

SCHOOL OF MEDICINE



Double title Master Degree in Medical Biotechnology

Giovanna Cenacchi
Dept of Biomedical and Neuromotor Sciences



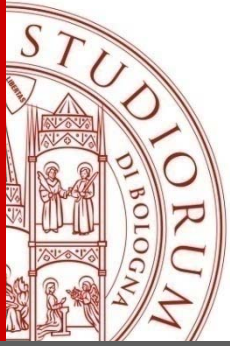
SERVIZIO SANITARIO REGIONALE
EMILIA-ROMAGNA
Azienda Ospedaliero - Universitaria di Bologna



MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

Polidiv. S. Orsola-Malpighi

MATER STUDIORUM - UNIVERSITÀ DI BOLOGNA



School of Medicine

- Master Program in Medical Biotechnology
- Master Program in Management in Medical Biotechnology

Chairman: Prof Irene Faenza

Vice Chairman: Prof Giovanna Cenacchi

<http://corsi.unibo.it/biotecnologiemediche/>



CORSO DI LAUREA MAGISTRALE IN BIOTECNOLOGIE MEDICHE

- Home**
- Presentazione del corso
- Attività formative
- Prospettive
- Docenti
- Piani didattici
- Info e contatti



Iscrivarsi

Conoscere il Corso: caratteristiche, requisiti di accesso e indicazioni per iscriversi.

Studiare

Informazioni fondamentali per svolgere gli studi e affrontare ogni passo del tuo cammino universitario.

Didattica



[Regolamento del Corso di Laurea Magistrale in Biotecnologie Mediche](#)
Attività e ambiti formativi del corso.

[Orari delle lezioni](#)

Avvisi [Vedi tutti](#)

- [Bando Erasmus Placement](#)
Pubblicato il 07 ottobre 2013
- [AlmaEnglish](#)
Pubblicato il 09 gennaio 2013

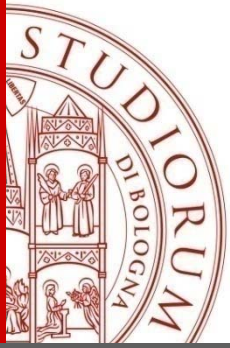
Eventi [Vedi tutti](#)

- 7 novembre 2013
["Incontri con la ricerca" AIRC](#)

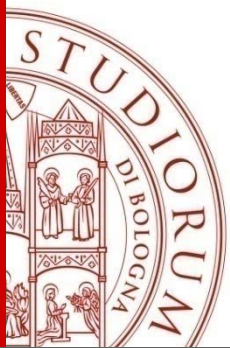


Presentazione del corso

Il Corso di Laurea Magistrale in Biotecnologie Mediche dell'Università di Bologna si presenta.



- Biotechnology is one of the critical factors for sustainable economic growth.
- Biotechnology is, and will be even more so in the future, influenced not only by the biotechnology industry but also by public research support, regulations, intellectual property rights, and social attitudes.



ITALIA

EXPO MILANO 2015



FEDERCHIMICA
ASSOBIOTEC

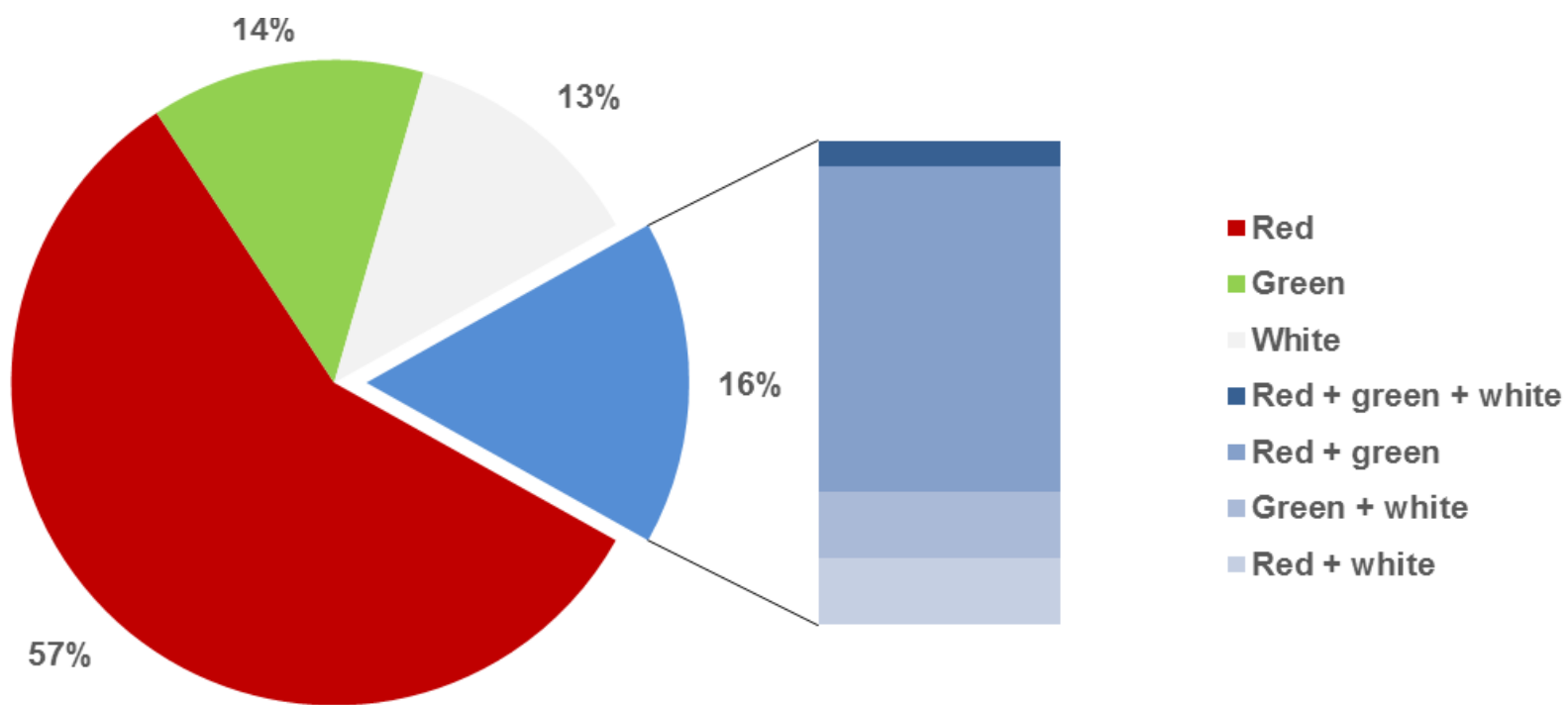
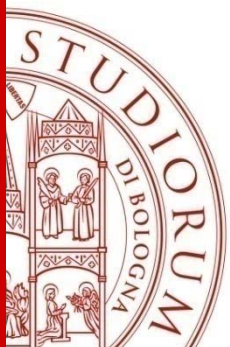
Associazione nazionale per lo sviluppo delle biotecnologie

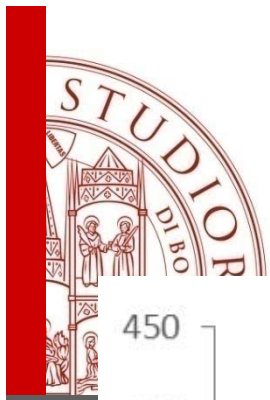
Bio In Italy[®]

Report 2015

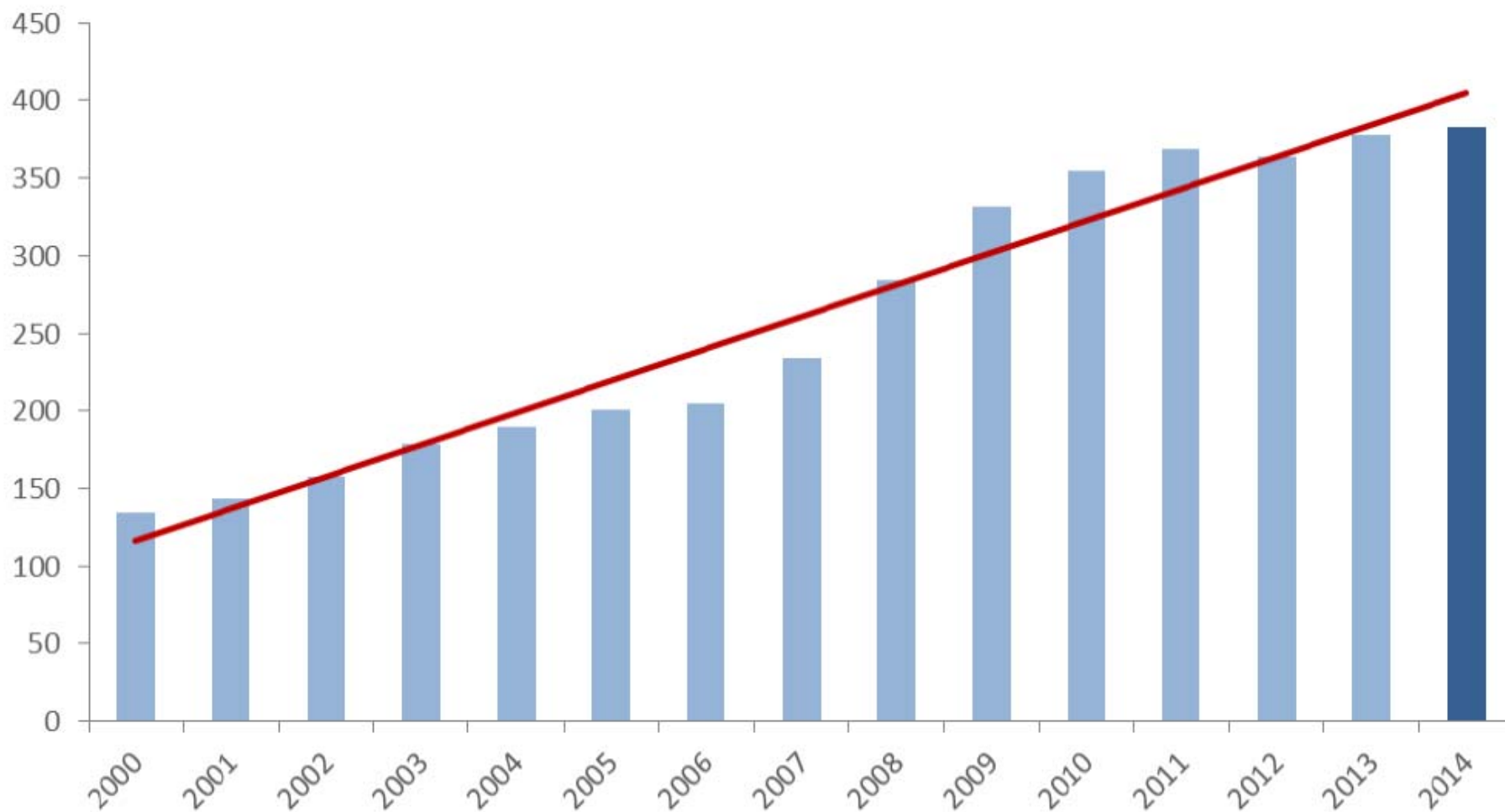
ALMA MATER STUDIORUM - UNIVERSITÀ DI BOLOGNA

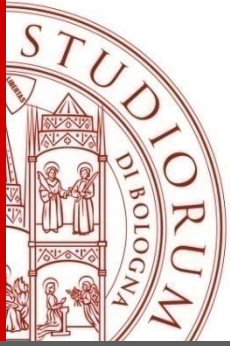
IL PRESENTE MATERIALE È RISERVATO AL PERSONALE DELL'UNIVERSITÀ DI BOLOGNA E NON PUÒ ESSERE UTILIZZATO AI TERMINI DI LEGGE DA ALTRE PERSONE O PER FINI NON ISTITUZIONALI





RED Biotech Companies

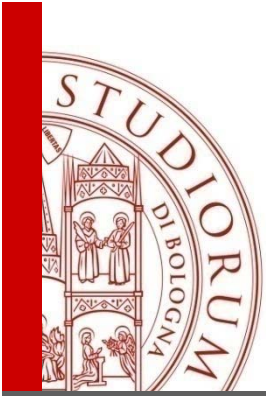




BiInItaly Report 2014

Assobiotec and Ernst & Young, in cooperation with Farmindustria and the Italian Institute for Foreign Trade

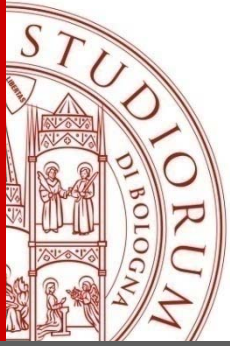
- ✓ The Italian biotech industry is composed of **407 companies**, mostly small, (< 50 employees)
- ✓ **241 companies operating in the health-care field: the “Red Biotech”** is the prevalent sector.
- ✓ **81% of which is made up of companies dedicated exclusively to human health**
- ✓ Total turnover equals € 7,152 million, with **a 6% increase** compared to the previous year, whilst R&D investments have grown to € 1,832 million, with a further 2.9% increase.



Nanotechnology

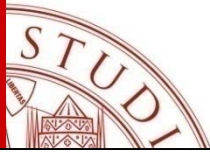
Nanobiotechnology plays a key role in the creation of nanodevices for the analysis of living systems on a molecular level.

Nanomedicine allows for improved understanding of human life while using the knowledge on human organism at a molecular level: the use of **nanotechnological** approaches and **nanomaterials** opens new prospects for the creation of drugs and systems for their directed transport

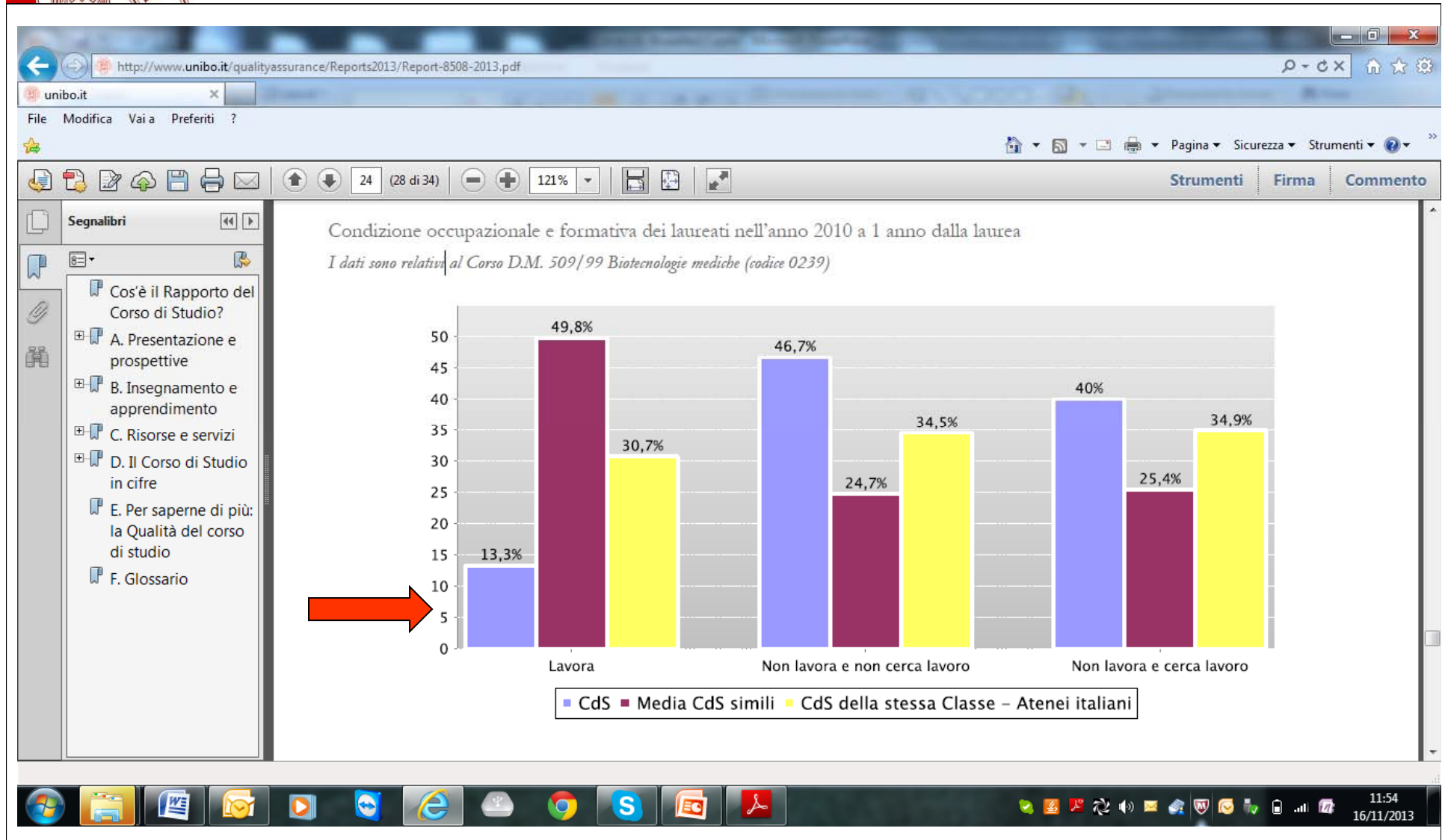


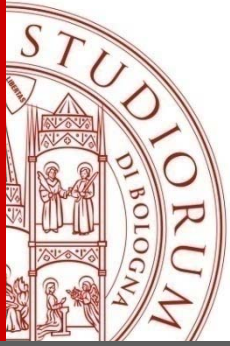
The application of nanotechnology can provide significant advantages for the

- diagnosis
- treatment
- management of diseases.



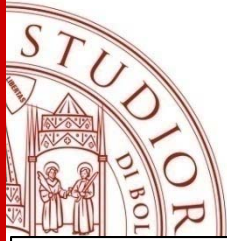
2013





Programme profile

“...The 2nd cycle degree programme in Medical Biotechnologies aims to produce professionals with high level skills in planning and scientific, technical and productive development of biotechnologies applied to the human health field, and who can therefore work in positions of high responsibility....”



Course structure diagram of Medical Biotechnology

First year

Anatomo-Physiological Basis of Organ Diseases

- **Physiology**
- **Human Anatomy**

Biology and Molecular Pathology

- **Oncology and Molecular Immunopathology**
- **Molecular Biology**

Pathological Biochemistry and Biotechnology

- **Biochemistry and Biotechnological Applications in Pathology**
- **In Vivo Metabolic Diagnostics**

Biomolecular Basis of Organ Diseases I

- **Internal Medicine**
- **Endocrinology**

Genetics of Hereditary Diseases

- **Embryology**
- **Medical Genomics**

Pathological Anatomy



Course structure diagram of Medical Biotechnology

Second year

Biomolecular Basis of Organ Diseases II

- **Neurology**
- **Nephrology**
- **Blood Diseases**

Innovative Medical Therapies

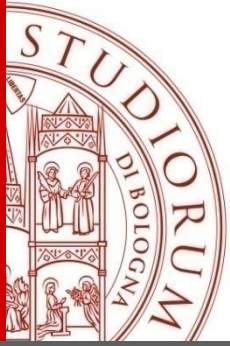
- **Gene therapy**
- **Pharmacology**

Laboratory Diagnosis

- **Clinical Pathology**
- **Clinical Microbiology**

Internship (2nd cycle)

Final Test



Key points for a start-up

- **Management:**

Build teams that shares a common vision, Intellectual honesty and an entrepreneurial culture with a longterm commitment

- **Ability to adapt**

- **Timing**

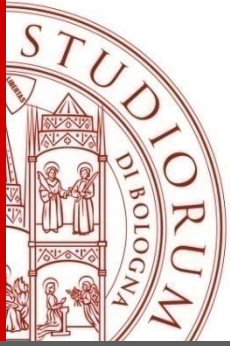
- **Location**

- **Cash**

- **Science**

- **Vision**

Adapted from F. de Rubertis, R. Fleck – W. Lanthaler “Six secrets to success – how to build a sustainable biotech business”, Nature Biotechnology v. 27 n. 7 July 2009 p. 595 - 597



Summer School

2011, 2012, 2013, 2014

Innovation and Technology Management in Medical and Pharmaceutical Biotechnology

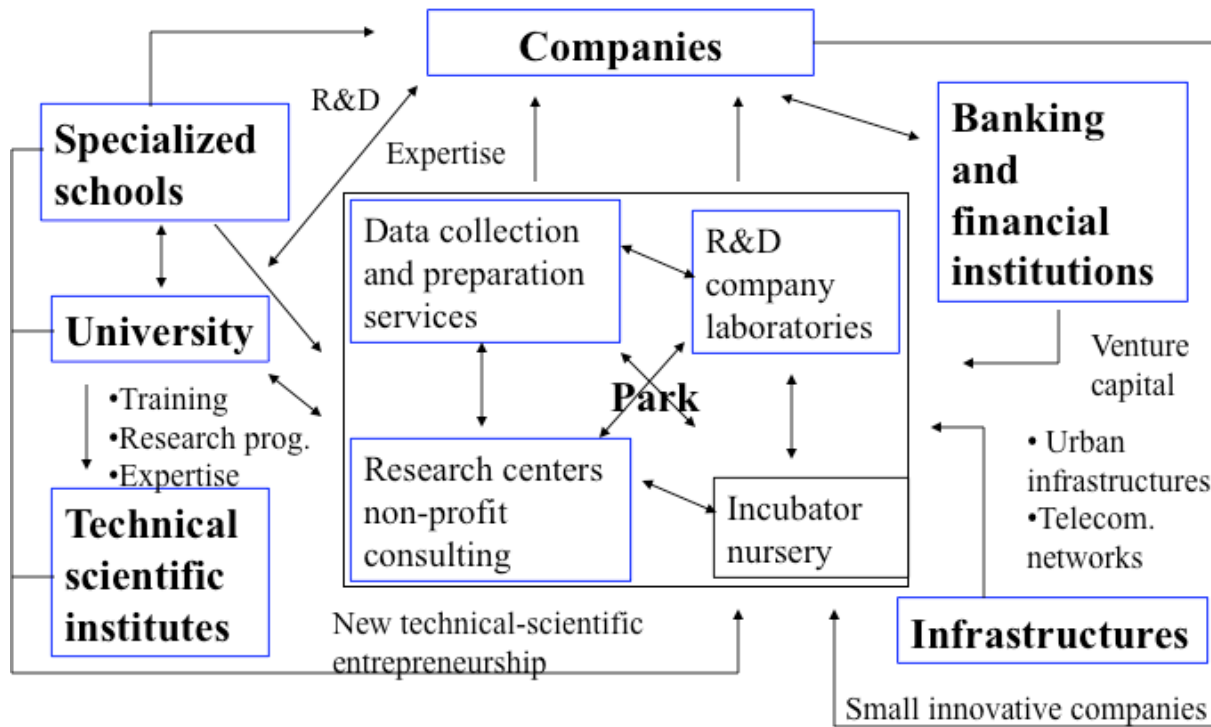
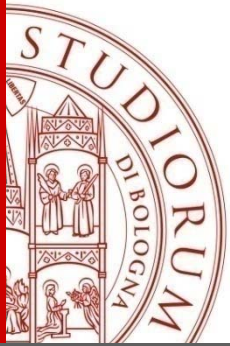
(2013 AND 2014 IP LLP – EUROPEAN GRANTS)

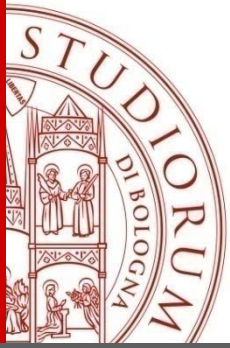
EU Partners:

Aberdeen University, UK

Oviedo University, ES

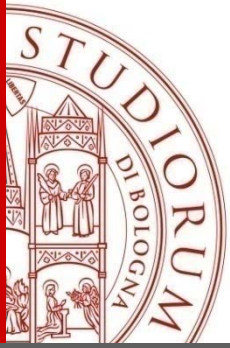
Sofia University, BU





TOPICS

- **biotechnology economics;**
- **the management of the innovation process;**
- **intellectual property in the life science industry;**
- **cell factories and biotechnology companies;**
- **regulatory aspects in development of advanced therapy**
- **medicinal products;**
- **ethical issues in using tissues from human and animal origin;**
- **entrepreneurship and new firms in high-tech and biotechnology;**
- **operations management and logistics in the biotech industry;**
- **development, downstream technologies, quality control and assurance for biotechnological products.**



Academic year 2014-15

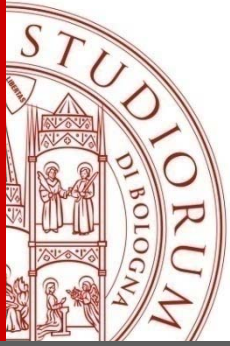


University of Oviedo
Spain



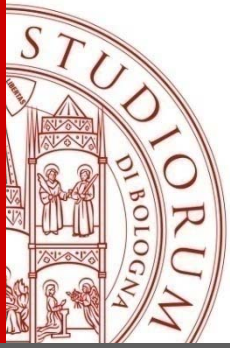
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Double Title Master programme in Medical Biotechnology

- Curriculum in “ Management in Medical Biotechnology”
- Curriculum in “Medical Biotechnology”



Curriculum in “ Management in Medical Biotechnology” First year in Italy and Second year in Oviedo for Italian Students

DEVELOPING INNOVATIVE DISCOVERIES AND PROJECTS

- Biotechnology entrepreneurship fundamentals
- Selection and evaluation of projects in Biotechnology
- Novel approaches for drug design, diagnostics and biopharmaceuticals

TECHNOLOGY MANAGEMENT

- Biotechnology company management
- Legal issues and intellectual property

ADVANCED BIOTECHNOLOGY

- Bionanotechnology
- Biosensors for the detection of contaminants

2014

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File Modifica Vista Finestra ?

Strumenti Compila e firma Commento

4.1. CONDIZIONE OCCUPAZIONALE

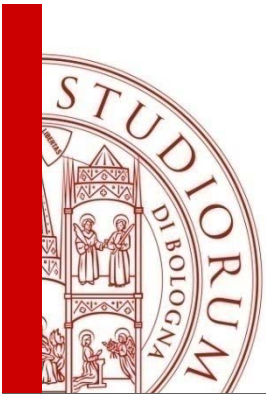
Condizione occupazionale dei laureati a un anno dalla laurea.
I dati provengono dai Rapporti AlmaLaurea sulla condizione occupazionale dei laureati.
Il **grafico** mostra chi lavora, chi non lavora e non cerca lavoro e chi non lavora ma cerca lavoro.
In aggiunta, la **tabella** mostra il numero degli intervistati, la percentuale di chi è impiegato in attività di praticantato o tirocinio e l'efficacia della Laurea sul lavoro svolto.
Il dato del Corso di Studio è confrontato con la **media dei Corsi di Studio simili** (che appartengono al medesimo raggruppamento) e la **media dei Corsi di Studio della stessa classe** degli atenei italiani, per i laureati negli anni solari indicati.

Condizione occupazionale e formativa dei laureati nell'anno solare 2012 a 1 anno dalla laurea
I dati sono relativi al Corso D.M. 270/04 Biotecnologie mediche (codice 8205)

Categoria	CdS	Media CdS simili	CdS della stessa Classe - Atenei italiani
Lavora	41,7%	57,8%	24,5%
Non lavora e non cerca lavoro	33,3%	20,4%	38,4%
Non lavora e cerca lavoro	25%	21,7%	37,1%

210 x 297 mm

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Thank you for your attention