor:	Irish Government	
Scope	Technical Support Services  Biotechnology Opportunities  Grants may be available to individuals, groups or companies based in Ireland towards the cost of feasbility studies on product development and market research	Contact: Bioresearch Ireland  Contact: The Information Desk at Forbairt
	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.	Contact: The Revenue Commissioners, Corporate Taxes Unit Dublin Castle Tel: + 353 1 679 2777
	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	Contact: The Revenue Commissioners, Corporate Taxes Unit Dublin Castle Tel: + 353 1 679 2777

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.	Contact: Forbairt Information Desk
	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£1million and the amount invested in eligible shares is subject to a IR£25,000 limit	Contact: The Revenue Commissioners, Corporate Taxes Unit, Dublin Castle Tel: + 353 1 679 2777

!	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: Contact:	
	Personnel Services	Forbairt Information Desk
	Consultancy Services	FAS Services to Business Section
	Recruitment and Training Services	Tel: + 353 1 668 5777
	Grants are available for:	Contact:
	Personnel	Forbairt Information Desk
	Training	Shannon Development
	Development	Tel: + 353 61 361 555
		FAS Services to Business Section

Programme:	Market Identification and Development	
Sponsor:	Irish Government	
Scope:	The following services are available:	Contact:
	Marketing Information and	The Client Service Desk
	Promotional Activities	Tel: + 353 1 206 6223
	Marketing Personnel	
	Market Development	
	Grants are available for:	Contact:
	Marketing Sales Development	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
Telephone:	+ 353 1 269 5011
Fax:	+ 353 1 269 5820

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 lascaigh Mhara (Irish Sea Fisheries Board)	
Address:	PO Box No 12, Crofton Road, Dun Laoghaire, Co Dublin	
Telephone:	+ 353 1 284 1544	
Fax:	+ 353 1 284 1123	
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@biores-irl.ie
Contact:	Man Dir: Dr Jim Ryan Mrkt Mngr: Mr Seamus O'Hara

Name:	DEVCO Ireland-State Agencies Development Co-Op Organisation - est 1975	
Address:	Marshalsea Court, 23 Merchants Quay, Dublin 8	
Telephone:	+ 353 1 661 3616	
Contact:	Ms B Howard	

Name:	Environmental Protection Agency
Address:	Ardcavan, Wexford
Telephone:	+ 353 53 47120
Fax:	+ 353 53 47119
Contact:	Mr L Mc Cumiskey

Name:	Euro Info Centre
Address:	Irish Trade Board/ An Bord Trachtala, Merion Hall, Strand Road, Sandy mount , Dublin 4.
Telephone:	+ 353 1 206 6000
Fax:	+ 353 1 206 6367

Contact:	Ms Margaret Hogan	
Contact.	Ms Margaret Hogan	

Name:	Euro Info Centre
Address:	Shannon Development, The Grannary, Michael Street, Limerick.
Telephone:	+ 353 61 410 777
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:	Forbairt - established 1994
Address:	Glasnevin, Dublin 9
Telephone:	+ 353 1 808 2000
Fax:	+ 353 1 808 2020
Email:	infodesk@forbairt.ie
Contact:	Mr Alan Dixon - Head of Corporate Communications

Name:	Health and Safety Authority - established 1989
Address:	10 Hogan Place, Dublin 2
Telephone:	+ 353 1 662 0400
Fax:	+ 353 1 662 0417
Contact:	Mr T Walsh

Name:	Health Research Board
Address:	73 Lower Baggot St, Dublin
Telephone:	+ 353 1 676 1176
Fax:	+ 353 1 661 1856
Email:	hrb@hrb.ie
Contact:	Dr J V O'Gorman - Chief Executive

Name:	IDA - Ireland
Address:	Wilton Park House, Wilton Place, Dublin 2
Telephone:	+ 353 1 603 4000
Fax:	+ 353 1 603 4040
Contact:	Mr K Mc Gowan
	Mr A Condon

Name:	Industry Research & Development - established 1992
Address:	Confederation House, 84-86 Lower Baggot Street, Dublin 2
Telephone:	+ 353 1 605 1608
Fax:	+ 353 1 661 1095
Contact:	Mr Richard Kavanagh MD

Ms Carole Meyers

Name:	Irish Business and Employers Confederation (IBEC)		
Address:	Confederation House, 84-86 Lower Baggot St, Dublin 2		
Telephone:	+ 353 1 6601011	+ 353 1 6601011	
Fax:	+ 353 1 660 1717	+ 353 1 660 1717	
Contact:	Mr Tony O'Brien - President		
	Mr T Barry and Mr T Kilduff - Vice Presidents		
	Mr John Dunne - Director General		

Name:	Irish Medicines Board - established 1996	
Address:	Earlsfort Centre, Earlsfort Terrace, Dublin 2	
Telephone:	+ 353 1 676 4971	
Fax:	+ 353 1 676 7836	
Contact:	Mr John J Kelly	

Name:	Teagasc - The Agriculture and Food Development Authority	
Address:	19 Sandymount Avenue, Ballsbridge, Dublin 4	
Telephone:	+ 353 1 668 8188	
Fax:	+ 353 1 668 8023	
Contact:	Dr Liam Downey	

Name:	Salmon Research Agency of Ireland Inc - established 1989	
Address:	Farran Laboratory, Newport, Co Mayo	
Telephone:	+ 353 98 41107/411 12	
Fax:	+ 353 98 47105	
Contact:	Dr K Whelan	

### **3.10.** Italy

### 3.10.1. A Brief Background to the Industry

Italy represents an excellent market for biotech products. However, the majority of them is/are imported. At a first glance, the number of biotechnology companies in Italy appears to have increased considerably, from 134 in 1989 to 240 in 1997, but a large part of this growth is due to distribution companies, representing 30% of the total in 1997.

The commitment of the Italian biotech industry to R&D is low. While Italian biotech turnover accounts for around 5% of the worldwide market, research investment is only about 1.3% of the corresponding worldwide bio-industrial effort. There has been an improvement in the relationships between industry and academia, so that collaboration links between biotech companies and academic researchers are now current practice. However, there is still a certain difficulty in focusing the research carried out by Universities and the National Research Council (CNR) institutes on industrial issues.

As far as professional training is concerned, various Universities recently launched undergraduate courses in biotechnology, thereby showing a sound will to keep pace with technology innovation. Moreover, the Italian Ministry of University and Research (MURST) completed a first experimental project aimed at training 54 industrial research experts/managers in some biotech application fields: a new three-year programme – linked to the National Research & Training Programme (PNR&F) for advanced biotechnology launched in November 1996 – should lead to the training of a further 50 research experts.

As to Science and Technology Parks, in the early Nineties a governmental initiative was approved and granted around 775 million Euro funding for the creation of such Parks in Southern Italy and in other industrially depressed areas. In the same period, the Italian Association of Science and Technology Parks was set up, acting in favour of the creation of new Parks and the exploitation of existing ones. All these ventures, along with the growing in awareness of the importance of these structures, stimulated the birth and development of S&T Parks, whose number today exceeds ten.

### 3.10.2. Current Actions and Programmes

In Italy, the available tools are basically provided by a National law (n° 46/1982) and by various EU initiatives. This National law provides for several ways of supporting research and other innovative activities undertaken by companies, i.e.:

funding – partly at facilitated rates of interest and partly non-return – granted to research projects autonomously submitted by companies

- the already mentioned PNR&Fs, concerning subjects considered of priority interest: they grant 100% funding for research and training projects whose results will become the property of the State, with the possibility of being sold to the companies
- financial contributions to cover up to 50% of costs incurred and which must not exceed 100000 Euro – to SMEs for research projects and services entrusted to labs recognised by the MURST
- funding of technology transfer and related training initiatives undertaken by SMEs, including those operating within S&T Parks.

Another government action is the funding of a 5-year biotechnology "Dedicated Project" (PF), carried out by the National Research Council (CNR) institutes: the PF currently running was launched in 1997 and is aimed towards the strengthening of basic research.

- 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

It should be noticed that the Italian bio-industry Association (ASSOBIOTEC° is very active in promoting and fostering the access of companies to these research and innovation-supporting tools. ASSOBIOTEC is and has been instrumental in agreeing on and checking the feasibility and industrial validity of the past and current PNR&Fs and CNR Dedicated Projects. Moreover, by appointment of the MURST, it is a focal point for the EU CRAFT-Life Sciences Programme.

# 3.10.3. Programmes at a Glance

Programme:	Funding Programmes	Funding Programmes		
Sponsor:	National Authorities	National Authorities		
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:	Mr. Leonardo Vingiani	Assobiotec Via Accademia 33 20131 Milano	Tel: + 39 2 26 81 03 06/ 26 81 Fax: + 39 2 26 81 04 05 Email: assobiotec@pn.itnet.it	

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	

Programme:	Financial Contributions to SMEs	Financial Contributions to SMEs		
Sponsor:	MURST			
Scope:	granted to SMEs for research projects and	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 MURST Ministero dell'Università e delle Ricerca Scientifica e Tecnologica (MURST) piazzale Kennedy 20 00144 Roma	MÜRST Ministero dell'Università e delle Ricerca Scientifica e Tecnologica (MURST) piazzale Kennedy 20 00144		

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:	Mr. Leonardo Vingiani	Assobiotec Via Academia 33 20131 Milano	Tel: + 39 2 26 81 03 06/ 26 81 Fax: + 39 2 26 81 04 05 Email: assobiotec@pn.itnet.it

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 Mezzorgiorno 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 Authoritie	The European Commission and National Authorities		
Scope:	This programme falls under the SME Community of SMEs, particularly in the South of the Country.	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 Direzione Generale della Produzione Industriale Via Molise, 2 I-00100 ROMA	Tel: + 39 6 47 05 20 22 Fax: + 39 6 47 44 04 8		

# 3.10.4. Support Organisations/Contacts

Name:	Assobiotec
Address:	Via Accademia 33, 20131 Milano
Telephone:	+ 39 2 268 10 306
Fax:	+ 39 2 268 10 405
Email:	Assobiotec@pn.itnet.it
Contact:	Mr. Leonardo Vingiani

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.sa Caterina Dolcetti

Name:	Facoltà di Medicina e Chirugia
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.mip.polimi.it
Contact:	Mr Angelo Gatto

Name:	ENEA/IRENE
Address:	via Don Fiammelli, I-40100 Bologna

Telephone:	+ 39 51 60 98 197
Fax:	+ 39 51 60 98 084
Email:	irene@risc990.bologna.enea.it
Contact:	Mr Massimo Gazzotti

Name:	Consorzio Pisa Ricerche/RECITAL
Address:	Piazza Alessandro D'Acona1, 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

Name:	Italian Associa	te Member	Agenzia	per	la	Promozione	della	Recerca
	Europea/APRE							

Address:	Via Flaminia 43, I-100196 Roma
Telephone:	+ 39 63 23 26 17
Fax:	+ 39 63 23 26 18
Email:	Apre@r6info.sede.enea.it
Contact:	Mrs Diassina Di Maggio

# NOTE : For a complete listing of Euro Info Centres, please contact DGXXIII Fax : + 32 2 2957335

Name:	Euro Info Centre
Address:	Asociazione Industriali della Provincia di Vicenza, Piazza Castello 3, I-36100 Vicenza
Telephone:	+ 39 44 42 32 580
Fax:	+ 39 44 42 32 686
Contact:	Mr Lorenzo Maggio

Name:	Euro Info Centre
Address:	Mondimpresa/Unioncamere Sicilia/Confindustria Sicilia, Via Dmerica Amari 11, I-90139, Palermo, Italia
Telephone:	+ 39 91 32 15 10
Fax:	+ 39 91 32 17 03
Contact:	Claudio Leone

# 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'Economie Bd Royal 19-21 L-2914 Luxembourg	Tel: + 352 478 41 38

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 L-2913 Luxembourg	Tel:+ 352 46 40 27

# 3.11.4. Support Organisations/Contacts

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
Telephone:	+ 352 4 78 55 90
Fax:	+ 352 4 22 44 58
Contact:	Mrs Backes-Lies

Name:	LUXINNOVATION
Address:	7 Rue Alcide de Gasperi, L-1615 Luxembourg-Kirchberg
Telephone:	+ 352 43 62 631
Fax:	+ 352 43 23 28
Email:	serge.pommerell@sitel.lu
Contact:	Mr Serge Pommerell

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

Name:	Euro Info Centre
Address:	Chambre de Commerce du Grand Duché de Luxembourg/FEDIL, Rue Alside de Gasper 7, BP1503, L-2981, Luxembourg
Telephone:	+352 42 39 355
Fax:	+352 43 83 26
Email:	eic@cc.lu
Contact:	Mlle Sabrina Sagramola

Name:	Euro Info Centre
Address:	Chambre des Métiers du Grand Duché de Luxembourg, Circuit de la Foire Int 2, BP 1604, L-1016
Telephone:	+352 42 67 671
Fax:	+352 42 67 787
Email:	daniele.menster@batel.lu
Contact:	Mlle Danièle Menster

#### 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

Programme:	TOK Scheme	
Sponsor	Senter	
Scope:	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.	
Funding:	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.	
Contact:	Mr van Terwisga Senter PO Box 30732 2500 GS The Hague	Tel: +31 70 361 0341/361 0319 Fax: +31 70 361 4430

Programme:	BTS - General Programme	
Sponsor	Senter	
Scope:	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.	
Funding:	Up to 37.5% of costs is subsidised	
Contact:	Mr van Terwisga Senter PO Box 30732 2500 GS The Hague	Tel: +31 70 361 0341/361 0319 Fax: +31 70 361 4430

Programme:	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. This programme ends in 1999.	
Funding:	Dfl 17 million governmental grant	
Contact:	Dr Pieter Bos Secretariat ABON Kluyver 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

Programme:	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. This programme ends in 1999 and is partially replaced by the STIGON Programme, sponsored by NOW as well. The contact person is Dr. W.W. Mart.	
Funding:	Budget of ECU 450,000	
Contact:	Mr Maesseu NWO Tel: +31 70 344 0640 Fax: +31 70	

Programme:	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

Programme:	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.	
Contact:	Drs. JW van der Kamp TNO Bureau for Biotechnology PO Box 360 3700 AJ Zeist	Tel: + 31 3069 44900/629 Fax: + 31 3069 44901 email: vanderKamp@voeding.tno.nl

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Fax:	+ 31 70 354 6643
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Name:	Nefyto (Dutch Agrochemical Industry Association)
Address:	PO Box 80523, 2508 GM DEN HAAG, The Netherlands
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Fax:	+ 31 70 354 9766
Contact:	Mrs MLC van Assen

Name:	NIZO (Netherlands Institute for Dairy Research)
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Telephone:	+ 31 318 659511
Fax:	+ 31 318 650400
Email:	info@nizo.nl
Contact:	Prof Dr JTM Wouters

Name:	NVZP (The Dutch Seed Trade Association)
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Fax:	+ 31 30 693 2951
Contact:	Ir AC van Elsen

Name:	Seminis Vegetable Seeds

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Fax:	+ 31 317 415634	
Email:	pmetz@svseeds.nl	
Contact:	Dr P. Metz	

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

Name:	VNCI (Dutch Chemical Association)	
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Fax:	+ 31 70 320 3903	
Contact:	Drs PF Noordervliet	

Name:	Ministry of Volkshuisvesting Ruimteliijke Ordening en Milieubeheer (VROM)
	(Allocation Spatial Planning and Environmental Management)
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Name:	Senter	
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Telephone:	+31 70 36 10 310	

Name:	Ministry of Economic Affairs	
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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

Programme:	PRAXIS XXI
Sponsor:	ICCTI - The Institute for International Co-operation in Science and Technology
Scope:	The main aim of this scheme is to strengthen the scientific and technological system's foundations by supplying R&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.

Contact: Mr Jorge Nasc	nto Tel: + 351 8 47 10 22
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Programme:	PRAXIS XXI - Industry
Sponsor:	ICCTI - The Institute for International Co-operation in Science and Technology
Scope:	The aim of the scheme within industry includes establishing:  - 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
	<ul> <li>Promotion of research programmes and projects within the area of advanced technologies to support the diversification and modernisation of industry.</li> </ul>
	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:
	<ul> <li>Training in advanced technologies for SME managers</li> <li>Facilities to improve SME access to finance and credit</li> <li>The creation of a Technical Information Centre for SMEs</li> <li>Grants for projects strengthening technological competence in SMEs by defining needs, providing technical support, transferring technology from science and technology institutes to SMEs.</li> <li>The Programme is due to run until 31 December 1999.</li> </ul>

Contact:	Mr Eng Luís Durao DGDR Rua Sao Huhao 63	Tel: + 351 1 881 40 00 Fax: + 351 1 888 11 11
	P-1010 Lisboa	

Programme:	ERDF Skills Base and Innovation	1
Sponsor:	The European Commission and Nation	al Authorities
Scope:	·	proved an operational programme to support research in Portugal, building on the results of the
	The Community finances 74.21% of to by the national, regional and local auth	stal investment, the remainder of which is provided orities and the private sector.
	The main scheme under this programm	ne 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.	
Contact:	Ministério da Educaçao Gestao do ProdepII Pr. De Alvalade 12 P-1700 Lisboa	Tel: + 351 1 847 24 70/6

# 3.13.4. Support Organisations/Contacts

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Fax:	+ 351 17 27 17 33
Email:	Jperdigoto@adi.pt
Contact:	Mr Joao Perdigoto

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Contact:	Pedro de Noronha Pissarra, B.Sc., Ph.D.

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### **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

Programme:	The RTD National Plan (1996-99)	The RTD National Plan (1996-99)	
Sponsor:	Ministerio de Educación y Cultura		
Scope:		This programme focuses particularly on the academic sector and public RTD organisations. It also involves some collaboration with companies.	
Contact:	Dolores Cobo Secretaría General del Plan Nacional de I+D (Dpto de Calidad de Vida) Comisíon Interministerial de Ciencia y Tecnologia	Tel: + 34 1 33 60 400	

Roasarío Pino 14	
E-28020 Madrid	

Programme:	The ATYCA Initiative (1997-99)	
Sponsor:	Ministerio de Industria y Energía	
Scope:		ompanies, particularly SMEs, for RTD work. specific technological areas for preferential
Contact:	Juan Carlos Malpaso Dirección General de Tecnología y Segurídad Industrial Ministerio de Industria y Energía Paseo de la Castellana 160 E-28071 Madrid	Tel: + 34 1 34 94 397 Tel: + 34 1 39 94 398

Programme:	The Industrial Technological Develop	ment - Global Grant
Sponsor:	The European Commission and National, Re	egional and Local Authorities
Scope:	Tecnológico Industrial (CDTI), with a view Spanish Regions whose development is technological capacity of the corporate serindustry.  The Community provides 30.3% of the fund will be reimbursable where a project is succeive reinvested.  The scheme consists of three sub-programm  Technology Projects - involving new prequirements, business assimilation technology outside Spain	oroducts and processes in line with market of innovative technologies, marketing of es information, transfer and promotion of
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 focuse 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 intagibles.  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 Indsutrial (IMPI) Paseo de la Castellana 141 E-28071 Madrid

Programme:	Technological R&D Infrastruct	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 Dpto de Economía y Turismo Diputación Foral de Guipuzcoa Plaza de Guipuzcoa s/n F-2004 San Sebastian	Tel: + 34 43 48 22 23	

Programme:	The National Programme of Biotechn	The National Programme of Biotechnology	
Sponsor:	Ministerio de Educación		
Scope:	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 biotechnical processes and the environment. It is directed at Public or private investigation centres, universities, associated scientific investigators and non-profit making organisations.		
Contact:	José M Martinez Zapater Plan Nacional de Biotecnología Comisión Interministerial de Ciencia y Tecnología Rosario Pino 14 E-28020 Madrid	Tel: + 34 1 33 60 479	

# 3.14.4. Support Organisations/Contacts

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Name:	Secretaria General de Medio Ambiente
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Contact:	Ms Eliza Barahona

Name:	Centro para el Dessarrollo Technológico Industrial
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Contact: Dr A Beltran	Contact:	Dr A Beltran
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Contact:	Mr José L Pino

#### 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.. There are now many venture capital companies (both public and private) which support biotech industry. There is a good mixture of large and small firms in the industry. The science parks in Lund, Uppsala and several other university towns are growing rapidly.

There have 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 Institutet at Stockholm is another. The Biomedical Centre at Uppsala and the Chemical Centre at Lund are two more. The Institute for Food and Biotechnology (SIK) fulfills a similar role.

### 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 several programmes in the area of cell factory, genome and nucleic acid research, therapy, plant and forest biotechnology and biology. Competence Centra is a programme run by the National Board for Industrial and Technical Development (NUTEK), which includes biotechnology.

# 3.15.3. Programmes at a Glance

Programme:	Pilot Programme			
Sponsor:	NUTEK (National Board f	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 S-117 86 Stockholm Sweden	Tel: + 46 8 681 9100 Fax: + 46 8 19 6826	

Programme:	Competence C	Competence Centre Programme		
Sponsor	NUTEK (Nationa	NUTEK (National Board for Industrial and Technical Development)		
Scope:	aim is to achieve by creating mu companies partic	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 S-117 86 Stockholm Sweden	Tel: + 46 8 681 9262  Fax: + 46 8 19 6826  email: Staffan.Hjorth@nutek.se	

Programme:	SME (1996-99)			
Sponsor	DG XVI	DG XVI		
Scope:	Community Initiative international markets to information and express risk capital, in Swed development for Spromotion of the understanding in the second sec	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 S-10333 Stockholm	Tel: + 46 8 405 1000 Fax: + 46 20 4586	

# 3.15.4. Support Organisations/Contacts

Name	NUTEK (National Board for Industrial and Technical Development)	
Address	S-11786 Stockholm, Sweden	
Telephone	+46 8 687 66 47	
Fax	+46 8 687 93 65	

Contact:	Dr Henrik Fridén

Name	NFR (Swedish Natural Science Research Council)	
Address	PO Box 7142, S-103 87, Stockholm, Sweden	
Telephone	+ 46 8 454 4252	
Fax	+ 46 8 454 4250	
Email	winnie.birberg@nfr.se	
Contact:	Dr Winnie Birberg	

Name	University of Umea
Address	Department of Microbiology, S-90187 Umea, Sweden
Telephone	+ 46 90 176751
Fax	+ 46 90 772630
Contact:	Prof Kerstin Straby

Name	Institute of Food and Biotechnology (SIK)	
Address	PO Box 5401, S-40229, Goteberg / IDEON, S-223 70 Lund	
Telephone	+46 18 18 86 07/ +46 46 16 8820	
Fax	+ +46 18 50 13 25+46 46 18 8765	
Contact:	Dr. Per Vretblad, Mr Magnus Glad	
Email	pv@sik.se mgd@sik.se	

Name	TFR (Swedish Research Council for Engineering Sciences)	
Address	Box 7136, S-103 87 Stockholm, Sweden	
Telephone	+ 46 8 454 4170	
Fax	+ 46 8 454 4180	
Email	info@trf.se	

Name	Euro Info Centre Nutek
Address	Lijeholmsvägen, 32, S-117 86, Stockholm
Telephone	46 868 195 00
Fax	46 874 440 45
Email	eic@nutek.se
Contact:	Ms Maria Olofsson

NameEuro Info Centre West Sweden, Trade and Industry Development Agency in<br/>GöteburgAddressNorra Hamngatan, 14, S-411 14, GöteburgTelephone46 316 124 18Fax46 316 124 01Emailingrid\_gunnarsson@westsweden.seContact:Mr Lars Ekberg

Name	Euro Info Centre Stockholm	
Address	Box 12712, Hantverkargatan 2F, S-112 94 Stockholm	
Telephone	46 878 580 50	
Fax	46 865 001 19	
Email	eic@euro_stockholm.se	
Contact:	Mr Christer Dahlberg	

### 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

Programme:	The LINK Scheme	
Sponsor	The different parts of this scheme have different sponsors. These are DTI, BBSRC, EPSRC, NERC, MRC and MAFF.	
Scope:	The LINK scheme aims to accelerate the exploitation of technology 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.  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:	
	<b>Biological Treatment of Soil and Water</b> (DTI, BBSRC, EPSRC, NERC, MAFF) 9m over five years	
	Cell Engineering (DTI, BBSRC, MRC, MAFF) £15m over five years.	

	Biochemical Engineering (DTI, BBSRC) £23m over eight years.		
	Applied Biocatalysis (DTI, BBSRC) £8m over five years.		
	Analytical Biotechnology (DTI, BBSRC)		
Funding:	See above		
Contact:	LINK Directorate	Bridge Place 88-89 Eccleston Square London SW1V 1PT Tel: +44 171 215 0771	

Programme:	Biotechnology Means Business (BMB)		
Sponsor	Department of Trade & Industry		
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	Biotechnology Exploitation Platform (BEP) Challenge	
	BEP aims to encourage the effect and facilitate their commercial biotechnology is eligible to apply credibility of the business plan, property management, the comwhich the government support w	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 ECU27 million.
Contact:	Local Government Office or local Business Link

Programme:	Foresight Challe	Foresight Challenge		
Sponsor	Department of Trac	Department of Trade & Industry		
Scope:	the quality of life. which best meet the Bidders are urged	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 partners private sector busin	hips must involve one member from the less.	science base and one from	
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 Lowla	SME Scottish Lowlands (1994-99)		
Sponsor	DG XVI, national and pr	ivate		
Scope:	and to contribute to the help SMEs in the region	economic development of Son to adapt to the requirements eness. The emphasis of the	E Community Initiative (1994-1999) cotland's Lowlands region. It aims to s of the single market and boost their e measures in the programme is on	
Funding:	remainder being met by	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 Victoria Quay Edinburgh EH6 6QQ	Tel: + 44 131 244 0736	

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 (	The Teaching Company Scheme (TCS)	
Sponsor	Department of Tra	ade & Industry	
Scope:	technological and Each TCS progra for two years on	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 London EC4A 4AS	Tel: +44 171 936 3556 Fax: +44 171 936 3531

Programme:	Postgraduate Tra	Postgraduate Training Partnerships (PTP)		
Sponsor:	Department of Trade	Department of Trade & Industry		
Scope:	An initiative jointly supported by DTI and Engineering and Physical Science Research Council (EPSRC) involving the annual recruitment into each 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 London SW1H 0ET	Tel: +44 171 215 3868 Fax: +44 171 215 3933	

# 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
Telephone:	+44 171 276 8187
Fax:	+44 171 276 8333

# 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		
Region	Address	Tel & Fax
Anglia	Block b, Government Buildings	Tel: +44 1223 462727
	Brooklands Avenue, Cambridge CB2 2DR	Fax: +44 1223 455652
East Midlands	Block 7, Chalfont Drive,	Tel: +44 115 9291191
	Nottingham NG8 3SN	Fax: +44 115 9294886
Northern	Eden Bridge House, Lowther Street,	Tel: +44 1228 23400
	Carlisle, Cumbria CA3 9DX	Fax: +44 1228 23400, ext. 468
North East	Government Buildings, Crosby Road,	Tel: +44 1609 773751
	Northallerton, North Yorkshire DL6 1AD	Fax: +44 1609 780 179
North Mercia	Berkeley Towers, Crewe, CW2 6PT	Tel: +44 1270 69211
		Fax: +44 1270 669494
South East	Block A, Government Buildings, Coley Park, Reading RG1 6DT	Tel: +44 118 958 1222
		Fax: +44 118 939 2399
South Mercia	Block C, Government Buildings, Whittington Road, Worcester, WT5 2LQ	Tel: +44 1905 763355
		Fax: +44 1905 763180
South West	Pydar House, Pydar Street, Truro, TR1	Tel: +44 1872 73191
	2XD	Fax: +44 1872 40509
Wessex	Burghill Road, Westbury-on-Trym, Bristol BS10 6NJ	Tel: +44 117 9591000
		Fax: +44 117 9505392

Name:	The Scottish Office Education and Industry Department
Address:	Meridian Court, Cadogen Street, Glasgow G2 6AT
Telephone:	+44 141 242 5577

Fax:	+44 141 242 5404
Email	heather.negus@so049.scotoff.gov.uk
Contact:	Heather Negus

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

Name:	Euro Info Centre Limited
Address:	Scottish Enterprise, Franborough House, 123 Bothwell Street, G2 7JP Glasgow
Telephone:	+ 44 141 2210999
Fax:	+ 44 141 2216539
Contact:	Mr Ian Traill

Name:	Scottish Enterprise Biotechnology Group
Address:	120 Bothwell Street, Glasgow G2 7JP
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Fax:	+44 141 228 2412
Email	john.bremner@so049.scotoff.gov.uk
Contact:	John Bremner

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

Name:	Wales Euro Info Centre
Address:	Welsh Development Agency, UWCC Guest Building, PO Box 430, CF1 3XT Cardiff
Telephone:	+ 44 1222 22 95 25
Fax:	+ 44 1222 22 97 40
Contact:	Mr. Brian Meredith

Name:	Welsh Development Agency
Address:	Technology Transfer Group, Principality House, The Friary, Cardiff CF1 4AE
Telephone:	+44 1222 828 734
Fax:	+44 1222 640 030

Contact:	Jennifer Clark

Name:	Medical Research Council (MRC)
Address:	Research Business Group, MRC, 20 Park Crescent, London S1N 4AL
Telephone:	+44 171 636 5422
Fax:	+44 171 436 6179
Email	rga.group@headoffice.mrc.ac.uk

Name:	Natural Environment Research Council (NERC)
Address:	Polaris House, North Star Avenue, Swindon, SW2 1EU
Telephone:	+44 1793 411500
Fax:	+44 1793 411 501
Email	webmaster@nerc.ac.uk

Name:	Biotechnology and Biological Sciences Research Council (BBSRC)
Address:	Polaris House, North Star Avenue, Swindon, SW2 1UH
Telephone:	+44 1793 413 200
Fax:	+44 1793 413 201
Contact	Dr D Yarrow

Name:	BioIndustry Association (BIA)
Address:	14/15 Belgrave Square, London SW1X 8PS
Telephone:	+44 171 565 7190
Fax:	+44 171 565 7191
Email	admin@bioindustry.org.uk
Contact:	Stewart Clode

Name:	Association of British Pharmaceutical Industry (ABPI)
Address:	12 Whitehall London SW1A 2DY
Telephone:	+44 171 930 3477
Fax:	+44 171 747 1411
Email	abpi@abpi.org.uk

## **Northern Ireland**

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

Name:	Euro Info Centre
Address:	Local Enterprise Development Unit (LEDU), LEDU House, Upper Galwally, BT8 4TB Belfast.
Telephone:	+ 44 1232 491031
Fax:	+ 441232 6911432
Contact:	Ms. Eleanor Butterwick

Name:	Centre for Innovation In Biotechnology - established in 1995
Address:	University of Ulster, Cromore Road, Coleraine BT52 1SA
Telephone:	+ 44 1265 324 501
Fax:	+ 44 1265 324 906
Email:	j.carmichael@ulst.ca.uk
Contact:	Dr Jeremy Carmichael

Name:	Environment and Heritage Service-Northern Ireland (EHS) - established 1996
Address:	Natural Heritage, Commonwealth House, 35 Castle Street, Belfast BT1 1GU
Telephone:	+ 44 1232 251 477
Fax:	+ 44 1232 546 660
Contact:	Mr RC Martin

Name:	Industrial Development Board
Address:	IDB House, 64 Chichester Street, Belfast BT1 4JX
Telephone:	+ 44 1232 233 233
Fax:	+ 44 1232 545 000
Contact:	Mr Bruce Robinson

Name:	Industrial Research and Technology Unit
Address:	Netherleigh, Massey Avenue, Belfast BT4 2JP
Telephone:	+ 44 1232 529 533
Fax:	+ 44 1232 529 548
Contact:	Ms Dorenda McKay Alan Boyd

Name:	LEDU - the Small Business Agency for Northern Ireland
Address:	Upper Galwally, Belfast, BT8 4TB
Telephone:	+ 44 1232 491 031

Fax:	+ 44 1232 691 432
Email	ledu@nics.gov.uk
Contact:	Ms Una Donnelly

#### 4. SECTION 4: APPENDICES

#### 4.1. Appendix 1: State of play of legislation in biotechnology

### A - Legislation in force

#### I - Horizontal legislation

- (1) Council Directive 90/219/EEC on the contained use of genetically modified micro-organisms (O.J.L 117 of 08.05.1990, p1), as amended by Council Directive 98/81/EEC (O.J.L 330 of 05.12.1998, p.13).
- (2) Council Directive 90/220/EEC on the deliberate release into the environment of genetically modified organisms (O.J.L 117 of 08.05.1990, p15), as amended by Commission Directive 97/35, which adapts this Directive to technical progress for the second time (OJL 189/72 of 27.06.97).
- (3) Council Directive 90/679 on the protection of workers from the risks related to exposure to biological agents at work (O.J.L 374 of 31.12.1990, p1); as amended by Council Directive 93/88/EEC (O.J.L 268 of 29.10.1993, p7), as amended by Commission Directive 95/30/EEC (OJL 155 of 06.07.95, p41).
- (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**

- (1) Council Directive 93/114/EEC of 14 December 1993 amending Directive 70/524/EEC concerning the additives in feedingstuffs (O.J.L 334 of 31.12.93 p.24).
- (2) Commission Directive 94/40/EC of 22 July 1994 amending Council Directive 87/153/EEC fixing guidelines for the assessment of additives in animal production (O.J.L 208 of 11.08.94 p15).
- (3) Council Regulation 2309/93/EEC of 22 July 1993 laying down Community procedures for the authorisation and supervision of medicinal products for human and veterinary use and establishing a European Agency for the Evaluation of Medicinal Products (O.J.L 214 of 24.08.1993, p.1).

- (4) Regulation 258/97 of the European Parliament and of the Council of 27 January 1997 concerning novel foods and novel food ingredients (O.J.L 043 of 14.02.1997 p.1).
- (5) Regulation 2232/96 of the European Parliament and of the Council of 28 October 1996 laying down a Community procedure for flavoring substances used or intended for use in or on foodstuffs (O.J.L 299/1 of 23.11.96).
- (6) Council Directive 98/95/EEC amending Directives 66/400/EEC, 66/401/EEC, 66/402/EEC, 66/403/EEC, 69/208/EEC, 70/457/EEC and 70/458/EEC on the marketing of beet seed, fodder plant seed, cereal seed, seed potatoes, seed of oil and fibre plants and vegetable seed and on the common catalogue of varieties of agricultural plant species (O.J.L 25 of 01.02.1999 p.).

#### **III - Intellectual property**

- (1) Council Regulation 2100/94/EEC of 27 July 1994 on Community Plant Variety Rights (O.J.L 227 of 01.09.1994 p.1).
- (2) Directive 98/44/EEC of the European Parliament and of the Council of 6 July 1998 on the legal protection of biotechnological inventions (O.J.L 213, 30/07/1998, p13-21).

#### **IV - Other Acts**

Council Regulation (EC) n° 1139/98 of 26 May 1998 concerning the compulsory indication on the labeling 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

Proposal (presented by the Commission) for a Directive of the European Parliament and of the Council amending Council Directive 90/220/EEC on the deliberate release into the environment of genetically modified organisms - COM (98) 85 final of 23.02.1998.

## **C – Other relevant texts:**

Commission recommendation of 29 July 1997 concerning the scientific aspects and the presentation of information necessary to support applications for the placing on the market of novel foods and novel food ingredients and the preparation of initial assessment reports under regulation (EC)  $N^{\circ}$  258/97 of the European Parliament and of the Council.

OJL 253 of 16 September 1997.

# 4.2. Appendix 2: National EU and Regulatory Authorities

#### Austria

Organisation:	Bundesministerium Für Gesundheit
Contact Name:	Dr Gabriele Satzinger
Address:	ABT.III/2, Radetzkystrasse 2, A-1030 Vienna
Telephone:	+ 43 1 31 71 17 48 26
Fax:	+ 43 1 31 71 37 952

Organisation:	Federal Environmental Agency
Contact Name:	Mr Helmut Gaugitsch
Address:	Umweltbundesamt, Spittelauer Laende 5, A-1090 Vienna
Telephone:	+ 43 1 31 30 45 66
Fax:	+ 43 1 31 30 44 00

Organisation:	Bundesstaaliche Anstalt für experim-pharmakologische und Balneologische Untersuchungen
Address:	Wahringer Strasse 13a, A-Wien
Fax:	+ 43 17 14 92 22

Organisation:	Bundesministerium für Arbeit und Soziales
Contact Name:	Alice Schmatzberger
Address:	Praterstr.31, A-1020 Vienna
Telephone:	+ 43 1 71 10 06 164
Fax:	+ 43 1 71 10 02 190

## Belgium

Organisation:	Institute of Hygiene and Epidemiology Biosafety RDNA and Biotech
Contact Name:	Dr William Moens
Address:	J Wystmanstraat 14, B-1050 Brussels
Telephone:	+ 32 2/6 42 55 12
Fax:	+ 32 2/6 42 52 92

Organisation:	Ministère de la Santé Publique et de l'Environnement Inspection
	Générale de la Pharmacie, Secrétariat de la Commission de

	Médicaments
Address:	Cité Administrative de l'Etat, Quartier Vésale, B-1010 Brussels
Telephone:	+ 32 2 210 48 96
Fax:	+ 32 2 210 48 80

Organisation:	Ministère de l'Agriculture
Contact Name:	Dr Eric Liegeois
Address:	Manhattan Centre 9eme Etage, Avenue Boulevard 21, B-1210
Telephone:	+ 32 2 208 32 11
Fax:	+ 32 2 206 72 11

Organisation:	Ministère de l'Emploi et du Travail
Contact Name:	Jozef Costermans
Address:	51 rue Belliard, B-1040 Brussels
Telephone:	+ 32 2 233 46 02
Fax:	+ 32 2 233 44 88

Organisation:	Institut Bruxellois de Gestion et de l'Environment - Brussels - Capital Region
Contact Name:	Mr D Robin
Address:	Gulledele 100, B-1200 Brussels
Telephone:	+32 2 5 38 99 22
Fax:	+32 2 538 69 46

Organisation:	Aminal – Flemish Region
Contact Name:	Mr G Saelemakers
Address:	Belliardstraat 14-18, B-1040 Brussels
Telephone:	+ 32 25 07 67 02
Fax:	+ 32 25 07 67 05

Organisation:	DGRNE-DPP - Wallonian Region
Contact Name:	Dr L Nick
Address:	Avenue de Prince de Liège 15, B-5100 Namur
Telephone:	+ 32 81 32 57 68
Fax:	+ 32 81 32 59 82

## Denmark

Organisation:	Working Environment Service
Contact Names:	Anders Christensen/Susan Cowan
Address:	Landskronagade 33, DK-2100 Copenhagen
Telephone:	+ 45 39 15 20 00
Fax:	+ 45 39 15 25 60

Organisation:	Danish Environmental Protection Agency, Biotechnology
Contact Name:	Mr Albert S Welinder
Address:	Strandgade 29, DK-1410 Copenhagen K
Telephone:	+ 45 32 66 01 011
Fax:	+ 45 32 66 04 79

Organisation:	Sundhedsstyrelsen, Laegemiddelafdelingen
Address:	Frederickssundsvej 387, DK-2700 Bronshoj
Telephone:	+ 45 44 88 91 11
Fax:	+ 45 44 94 02 37

Organisation:	Danish Environmental Protection Agency, Biotechnology
Contact Name:	Ms Inge-Marie Lorenzen
Address:	Strandgade 29, DK-1401 Copenhagen K

## **Finland**

Organisation:	National Agency for Medicines
Address:	Marketing Authorisations, Mannerheimintie 166, PO Box 55, FIN-00301 Helsinki
Telephone:	+ 358 047441
Fax:	+ 358 04744525

Organisation:	Ministry of Environment
Contact Name:	Ms Tuija Talsi
Address:	PO Box 3 99, SF-00121 Helsinki
Telephone:	+ 358 01 99 11
Fax:	+ 358 1 99 14 99

Organisation:	Ministry of Social Affairs and Health
Contact Names:	Heikki Loppi/Matti Lamberg
Address:	PB 197, FI-00531 Helsinki
Telephone:	+ 358 9 160 4342
Fax:	+ 358 9 160 9862

Organisation:	Ministry of Labour
Contact Names:	Asko Aalto/Ilona Valtanen
Address:	Box 356, FI-33101 Tampere
Telephone:	+ 358 3 2608486

Organisation:	Sosiaali-ja Terveysministeritö
Contact Name:	Ms Hannele Leiwo
Address:	Geenitekniikan Lautakunta Pl 197, Siltasaarenkatu 18, 9.Krs, SF-00531 Helsinki

## France

Organisation:	Agence du Médicament
Address:	143-147 Boulevard Anatole France, F-93285 Saint-Denis Cedex
Telephone:	+ 33 1 48 13 20 00
Fax:	+ 33 1 48 24 75/48 13 20 90
	Mutual recognition and centralised procedures
Telephone:	+ 33 1 48 13 21 01
Fax:	+ 33 1 48 13 24 96
	Regulatory affairs and national applications
Telephone:	+ 33 1 48 13 21 57
Fax:	+ 33 1 48 13 24 75

Organisation:	Ministère de L'Agriculture et de la Reche
Contact Name:	M. Eric Schoonejans
Address:	251, Rue de Vaugirard, F-75732, Paris Cedex.
Telephone:	+ 33 1/49 55 58 81
Fax:	+ 33 1 49 55 59 48

Organisation:	Ministère de L'Environnement-Deppr, Agriculture-Agro-Alimentaire
Contact Name:	M. Hubert Calamy

Address:	Avenue de Segur 20, F-75302 Paris 07 SP
Telephone:	+ 33 1 42 19 14 59
Fax:	+ 33 1/42 19 14 64

Organisation:	INRS
Contact Names:	Annie Leprince/Dominique Abiteboul
Address:	30 rue Olivier Noyer, F-75680 Paris Cedex 14
Telephone:	+ 33 1 40 44 30 60
Fax:	+ 33 1 40 44 24 12

Organisation:	Ministère Emploi et Solidarité
Contact Name:	M Hervié Janiaut
Address:	20 bis rue d'Estrées, DRT/CT4, F-75007 Paris 07
Telephone:	+ 33 1 44 38 26 69

# Germany

Organisation:	Robert Koch Institutes des Bundesgesundheitsamtes Fachbereich Genetick, Gentechnik – Main Competent Authority
Contact Name:	Dr Hans-Joerg Buhk
Address:	Postach 34, D-13161 Berlin
Telephone:	+ 49 30 45 47 30 00
Fax:	+ 49 30 45 47 30 60

Organisation:	Biologische Bundesanstalt – Co-responsible Authorities
Contact Name:	Dr Joachim Schiemann
Address:	Messeweg 11/12, D-38104 Braunschweig
Telephone:	+ 49 53 12 99 38 16
Fax:	+ 49 53 12 99 30 13

Organisation:	Umweltbundesamt Einvernehmensstelle Gentechnik
Contact Name:	Ms Ingrid Noeh
Address:	Postfach 33 00 22, D-14191 Berlin
Telephone:	+ 49 30 89 03 32 50
Fax:	+ 49 30 89 03 33 80

Organisation:	Bundesforschungsanstalt fuer Virsukarnkheiten der Tiere
Address:	Paul-Ehrlich-Str 28, D-7400 Tuebingen
Telephone:	+ 49 70 71 96 70
Fax:	+ 49 70 71 97 73 03

Organisation:	Bundesamt für Sera und Impfstoffe
Address:	Paul-Ehrlich-Institut, Paul-Ehrlichstrasse 51-29, D-6225 Langen
Telephone:	+ 49 6103 770
Fax:	+ 49 6103 77 123

Organisation:	Bundesanstalt für Arbeitsschutz und Arbeitsmedizin
Contact Name:	Rüdiger Pipke
Address:	Postfach 170202, D-44061 Dortmund
Telephone:	+ 49 231 9071 292
Fax:	+ 49 231 9071 454

Organisation:	Bundesministerium für Arbeit und Sozialordnung Gefahrstoffe, Chemikaliensicherheit, Bio- und Gentenchnik Dienstlich
Contact Name:	Dr Astrid Smola
Address:	Am Burgweiher 56, D-53123 Bonn
Telephone:	+ 49 228 527 25 83
Fax:	+ 49 228 527 29 58

Organisation:	Bundesinstitut für Arzneimittel und Medizinprodukte (For Dossier)
Address:	Genthiner Strasse 38, D-10785 Berlin
Address:	Seestrasse 10, D-13353 Berlin (Subsequent correspondence)
Telephone:	+ 49 30 4502 0, ext 1478/1449
Fax:	+ 49 30 4502 1207

Organisation:	BDP: (Ass of German Plant Breeders)
Address:	Kaufinannstr. 71-73, 53115 Bonn
Telephone:	+ 49 228 98 581-22
Fax:	+49 228 69 26 02

Organisation:	EOF (National Drug Organisation)
Address:	Messogion Avenue 284, Cholargos 15562, Athens
Telephone:	+ 30 1 6545193/6547004
Fax:	+ 30 1 654 55 35/654 70 04/654 72 02

Organisation:	University of Athens Medical Schools
Contact Name:	Ms Evangelia Kaklamani
Address:	Anaperon Pelemou Street, GR-11521 Athens
Telephone:	+ 301 77 94 731
Fax:	+ 301 72 35 010

Organisation:	Ministry of the Environment
Contact Name:	Mr George Alvanopoulos
Address:	36 Trikalon Street, GR-11526 Athens, Ampelokipi

## Ireland

Organisation:	Irish Medicines Board
Address:	Charles Lucas House, 63-64 Adelaide Road, Dublin 2
Telephone:	+ 353 1 676 4971/7
Fax:	+ 353 1 676 7836

Organisation:	Health and Safety Authority
Contact Name:	Mr Dan Murphy
Address:	10 Hogan Place, Dublin - IRL
Telephone:	+ 353 1 662 0400
Fax:	+ 353 1 662 0411

Organisation:	Department of Environment
Contact Name:	Mr Owen Ryan
Address:	Room 227, Custom House, Dublin 1, IRL
Telephone:	+ 353 1 879 33 77
Fax:	+ 353 1 874 27 10

Organisation:	The Environmental Protection Agency
---------------	-------------------------------------

Contact Name:	Mr Gerry Carty
Address:	Ardcavan, Co Wexford, IRL
Telephone:	+ 353 53/4 71 20
Fax:	+ 353 53/4 71 19

Organisation:	The Environmental Protection Agency Headquarters
Contact Name:	Dr Thomas McLoughlin
Address:	Ardcavan, Co Wexford, IRL

## Italy

Organisation:	Ministerio della Sanità, Direziona Generale Savizio Farmaceutico
Address:	Viale della Civilità Romana 7, 1-00144 Rome EUR
Telephone:	+ 39 6 59 94 38 93
Fax:	+ 39 6 59 94 31 74

Organisation:	Ministerio Della Sanità
Contact Name:	Dr Luigi Binetti
Address:	Via Sierra Nevada 60, I-00144 Rome
Telephone:	+ 39 659 94 42 09
Fax:	+ 39 659 94 42 49

Organisation:	Institute Superior di Sanità
Contact Name:	Graziella Orefici
Address:	Via Regina Elene 299, I-00161 Rome
Telephone:	+ 39 6 4990 2333
Fax:	+ 39 6 493 87 112 or 39 6 4990 2934

Organisation:	Ministerio della Sanità
Contact Name:	Dr Giuseppe Battaglino
Address:	Via Sierra Nevada 60, I-00144 Rome

Organisation:	Ministère de la Santé, Division de la Pharamcie et des Médicaments
Contact:	Mrs Backes-Lies
Address:	Rue CM Spoo 10, L-2546 Luxembourg
Telephone:	+ 352 478 55 90
Fax:	+ 352 422 44 58
Telex:	2546 SANTE LU

Organisation:	Inspection du Travail et des Mines
Contact:	Mr Paul Weber
Address:	26 rue Zithe, L-2010 Luxembourg
Telephone:	+ 352 47 86 154
Fax:	+ 352 49 14 47

## Netherlands

Organisation:	College ter beoordeling van geneesmiddelen (Meidinces Evaluation Board)
Address:	Postbus 5811, Sir Winston Churchillaan 362, NL-2280 HV Rijswijk
Telephone:	+ 31 70 340 7152
Fax:	+ 31 70 340 5155

Organisation:	Ministry of Social Affairs and Employment, Directorate Working Conditions
Contact:	Ton MTE Vermeula
Address:	Anna van Hannoverstraat 4, PO Box 90801, NL-2509 LV The Hague
Telephone:	+ 31 70 333 5280
Fax:	+ 31 70 333 4026

Organisation:	VROM (Ministry of Allocation, Spacial Planning and Environmental Management)
Address:	PO Box 20951, 2500 BZ Den Haag
Telephone:	+31 70 339 48 93
Fax:	+31 70 339 48 93

Organisation:	NIABA
Address:	PO Box 443, 2260 AK Leidschendam
Telephone:	+31 70 32 70 464
Fax:	+31 70 32 05 765

email:	niaba@s4all.nl

Organisation:	Ministry of Housing, SUS/655
Contact:	Dr Peter van Der Meer
Address:	PO Box 3 09 45, NL-2500 GX The Hague
Telephone:	+ 31 703 39 48 93
Fax:	+ 31 703 39 12 97

# Portugal

Organisation:	Instituto Nacional da Farmácia e do Medicamento (Infarmed)
Address:	Parque de Sáude de Lisboa, Av do Brasil 53, PO-1700 Lisbon
Telephone:	+ 351 1 790 8500/795 7836
Fax:	+ 351 1 795 9116

Organisation:	Instituto Nactional de Sáude
Contact:	Mme Maria Teresa Paixao
Address:	P-Lisbon
Telephone:	+ 351 659 2222
Fax:	+ 351 659 2155

Organisation:	Autoridade Competente - DGQA, Direccao-Geral da Qualidade do Ambiente
Contact:	Mr Jorge Nascimento Fernandes
Address:	Avenida Alm Gago Countinho 30-2°, P-1000 Lisbon
Telephone:	+ 351 1/8 47 10 22
Fax:	+ 351 1/8 47 30 01

## **Spain**

Organisation:	Ministerio de Sanidad y Consumo
Address:	Direcciòn General de Farmacía y Productos Sanitarios, Paseo del Prado 18-20, E-28014 Madrid
Fax:	+ 34 1 596 1547/596 1548

Organisation:	Secretaria General de Medio Ambiente
Contact:	Ms Eliza Barahona

Address:	Paseo de la Castellano 67, E-28071 Madrid
Telephone:	+ 34 15 97 74 88
Fax:	+ 34 15 97 85 13

Organisation:	Jefe de Servicio de Estudios e Investigación
Contact:	D Jerónimo Maqueda Blasco
Organisation:	Instituto Nacional de Seguridad e Higiene
Contact:	Carmen Ramos Carrillo
Address:	Torrelaguna 73, E-Madrid
Telephone:	+ 34 1 40 37 000
Fax:	+ 34 1 40 30 050

## Sweden

Organisation:	The Medical Products Agency (Delivery of the Dossier)
Address:	Husargatan 8, B 26, S-751 03 Uppsala
Telephone:	+ 46 18 17 46 06

Organisation:	The Medical Products Agency (Subsequent correspondence)
Address:	PO Box 26, S-751 03 Uppsala
Telephone:	+ 46 18 17 46 00
Fax:	+ 46 18 54 85 66

Organisation:	Swedish Board of Agriculture
Contact:	Mr Carl Johan Liden
Address:	S-55182 Joenkoeping
Telephone:	+ 46 36/15 50 00
Fax:	+ 46 36/19 05 46

Organisation:	Karolinksa Institutet
Contact:	Roland Möllby
Address:	MTC, S-17177 Stockholm
Telephone:	+ 46 8 728 7175
Fax:	+ 46 8 331 547

Organisation:	Jordbruksverket
Contact Name:	Mr Evert Jonsson
Address:	Vallgatan 8, S-55182 Joenkeoping

Organisation:	National Board of Occupational Safety and Health
Contact:	Anna Malm
Address:	Arbetarskyddsstyrelsen, S-17184 Solna
Telephone:	+ 46 8 730 92 58

# **United Kingdom**

Organisation:	European Agency for the Evaluation of Medicinal Products (known as the European Medicines Evaluation Agency [EMEA])
Address:	7 Westferry Circus, Canary Wharf, London E14 4HB
Telephone:	+ 44 171 418 8400
Fax:	+ 44 171 418 8551
Email:	mail@emea.eudra.org
Web Site:	http://www.eudra.org/emea.html

Organisation:	Medicines Control Agency, Registration Section (Delivery of the Dossier)
Address:	Block 3, Spur K North, Government Buidlings, Kingston By-Pass Road, Surbiton, Surrey KT6 5QN
Telephone:	+ 44 181 398 9283

Fax:	+ 44 171 273 0493
Telephone:	+ 44 171 273 0491/0451
Address:	Room 1425, Market Towers, 1 Nine Elms Lane, London SW8 5NQ
Organisation:	Medicines Control Agency (Written reponse data)

Organisation:	Medicines Control Agency (Variations)
Address:	Room 1115, Market Towers, 1 Nine Elms Lane, London SE8 5NQ
Telephone:	+ 44 171 273 0308
Fax:	+ 44 171 273 0293

Organisation:	Medicines Control Agency (Renewals)
Address:	Room 1112, Market Towers, 1 Nine Elms Lane, London SW8 5NQ

Telephone:	+ 44 171 273 0337
Fax:	+ 44 171 273 0293

Organisation:	Health & Safety Executive
Contact:	Dr Stuart Smith
Address:	7th Floor, Room 7.02, Rose Court, Southwark Bridge, London SE1 9HS
Telephone:	+ 44 717 17 62 98
Fax:	+ 44 717 17 61 99

Organisation:	Department of the Environment, Toxic Substances Division
Contact:	Dr Helen Marquard
Address:	Marsham Street 43, London SW1P 3PY
Telephone:	+ 44 712 76 83 37
Fax:	+ 44 712 76 83 33

Organisation:	Health and Safety Executive
Contacts:	Mark Bale/Jillian Deans
Address:	Rose Court, Southwark Bridge, London SE1 9HS
Telephone:	+ 44 171 717 6230
Fax:	+ 44 171 717 6199

Organisation:	Health and Safety Executive
Contact:	Mr John Newbold
Address:	413 Magdalen House, Liverpool
Telephone:	+ 44 151 951 3622
Fax:	+ 44 151 922 7918

Organisation:	Department of Health
Contact:	Eileen Lawrence
Address:	Skipton House, 80 London Road, London SE1 6LW
Telephone:	+ 44 171 972 5349

## 4.3. Appendix 3: Primary Contact Points for Patents

AUSTRIA	
Address:	Österreichisches Patentamt Kohlmarkt 8-10, A-1014 Vienna
Tel:	+43 1 534 540
Fax:	+43 1 534 245 20

BELGIUM	
Organisation:	Office de la Propriété Industrielle auprès du Ministère des affaires economiques
Address:	Boulevard E Jacqmain 154, B-1000 Brussels
Tel:	+32 2 206 41 11
Fax:	+32 2 206 57 50

DENMARK	
Organisation:	Patentdirektoratet
Address:	Helgeshoj Allé 81, DK-2630 Taastrup
Tel:	+45 43 508 000
Fax:	+45 43 508 001

FINLAND	
Organisation:	Patentti-ja rekisterihallitus
Address:	PO Box 1140, Arkadiankatu 6A, Fin-00100, Helsinki
Tel:	+358 9 693 95 00
Fax:	+358 6 69 39 53 28

FRANCE	
Organisation:	Institut National de la Propriété Industrielle (INPI)
Address:	26 Bis, Rue de St Petersbourg, F-75800 Paris, Cédex 08
Tel:	+33 1 42 92 52 52
Fax:	+33 1 42 94 86 54

GERMANY	
Organisation:	Deutsches Patentamt

Address:	D-80297 München
Tel:	+49 89 21 950
Fax:	+49 89 21 95 22 21

GERMANY	
Organisation:	Deutsches Patentamt
Address:	Dienststelle Berlin, D-10958 Berlin
Tel:	+49 30 25 941
Fax:	+49 30 25 94 693

GERMANY	
Organisation:	Kanzlei Pünder-Volhard Weber Axter
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 Propiété 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	Départment de La Haye	
Address:	Patentlaan2, Posbbus 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::	Gitshciner 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

# 4.4. Appendix 4: Directorates and Units within the European Commission Working on Biotechnology and/or SME Projects

## **Secretariat General**

Directorate/ Unit	Tel/Fax
C (1) Secretariat of the European Group on Ethics in Science and New Technologies.	F 299 45 65
C (1) Secretariat of the Biotechnology Coordination Committee.	F 295 76 37

#### **DG I: External Relations**

Directorate/Unit	Principle Activities	Tel/Fax
B (1)/ B (2) Relations with North America, Australia and New Zealand	Defence of the EU interests vis-à-vis the US, promotion of EU/US relations through dialogue and negotiation	F 299 22 17
D(3) New technologies	New technologies, intellectual property and public procurement	F 299 20 10
G(2) WTO,OECD, commercial matters with respect to agriculture and fisheries; export credit policy; export promotion	Takes a co-ordinate position concerning trade related aspects of biotechnology	F 299 10 46
M(2) External relations in the research, science, nuclear energy and environmental field		F 296 93 09

## **DG II:** Economic and Financial Affairs

Directorate/Unit	Principle Activities	Tel/Fax
FOS-A	Eurotech and JEV initiative <a href="http://europa.eu.int/comm/dg02/fos/etc200.htm">http://europa.eu.int/comm/dg02/fos/etc200.htm</a>	F + 352 4301 364 39
E(1)	Growth and employment initiative and EIF	T 299 44 04
E(2)	Risk capital and stock exchanges	T 295 16 63

## DG III: Industry

Directorate/Unit	Principle Activities	Tel/Fax
E(1) Foodstuffs legislation	Foodstuffs legislation – Scientific and technical aspects	F 296 09 51
E(2) Food Production and Biotechnology	Co-ordination of all questions of industrial policy, regulation and research related to biotech.	F 296 64 67
E(3) Pharmaceutical products	Pharmaceutical products	F 296 15 20

## DG V: Employment, Industrial Relations and Social Affairs

Directorate/Unit	Principle Activities	Tel/Fax
F(4) Industrial accidents and injuries; secretariat of the Advisory Committee on Safety, Hygiene and Health Protection at Work	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	F 293 48 55
F(5) Occupational health and hygiene	Policy relating to Health and safety in the Biotech sector	F +352 4301 33248

## DG VI: Agriculture

Directorate/Unit	Principle Activities	Tel/Fax
B.II(1) Legislation	Legislation relating to crop products and animal nutrition	F 295 7832
B.II(2)  Veterinary and zootechnical legislation	Harmonisation and development of legislation in veterinary medicine and animal husbandry	F 296 26 15
C(2) Animal feed, non-food uses, and cereal substitutes	Non food uses of agricultural products, analysis of animal feed market, impact of biotechnology in such sectors	F 296 60 21
C(3) Sugar	Management of problems for sugar, isoglocuse and molasses, use of beet and cane for non-food purposes, use of sugar, isoglucose and molasses in the chemical and pharmaceutical industries	F 295 19 10
H (1) GATT, WTO and United States	International affairs concerning agriculture	F 295 24 16

## **DG VII:** Transport

Directorate/Unit	Principle Activities	Tel/Fax
B(3)	Co-ordination of safety technology and	F 296 84 01
Safety, technology and road transport environment	transport policy and the environment	

#### **DGXI:** Environment, Nuclear Safety and Civil Protection

Directorate/Unit	Principle Activities	Tel/Fax
E(2) Environmental control of industrial products and biotechnology	Responsible for Directives 90/219/EEC and 90/220/EEC	F 296 6233
D(4)	Biosafety Protocol negotiation	F 296 95 57
Global aspects of environment		

# DGXIII: Telecommunications, Information Market and Exploitation of Research

Directorate/Unit	Principle Activities	Tel/Fax
D(4)	Co-ordination of technology transfer networks	F 293 5071
Innovation and technology transfer		

## **DGXV:** Internal Market and Financial Services

Directorate/Unit	Contact Name	Principle Activities	Tel/Fax
E(2) Intellectual and industrial property. Freedom of establishment and freedom to provide services, notably in the regulated professions.	Dominique.Vandergheynst @dg15.cec.be	Co-ordinates policy on intellectual and industrial property within the biotechnology sector.	Tel/Fax  T 295 6923 F 299 3104

## **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	Tel/Fax
		i .

B(3) Improvement of conditions for enterprise and market access	Co-ordinates the accessing of funding for SMEs	F 295 21 54
B(2) SME Co-operation and transnational development	Co-operation between SMEs at international and European level	F 295 17 40
B(1)  Information for businesses (EICs) and relations with other Community networks	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 295 73 35

EUROPEAN COMMISSION	
Organisation:	Enterprises Information Unit, Directorate General XXIII-B/1
Address:	Rue d'Arlon 80 B-1040 Brussels
Fax:	+ 32 2 296 1241

### 4.5. Appendix 5: Contact points for the Fifth Framework Programme

4.5.1. Contact Points within the Commission concerning the Thematic Programme "Quality of Life and Management of Living Resources"

General information on the Programme E-mail : <u>Life@dg12.cec.be</u>

#### **KEY ACTION I**

Fax: +32.2.296.43.22

**Head of Unit** Liam BRESLIN (f.f.)

Safe & Flexible Manufacturing Processes & Technologies

Raw material improvement, GMOs Barend. Verachtert@dg12.cec.be

Raw materials, consumer acceptance and needs

Alessandra.Luchetti@dg12.cec.be

Technologies, food structures <u>Torbjorn.Ingemansson@dg12.cec.be</u>

**Detection and Elimination of Infectious and Toxic Agents** 

Throughout the Food Chain

Food safety, safer preservation techniques and production Xabier. Goenaga@dg12.cec.be

methods

Rapid detection, xenobiotics, TSE

Agnes.Fabre@dg12.cec.be

Risk assessment Pieter-Jan.Bouwmeister@dg12.cec.be

Role of Food in Promoting and Sustaining Health

Food nutrition, bioavailibility

Jurgen.Lucas@dg12.cec.be

Diet, Diseases and disorders <u>Francisca.Serra@dg12.cec.be</u>

Fisheries and agriculture Mario.Santos@dg14.cec.be

**KEY ACTION 2 – CONTROL OF INFECTIOUS** Fax: +32.2.295.53.65

**DISEASES** 

Head of Unit Umberto BERTAZZONI

Vaccine development; therapeutic interventions

Arnd.Hoeveler@dg12.cec.be

Fax: +32.2.299.18.60

Vaccine development; therapeutic interventions; public health

Therapeutic interventions, drug resistance; disease transmission

Diagnostic tests; methodologies for product safety

Topics related to animals used in farm livestock production

Fisheries and aquaculture

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Ludovica.Serafini@dg12.cec.be

Ludovica.Serafini@dg12.cec.be

Tarja.Tiainen@dg14.cec.be

**KEY ACTION 3 – CELL FACTORY** 

Head of Unit Alfredo AGUILAR ROMANILLOS

**Health Related Processes and Products** 

New diagnostics and therapeutics, Biological productions

Alternatives to animal testing

Irene.Norstedt@dg12.cec.be

Giovanni.Fracchia@dg12.cec.be

Gwennael.Joliff-Botrel@dg12.cec.be

Beatrice.Lucaroni@dg12.cec.be

**Bioremediation and Waste Biotreatment Processes** 

Preventing industrial pollution, Bioassays and biosensors, <u>Ioannis.Economidis@dg12.cec.be</u> Identifying recombinant organisms

Biodegradation, Biodiversity, Identifying recombinant <u>Charles.Kessler@dg12.cec.be</u>

organisms

Preventing industrial pollution, Biodegradation

Freek.Heidekamp@dg12.cec.be

Biodiversity and ecological dynamics-animals

Beatrice.Lucaroni@dg12.cec.be

Biodiversity and ecological dynamics-plants

Indridi.Benediktsson@dg12.cec.be

Biological and biotechnological processes and products

Cellular and molecular characteristics, Functional biomolecules <a href="mailto:Philippe.de-Taxis-du-Poet@dg12.cec.be">Philippe.de-Taxis-du-Poet@dg12.cec.be</a>
Products and processes from plants, Metabolic and genetic <a href="mailto:Indridi.Benediktsson@dg12.cec.be">Indridi.Benediktsson@dg12.cec.be</a>

diversity

Products and processes from animals, Metabolic and genetic <a href="mailto:Beatrice.Lucaroni@dg12.cec.be">Beatrice.Lucaroni@dg12.cec.be</a>

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GERMANY	
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Address:	Geschaftsbereich 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 2 00187 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	
Organisation:	IMPI, Ministry of Industry
Address:	Paseo de la Castellana 141 28071 Madrid
Fax:	+ 34 1 582 9399/571 5912

SWEDEN	
Organisation:	Ministry of Industry and Commerce
Address:	Fredsgatan 8 S-10333 Stockholm
Fax:	+ 46 8 204 586

UNITED KINGDOM	
Organisation:	Department of Trade & Industry, Regional and Small Firms Branch

Address:	151 Buckingham Palace Road London
Telephone:	+ 44 171 215 5000
Fax:	+ 44 171 215 2909

# 4.8. Appendix 8: 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 Pierre Crooy Rue de Crayer 6 1050 Bruxelles
Tel:	+32 2 656 9300
Fax:	+32 2 656 8145
E-mail	http://www.bba-bio.be

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
E-mail	http://www.fbid.dk

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 Forshchungsgemeinschaft
Address:	Kennedyallee 40
	5300 Bonn 2
Tel:	+49 02 28885-1
Fax:	+49 02 28 8852221

GERMANY	
Organisation:	Deutsche Industrievereinigung Biotechnologie (DIB) – German Association of Biotechnology Industries
Address:	Karlstrasse 21, D-60329 Frankfurt am Main
Tel:	+ 49 69 25 56 14 81
Fax:	+ 49 69 25 56 16 20
E-mail	http://www.vci.de/dib

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 DECHEMA 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
Tel:	+353 1 605 1608
Fax:	+353 1 661 1095

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)
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	NGDOM	
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

# 4.9. Appendix 9: Contact List for Eurotech Capital

# GED – Grupo de Empresas de Desarollo (SEPI) – Spain

This Spanish financial group operates through a network of venture capital companies with an investment capacity of Euro 70 million, and manages a venture capital fund of the EBRD and the EU amounting to Euro 44 million in Romania. The main activity of the group is the provision of equity funding for SMEs and the management of funds

# GED-GRUPPO DE EMPRESSA DE DESAROLLO (SEPI) (E).

Mr. J. R. PUERTAS HERNÁNDEZ 8, Plaza Marqués de Salamanca E-28071 Madrid Tel:(34) 91 396 1274

Fax: (34) 91 396 1034 E-mail: <u>Puertas@Sepi.es</u>

# Eurosud Capital France / Italy / Spain

Eurosud Capital was formed in 1991 by companies in regional equity finance. They have acquired a European dimension through forming this association with an investment capacity of Euro 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

#### Sofinnova France

Sofinnova is an independent venture capital company with an investment capacity of Euro 90 million, active in high technology, particularly information technology, health-care and biotechnology. Its high-tech specialists invest in a minority stake and favour financing in the early stages of a company. Sofinnova does not take part in the management of the company, but most of the time has an active role on the board of directors.

# SOFINNOVA (F)

Mr Jean-Bernard SCHMIDT 51 rue Saint Georges, F-75009 Paris

Tel: (33) 1 44535305 Fax: (33) 1 45267892

E-mail: sofinnova-partners@sofinnova.fr

Website: http://www.sofinnova.fr

includes two associated members: SPPI in Tunisia and Moussahama SPPP in Morocco.

#### EUROSUD CAPITAL France/Italy/Spain

Mrs Sandrine GENTY 53, Cours Pierre Puget, F-13006 Marseille

Tel: (33) 4 91 59 89 45 Fax: (33) 4 91 59 89 41

E-mail: <a href="mailto:eurosud@eurosud.com">eurosud@eurosud.com</a>
Website: <a href="mailto:http://www.eurosud.com">http://www.eurosud.com</a>

## 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 Euro 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 or 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.

# SOFIPA (I) Mrs Michele MOGAVERO Via Paisiello 39, I-00198 Rome

Tel: (39) 6 84402654 Fax: (39) 6 85302559

# **Euroventures Benelux Team Benelux**

Euroventures Benelux manages two funds with an investment capacity of Euro 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.

#### **EUROVENTURES BENELUX (B-NL-L)**

Mrs Sabine VERMASSEN H Henneaulaan 366, B-1930 Zaventem Tel: (32) 2 7251838; Fax (32) 2 7214435

E-mail: <a href="mailto:evbnlzav@tornado.be">evbnlzav@tornado.be</a>

# **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 undermanaged biotech companies with products that are already in clinical development and/or appear to have good commercialisation prospects. The RBU has at present Euro 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.

#### ROTHSCHILD BIOSCIENCE UNIT (UK)

Tanneke ZEEUW

Five Arrows House, St. Swithin's Lane,

UK-London EC4N 8NR Tel: (44) 171 623 1000

Fax (44) 171 623 6261

E-mail: tanneke.zeeuw@ramasset.co.uk

#### **Gilde Investment Management Netherlands**

Gilde Investment Management, founded in 1982, is a Dutch venture capital company independent of any financial entity with an investment capacity of Euro 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.

#### GILDE INVESTMENT FUNDS (NL)

Mr Edwin DE GRAAF

Newtonlaan 91, PO Box 85067,

NL-3508 AB Utrecht Tel: (31) 30 2192539 Fax: (31) 30 2540004

E-mail: info@gilde.nl

Website: http://www.gilde.nl

#### Danish Venture Finance Denmark

Danish Venture Finance, founded in 1988, is a Danish venture-capital company independent of any financial entity, with an investment capacity of Euro 70 million. Danish Venture Finance's investment strategy focuses primarily on three industries; life sciences, information technology and materials science. Danish Venture Finance plays a role as an active sparring partner for the portfolio companies and takes active part in the internationalisation process.

# DANISH VENTURE FINANCE (DK) Mr Uffe BUNDGAARD-JØRGENSEN Gladsaxevej 376, DK-2860 Søborg

Tel: (45) 39 660400 Fax: (45) 39 661311

E-Mail: info@danishventure.dk

Website: http://www.danishventure.dk

# Techno Venture Management (TVM) Germany

TVM is one of the leading independent German venture capital funds with a focus on technology investments. Areas of interest are computers, network technologies, software, telecommunications and medical/biotech. Founded in 1983, TVM manages several funds for investments in Germany, Western Europe and the USA. The total fund volume is Euro 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.

# TECHNO VENTURE MANAGEMENT

Mr Helmut SCHÜSLER

Denninger Strasse 15, D-81679 Munich

Tel: (49) 89 998992-0 Fax: (49) 89 99899255/6 E-mail: <u>schuehsler@tvmc.de</u> Website: <u>http://www.tvmvc.com</u>

# Alta Berkeley Associates United Kingdom

Alta Berkeley Associates is a privately-held venture capital group with an investment capacity of Euro 100 million. Its investment strategy focuses primarily on three industries: health-care/life sciences, 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. Companies are financed at any stage of development, from start-up to buyout.

# Finovelec France

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 Euro 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 geographically diversified (France, Europe, USA).

# ALTA BERKELEY ASSOCIATES (UK)

Mr Hugh SMITH

9-10 Saville Row, London W1X 1AF

Tel: (44) 171 7344884 Fax: (44) 171 7346711

Email: hugh.smith@alta.berkeley.co.uk

#### FINOVELEC (F)

Mr Hervé THOMAS

5 Place de la Baume, F-75008 Paris

Cedex

Tel: (33) 1 56881616 Fax: (33) 1 56881618

# SITRA Finland

SITRA is an independent public fund responsible to the Finnish Parliament and has an investment capacity of Euro 125 million. SITRA's role is to strengthen links between research and the business sector. SITRA invests in Finnish and international high-tech companies and seed and earlystages. SITRA makes strategic fund investment in Europe and globally. It has invested into several international funds like Advent GPE, AVI III, 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.

# SITRA (FIN) Mr Anu NOKSO-KOIVISTO P O Box 329, FIN-00121 Helsinki

Tel: (358) 9 618991; Fax: (358) 9 645072

E-mail: sitra@sitra.fi

Website: http://www.sitra.fi

# **Euroventures Management Sweden**

Euroventures Management, founded in 1985, is one of the leading venture and development capital management companies in the Nordic countries. The company manages six funds: Euroventures Nordica I, Euroventures Nordica II, Swedetech, Swedestart, Swedestart II and the Baltic Rim Fund. The investment focus of both Nordica I and II has been to invest in small to medium sized industrial companies. The focus of Swedetech is to invest in Swedish medium-sized industrial companies. Swedestart invests in Swedish start-ups and small companies. Swedestart II focuses on Swedish telecom, IT and life science companies. The Baltic Rim Fund invests in medium-sized Swedish, Danish and Finnish industrial companies with exspansion potential in the Baltic Sea Region.

#### **EUROVENTURES MANAGEMENT (S)**

Mr Lars HAGDAHL

P O Box 7210, S-10388 Stockholm

Tel: (46) 8 54513130 Fax: (46) 8 208997

E-mail: info@euroventures.se

Website: http://www.euroventures.se

#### Horizonte Venture Management, Austria

Horizonte, founded in 1985, is the first and pesently largest venture capital company in Austria. It is majority-owned by the management with minority stakes owned by

Advent Intl. and FGG. Horizonte focuses 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 Euro 28 million.

# HORIZONTE VENTURE MANAGEMENT (A)

Mr Franz R KREJS

Bauernmarkt 6, A-1010 Wien Tel: (43) 1 53356010

Fax: (43) 1 53356014 E-mail: horizont@eunet.at

Website: <a href="http://www.horizonte.at">http://www.horizonte.at</a>

# 4.10. Appendix 10: Innovation and Technology Equity Capital (I-TEC) - for technologically innovative SMEs

# - List of selected venture capital operators -

#### - March 1999 -

**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: Auriga Partners
Contact: Mr Patrick BAMAS
Address: 18, Avenue Matignon

F-75008 PARIS

**Fax:** +33 1 53 30 07 00

E-mail: <u>auriga@auriga-ventures.com</u>

**Coverage:** F, EU, Israel, USA

**Invest. focus:** Information technology & telecommunications; Life sciences; New materials; Advanced electrical equipment; Energy, industrial process control;

Instrumentation and environment

**Operator:** I-Source Gestion **Contact:** Mr Eric HARLÉ

**Address:** Domaine de Voluceau

BP 105, F-78153 ROCQUENCOURT

**Fax:** +33 1 39 63 58 88

E-mail: eric.harle@wanadoo.fr

**Coverage:** F, EU, EEA

Invest. focus: Communication and information technology

Operator: Natexis Ventech
Contact: Mr Alain CAFFI
Address: 48, bis rue Fabert
F-75007 PARIS

**Fax:** +33 1 49 55 70 85

E-mail: natexis@wanadoo.fr

**Coverage:** F, EU, Israel

Invest. focus: Information technology & telecommunications; Life sciences;

Biotechnology and healthcare; instrumentation.

**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:** Ms AnnBleasdale

Address: Langley Place, 99 Langley Road

WD1 3PE WATFORD, UK

**Fax:** + 44 1923 247783

e-mail: ableasdale@mtifirms.com
website: http://www.mtifirms.com

Coverage: UK

**Invest. focus:** IT; Software; Communications; Electronic hardware & devices;

Life Sciences; Materials technology.

**Operator:** Amadeus Capital Partners

**Contact**: Ms Anne GLOVER

**Address**: Mount Pleasant House, Mount Pleasant,

Huntingdon Road, CB3 0BL CAMBRIDGE, UK

**Fax**: +44 1223 578 369

E-mail: info@amadeus1.com

Website: <a href="http://www.amadeus1.com">http://www.amadeus1.com</a>

Coverage: UK

**Invest. focus:** Information technology, Computer networking, Communications,

Bioelectronics, Computer hardware and software and new media.

**Operator:** Quantum Healthcare Fund Manager

**Contact**: Mr Alan GOODMAN

**Address**: St John's Innovation Centre, Cowley Road,

CB4 4WS CAMBRIDGE, UK

**Fax**: +44 1223 42 68 88

E-mail: jay.gray@dial.pipex.com

Coverage: UK, EU Special focus: UK

......

**Invest. focus**: Biotechnology and healthcare.

**Operator:** Young Associates Limited

**Contact**: Mr Yoav KURTZBARD

**Address**: Harcourt House, 19 Cavendish Square,

W1M 9AB LONDON, UK

**Fax:** +44 171 447 88 00

E-mail: <u>info@youngassoc.com</u>

Coverage: UK

**Invest. focus**: Communication and information technology.

**Operator:** Kennet Capital Limited

**Contact**: Mr Roeland BOONSTOPPEL

**Address**: 33 Cavendish Square,

W1M 0DS LONDON, UK

**Fax**: +44 171 629 99 11

E-mail: <a href="mailto:rboonstoppel@broadview.com">rboonstoppel@broadview.com</a>
<a href="mailto:www.kennetcapital.com">http://www.kennetcapital.com</a>

**Coverage**: European Union + Associated States

Special focus: UK, IRL, B, NL, LUX, D, DK, F, N, SW, FIN, ICE

**Invest. focus**: European information and communications companies with international growth potential.

**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: ITP Management
Contact: Mr Roger CLAES
Address: H. Henneaulann 366.

B-1930 ZAVENTEM

Fax: +32 2 721 44 35

E-mail: <a href="mailto:roger.claes@it-partners.be">roger.claes@it-partners.be</a>
Website: <a href="http://www.it-partners.be/">http://www.it-partners.be/</a>

**Coverage:** European Union + Associated States

**Special focus:** B, NL, D, F, LUX, UK **Invest. Focus:** Information technology

**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-80333 MÜNCHEN

**Fax:** + 49 89 5486 2299

e-mail: strascheg@technologieholding.deWebsite: http://www. technologieholding.deCoverage: 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, Mr Florian RETZLAFF

**Address:** Ottostrasse 4

D-80333 MÜNCHEN

**Fax:** + 49 89 59988020

**e-mail:** Mrueff@vci-technoinvest.de

FRetzlaff@vci-technoinvest.de

**Coverage:** European Union and Associated States

Special Focus: D (A, CH)

Invest. focus: Information & communication technologies; Industrial automation &

process engineering; Medical & biotechnology.

**Operator:** Wellington Finanz Beratungs

**Contact**: Mr Frank BOEHNKE

**Address**: Pacellistrasse 14

D-80333 MÜNCHEN

**Fax**: +49 89 21 99 41 98 **E-mail**: info@wellington.de

Coverage: D, A, CH, EU

Invest. focus: Healthcare; Biotechnology; Telecommunications; Software and

multimedia

**Operator:** IMH Industrie Management Holding Treuhand

Contact: Mr Johannes GROSS

Address: Blücherstrasse, 37a

**D-10961 BERLIN** 

**Fax**: +49 30 69 80 33 33 **E-mail**: <u>imh@imhventure.de</u>

**Coverage**: D, A, CH, EU

**Invest. focus**: Communication and information technology; New media; Bio/gene technology; Electronic pharmaceutical technology; New materials; technology oriented services.

Operator: Trinity Venture Fund
Contact: Mr John TRACEY

**Address**: Dunleary House

Dun Laoghaire, County Dublin, Ireland

Fax: +353 1 284 6136 E-mail: john@trinity-vc.ie

**Coverage**: Ireland

**Invest. focus**: Emerging companies, mainly technology base, all sectors (excluding financial services, energy and property)

Operator: Øresund Lifecare
Contact: Mr Niels MENGEL

**Address**: Indiavej 1

**DK-2100 COPENHAGEN** 

**Fax**: +45 33 146 705

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**Coverage**: European Union + Associated States

Special focus: DK, FI, S, N, ICELAND

Invest.focus: Healthcare; Biotechnology; Pharmaceutical; Medical devices

**Operator:** Sitra Technology Management

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Coverage: FI, EU

**Invest. Focus**: Information technology; Electronics & automation; Machine building & process technologies; New materials; Energy; Environmental industry.

**Operator:** Gemini Capital Fund Management

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Fax: +972 9 958 48 42 E-mail: hazel@gemini.co.il Website: http://gemini.co.il

Coverage: Israel

**Invest. focus**: High Tech companies

**Operator:** Pamot Rehovot Advisors

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**Coverage**: Israel

Invest. focus: Life Science, Biotechnology, Pharmaceutical, Bioelectronics, Medical

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Operator: Pino Venture Partners
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**Coverage**: I, EU **Specific focus**: Italy

Invest. focus: Telecommunications, New Media, Information Technology.

**Operator:** Nesbic Converging Technologies Europe

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Coverage: EU

Special focus: Benelux, UK, D, F, Scandinavia

**Invest. focus**: Information technology, Telecommunication and media content industry.

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Coverage: D, UK, F, IRL, I, SW, FIN, N, DK

**Invest. focus**: Electronic components and systems; Computer systems and peripherals; Software and systems; Communication systems and services; Information systems and services; New material and processes; Biotechnology and medical technology.

Operator: Odlander, Fredrikson and Co – Healthcap

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Invest. focus: Healthcare.

# 4.11. Appendix 11: List of Innovation Relay Centres

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				hnopol.be
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	r-33000 Reillies	Fax: 33299676022		Telephone : 33472114321
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	D-65189 Wiesbaden	Fax: 49611774313	Chamber of Commerce	Fax:
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	Centek Training and Development Centre at Lulea University of Technology S-97187 Lulea	Mr. Michael NILSSON Telephone: 4692091198 Fax: 4692099020 E-mail: michael.nilsson@centek. se@centek.se	Associated Member The Swedish EC R&D Council P.O. Box 7091 S-10387 Stockholm	Mr. Dan ANDRÉE Telephone: 4684546453 Fax: 4684546451 E-mail: dan@eufou.se

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	The Technology	Mr Bill Blake	Welsh Development	Mr Anthony
	Broker Ltd.	Telephone:	Agency (WDA)	ARMITAGE
	Station Road,	441954261199	Principality House -	Telephone:
	Longstanton	Fax :441954260291	The Friary	441222828739
	UK- Cambridge CB4	E-mail:	UK- Cardiff CF1	Fax :
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	300	Totte & totoker.co.uk	77.11	E-mail:
				100065.3127@com
	DECN (LL)	M. C. DOULTON	<b>C</b> 4	puserve.com
	RTC North Ltd	Ms Susan BOULTON	Coventry	Mr John
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	Wessington Way	441915164400	<b>Enterprises Ltd</b>	Telephone:
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# 4.12. Appendix 12: Bibliography

#### **Field Trials**

'The Regulation and Control of the Deliberate Release of Genetically Modified Organisms (GMOs)'	Published July 1993
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# **International Property Rights**

The European Patent Office	'What is a Patent?'	Published Munich 1996
The European Patent Office	'How to get a European Patent - Guide for Applicants'	Published November 1995
The European Patent Office	'Directory of Patent	Published December 1995
	Information Centres in the Member States'	ISSN 1024-5383
The European Patent Office	'National Law Relating to the	Published January 1997
	EPC'	10th Edition
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Eigendom (Bureau IE)		
The European Commission	'Green Paper on Innovation'	(COM(95) 688 final 20.12.1995)
European Federation of Biotechnology	'Patenting in Biotechnology' Briefing Paper	Published September 1996
WebPages:	• •	
http://www.patent.gov.uk/dpat ents/howprep.html	'How to Prepare a UK Patent Application'	Published May 1997
http://apollo.cordis.lu/cordis- cg	'PATLIB'97 - European Patent Information'	Published February 1997
http://www.Austria.Eu.net/epo/epidos/conf/patlibal.htm	'PATLIB'	Published July 1997
European Programmes		
European Commission	'Coordination of Structural Biology in Europe: National, EC and Joint Efforts'	Published Luxembourg 1997 ISSN 1018-5593
European Commission	'Maximising European SMEs Full Potential for Employment, Growth and Competitiveness: - Proposal for a Council Decision on a Third Multiannual Programme for Small and Medium-sized Enterprises (SMEs) in the European Union (1997-2000)'	COM (96) 98 final of 20.03.1996
European Commission DG XII	'The Fourth Framework Programme'	Published Luxembourg 1994 ISBN 92-826-8824-0
CORDIS	'Fourth Framework Programme'	Published May 1996
Community Research and Development Information Service		
CORDIS	'EU Research Programmes and	Published January 1997
Community Research and Development Information Service	Related Activities'	
European Commission	'Towards the 5 <sup>th</sup> Framework Programme Programme:Scientific and Technological Objectives - Commission Working Paper'	Published February 1997
European Commission DG XII	'Inventing Tomorrow - Europe's Research at the Service of its People' 'Preliminary Guidelines for The	Published Luxembourg 1996 ISBN 92-827-7914-9

	Fifth Framework Programme'	
UK - Department of Trade and Industry	'Shaping the Fifth Framework'	Published DTI February 1997
European Commission	'Technology Stimulation Measures for SMEs within the Fourth Framework Programme (1994-1998)'	Published Luxembourg 1996
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Ward M	'Another Push to Revise Eurobiotech Directives'	Biotechnology 14 (2) 133-134
P Mustar	'Small Firm Formation in	Technovation 15 (5) 303-327
J Niosi	Biotechnology: a Comparison of	1993
Walsh V	France, Britain and Canada'	
The Financial Times – UK	'Biotech Regulation in Europe'	ISBN 1853.34.265.3
Web Pages:		
http://www.cordis.lu/cordis/02.htm	'The Fourth RTD Framework Programme'	Published February 1997
http://www.cordis.lu	'A variety of topics to be found on the Fifth Framework Programme'	Published September 1997

# **National Programmes**

#### Austria

Osterreichisches Forschungszentrum Seibersdorf, Prognos AG. Wien:Bundesmin. Wiss. Forschung	'Biotechnology in Osterreich - Studie im Auftrag des Bundesministeriums für Wissenschaft und Forschung/Arbeitsgemeinschaft Uniconsult GmbH'	Published July 1988
Vienna Biocenter	'Research report 1993-95'	Published University Wien 1996
The Austrian Science Fund	'Funding Opportunities - Statistical Information'	Published March 1997

# Belgium

The General Directorate for Technology, Researh and Energy of the Ministry of the Walloon Region	'Directory of Biotechnology'	Published Belgium 1996
The General Directorate for Technology, Researh and Energy of the Ministry of the Walloon Region	'Division des Aides Aux Entreprises - Aides a la Recherche Technologie'	Published Belgium 1997
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		April 1988 (report)
Ernst & Young	'La Mosaique Biotech'	Published Amsterdam Elsevier 1991 (study)

ADEBIO	'Annuarie des Biotechnologies et des bioindustries'	Published Paris Biofutur/Elsevier 1995 (directory <b>)</b>
Comité National d'Evaluation de la Recherche	'Evaluation du programme 'biotechnologies; in 'Un Autre Regard sur la Recherche: Sept Evaluations 1990-1993'	Published Paris 1994 (report)
Web Pages:		European Commission
http://europa.eu.int.en.comm/dg16	'European Union - Regional Policy and Cohesion'	DG XVI - April 1997
http://www.belspo.be/fedra/e/prog.htm	'FEDRA: Database of the Federal Research Actions'	The Federal Authorities within the Belgian Government
		August 1997
http://biosafety.ihe.be	'Biosafety and Biotechnology'	July 1997
		The Institute of Public Health
		May 1997
Denmark		
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The Danish Research Councils	'The Danish Research and	Published Denmark 1995
	Development Programme for Food Technology'	ISBN:87-90201-03-5
Finland		
Academy of Finland	'Research at the Top'	Published Helsinki 1996 (report)
Web Page: http://www.tekes.fi/english	'TEKES Technology Programmes'	Technology Development Centre
<b>,</b>		September 1997
France		
Comité National d'Evaluation de la Recherche	'Un Autre Regard sur la Recherche - Sept evaluations 1990-1993'	Pubished Paris 1994
ADEBIO	'Annuaire des Biotechnologies et des Bioindustries'	Published Paris Biofutur/Elsevier 1995
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