BioHealth Computing EM

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DG Éducation et culture

ERASMUS MUNDUS

UNIVERSITE JOSEPH FOURIER
SCIENCES.TECHNOLOGIE.SANTÉ

UNIVERSITAT DE BARCELONA

UNIVERSITÀ DEGLI STUDI DI TORINO
ALMA UNIVERSITAS TAURINENSIS

UNIVERSITATEA DE ŞTIINTE AGRICOLE SI MEDICINA VETERINARA DE CLUJ-NAPOCA

Maastricht University

October 18th 2010

Invited Partners

- 1. UJF Grenoble. Faculty of Pharmacy, Michel Sève, Emmanuel Drouet, Christine Demeilliers, [Jean-Luc Lenormand, Jean Breton]
- 2. UJF Grenoble, Faculty of Medicine.,Christophe Pison, Dominique Bicout [Anne Maitre, Charles Auffray]
- 3. UJF Grenoble. Faculty of Mathematics, Laurent Desbat [Eric Bonnetier, Christophe Prud'homme]
- 4. UB Barcelona. Faculty of Pharmacy., Josefa Badia Palacin (Pepita!), Amparo Cortès.
- 5. UB Barcelona. Faculty of Medicine, Josep Roca Torrent; Faculty of Biology. [Marta Cascante].
- 6. UB Barcelona. Faculty of Mathematics, Josep Vives
- 7. UNITO Torino. Scuola Universitaria Interfacoltà per le Biotecnologie biologia molecolare. Fiorella Altruda, Ferdinando Di Cunto [Lorenzo Silengo]
- 8. UM Maastricht. School of Nutrition, Toxicology and Metabolism, Annemie Schols [Emiel Wouters]
- 9. USAMV Cluj-Napoca. Faculty Vererinary Medicine.,Vasile Cozma
- 10. UNIGE. Faculty of Pharmacy, Pharmapeptides, Gerrit Borchard. [SIB, Patricia Pallaggi].

Agenda of the meeting

- **[9:30-10:15] Presentation**: Need Analysis; Overview; Academic Structure; Competencies.
- **[10:30-13:00] Students' admission**: Admission criteria; Application procedure; Students selection; Students enrolment; Scholarships-fellowships.
- **[14:00-15:00] Curriculum**: Course integration; Services provided to students.
- **[15:00-16:00] Partnerships:** Public-private partnerships; Advisory board; International policy.
- **[16:00-17:00] Organization:** Consortium management; Financial arrangements; Consortium agreement

What's Erasmus Mundus ?

Cooperation program in the field of higher education

- **General aims:** enhance quality in European higher education ;
- 1. Promoting European higher education
  - offer high quality with a distinct European added value
  - improve accessibility, profile and visibility in the world, attract and recruit top class students / doctoral candidates / scholars
- 2. Helping improving and enhancing the career prospects of students developing the qualifications of men and women
- 3. Promoting intercultural understanding through co-operation with third countries
- **3 actions**

-**Action 1:** High level integrated masters courses and doctorate

-**Action 2:** Partnerships between EU and 1/3 countries HEI's (ex ECW)

-**Action 3:** Attractiveness of European higher education Promotion of the programme and its outputs, Conferences, seminars, workshops, studies, analyses, pilot projects, prizes, international networks, grants for 1/3 countries students and scholars

Erasmus Mundus Programme

2011-12: 123 EM Master Courses (22 EM Joint Doctorates)

- 2004–10: 183 MCs selected,116 MCs labelled, around 26/year;
- 2013-14 (objective): 150 MCs, 34 MCs selected, around 11/year;

2010-11: 1950 Scholarships (1100 non-EU / 850 EU)

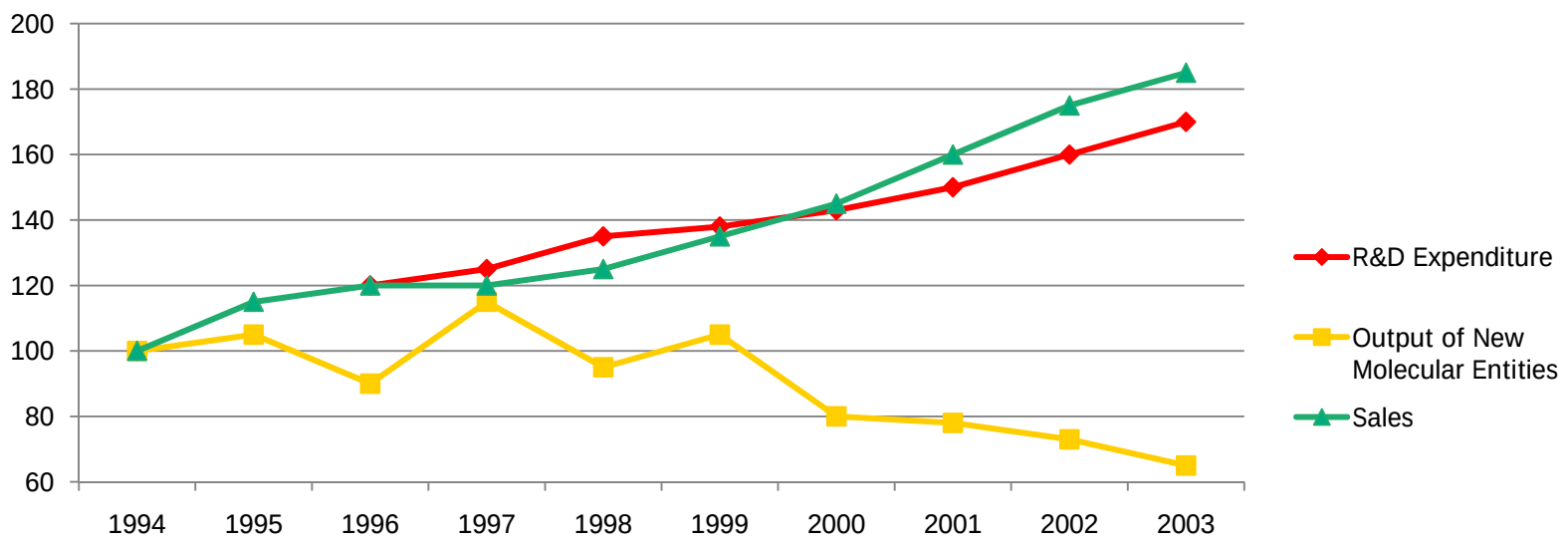
- 2004-2010: 9590 scholarships (7976 for students & 1614 for academics);
- 2013-14 (objective): 12500 scholarships (8500 for students & 4000 for academics).

2010-11 Budget: around EUR 1 billion

- EUR 493.69 Million for Actions 1 and 3 (EU's Education Budget)
- EUR 460 Million for Action 2 (EU's Externals Relations Budget)

Cost of drug development

- Despite the steadily growing R&D expenditure, and significant increase in sales, there is a:
- Decline in output of new molecular entities and medicine;
  - projects are much more prune to failure: only 5% phase 1 projects produce output;
  - average total development time is increasing : 8yrs (1960) to 14 yrs (1990).



Disease complexity

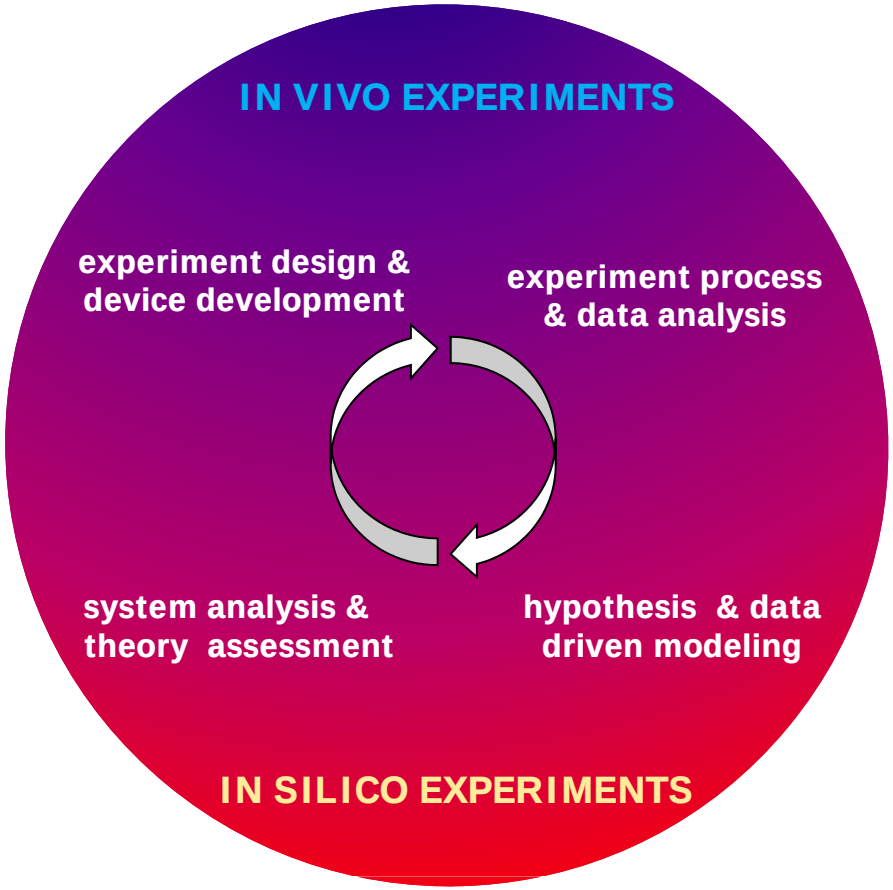
- **Sequencing of human genome** has led to a considerable increase in the number of potential target, that can be considered in drug discovery, and promises shed light on the aetiology of such conditions (the diseases);
- **Many biological and environmental factors**, predisposing to, and causing diseases, are poorly understood let alone the way they interact;
- More and more common diseases are treated with **combination of two or three medicines** hitting different targets in the context of functional network that underlie these diseases.

Medical shift

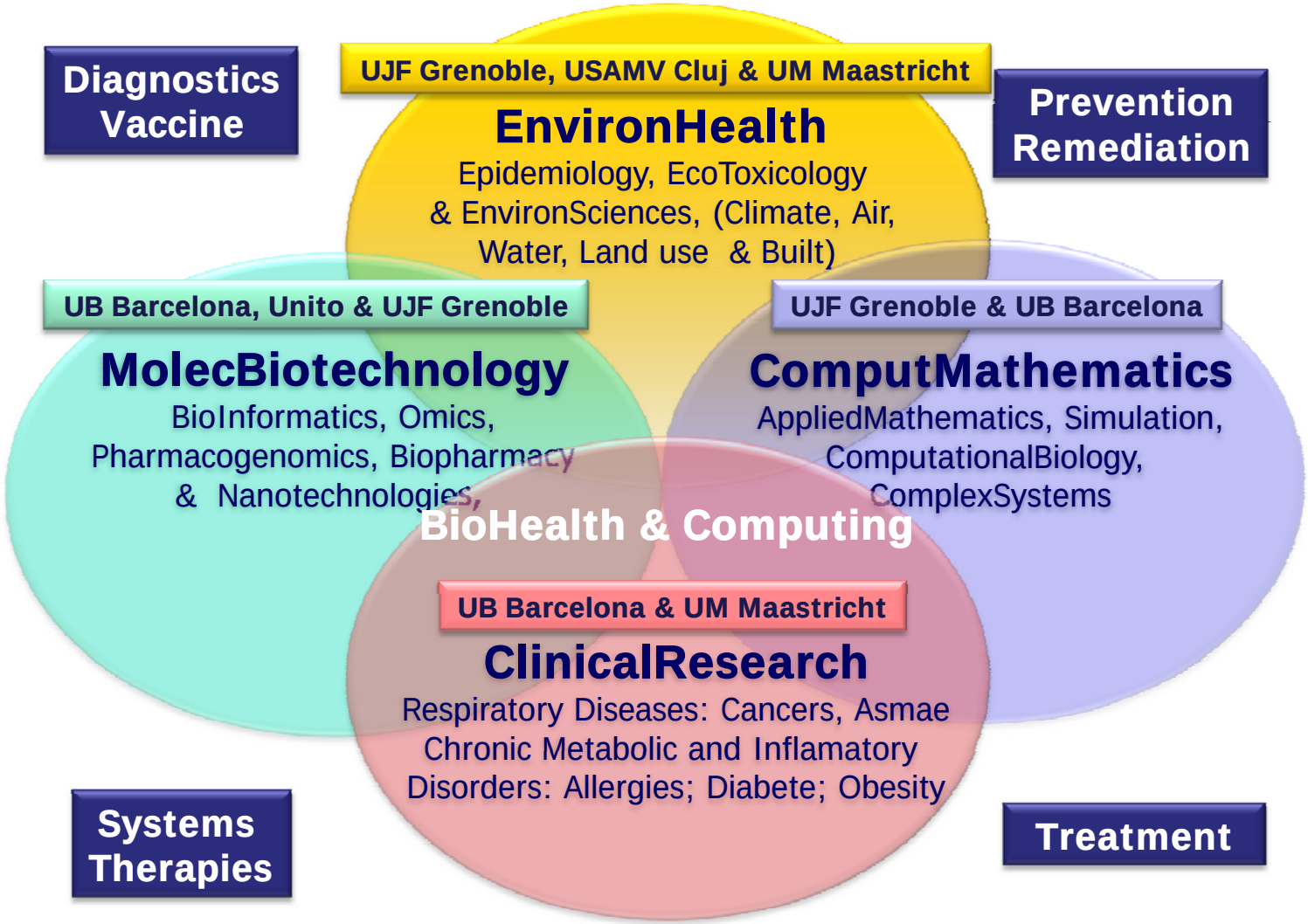
- **Healthcare delivery shifting from**:
  - retrospective approach, which is concerned with analysis of the root cause of failure (“what is your chief complaint?”), to
  - prospective posture based on risk assessment before the development of symptoms.
- **Clinical practice and basic research separated by a series of hurdles or fences**:
  - case studies, without any basic knowledge, to increase the primary care provider's knowledge of hazardous substances (or emergent pathogens).
  - development of new drugs independently of the clinic, and often "thrown over the fence" for safety testing and clinical trials.
- **Translational medicine**:
  - stimulating "bench to bedside" research.
  - developing a comprehensive theoretical education in the principles and methods of environmental health (hazard analysis).

Engineering design: Product Life Management

- Modeling underlying process, generate experimental data. These outputs may indicate a limited range of WET EXPERIMENTS.
- In turn, these results may, be used to test and refine the model by a new cycle of simulation and DRY EXPERIMENTS.
- Iterations between modeling and experimentation, help to deepen our understanding of the dynamics within the system being studied.



Areas of interest of this programme



Master's Programme

InVivo *InSilico*

Track ClinicalResearch	Track EnvironHealth	Track MolecularBiotech	Track ComputMath
UB Barcelona UM Maastricht	UJF Grenoble USAMV Cluj-Napoca	UJF Grenoble UB Barcelona UNITO Torino	UJF Grenoble UB Barcelona

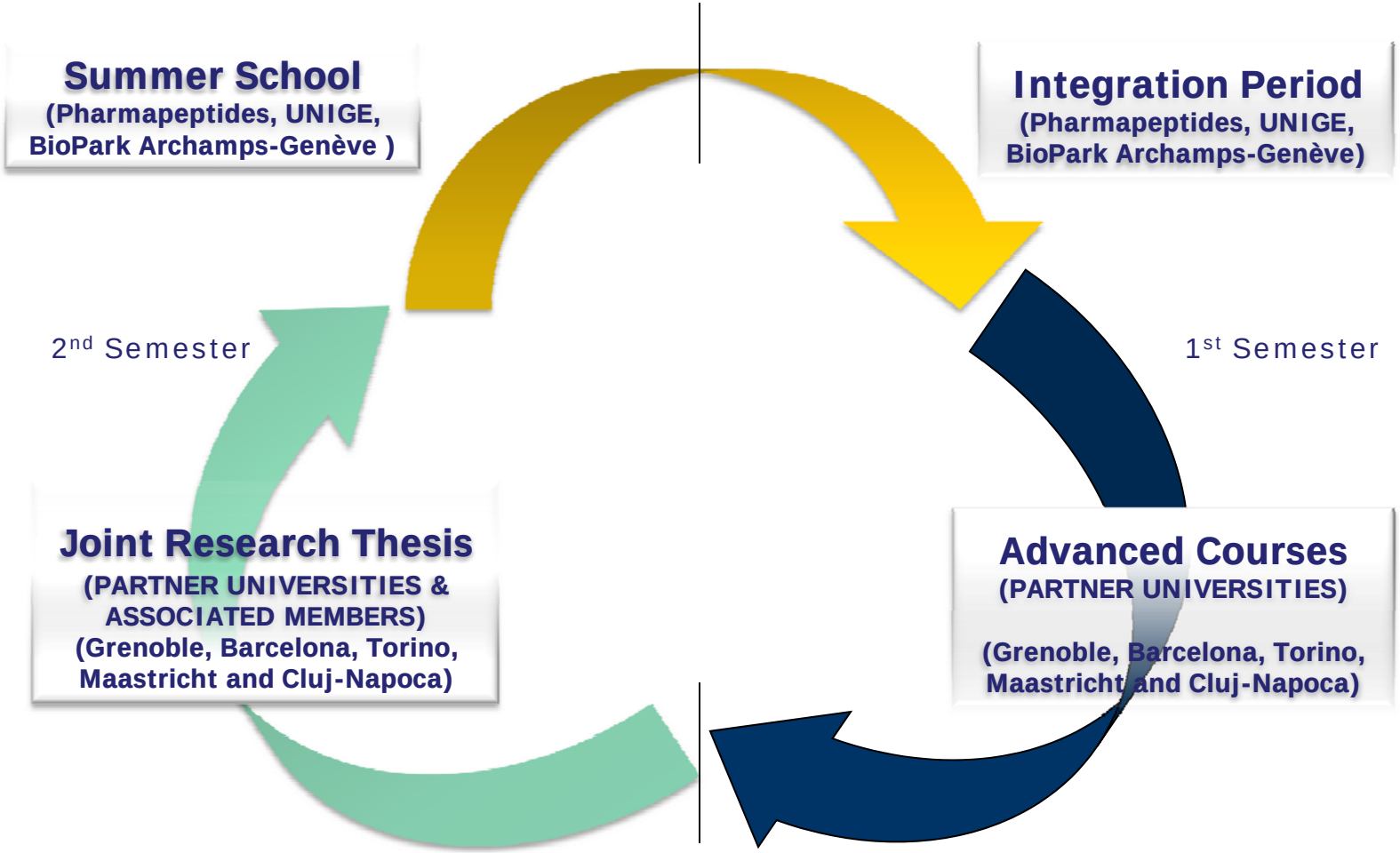
1st Semester

Intégration Period
(Pharmapeptides, UNIGE, BioPark Archamps-Genève)
Advanced Courses
(PARTNER UNIVERSITIES)
(Grenoble, Barcelona, Torino, Maastricht and Cluj-Napoca)

2nd Semester

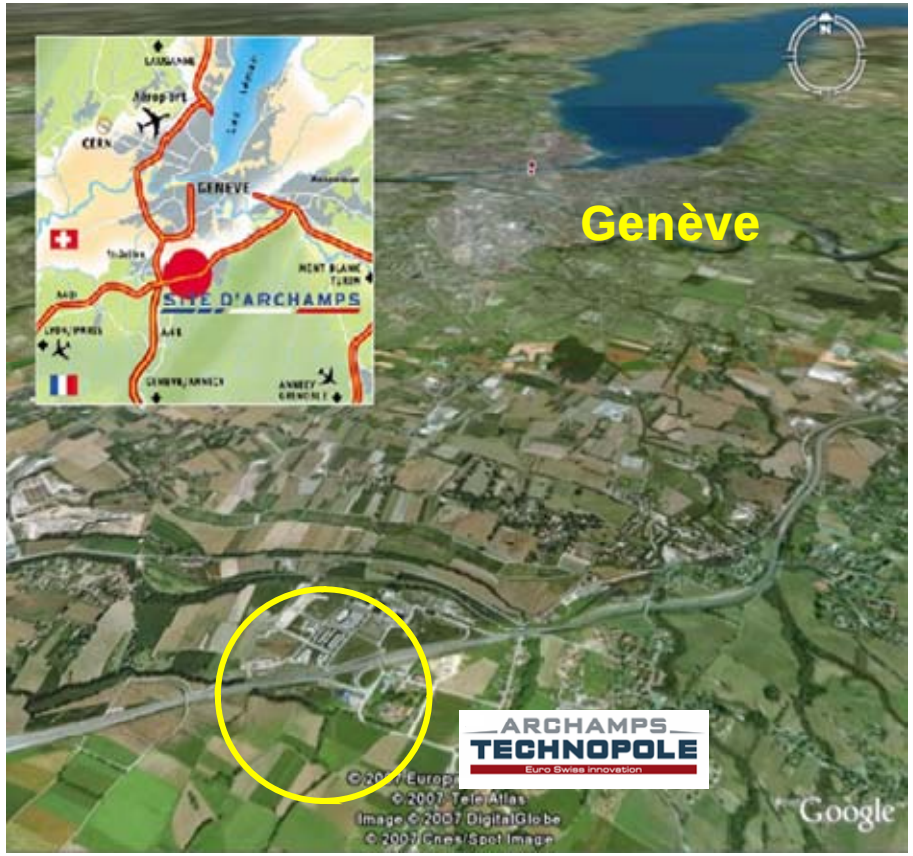
Joint Research Thesis
(PARTNER UNIVERSITIES & ASSOCIATED MEMBERS)
(Grenoble, Barcelona, Torino, Maastricht and Cluj-Napoca)
Summer School
(Pharmapeptides, UNIGE, BioPark Archamps-Genève)

Mobility Scheme



Archamps-Genève Technopole

- **Location** at the border between:
  - Swiss: Geneva (15“),
  - Rhône-Alpes: Lyon & Grenoble (90”),
  - Italia: Mont-Blanc tunnel (75”).
- **Technopole** comprising:
  - business park aimed at service-sector businesses,
  - activity park for innovative industrial ventures,
  - university research and training centre,
  - ultra-modern convention and conference centre.
- **Pharmapeptides Center** (**UNIGE**):
  - higher education and training,
  - scientific and technological research and transfer,
  - institutional cross-border academic collaboration.



Awarded Degrees

Student have to acquire 60 credits in the framework of a mobility scheme:

- 30 ECTS devoted to the master courses, and
- 30 ECTS to a master thesis, whose defence will be organized under the responsibility of the university where the student is registered.
- examination criteria of each of the two host institutions apply.

Following the successful completion of academic year, students are awarded:

- Double Diploma: original diploma awarded by each universities awarding the ECTS leading to the degree.
- Special Diploma in “BioHealth Computing EM”, issued by the Partner Universities, delivered in addition to the double diploma.
- Diploma Supplement describing the overall organization of the master programme, the added value it brings to the student, and the details on the student’s study programme.

Original Diploma

Partner Institution	Title of degree	Type of degree	Official Name of the Degree (Name in English) Date and reference of formal approval of degree
UJF Grenoble	Master of Sciences		Master Ingénierie de la Santé et du Médicament
		Track 2	Spécialité Méthodes de Recherche en Environnement-Santé
		Track 3	Spécialité Biotechnologie et Ingénieries Diagnostiques et Thérapeutiques
		Track 4	Master Mathématiques, Informatique: Spécialité
UB Barcelona	Master of Sciences	Track 1	Màster en Medicina Respiratòria
		Track 3	Màster en Biotechnologie
		Track 4	Màster de Matemàtica Avançada i Professional
UNITO Torino	Master of Sciences	Track 3	Laurea magistrale de Biotecnologie Molecolari
UM Maastricht	Master of Sciences	Track 1	Master Nutrition and Metabolism; fundamental and clinical aspects
		Track 2	Master Molecular Lifesciences
USAMV Cluj-Napoca	Master of Sciences	Track 2	Masterat Patologie animală şi sănătate publică

Students's competencies

Students gradually improve:

- **Basic knowledge** of the major fields of BioHealth and Computing; Basic experimental skills; Scientific method and approach ;
- **Information handling skills** (prioritizing information and gleaning most important points); Mathematical and analytical problem solving skills (using calculus to solve problems; Computing proficiency (basic programming skills);
- **Communication skills** (communicating scientific and technical information through both written and oral presentations;
- **Organizational and management skills** (time management, meeting deadlines, focus and staying power, appropriately utilizing resources, grant writing, etc.)
- **Personal/interpersonal skills** (adaptative behavior, creativity, sociability).

Learning outputs

Students' ability:

- to develop innovating joint research projects which need a genuine interdisciplinary approach and use of systemic modelling and simulation tools, and to facilitate the interaction between basic research and clinical medicine,;
- to design application of new technologies in a patient driven environment, where the emphasis is on early patient testing and evaluation, particularly in clinical trials, and to manage product lifecycle (PLM) in industries.
- to set up new therapeutic, diagnostic & epidemiological tools, and to become leaders in research and development programs, for patient care, public health, and disease control.
- to model and to assess health impacts of environmental exposure at several scales of organization of living systems;
- to open themselves to ethical rules, industrial practices and business management. as teamwork, management of complex processes, conceptual approach, and high intercultural awareness.

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Admission criteria

One year MSc programme open students who :

- have completed one year MSc course (60 ECTS) or equivalent degree in one of the four track of the Master Programme (or related fields) with prerequisites (Biology or Computing), and having achieved a minimum of 70 % of the maximum score
- are required to pass a TOEFL exam: paper based at least 580, computer based at least 237 or internet based at least 92-93. An alternative is a minimum score of 6.5 from IELTS test.
- Consortium Committee can admit excellent students with a somewhat lower TOEFL (550, 213 or 79-80 respectively) or IELTS score (6.0).

Application procedure

Students apply through a standard Application Form downloaded from the website :

- containing all elements necessary: letter of motivation, full academic background containing a list of courses followed, obtained grades, information about the ranking of the students in their previous studies, language skills, two recommendation letters;
- indicating the Research projects and research team teams in which they want to do their research and the Universities where they want to follow their courses.

Technical Secretariat of the Coordinating Institution

- provides first-hand support via telephone or e-mail for all questions regarding the application;
- collects all application forms, before the agreed deadlines in order to be eligible; checks whether students fulfil basic diploma requirements, makes the first selection based on selection criteria and prepares an overview for the selection by the Educational Committee.

Master Thesis

- **Projects are:**
  - well-defined, relevant to the student's track and addressing a question of importance in the student's field;
  - corresponding to multidisciplinary approaches of the Msc courses: (i) Clinical Research; (ii) Environmental Health; (iii) Molecular Biotechnology; or (iv) Computational Mathematics;
  - designed by Partner Institutions, assessed by the Education Committee, and approved by the two universities awarding the double degree;
  - supervised by two staff members of the participating research and teaching groups of the BioHealth Computing EM Consortium.
- **Students are:**
  - expected to design write a formal research protocol, perform the study described in it, and prepare a comprehensive scholarly scientific paper reporting the results;
  - required to write a scientific publication under guidance of their research supervisors, and to give a scientific communication in a special session of the BioHealth Computing EM Summer School.

Students selection

Educational Committee selects and ranks

- a first list of students and academics (main+reserve list) that will be proposed for an Erasmus Mundus scholarship during a first meeting (end of january).
- a second list of European students during a second yearly meeting (end of may) that will be proposed for Consortium scholarships (companies and regional scholarships).

Coordinator will contact selected students,

- to inform them about the results of the selection process,
- to start up the inscription procedures and mobility arrangements (inviting letters to obtain visa e.g).

Erasmus Mundus Scholarships

Action 1 A - EMMCs (c)

Info Day February 2009 EUROPEAN COMMISSION

		Category A scholarships	Category B scholarships	Scholars scholarships
I	Contrib. to travel and any other types of personal costs	€ 4 000 per year	€ 3 000 - only if mobility to a Third-Country partner	
II	Contrib. to participation costs (incl. insurance)	Max € 4 000 / semester	Max € 2 000 / semester	
III	Monthly allowance	€ 1 000 / month	€ 500 / month	
IV	Living allowance (incl. travel costs)			€ 1 200 / week for a maximum duration of 3 months per scholar
	Total	€ 24 000 per year	€ 10 000 per year (+ € 3 000 if travel)	€ 14 400 for a 3-month stay max

A two year EMMC (with a third country partner) will receive approx.

€ 750.000 per course edition

ERASMUS MUNDUS 2009 – 2013

Students enrolment

Consortium enrols accepted students

- according to their own regulations in two partner universities where each student will follow one semester of the master course, under the list of local courses.
- and student's preference within the limitations of the set minimum and maximum numbers of students per institution as a percentage of the total number of students in BioHealth Computing EM, being 10% and 33% respectively.
- Enrolment is only official after paying the subscription fee to the account of the Consortium.
- Accepted students are bound to the rules and regulations from each Partner at which she/he is enrolled.

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Students registration

Upon registration

- Which however always takes place administratively at the Coordinator's institution.
- Each student is required to sign a Student Agreement defining their rights and duties.

At the start of the BioHealth Computing EM Course,

- Each student is interviewed by their mentor to ensure the study plan meets the needs of the student and that the study plan is also feasible.
- Students who enter may have only minor deficiencies at the start of the Course. If they do, then they need to attend courses to overcome these deficiencies during their 1st semester.

Agenda of the meeting (Afternoon)

[14:00-15:00] Curriculum

- Course integration
- Quality assessment

[15:00-16:00] Partnerships

- Public-prvate partnerships (Advisory Board).
- International policy

[16:00-17:00] Organization

- Consortium management
- Financial arrangements
  > Draft of Consortium Agreement

Advanced Courses in Clinical Research

Prof Josep Roca, UB Barcelona (24 ECTS)

Courses code	Courses name	Credits ECTS
1.1.1	Translational Research for Biological Processes	5
1.1.2	Nanotechnology and biosensors	5
1.1.3	Systems Biology and Bioinformatics	5
1.1.4	Animal experimental models for research	5
1.1.5	Functional assessment and biomarkers	5
1.1.6	Organization and management	2.5
1.1.7	Clinical trials and information management	2.5

Prof Annemie Schols Emiel Wouters, UM Maastricht (24 ECTS) ??????

2.1.1	M	?
2.1.2	S	?
2.1.3	N	?
2.1.4	T	?
2.1.5	N	?

Advanced Courses in Environmental and Animal Health

Prof Anne Maître, UJF Grenoble (24 ECTS)

Courses code	Courses name	ECTS
2.1.1	EPIDRISQ: Epidemiology and Health Risks	3
2.1.2	TOXBASE: Toxicology, Bio-markers of Exposure and Effects	3
2.1.3	MODENV: Modelling Environmental Health Processing	3 (+3)
2.1.4	RISQCHIM: Chemical Risks in Environment and Industry	3 (+3)
2.1.5	PEX: Environmental Disturbance associated to Xenobiotics	3 (+3)
2.1.6	SIG: Geographic Information System and Health	3

Prof. Vasile Cozma, USAVM Cluj-Napoca (24 ECTS)

2.2.1	Veterinary public health	7
2.2.2	Ecotoxicology	5
2.2.3	Animal welfare and Issues in law, ethics, and R&D experimentation	4
2.2.4	Transmissible diseases in farm animals	6
2.2.5	Veterinary laboratory diagnostics	4
2.2.6	Food safety and consumer protection	4
2.2.7	Biotechnologies applied in animal science: hereditary disease in animals	5

Advanced Courses in Molecular Biotechnology

Prof. Michel Sève, UJF Grenoble (24 ECTS)

Courses code	Courses name	Credits ECTS
3.1.1	Biochips for health research	3
3.1.2	Proteomics for health research	3
3.1.3	Protemics for health research: practical session	3
3.1.4	Elements of bioinformatics	3
3.1.5	Bioengineering and production of biological and biosimilar medicines	3
3.1.A	Molecular biotechnology	3
3.1.B	Analytical tools for the drugs development	3
3.1.C	Research methods for pharmacological targets	3
3.1.1	Biochips for health research	3
3.1.2	Proteomics for health research	3

Advanced Courses in Molecular Biotechnology

Prof. Josefa Badia Palacin, UB Barcelona (24 ECTS)

Course code	Courses name	Credits ECTS
3.2.1	Animal biotechnology	5
3.2.2	Biotechnological application	5
3.2.3	Genomics, proteomics and bioinformatics	5
3.2.4	Molecular and cellular bases of biotechnology	5
3.2.5	Research seminars	4

Prof. Fiorela Altruda, UNITO Torino (24 ECTS)

3.3.1	Complex systems	3
3.3.2	Functional genomics	9
3.3.3	Computational genomics	10
3.3.A	Clinical application of stem cells	3
3.3.B	Molecular profiling in proliferation processes	4

Advanced Courses in Computational Mathematics

Prof. Eric Bonnetier, UJF Grenoble (24 ECTS)

Courses code	Courses name	Credits ECTS
4.1.1	Mathematical models in the physical and biological sciences	6
4.1.2	Asymptotic methods in PDE's and applications	6
4.1.3	From atomistic to continuum modeling in physics and biology.	6
4.1.4	Multiscale modelling	6
4.1.5	Advanced numerical analysis	6
4.1.6	Advanced Computing	6
4.1.7	Optimal control and data assimilation	6
4.1.8	Advance statistics	6
4.1.9	Advanced stochastic calculus	3
4.1.10	Sensitivity analysis	6

Prof. Josep Vives, UB Barcelona (24 ECTS)

Courses code	Courses name	Credits ECTS
4.2.1	Dynamical systems	9
4.2.2	Applied harmonic analysis	9
4.2.3	Partial differential equations	7.5
4.2.4	Simulation methods	9
4.2.5	Numerical analysis	9
4.2.6	Optimization and control	9
4.2.7	Software graphics	7.5
4.2.8	Introduction to stochastic calculus	9
4.2.9	Measure and probability	7.5
4.2.10	Stochastic processes	7.5

Quality assesment

Each partner institution

- established procedures for evaluation by students already exist.
- will report the impact of the courses on the student's competence by a course evaluation protocol (both at the course and programme level).
- is responsible for following closely the attendance of students to the courses and for detecting, as early as possible, students who would not be of a sufficient level to obtain the final degree; such cases should be immediately reported to the coordinating team. Advice can be that special action should be taken or that the study should be stopped.

Agenda of the meeting (Afternoon)

[14:00-15:00] Curriculum

- Course integration
- Services provided to students

[15:00-16:00] Partnerships

- Public-private partnerships (IAB)
- International policy

[16:00-17:00] Organization

- Consortium management
- Financial arrangements
- > Draft of Consortium Agreement

Specific goals of the consortium

General Objective:

- Providing an advanced understanding of the methodologies and processes required for the translation of laboratory-based science technology into practical health applications;
- Innovative approach based on methods used by manufacturing industries, addressing a market failure, and enabling Life and IT Industries to optimise their research phases (Product Life Management).

Specific goals:

- (a) establishing a core curriculum that will address the needs of translational investigations;
- (b) implementing a mentor training program and promote research programs across the consortium, sharing with best practices;
- (c) participating to cluster organizations, biotech medtech and IT innovation cluster, focused on the development of life science companies.

Members

- **BioParks and Universities'Hospitals**
  - BioIndustry Park Silvano-Fumero (Torino); Parc Cientific de Barcelona; BioPark Archamps-Genève Technopole; Rovaltain Valence; Floralis Grenoble;
  - Universities' Hospitals of Grenoble, Barcelona, Cluj-Napoca;
- **Poles of Competiveness and Industries**
  - Poles of Competiveness: LyonBiopole ; bioPmed Piemonte; BioCat Cataluña;
  - Life Industries: Sanofi-Pasteur, BioMérieux, Merial;
  - IT Industries: BioIntelligence Consortium, by the way of Sophia BioSystems (SoBioS), a startup founded in 2006 by Marc Vasseur, a contractor who previously co-founded Genset (former flagship of the French biotechnology);
- **Swiss partnerships**
  - Swiss Institute of BioInformatics and University of Genève by the way of the Pharmapeptides Center (Prof. Gerrit Borchard).

► Public-private partnerships

Associated Partners

International Advisory Board

Organization:

- Dozen representatives from different working field, expressing their support to the Programme, and advising the Consortium Committee
- Meeting 2 times/year during the orientation period (September, May or June)

Specific goals:

- Development and Sustainability Plan: Internships and scholarships
- Quality assesment and the relevance of the MSc Course for the professional practice: Career opportunities; Work placement arrangement.
- International Clustering and Networking: Bioregions, Pole of Competitiveness, etc

Visitors' location

- 1025 visitors from Oct 4th to Oct 16th; around one hundred visitors/day;

- Indonesia (ID) 92; Ethiopia (ET) 90; France (FR) 55; India (IN) 52 ; China (CN) 49; Spain (ES) 47; Pakistan (PK) 44 ; United States (US) 31; Russian Federation (RU) 22; Italy (IT) 20; Philippines (PH) 20; Ghana (GH) 20; Serbia (RS) 19; Bangladesh (BD) 19; Thailand (TH) 16; Norway (NO) 15; Mexico (MX) 15; United Kingdom (GB) 15; Serbia (RS) 14; Turkey (TR) 14, etc

Contacts

- ## Universities
  - **Asia:** China (Shanghai Jiao Tong University , School of Medicine, Tongji University, China Pharmaceutical University Nanjing); India (Anna University-Chennai, Pondichery University; Dehli University); Japan (University of Kyoto)
  - **Others:** Brazil (National School of Public Health/Oswaldo Cruz Foundation, Rio); Canada (Université de Montréal ; Israel (Ben Gourion University); Turkey (Selçuk Üniversitesi); Iran (Tehran University of Medical Sciences, School of Public Health)
- ## BioParks and Universities'Hospitals
  - **Asia:** China (Shangai Rujin Hospital, Institut Pasteur of Shanghai, Suzhou BioBay); Korea (Chuncheon Bioindustry Foundation); Japan (Kansai TLO)
  - **Others:** Canada (BiopolisQuébec, Montréal InVivo, CQIB Laval, Sherbrooke Innopole); Israel (BioNegev - Innovation); Turkey (Konya Teknokent AS); Iran(Iranian Research Organization for Science and Technology)
- ## Poles of Competiveness and Industries
  - **Asia:** China (ERAI Shangai, BioMérieux , Shangai, ERAI India)

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  > Draft of consortium agreement

Management structure

Consortium governed by:

- **Coordinating Institution (CI),** Université Joseph-Fourier Grenoble hosts the Coordinator (C), in charge of coordinating and developing the consortium, and the Manager (M), responsible for managing the Programme at an inter-university level.
- **Consortium Committee (CC),** with one representative of each partner institution (HEI/BioPark), more the Coordinator, is in charge of all academic issues. Each member of the Consortium can bring observing non-voting persons (e.g. experts ...) to the CC meetings, unless decided otherwise by the CC. This committee defines the regulations of the programme, and notably :
  - Appointment of other committees such as Education Board (EB), Scientific Board (SB) and International Advisory Board (IAB);
  - Definition of the financial regulations and particularly the distribution rules of the tuition fees, under the framework of Consortium Agreement.

Costs analysis

Fixed costs

- **Partners** for running the course (secretarial work, other administrative costs);
- **Coordinating Institution** for (1) Managing, coordinating and developing the Consortium (publicity, website, secretary work);(2) Mobility associated to Meetings of the Committees; (3) Yearly Summer School (including travel and stay); and (4) other costs to be covered.

Variable costs

- **Institutional subscription fees** charged per individual student by the two institutions where the student is studying.
- **Students' Scholarships** (monthly scholarship + remainder of lump sum for travel, fees and relocation cost after deduction of the tuition fee and other costs)
- **Participation of the students** in the Yearly Summer School,

Regulation rules

- **Budget scenarios will be studied** with varying: (i) Number of Internal Scholarships to up to European students demonstrating true Academic Excellence and/or coming underprivileged economic background; and (ii) Level of Tuition Fees in order to make the best estimate of the fees needed equilibrate the budget. (Upper case and base case scenarios can result in either a surplus of income over costs or a deficit.)
- **Yearly adjustments in fees will be made** to ensure that the BioHealth Computing EM Course is sustainable. Thus part of it should revert to a “Community Fund” in order to cover development expenses. The Consortium will offer, the opportunity to develop new collaborations to associated research teams.
- **New budgets will be composed, and proposed to the Consortium Committee for approval**. Calculation algorithm should be simple and versatile enough to be easily applicable.

Agenda 2010-11

Working programme

- October 14th 2011: International Advisory Board
- October 18th 2010: Kickoff Meeting
- February 4th 2011: Consortium Committee
- March 15th 2011: International Advisory Board
- May 16th 2011: Consortium Committee
- June 17th 2011: Scientific Board
- September 5th – 23th 2011: Summer School and Consortium Committee.