

Borsa  
dell'Innovazione  
e dell'Alta  
Tecnologia



# Focus on Biotechnology in Apulia

**ITA** 

ITALIAN TRADE AGENCY

ICE - Agenzia per la promozione all'estero e  
l'internazionalizzazione delle imprese italiane

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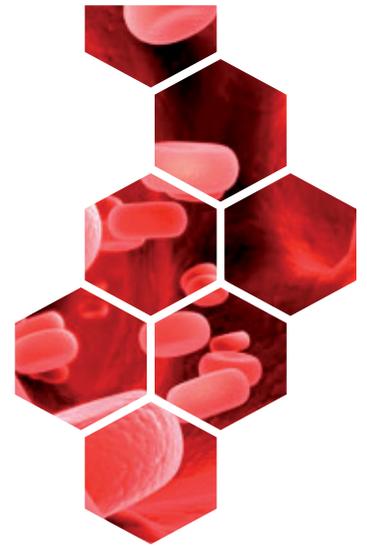
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*Ministero dello Sviluppo Economico*

## Contents

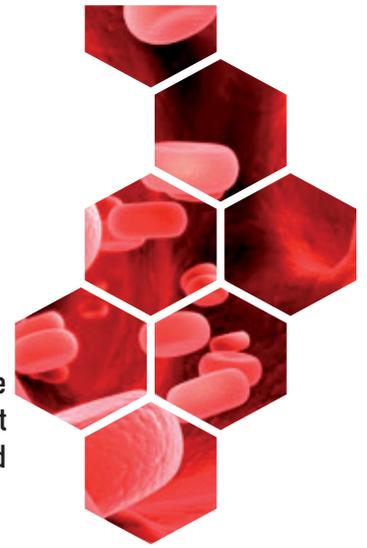
<b>A. Historical background of the biotech sector in Apulia .....</b>	<b>3</b>
<b>B. The biotech cluster in Apulia .....</b>	<b>4</b>
<b>C. The biotech research and technological innovation system in Apulia.....</b>	<b>6</b>
1. The biotech research and technological innovation system in Apulia.....	6
2. Regional Universities.....	6
University of Bari 'Aldo Moro' .....	6
University of Salento .....	7
University of Foggia.....	7
Polytechnic of Bari .....	7
3. Public and private research centres .....	8
CNR National Research Council .....	8
IRCCS Istituto Tumori "Giovanni Paolo II" (IRCCS Cancer Institute Giovanni Paolo II) .....	8
IRCCS "Casa Sollievo della Sofferenza" (IRCCS Home for the Relief of Suffering) .....	8
IRCCS "Saverio de Bellis" .....	8
Fondazione per la Ricerca Farmacologica Gianni Benzi Onlus (Foundation for Pharmacological Research Gianni Benzi) .....	9
Consorzio CARSO (C.A.R.S.O. Consortium).....	9
Istituto Scientifico Biomedico Euro Mediterraneo (ISBEM) (Euro Mediterranean Institute of Biomedical Science) .....	9
Consorzio Valutazioni Biologiche e Farmacologiche (Biological and Pharmacological Evaluation Consortium) .....	9
4. Industrial research and technology transfer centres.....	10
Centro di Competenza CERTA (CERTA Competence Centre) .....	10
Centro di Competenza DAISY-NET (DAISY-NET Competence Centre) .....	10
Tecnopolis PST .....	10
<b>D. The regional biotech industry .....</b>	<b>10</b>
1. Start-ups, academic Spin-offs and SMEs in the biotech cluster in Apulia .....	10
AB Analitica.....	10
ApuliaBiotech.....	11
Biotecgen .....	11
Echolight .....	11
EDP La Traccia .....	11
Farmalabor .....	11
ITEL.....	12
Informatica & Tecnologia .....	12
IMS - Istituto di Management Sanitario (IMS - Healthcare Management Institute).....	12
Kos Genetic .....	13
Laboratorio Analisi Cliniche Dr. P. Pignatelli (Clinical Analysis Laboratory Dr. P. Pignatelli).....	13
MASMEC .....	13
NANOMED3D.....	14
SINCON .....	14
StemGen S.p.A .....	14





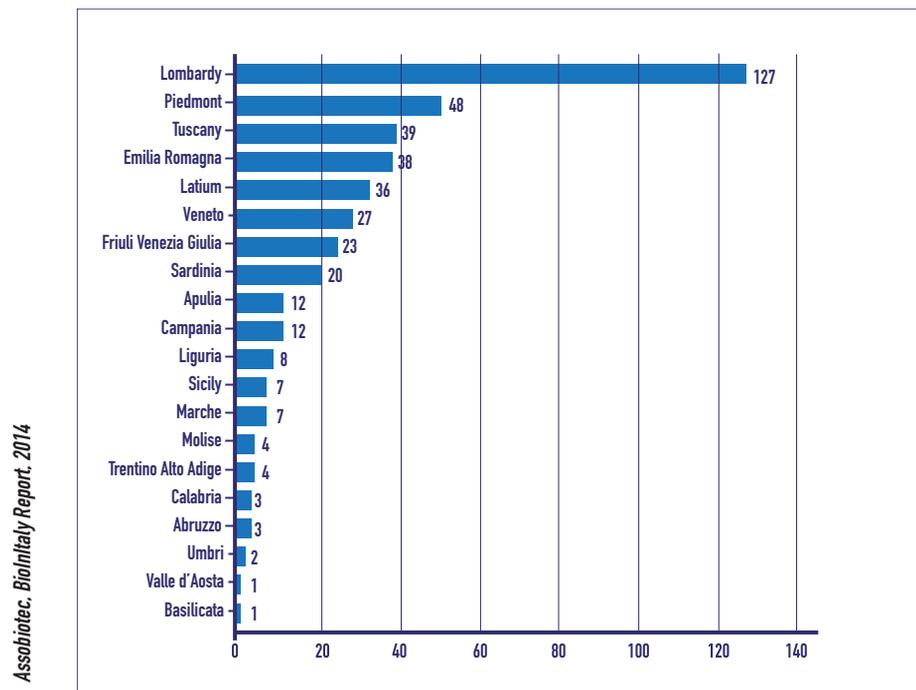
<b>E. Project proposals submitted to the BIAT.....</b>	<b>15</b>
BIOTECHNOLOGY .....	15
NANOTECHNOLOGY .....	15
Italian Trade Agency .....	16
The BIAT .....	16





## A. Historical background of the biotech sector in Apulia

The attractiveness of Apulia as a location for investing in biotech activities is constantly growing. The latest industry report, "BioItaly 2014" by Assobiotec, highlights growth in the biotech sector throughout Apulia, even in a time of global crisis. Indeed, the presence of biotech companies in Apulia has doubled from 6 to 12 in the past 4 years.



Apulia boasts peaks of excellence in the fields of pharmaceuticals and health products, thanks to the presence of world leading manufacturers who produce specialised medicines, cosmetics, herbal medicines, diagnostics, disposables, surgery products, high-tech biomedical devices, as well as of a number of small but important companies that own prominent patents in specific market niches.

The Apulia biotech sector is made up of two pharmaceutical multinational companies, Merck Serono and Sanofi Aventis, engaged not only in manufacturing but also in research & development at a very high technological level, together with a growing number of small and medium-size innovative enterprises and start-ups.

Prominent research activities in the field of biotech are carried out in Apulia by over 50 research facilities, which have achieved numerous international acknowledgements, especially as far as basic scientific research is concerned within the regional Universities, the NCR's (National Research Council) laboratories, the National Laboratory for Nanotechnologies (NNL) of the National Institute for Materials Physics and the 3 regional IRCCS (Hospital clinics with scientific research institutes). Many of these research centres have an impressive record of performance as far as scientific publications, patents and partnerships in European research projects are concerned.

In particular, thanks to the research and training being carried out in Apulia, a wealth of knowledge and skills for transfer to industry is readily available in fields such as human health and biotechnology, in addition to veterinary medicine, agriculture and food, environmental technologies and industrial processes. Indeed, due to the fact that biotechnology, by its very nature, is characterised by high levels of specialisation in several different scientific disciplines, research techniques and potential applications,



it is not surprising that a wide range of skills and competences are being developed locally that can be usefully channelled into both industry and projects at regional or international level.

In Apulia a very positive trend of increase in the production of patents in the fields of health products and drug-biotech can be observed. In particular, recent data indicates an increase in international patenting by Apulian universities that is contributing to the development within these universities of permanent tools and resources for the facilitation of technology transfer. In recent years a considerable increase in joint research initiatives between universities and enterprises has also taken place. The range of ongoing projects and patents show the important inter-relationships and collaborations among institutions, researchers and world leading manufacturers both within and out with the Apulia Region.

Among the best examples of such innovative initiatives, based on public-private cooperation:

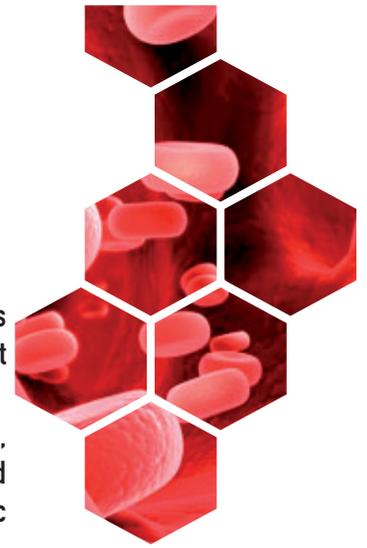
- the participation of the Universities of Bari, Foggia, the consortium C.A.R.S.O. and different companies (Apuliabiotech, Biotecgen, etc) in strategic projects eligible for funding with resources Accordo di Programma Quadro (APQ) 2005, laboratory networks, strategic projects, of which 12 are related to red biotechnology and in particular to innovative manufacturing systems, advanced diagnostics, personalised therapies, biobanks;
- the participation of the regional Universities, the Council of National Research (CNR), together with two of the regional IRCCS's (Istituto di Ricovero e Cura a Carattere Scientifico: Hospital clinics with scientific research institutes), the "Giovanni Paolo II Tumours Clinic" and the "Home for the Relief of Suffering", in the Competence Centre for Advanced Biology Biosistema located in 5 Regions, 3 of which convergence regions, with activities in the fields of advanced biology, genomics, proteomics, bioinformatics, nanobiotechnology and new bio-compatible materials;
- the participation in Projects Exploratory testing promoted within the Regional Planning Framework 2005 (13 of the funded projects are related to biotechnology).

## B. The biotech cluster in Apulia

H-BIO is a high technology cluster, established as a Public/Private Consortium in September 2012, within the Framework Agreement between the Italian Ministry for Research and Higher Education (MIUR) and the Apulia Regional Government.

H-BIO aims to develop the regional cluster in the strategic sector of Health and Biotechnology, by bringing together the critical mass of scientific expertise and industries operating in the region.





Innovation in this sector has a critical role for the development of research at academic level, as well as for the transfer of research results to industry in order to make them available to patients who represent the ultimate end-users.

Based on a careful analysis of the potential expressed by the university and research network in Apulia, together with the numerous initiatives already in place in this field and taking into account the needs and interest expressed by the manufacturing sector, the Cluster's activities are focused on 4 specific strategic areas:

- **Personalised medicine:** this area makes use of the knowledge derived from genetic engineering for profiling patients on the basis of the genetic predisposition to specific diseases, as well as to identify populations and subpopulations of respondents/non-respondents to treatments on the basis of phenotypic or genotypic diversity. Personalised medicine also makes use of panels of protein biomarkers targeted to specific risk conditions that allow early detection of certain diseases in pre-clinical stage.
- **Advanced Therapy:** this area identifies the pharmaceutical products containing somatic cells, vectors that carry genes, engineered tissues, with the aim of improving results for the treatment of numerous diseases, including leukaemia and lymphomas, diabetes, diseases of the bone, skin, heart, kidney and central nervous system.
- **Molecular and advanced diagnostics:** this area integrates different domains such as molecular and cellular biology, genetics/genomics, molecular physiology, biophysics, physics, chemistry, biomedical engineering, and nanotechnology. Through the development of microsystems, microchips, medical devices, other innovative methodologies, non-invasive approaches can be developed for applications in the diagnosis, predictive diagnosis, monitoring and prognosis of a wide variety of disorders ranging from neurodegenerative diseases to tumours.
- **New manufacturing processes:** this area promotes the development of manufacturing activities in fields such as diagnostics, pharmaceuticals or medical devices of particular interest within the region. Companies will be encouraged to develop innovative products and processes by integrating the skills widely available within the Cluster. Innovative technologies for large-scale production of specific interest include: Fermentation processes and high-density cell cultures, Proteins production in cell-free systems, Biomaterials applicable in the extra-corporeal depuration.

The main activities of the Cluster include: Research and Development Projects in the aforementioned strategic areas; Local initiatives, involving: support for technology transfer and enterprise development; Networking; Support on regulation and patenting.

The H-BIO Apulia Cluster has 11 Public Partners and 25 Private Partners.

H-BIO participates, directly or indirectly through its partners, in various national and international networks, including:

- ALISEI- National Life Science Cluster;
- PROTEOMICA- National Network;
- IMPRIMAT- European Network;
- ENCALS-European Network for the Cure of ALS;
- LeukaemiaNet-European Network of Excellence;
- GRiP (Global research in Paediatrics) Network of Excellence;
- TEDDY (Taskforce in Europe for Drug Development for the Young)Network of Excellence;
- European Technology Platforms Life Watch;
- ELIXIR-infrastructure for biological information in Europe;
- SUSCHEM: European Technology Platform for Sustainable Chemistry.



## C. The biotech research and technological innovation system in Apulia

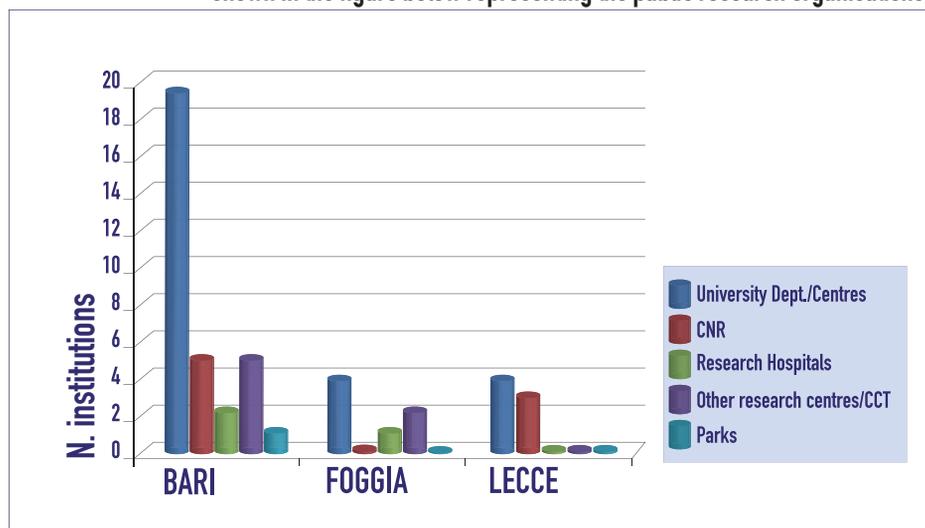
### 1. The biotech research and technological innovation system in Apulia

The biotech sector in the Apulia region involves universities, public and private research centres, and centres for industrial research and technology transfer.

The network of Apulian universities which operates in the biotech research and technological innovation sector involves: University of Bari, University of Salento, University of Foggia, Polytechnic of Bari and CNR – National Research Council.

The presence of Departments and research centres is extensive and they focus on various research activities, in particular on biotechnology drugs, gene therapy, somatic cell therapy, tissue engineering, biomarkers, drug discovery and drug delivery, technology and services for advanced diagnostics, bio-informatics products applied to the field of medicine.

The critical mass of competences provided by public sector research is shown in the figure below representing the public research organisations



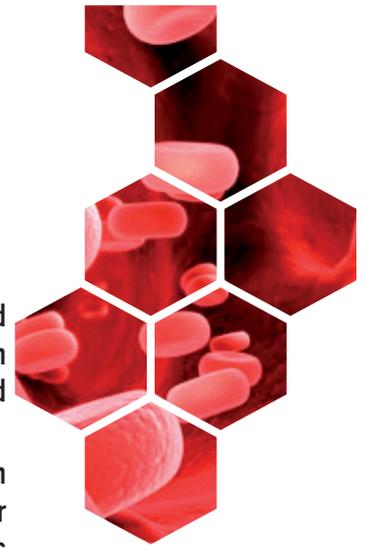
participating in H-BIO-Puglia.

### 2. Regional Universities

#### University of Bari 'Aldo Moro'

The University of Bari 'Aldo Moro', one of the 58 State universities, was founded in 1925 and is attended today by about 60,000 students. It is a state-supported university, which is divided into 12 faculties. The university offers various courses for undergraduate, graduate and post-graduate students. In addition to teaching, the university is also focused on scientific research at doctorate level. The University of Bari research centres are highly interactive, having connections among different





departments, universities, and other research centres. The University facilities include central and departmental libraries, lecture halls, job placement centres, a press office and counselling centres. Each year, the university holds different cultural and part-time activities that foster friendship among local and international students. The Erasmus/LLP programme is very active in the Medical field.

The University of Bari has a centre of excellence in the biotech field: the centre of excellence for research in comparative genomics. It was founded in 2001 and is focused on the study of genetic and molecular bases of different diseases. In this centre, comprising 8 units, 'omics' and system biology research is carried out with the aim of identifying genetic, epigenetic, proteomic and functional profiles, as well as developing diagnostic panels and molecular modelling techniques.

► Website: [www.uniba.it](http://www.uniba.it)

### University of Salento

The University of Salento is located in Lecce, Italy. It was founded in 1955 and is organized in 10 Faculties. Since 2005, the University of Salento is a partner of the Euro-Mediterranean Centre for Climate Change (CMCC). The departments carrying out research in the field of biotechnologies are: Engineering of Innovation, Mathematics and Physics, Biological and Environmental Sciences and Technologies (Di. STe.B.A.). Among the excellence of the University, the National Nanotechnologies Laboratory (NNL) whose research activities include: the synthesis and the fabrication of nanostructures and devices; the experimental and computational-theoretical study of their properties and functionality, and of their interfaces with the meso and microscopic scale, as well as their integration in complex functional systems.

► Website: [www.unisalento.it](http://www.unisalento.it)

### University of Foggia

Since its foundation (1999), the University of Foggia has presented – in terms of education and research – a dynamic and innovative proposal. A module characterised by didactics in step with local requirements, by applied local research projects, internationalization, work orientation, cultural events and promotion of University activities.

The six Departments with their courses and an Interdepartmental Research centre have contributed to turning the University of Foggia into a cultural centre. Last year the University expanded and consolidated all the initiatives and activities aimed at improving and qualifying teaching methods, research and international relations.

The Departments of Clinical and Experimental Medicine, Medical and Surgical Sciences, Agricultural, Food and Environmental Sciences, carry out research in health biotechnologies.

► Website: [www.unifg.it](http://www.unifg.it)

### Polytechnic of Bari

The Polytechnic of Bari is an Italian public University offering scientific and technological programmes. The Polytechnic trains students in architecture, engineering and industrial design and issues academic qualifications.

The Polytechnic of Bari is an international centre of excellence which pursues cultural, scientific and technological progress through research in scientific, technological, humanistic and economic-social fields, in addition to higher education activities, mainly in the fields of architecture and engineering, as well as the processing and the transfer of the most advanced scientific and technological knowledge, for the development of the society and the territory.

► Website: [www.poliba.it](http://www.poliba.it)



### 3. Public and private research centres

#### CNR National Research Council

The National Research Council (CNR) is a public organization; its mission is to carry out, promote, spread, transfer and improve research activities in the main sectors of knowledge, as well as relevant applications for scientific, technological, economic and social development throughout Italy. The activities of CNR are divided into macro areas of interdisciplinary scientific and technological research, regarding biotechnology, medicine, materials, environment and land, information and communications, advanced systems of production, judicial and socio-economic sciences, classical studies and arts.

CNR has a network of institutes throughout Italy. The Institute of Sciences of Food production (ISPA), the Institute of Crystallography (IC) and the Institute of bio-membrane and bioenergetics (IBBE) are all located in the region of Apulia.

► Website: [www.cnr.it](http://www.cnr.it)

#### IRCCS Istituto Tumori “Giovanni Paolo II” (IRCCS Cancer Institute Giovanni Paolo II)

IRCCS Istituto Tumori “Giovanni Paolo II” performs research for the development of bio tests and the identification of biomarkers to be applied in personalised medicine for more targeted diagnosis and therapy. It participates in the following projects: FP7 Project “EurocanPlatform: A European Platform for Translational Cancer Research”; “Biobanking and Biomolecular Resources Research Infrastructure (BBMRI)”; “Screening for hereditary breast cancer” – DIFE 2007; “Analysis of the association of oncological pathology in patients affected by rare diseases” (Analisi dell’associazione di patologia oncologica in soggetti affetti da patologie rare.)

► Website: [www.oncologico.bari.it](http://www.oncologico.bari.it)

#### IRCCS “Casa Sollievo della Sofferenza” (IRCCS Home for the Relief of Suffering)

IRCCS “Casa Sollievo della Sofferenza” is specialized in research on inherited genetic diseases, carried out in seven main units/laboratories of Medical Genetics, Diabetology and Endocrinology, Gastroenterology, Haemostasis and Thrombosis, Geriatrics and Gerontology, Oncology, and the CSS-Mendel Institute of genetics branch in Rome. Present research activities focus on the field of genetic diseases, innovative therapies and regenerative medicine.

► Website: [www.operapadrepio.it](http://www.operapadrepio.it)

#### IRCCS “Saverio de Bellis”

IRCCS “Saverio de Bellis” participates in the mission of H-BIO through the development of projects of molecular biology and their mechanisms of regulation in hepatocarcinogenesis. It participates in several national and international projects and collaborations including: “Use of the ALR –



Augmenter of Liver Regeneration as a drug for cancer degenerative diseases” and “New biomarkers for the Target Therapy in the colon-rectal carcinoma”.

► Website: [www.irccsdebellis.it](http://www.irccsdebellis.it)

### Fondazione per la Ricerca Farmacologica Gianni Benzi Onlus (Foundation for Pharmacological Research Gianni Benzi)

The Gianni Benzi Pharmacological Research Foundation (FGB) promotes and collaborates in research in innovative biological and medical fields (biomarkers identification, diagnostic tools, innovative medicines, systemic biology, ITC, marketing and industrial management). In addition, the Foundation carries out training activities in these sectors.

It is also associated to H-BIO where it is involved in the complex regulatory process related to biotechnologies and advanced therapies, including the use of material from bio-bank, approval of experimental protocols, registration procedures, market analysis and Health Technology Assessment.

► Website: [info@fondazionebenzi.org](mailto:info@fondazionebenzi.org)

### Consorzio CARSO (C.A.R.S.O. Consortium)

The main purpose of C.A.R.S.O. Consortium is to learn and train young Southern Italian post-doctoral students, in basic and translational scientific research in biomolecular and oncological field and other diseases. In addition, it promotes and disseminates scientific and technological results obtained in collaboration with other institutions (public and private companies). It provides services of omics and systems biology for translational research, “THE GENOMIC ILLUMINA FACILITY”, a technology deployed on either of two multi-sample array formats for DNA or RNA-analysis applications.

► Website: [www.carso.it](http://www.carso.it)

### Istituto Scientifico Biomedico Euro Mediterraneo (ISBEM) (Euro Mediterranean Institute of Biomedical Science)

The mission of ISBEM is to foster the development of a cultural pole of excellence and a point of reference in the biomedical and health sector, through the integrated collaboration of the Health System with the Research System.

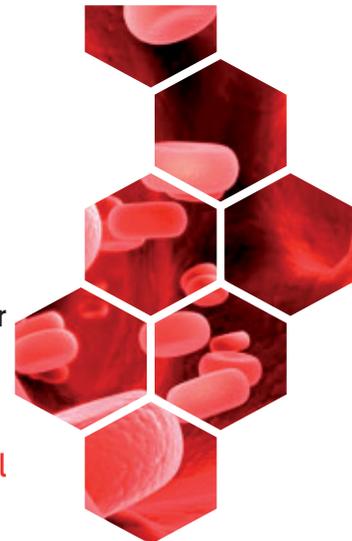
► Website [www.isbem.it](http://www.isbem.it)

### Consorzio Valutazioni Biologiche e Farmacologiche (Biological and Pharmacological Evaluation Consortium)

CVBF participates in many international projects in the field of drug development for children and rare diseases. Specific activities in H-BIO include research on the identification of biomarkers for innovative clinical applications, qualification and validation processes. CVBF is also involved in activities aimed at speeding up the market utilisation of innovative products facilitating the public-private collaboration in planning and carrying out projects.

CVBF, acting as a CRO- Contract Research Organization, provides competencies in the assessment of research protocols, clinical studies planning and management.

► Website: [info@cvbf.net](mailto:info@cvbf.net)





## 4. Industrial research and technology transfer centres

### Centro di Competenza CERTA (CERTA Competence Centre)

CeRTA scarl (Regional Centres for Food Technologies) is a Centre of Competence, which sustains innovation in the field of agri-food manufacturing through high-value services and technologies, including applied microbiology and molecular biology. It participates in the ONEV project (Omica e nanotecnologie applicate agli esseri viventi per la diagnosi delle malattie) (Omics and nanotechnology applied to living organisms for the diagnosis of diseases).

► Website: [www.certa.it](http://www.certa.it)

### Centro di Competenza DAISY-NET (DAISY-NET Competence Centre)

DAISY-Net is the Apulia point of reference for the competence centre ICT-Sud. It operates in the field of bio-informatics applied in medicine and innovative manufacture processes, and in particular in the registry of digital species, remote data protection, disaster recovery, cloud computing.

► Website: [www.daisy-net.com](http://www.daisy-net.com)

### Tecnopolis PST

Tecnopolis PST is a consortium created by the University of Bari for the management of a technology park. It fosters the creation of new enterprises and spin-offs and promotes training activities.

► Website: [www.tecnopolispst.it](http://www.tecnopolispst.it)

## D. The regional biotech industry

The H-Bio Cluster in Apulia boasts significant links with local industries, thanks to a growing number of companies operating in business sectors directly relating to biotechnologies.

At present there are also two multinational companies in the pharmaceutical industry (Merck Serono and Sanofi Aventis) with state-of-the-art manufacturing facilities, in addition to numerous small and medium-sized innovative companies and start-ups which operate in various business sectors, including: Masmec, Farmalabor, ITEL, Informatica & Tecnologia, Istituto di Management Sanitario, AB Analitica, ApuliaBiotech, Biotecgen, Echolight, Kos Genetic, NANOMED3D, Sincon, Laboratorio dr P. Pignatelli, EDP La Traccia and Stemgen.

### 1. Start-ups, academic Spin-offs and SMEs in the biotech cluster in Apulia

#### AB Analitica

AB Analitica is a company established in 1990 and specialized in the development and sale of diagnostic systems for professional use. Highly qualified researchers and continuous collaboration with Research



institutes, Universities, and Hospitals, has allowed AB ANALITICA to consolidate scientific knowledge and experience, over the years, for the development of diagnostic systems in line with the most recent medical guidelines, whilst providing quality, innovation, and security.

► Website: [www.abanalitica.it](http://www.abanalitica.it)

### ApuliaBiotech

ApuliaBiotech S.c.r.l. develops and transfers products and processes in the field of Computing and Biotechnology. In addition, it promotes, organizes and carries out research projects and computer programme development.

► Website: [www.apuliabotech.it](http://www.apuliabotech.it)

### Biotecgen

Biotecgen is a small company, established in 2002, which carries out research and product development, based on molecular biology and applied environmental microbiology, primarily for food industries. Its laboratories are based in the Department of Biological and Environmental Sciences and Technologies (Di.S.Te.B.A.), University of Salento. Its research is aimed at strengthening the cooperation between public and private entities contributing to the scientific and technological growth of the territory. The company has extensive experience in community programming boasting a number of successfully completed projects.

► Website: [www.biotecgen.it/default.aspx](http://www.biotecgen.it/default.aspx)

### Echolight

Echolight, a spin-off of the National Research Council, based at the Lecce site of the Institute of Clinical Physiology, is a research-based hi-tech start-up specialized in the development of innovative medical devices for early diagnosis of osteoporosis. It has developed a new system, unique in its kind, exploiting a revolutionary ultrasound technique for the assessment of bone strength at spine and femur levels. Presently, the first phase of device clinical validation has been completed and an international multi-centre study is underway. Echolight aims to bring to the world market, the first device for early diagnosis of osteoporosis, so extending test availability also to private practices and pharmacies.

► Website: [www.echolight.it](http://www.echolight.it)

### EDP La Traccia

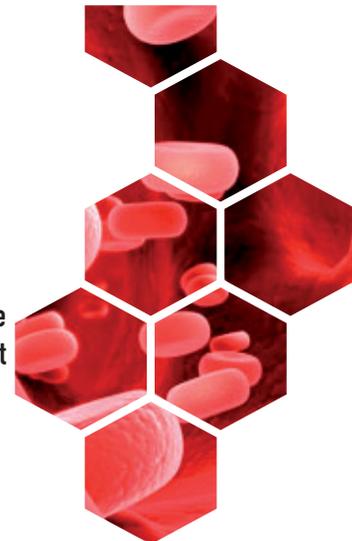
Founded in 1980, Cooperativa Edp LA TRACCIA gathers a large group of professionals specialized in the Earth Observation and Infomobility sectors, ICT, design and development of software solutions for Automatic Language Treatment (TAL). It has a certified ISO 9001:2000 and ISO 27001 research laboratory for the ICT and Robotic sectors, and is registered with the Ministry of Scientific Research and Higher Education (in accordance with art. 14 of M.D. no. 593 of 08/08/2000).

EDP La Traccia invests in Research and Development and in the constant update of the knowledge of its professionals. Relations and technological exchanges with companies throughout Italy, now enable the Traccia Team to keep pace with the times, adopting the most advanced techniques for the benefit of an increasingly specialized and competitive production.

► Website: [www.latraccia.it](http://www.latraccia.it)

### Farmalabor

Founded in 2001 in Canosa di Puglia by a group of pharmacists, Farmalabor has developed in the Italian leading company in the distribution of raw materials for use in the manufacturing of pharmaceuticals, cosmetics and foods. Farmalabor has two production sites in Canosa di Puglia dedicated to storage





and repackaging of Active Pharmaceutical Ingredients (hormones, psychotropic substances, antibiotics and multipurpose) and manages many warehouses dedicated to storage of laboratory equipment and packaging materials, with a total surface of 11.000 sq.m. With an advanced logistics system, integrated management of operations and customized process optimization software, Farmalabor is an efficient and attentive market-oriented company capable of competing on both Italian and foreign markets.

► Website: [www.farmalabor.it](http://www.farmalabor.it)

### ITEL

ITEL Telecomunicazioni®, also known as ITEL, started its business in 1982 in the telecommunications sector, providing in Italy radio links and electromagnetic shields for the data protection for the Armed Forces, NATO bases, ENEL (National Electricity Company), banks and radio/TV networks. Thanks to the expertise acquired in electromagnetic waves, fields and radiations, ITEL has expanded its market to include the medical and radiopharmaceuticals. The division ITELPHARMA® is the first reference centre in the region of Apulia for the manufacture and quality control of pharmaceuticals marked with radionuclides used in the PET/CT diagnostic imaging. The first radiotracer manufactured with Marketing Authorization in the region of Apulia for Nuclear Medicine Units is the Fluorodeoxyglucose (18F) FDG.

► Website: [www.itelte.it](http://www.itelte.it)

### Informatica & Tecnologia

I&T Group boasts more than 700 technicians specialized in IT management and consultancy, as well as software solution delivery in the domains of Knowledge, Document and Process Management and Healthcare. The Healthcare Competence Centre of I&T Group has a ten year long history in implementing Clinical IT Systems, in particular in the areas of organization model analysis and of advanced information technology solutions for healthcare centres, based on the principles of standardization, openness and vendor independence. Its human resources are part of a network of associations and public agencies that participates in the Permanent Committee for Electronic Healthcare and in Project Healthcare Bricks of the Italian Ministry of Health. This makes I&T an optimal partner for the digitalization process that all operators in the healthcare sector will be called, sooner or later, to activate.

► Website: [www.ietgroup.it](http://www.ietgroup.it)

### IMS - Istituto di Management Sanitario (IMS - Healthcare Management Institute)

IMS – Istituto di Management Sanitario (Healthcare Management Institute) – S.A. – is a company founded at the beginning of 2000, bringing together multidisciplinary professional competences matured in the last twenty five years in different fields in healthcare, including consulting,



management of research projects and clinical studies and trials. IMS addresses to the needs of Local Healthcare Structures, Universities and Research Centres, Public and Private Institutions operating in particular in clinical, healthcare, social-assistance and research fields.

► Website: [www.ist-ims.it](http://www.ist-ims.it)

### **Kos Genetic**

The mission of Kos Genetic is to develop new models, based on cutting edge technologies and state-of-the-art interdisciplinary research findings, to promote human and animal health and to improve livestock quality. Specifically, Kos Genetic analyses and dissects complex phenotypes allowing a more punctual and precise definition of new nosological entities, thanks to high throughput technologies, allowing the entire genome scan. It aims at synergistically integrating genomic and post genomic services to fully exploit the massive information coded by genes that make up the human, animal and vegetal genomes. Kos Genetic is committed to handling the complexity of how genes interact and relate to events occurring at the molecular level with phenotypes. Pursuing these commitments, it provides high quality, reliable and customized solutions.

► Website: [www.kosgenetic.com](http://www.kosgenetic.com)

### **Laboratorio Analisi Cliniche Dr. P. Pignatelli (Clinical Analysis Laboratory Dr. P. Pignatelli)**

Il Laboratorio Analisi Cliniche Dr. P. Pignatelli S.r.l. was set-up in Lecce in 1946 and in a short time became a centre of reference for the new semi-automatic methods of analysis, including diagnostic tests, blood chemistry, biological, cytogenetic, and clinical diagnostic laboratory for the prevention of congenital malformations and hereditary, preventive medicine, clinical pathology, immunology, virology and andrology. Over the years, the institution has established numerous partnerships with public and private organizations and is recognized as the national reference laboratory for quality and innovation, combining the activities of all diagnostic sections with a constant focus on innovation, the development of policies health and educational activities.

► Website: [www.labpignatelli.it](http://www.labpignatelli.it)

### **MASMEC**

Set-up over 30 years ago in Apulia, MASMEC has grown on international markets: today their machines are installed in Italy and Europe as well as in America and Asia and are covered by their assistance service everywhere. MASMEC is made up of two divisions born from their skills in mechatronics, robotics and signal processing technology.

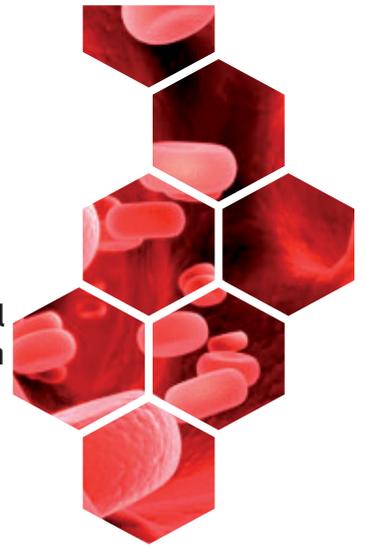
MASMEC BIOMED is a division engaged in developing applications for the medical sector. It designs and provides devices for the medical and biotech sectors with the main goal of improving the quality of life and health care for all.

The idea that technology can really help people live better lives is at the heart of MASMEC's work, research and social commitment, which recently focused on the early detection of lung cancer.

MASMEC specializes in:

- medical navigation systems for diagnostic and interventional procedures;
- liquid handling workstations for DNA and RNA extraction and plate preparation for research and analysis labs.

► Website: [www.masmec.org](http://www.masmec.org)





### NANOMED3D

Nanomed3D Srl is a start-up biotech company, designing and producing proprietary functionalized Nanotutor™ self-assembling peptides for research, medical devices and future therapies. Nanomed3D has developed and produces, patented nano bio-materials, which provide a stable 3 dimensional scaffold to which cells adhere to form tissues. Moreover, Nanomed3D patented bio-materials are made of sequences of self-assembling peptides. Nanomed3D patented bio-materials are designed for specific cell types and can include functional “motifs” which interact with the cell surface. Nanomed3D Custom SAP hydrogels are designed for specific cell cultures for basic and pre-clinical research. After ten years of intensive basic research Nanomed3D has achieved the ability to provide custom designed nano-structured substrates for cell culture and regenerative medicine needs.

► Website: [nanomed3d.com](http://nanomed3d.com)

### SINCON

SINCON operates in the Information Technology field, and in particular in the design and implementation of Information Systems for Public health institutions and companies.

Its core business is represented by the following services: Data Centre Management, Network Management and Cabling Systems Design, Management and operation of information systems; Design and development of software.

► Website: [www.sincon.it](http://www.sincon.it)

### StemGen S.p.A

Created in 2006, StemGen S.p.A is an Italian biotechnology start-up, engaged in the research and development of innovative oncological therapies, for improving the lives of people with gliomas and glioblastomas. The Company, which was built upon the knowledge and expertise of a world-class research team led by renowned neuroscientist Prof. Angelo Vescovi, is a drug discovery and development company. The mission of StemGen is therefore to discover and develop innovative and effective therapeutics in the area of solid cancers, through the exploitation of its unique know-how and technology in the field of normal and cancer stem cells. Particular emphasis has originally been put on the study of incurable brain cancers, namely glioblastomas. More recently, StemGen’s activity has rapidly and successfully expanded to the field of colon carcinomas.

► Website: [www.stemgen.net](http://www.stemgen.net)



## E. Project proposals submitted to the BIAT

### BIOTECHNOLOGY

Company	Title of the Project
APULIABIOTECH SCARL	Design of a Diagnostic Kit for Complement-Related Renal Diseases
BEFORPHARMA SRL	International Network as a New Model for Biotechnological Radiopharmaceuticals Innovation Promotion
CASTIGLIA S.r.l.	Bioactive Compounds
IRCCS CASA SOLLIEVO DELLA SOFFERENZA	ISBReMIT - Institute for Stem-cell Biology, Regenerative Medicine and Innovative Therapies
MASMEC SPA	Automated Systems for Interventional and Diagnostical Procedures
PLASMAPPs SRL - 1	Plasma Processes for Bio-Assay Development
SALINE SRL	Salu-Salt
TYPEONE SRL	Highly Innovative Technique for Producing Type I Collagen from Animal/Fish Tissues and Bio-Inspired Collagen-Based Products
UNIVERSITY OF SALENTO - 1	Immuno-Functionalized Polymer-Based Conformal Coatings Applied to Cells
UNIVERSITY OF SALENTO - 2	Nanosilver-Based Antibacterial Treatments
UNIVERSITY OF SALENTO - 3	Biomedical Devices with Antibacterial and Regenerative Properties for the Management of Complicated Wounds
UNIVERSITY OF SALENTO - DEPARTMENT OF ENGINEERING FOR INNOVATION - 1	MENIR - Biometric Meniscus Replacement Using Regenerative Medicine Methods
UNIVERSITY OF SALENTO - DEPARTMENT OF ENGINEERING FOR INNOVATION - 2	Honeycomb - a NOvel Biphasic Substitute for osteochondral lesion treatment (NOBIS)

### NANOTECHNOLOGY

Company	Title of the Project
NANOMED3D SRL	Functionalized Nanostructured Scaffold for the Regeneration of Chronic Spinal Cord Injuries (SCI)
PLASMAPPs SRL - 2	Plasma Processes for Rubber
TCT	Patented Technology for the Engineering and Production of Metal Oxide Nanoparticles and Heat Transfer Nanofluid for Advanced Materials and Innovative Fluids Development





The Italian Trade Agency - ICE is the Government agency that supports the globalization of Italian firms, implementing the strategies of the Ministry of Economic Development.

The Italian Trade Agency - ICE helps to develop, facilitate and promote Italian economic and trade relations with foreign countries, focusing on the needs of SME's, their associations and partnerships.

The Italian Trade Agency - ICE sustains Italian firms in their internationalization processes, in the marketing of Italian goods and services while promoting the "Made In Italy" image around the world, and it is directly involved in attracting foreign direct investments.

The Italian Trade Agency - ICE provides information, support and consultancy to Italian companies on foreign markets, promoting and fostering exports and cooperation in all areas - industry (consumer and capital goods), agricultural technology and agri-food, services, and training - with the aim of increasing and making more effective their presence on international markets.

The Italian Trade Agency - ICE works closely with the Italian Regions, the network of the Italian Chambers of Commerce, business organizations and other public and private entities.

The Italian Trade Agency - ICE headquarters is in Rome, with a large network of offices around the world and acts as "Trade Promotion Sections" of the Italian Embassies or Consulates.

## The BIAT

Funded under the Cohesion Action Plan of the Economic Development Ministry, the BIAT - Innovation and High Technology Lab, is an initiative designed to enable the enterprises and research systems of Italy's so-called Convergence Regions - Campania, Calabria, Apulia and Sicily - to express their full potential for innovation and excellence. BIAT is part of the program of activities of the Italian Presidency of the EU.

The event is organised by the Italian Trade Agency in collaboration with Confindustria (the Confederation of Italian industry), the Convergence Regional Governments and Campania in.Hub.

BIAT aims to promote the placing on the market and/or the transfer of innovative products and services or high technology and intangible assets (patents in particular) by matching commercial and technology supply and demand between start ups, innovative SMEs, business networks, universities, technology parks and foreign counterparts.

BIAT aims to put in place a systematic offering of industrial application opportunities from which all entrepreneurs can benefit.





CONFINDUSTRIA



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REGIONE PUGLIA