Report of

MEETING of the EUROPEAN BIOTECHNOLOGY THEMATIC NETWORK ASSOCIATION

Venue of the meeting
Università degli Studi di Perugia,
Palazzo Murena, Sala Dessau
Piazza dell'Università n°1

AGENDA
Thursday 17th January
Morning Session
09.30-10.00 Registration
10.00-13.00 Welcome of the President
Financial organisation
Activities
NATO project
Proposal from the Associated members
Global Bioethics Association presentation by Prof. Brunetto Chiarelli

KICKOFF MEETING of the "EUROPEAN BIOTECHNOLOGY" PROJECT

Venue of the meeting
Università degli Studi di Perugia,
Palazzo Murena, Sala Dessau
Piazza dell'Università n°1

AGENDA
Thursday 17th January
Afternoon session
14.30-15.00 Registration
15.00-15.15 Welcome
15.15-15.45 Presentation of the New project: Summary & Aims
15.45-18.30 Short presentation (5 minutes) of the 21 Work packages by each leader
18.30 End of the session

Friday 18th January
Morning session
09.30-11.00 Working group activities
11.00- 11.30 Coffee break
11.30-13.00 Final presentation of timetable by each work package leader

Friday 18th January
Afternoon session
15.00-16.30 Organisation of the project
16.30-17.00 Coffee break
17.00-17.30 Creation of the steering committee
17.30-18.30 Future deadline for meeting and plan of the dissemination activities
18.30 Valorisation and conclusions

MEETING of the International First Level Degree "Job Creation Oriented Biotechnology"

& Master "Biotechnology Medical Application"

Venue of the meeting
Università degli Studi di Perugia,
Palazzo Murena, Sala Dessau
Piazza dell'Università n°1
January19th, 2008

AGENDA
Saturday 19th January
09.30 Starting Work
Future and problems of the international courses
Signature of the students diploma
Diploma supplement
Report of the QAA visit
Contribution of the partner Universities
Proposal of a Workshop in Brussels on Oct-Nov 2008

With the support of the Lifelong Learning Programme of the European Union

EUROBIOTECH – European Biotechnology Agr. n° 2007-2566 / 001-001 project n° 134310-LLP-1-2007-1-IT-ERASMUS-ENW
This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein

MEETING of the EUROPEAN BIOTECHNOLOGY THEMATIC NETWORK ASSOCIATION
(Just for the Associates)

Venue of the meeting
Università degli Studi di Perugia,
Palazzo Murena, Sala Dessau
Piazza dell'Università n°1

AGENDA
Thursday 17th January
Morning Session
09.30-10.00 Registration
10.00-13.00 Welcome of the President
Financial organisation
Activities
NATO project
Proposal from the Associated members
Global Bioethics Association presentation by Prof. Brunetto Chiarelli

The representative of "Banca di Mantignana" will be present

PRESENT:
Mariapia Viola Magni, University of Perugia
Michele Maffia, University of Lecce
Jan Turna, Comenius University in Bratislava
Lyubov Yotova, University of Chemical Technology and Metallurgy, Sofia
Rossica Betcheva, University of Chemical Technology and Metallurgy, Sofia
Ola Skold, Uppsala University
Uldis Viesturs, University of Latvia
Aija Zilaevica, University of Latvia
Peter Brian Gahan, King's College London
Hans Michael Eichinger, Technische Universität München
György Kéri, Semmelweis University of Budapest
Oscar Vicente, Polytechnic University of Valencia
Costantine Arvanitakis, Aristotle University of Thessaloniki
Magdolna Szente, University of Szeged
Algimantas Paulauskas, Vytautas Magnus University
Colette Creusy, Catholic University of Lille
Elzbieta Walajtys-Rode, Rzeszow University of Technology
Luigi Magni, Pragma Engineering S.r.l.
Fabrizio Bruschi, University of Pisa
Juraj Krajcovic, Comenius University in Bratislava
Not Member
Camelia Bala, University of Bucarest
REPORT:
After the welcome the President summarises the aim of the Association (which are listed below) and remembers to the participants the results of the election made in Germany on 16th March 2007:

President: Mariapia Viola Magni, University of Perugia (IT)
Vice President: Costantine Arvanitakis, Aristotle University of Thessaloniki (GR)
Secretary General: Fabrizio Bruschi, University of Pisa (IT)
Treasurer: Jorge Rocha, University of Coimbra (PT)
Administrative Council:
Hans Michael Eichinger, Technische University of Mnchen (DE)
Elzbieta Walajtys-Rode, Rzeszow University of Technology (PL)
Lyubov Yotova, University of Chemical Technology and Metallurgy, Sofia (BG)
Jan Turna, Cominius University in Bratislava (SK)
Ola Skold, Uppsala University (SE)

AIMS:
- a. to implement, consult or supervise programmes for the assessment of skills and knowledge in sciences with an emphasis on biotechnology,
- b. to undertake programmes concerning education and training, especially those concerning innovative approaches,
- c. to operate as a consultant or assessor in programmes concerning education and training,
- d. to provide certification of achievement when assessments have been carried out under appropriate conditions,
- e. to co-operate with established professional or other associations in the furtherance of its objectives and
- f. to extend the reach of all aspects of education in biotechnology beyond national and European borders.

The BANK references for the Association to which all the partners must pay the association fee are:
BANK NAME: Banca di Mantignana Credito Cooperativo Umbro / Ponte San Giovanni
ACCOUNT NUMBER/CC: 612379
ABI: 08630
CAB: 03004
CIN: P
SWIFT CODE: ICRAITRR
IBAN CODE:
IT92P0863003004000000612374
ACCOUNT HOLDER: THE EUROPEAN BIOTECHNOLOGY THEMATIC NETWORK ASSOCIATION

For administrative purpose the Bank requires also to indicate two names who will have the power of signature.
The Assembly agrees to appoint the President, Prof. Mariapia Viola Magni and the Secretary, Prof. Fabrizio Bruschi. A specific report for the Bank is prepared.
The President then invited the members to propose projects and activities.
During this year a project entitled *"Detection of bacteria, viruses, parasites and fungi"* was presented by the Association under the framework of NATO Science for Peace and Security Programme.
It consists of an advanced research workshop of 3 days on bio contamination.
The speakers will be also from other countries like USA and Israel. If it will be approved, the meeting will be held in Perugia at the end of May 2008.

With the support of the Lifelong Learning Programme of the European Union

EUROBIOTECH – European Biotechnology Agr. n° 2007-2566 / 001-001 project n° 134310-LLP-1-2007-1-IT-ERASMUS-ENW
This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein

Finally it is suggested to create the link with other Associations; this aspect is considered very important by the European Community. Therefore the President invites each member in find contacts.
The web-site is presented and it was decided to create the link with the Network and with the International Courses' web-sites.
A discussion is opened about e-learning and the ODL modules already prepared. It was decided to put the ODL modules on the web-site. Since some partners are in favour for a free access, while some others not, and since the ODL is the property of the author, the President decided to send to each author a letter asking if they wish to offer with free access or if a subscription is needed for using a module. In any case a registration of users will be required in order to monitor the access. It is also suggested that some enterprises may use the ODL space for publicity. This could represent an economical advantage for the Association.
The President suggested that the following letter should be sent to the ODL Authors:
"Dear ……,
as author of the ODL module entitled "……" I the undersigned, Prof. Mariapia Viola Magni, President of the "EBTN" Association, wish to know if you intend to put the above mentioned product using the web-site of the Association.
I would also like to know if there will be free access to your module will be free for each registered user or if you intend to put on the web-site just a summary of the module. In the latter case, the entire module may be obtained only after payment of fee to the Association. In this case I need to receive the summary and the requested fee.
Best wishes and kind regards.
Yours sincerely,

Prof. Mariapia Viola Magni
President "EBTN" Association"

KICKOFF MEETING of the "EUROPEAN BIOTECHNOLOGY" PROJECT

Venue of the meeting
Università degli Studi di Perugia,
Palazzo Murena, Sala Dessau
Piazza dell'Università n°1

AGENDA
Thursday 17th January
Afternoon session
14.30-15.00 Registration
15.00-15.15 Welcome
15.15-15.45 Presentation of the New project: Summary & Aims
15.45-18.30 Short presentation (5 minutes) of the 21 Work packages by each leader
18.30 End of the session

Friday 18th January
Morning session
09.30-11.00 Working group activities
11.00- 11.30 Coffee break
11.30-13.00 Final presentation of timetable by each work package leader

Friday 18th January
Afternoon session
15.00-16.30 Organisation of the project
16.30-17.00 Coffee break
17.00-17.30 Creation of the steering committee
17.30-18.30 Future deadline for meeting and plan of the dissemination activities
18.30 Valorisation and conclusions
PRESENT:
Mariapia Viola Magni, University of Perugia, and TUCEP Consortium
Andrea Germini, University of Parma
Kevan Gartland, Caledonian University of Glasgow
Tommaso Beccari, University of Perugia
Fabrizio Bruschi, University of Pisa
Peter Brian Gahan, King's College London
Elisa Guardabassi, TUCEP Consortium
Michele Maffia, University of Salento
Oscar Vicente, Polytechnic University of Valencia
Vincenzo Costigliola, European Medical Association
Carlo Storelli, University of Salento
Grazia Pula, Università di Perugia
Lyubov Yotova, University of Chemical Technology and Metallurgy
Uldis Viesturs, University of Latvia
Johanna Heine, University of Natural Resources and Applied Life Sciences Vienna
Rossica Betcheva, University of Chemical Technology and Metallurgy
Aija Zilaevica, University of Latvia
Luigi Magni, Pragma Engineering S.r.l.
Olga Golubnitschaja, Reinische Friedrich Wilhems University of Bonn
György Kéri, Semmelweis University of Budapest
Gianfranco Savelli, CEMIN
Hans Michael Eichinger, Technische Universität München
Magdolna Szente, University of Szeged
Paolo Fabrizi, Unihart
Costantine Arvanitakis, Aristotle University of Thessaloniki and Hellenic Foundation of Gastroenterology and Nutrition
Elzbieta Walajtys-Rode, Rzeszow University of Technology
Jorge Coelho, University of Coimbra
Maria Klapa,Foundation of Research and Technology
Camelia Bala, University of Bucarest
Pere Garriga, Technical University of Catalonia
Andrej Susek, University of Maribor
Colette Creusy, Catholic University of Lille
Juraj Krajcovic, Comenius University, Bratislava
Brunetto Chiarelli, University of Firenze
Jan Turna, Comenius University, Bratislava
Rosangela Marchelli, University of Parma
Ola Skold, Uppsala University

NOT PARTNERS:
Winrich Breipohl, University of Witten-Herdecke
Algimantas Paulauskas, Vytautas Magnus University

With the support of the Lifelong Learning Programme of the European Union

EUROBIOTECH – European Biotechnology Agr. n° 2007-2566 / 001-001 project n° 134310-LLP-1-2007-1-IT-ERASMUS-ENW
This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein

Bruno Palazzotti, Provincia di Perugia

REPORT
Thursday 17th January
Afternoon session
After the welcome the coordinator expresses her gratitude to see a lot of partners present to the Kick off Meeting of the new project "EUROpean BIOTECHnology" approved for the period 2007/2010.
As an introduction she summarised the most important aims and objectives as the follows:

"THE NEW PROJECT: SUMMARY
The project intends to pursue the objective of the Lisbon declaration by developing Biotechnology sector at European level.
Its aims are to develop a formation more pertinent to the modern needs of enterprises, to avoid academic constrains by favouring international courses which are capable of attracting students from outside Europe.
On the other hand we are expecting an increase in the employability of young graduates and an implementation of life long training through distance learning.
The collaboration with enterprises will favour also the development of research thus implementing the possible innovative aspects of this discipline.
Therefore it is our intention to cooperate in the three points of the "triangle - Education Research and Innovation".
As regards the first we intend to develop new curricula at the international level using the model already realised and implementing existing courses.
Tuning methodology will be applied. This will be reached with the help of enterprises which will be essential for preparing material for upgrading the formation of workers.
The didactic material will be prepared as ODL modules so completing the series already prepared by our network.
It is our intention to prepare a complete course in informatics as well the evaluating tests so permitting the formation of disadvantaged students at a distance.
The informatic tests will be used also to evaluate the biology knowledge of secondary school students following the model suggested by the Chemistry Network.
Another output will be to enhance the collaboration with enterprises by favouring research project in the food technology and health sectors.

The outputs will be: new international curricula design, the expansion outside Europe of the already existing one favouring Joint degrees between Universities in different countries.
Production of new ODL modules. Creation of tests for the ODL modules already prepared as well as the new ones.
Creation of informatic tests for students of secondary schools to give an European diploma in Biology.
Organisation with enterprises to update courses by using when possible the distance learning system and evaluation. Develop at least two research projects in collaboration with enterprises. Promote an open discussion on the most relevant bioethics problems. Evaluation of the economic and social impact of the Biotechnology through collaboration with enterprises.

The innovative aspects will be:
i) the creation of an education system which will favour employability at the European level and its attractiveness for other third countries
ii) to implement cooperation in formation between enterprises and the academic world thus favouring research development. Our work contributes to reaching the aims established in Lisbon and in the following meeting by the E.C.

The target groups are: students, teachers, entrepreneurs, Universities, enterprises which will be the beneficiary of the research collaboration.
In fact University researchers may transfer their experience to the enterprises which may indicate the needs of the markets and the necessity to develop some applications.
Students formed according to the needs of the market and with an international preparation will be more favoured in the work market.

The long term beneficiaries will be:
1. the Education Ministries of all European countries which will have useful models to be applied in all Europe at their disposition and some experience in order to modernize the Education system,
2. the enterprises which have better formed workers at their disposition and may collaborate in the Education with the Universities,
3. the research which may benefit from this collaboration,
4. the economic development at European level,
5. the increase of employment market,
6. the EC which may be seen to realize their proposed goals as described in various documents.

EXPECTED IMPACT
The evaluation of social and economic impact must be at a European level following the methodology indicated by the EC in the recent analysis (February 2007).
The partners, belonging in greater part to a previous network, intend to valorise the previous results obtained regarding education and to implement them through a more intense collaboration with enterprises.
New modules will be prepared for updating the workers and for stimulating the formation during life.
The use of informatics will be extended by creating a entire courses and by developing informatic tests.
Other new activities are represented by the increased collaboration in

With the support of the Lifelong Learning Programme of the European Union

EUROBIOTECH – European Biotechnology Agr. n° 2007-2566 / 001-001 project n° 134310-LLP-1-2007-1-IT-ERASMUS-ENW
This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein

research and by the proposal of new research projects. The open discussion on Bioethics will be also important in finding common lines in Europe.
In conclusion there are many innovative actions in this program namely the extension of the joint diploma, the implementation of LLL, collaboration in formation and research with enterprises."

Finally the President wishes to recall the other previous projects (listed below) concerning the Biotechnology Network:
FIRST PROJECT: BIOTECH - Biotechnology Thematic Network Agreement No. 26036 – CP – 1 – 96 – 1 – IT – ERASMUS - ETN
SECOND PROJECT: BIOTECHNOLOGY DISSEMINATION - Results, Dissemination by means Web site of European Biotechnology Network Agreement No. D26036-CP-1-99-1-IT-ERASMUS-ETN
THIRD PROJECT: BIOTECHNET - BIOTECHnology Thematic NETwork Agreement No. 10051- CP - 1 - 00-IT- ERASMUS - ETN
FOURTH PROJECT: BIOTECHUNTE – Biotechnology University Formation for Enterprises Development
Agreement No. 110769 - CP -1-2003-1- IT - ERASMUS -TNPP
Even if the project was approved there are some criticisms which need to be addressed.
1. It was important to include more enterprises, including big enterprises in our network, so all the partners are invited to make contact with enterprises present in their region.
2. It was necessary to create links with other European Associations such as European Medical Association.

It is also very important to be very active in completing the project in due time. Then the work package leaders were invited to present their work packages:
Innovative Technologies:
- Omics in Biotechnology
- Biosensor applications in medicine, foods and environment
- New Applications of Polymeric Biomaterials in Medicine

Immunology and Infective Disease:
- Application of Immunology in Biotechnology
- Microbial adaptation to environmental changes: innovative educational and technological aspects
- Molecular diagnostics of micro organisms

Informatics Computer Courses:
- Creation of a learning platform for Biotechnology disciplines
- Adoption of ODL Modules and Tests on Biotechnology ODL courses
- Test for evaluation of biological formation in the secondary school
- Tuning methodology

Environment:
- Consumerism, Bioethics and meaning of sustainability

Research:
- Diet and dietary patterns in gastrointestinal disease
- Identification of vegetal product authenticity using PNA platforms
- Collaboration with enterprises in the formation

Dissemination/Exploitation:
- Novel and Rare Technologies
- Dissemination
- Exploitation

MANAGEMENT
QUALITY ASSURANCE AND ASSESSMENT

(the work packages presentations' will be available as soon on: http://www.biotechunte.net)
Friday 18th January
Morning session
The coordinator invites Prof. Brunetto Chiarelli to make his presentation on the Global Bioethics Association.
Then the coordinator read the letter of Prof. Marco Galeotti who was not able to come to Perugia due to family reasons.

The work leaders are invited to collaborate with the other partners and to prepare a time table for the three years.

Friday 18th January
Afternoon session
In the afternoon the timetables of the different work package were presented as shown in the example below:
As regards the management the coordinator informed the partners that the activities will be monitored continuously through e-mail and other contacts and all information will be put on the web-site which will be updated every two weeks.
Every three months each partner must send the timesheet and after six months a report must be sent by the work leaders.
The coordinator proposed to create a Steering Committee formed by the work leaders and the partners agree.
It was also decided to establish a meeting with the work leaders every six months and general meetings every twelve months as the following calendar:

The meeting closed and the coordinator expressed her gratitude to all participants and congratulations for their interesting presentations.

MEETING of the International First Level Degree "Job Creation Oriented Biotechnology"

& Master "Biotechnology Medical Application"

Venue of the meeting
Università degli Studi di Perugia,
Palazzo Murena, Sala Dessau
Piazza dell'Università n°1
January19th, 2008

AGENDA
Saturday 19th January
09.30 Starting Work
Future and problems of the international courses
Signature of the students diploma

With the support of the Lifelong Learning Programme of the European Union

EUROBIOTECH – European Biotechnology Agr. n° 2007-2566 / 001-001 project n° 134310-LLP-1-2007-1-IT-ERASMUS-ENW

Diploma supplement
Report of the QAA visit
Contribution of the partner Universities
Proposal of a Workshop in Brussels on Oct-Nov 2008
PRESENT:
Mariapia Viola Magni, University of Perugia
Carlo Storelli, University of Salento
György Kéri, Semmelweis University of Budapest
Oscar Vicente, Polytechnic University of Valencia
Olga Golubnitschaja, Reinische Friedrich Wilhems University of Bonn
Lyubov Yotova, University of Sofia
Rossica Betcheva, University of Sofia

QAA TEAM
Kevan Gartland, *Caledonian University of Glasgow*
Peter Brian Gahan, King's College London

REPORT
The coordinator informed the members of the Teaching Committee that according to the new law n° 270 of the Italian Government it is necessary to reorganise the International course "Job Creation Oriented Biotechnology" in the following way:

Since the content of each single module does not change, the Teaching Committee accepted the new organisation in consideration of the fact that the Coordinator was forced to do it. Nevertheless the Coordinator is required to obtain information from the Italian Ministry in consideration that this is an International course and it will be difficult for the Universities of other countries to follow this organisation.
The printed Diploma was presented and it was established that each partner of the Teaching Committee will take care of the signature by the Rector of his own University. It was established to give the Diploma to the students during an official Ceremony organised by Perugia University. The students will also receive the Diploma Supplement signed only by Perugia University since the documents of the students are registered in Perugia. In this case it is not necessary to obtain the signature also from the other Rectors.

Then Prof. Peter Brian Gahan presented the evaluation of the Courses made in November:

QUALITY ASSURANCE AND ASSESSMENT VISIT TO "JOB CREATION ORIENTED BIOTECHNOLOGY" INTERNATIONAL FIRST LEVEL DEGREE COURSE BASED AT PERUGIA UNIVERSITY, ITALY, 27th NOVEMBER – 2nd DECEMBER 2007

VISITING TEAM:
Professor P.B.GAHAN
King's College London
England
Professor K. M. A. GARTLAND
Glasgow Caledonian University
Scotland
Professor R. WYNDAELE
University of Aarhus
Denmark

INTRODUCTION
1. This report presents the findings of a quality assurance and assessment review in November 2007 of the "Job Creation Oriented Biotechnology" International First Level Degree based at the Aldo Capitini Institute in Perugia
2. The teaching of the 1st level degree commenced September 2001 and the fourth group of third year students have graduated. It is the teaching and progress of students in all three years of the 1st level Biotechnology Degree that are being assessed.
3. The programme is based in the Aldo Capitini Institute in Perugia and in 2007-8 was taught by many international teachers in addition to Professors from the University of Perugia. Currently, there are 9 students in the first year, 9 students in the second year and 7 students in the third year of the 1st level programme.
4. The three-year 1st level programme permits the students to specialise in two topics selected from Plant Biotechnology, Animal Biotechnology & Tissue Engineering, Food Processing, Pharmaceutical Biotechnology & Drug Engineering, and Fundamentals of Bioprocessing & Bioengineering.

AIMS & OBJECTIVES OF THE FULL 1st LEVEL DEGREE PROGRAMME
The regulations relating to the programme are generally clearly specified and appropriate.

QUALITY OF THE EDUCATION IN THE THREE YEARS OF THE PROGRAMME & CONCLUSIONS

POSITIVE FEATURES
1. The programme enables the student to remain broadly based in the first year prior to permitting some specialization in the second and third years.
2. During the first year the students are introduced to general and inorganic chemistry, organic chemistry, computing and biostatistics, physical and mathematical fundamentals of biotechnology, plant and human physiology, bioethics and a series of current topics. All topics are delivered in English and appeared, in general, to be well-taught, based upon the small sample of classes available to us during the visit and discussions with the students. The second and third years also appeared to have been well taught, again, based upon the small sample of classes available to us during the visit and discussions with the students.
3. A range of teaching methods is employed including lectures, practical classes together with some problem-solving sessions, discussions and directed reading. There is evidence

With the support of the Lifelong Learning Programme of the European Union

EUROBIOTECH – European Biotechnology Agr. n° 2007-2566 / 001-001 project n° 134310-LLP-1-2007-1-IT-ERASMUS-ENW
This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein

of several good examples of problem solving and data interpretation approaches being employed.
4. The teaching accommodation is generally good and the teaching laboratories are well-equipped for the subjects being taught. The IT facilities have been improved by the installation of eight connection points for the students to use with their own computers so taking the pressure off the other computing facilities in Aldo Capitini Institute for those students without their own computers. The vast majority of he students have their own lap-tops. However, there have been intermitant problems with wifi network that have not been resolved in spite of visits from technicians. .
5. Most students were successful in the examinations at the end of the first and second years though some students needed to resit the examinations of some modules in September 2007. All fourteen students of the third year were awarded the degree after presentation and examination of the theses by the Teaching Committee though three of these were awarded in November 2007 due to late completion of the theses.
6. During the course of the quality assurance visit, the public defence of three bachelor student theses was observed and this process, together with the administration of the degree awarding process, was effective. A small number of additional Masters theses were presented and considered appropriate.
7. The Secretariat staff is extremely friendly, helpful and confident in their roles. The undergraduate students were uniformly highly appreciative of the Secretariat support provided at ACI.
8. There is a strong sense of community within the International Degree student population, which leads to a clear sense of belonging and of international cooperation. Students find this spirit of collaboration and mutual self-help highly supportive and are uniformly grateful for this feature of their integrated experience.
9. The Teaching Committee has been meeting at intervals, and also by e-mail to discuss the various points raised both in the last report and during the programme. The meetings have been minuted and the minutes made available to the Student Committee. Clear evidence of the Coordinator and Secretariat staff considering and acting upon some of the comments from the students was apparent.
10. Students were particularly appreciative of the interactive nature of teaching in bioinformatics, but would welcome more opportunities to develop their IT skills in advance of this material being covered.
11. More appropriate mechanisms of assessment have now been established in each of the thee years of the course.

ASPECTS REQUIRING FURTHER ENHANCEMENT
1. As yet, no diplomas have been signed by all of the Rectors of all of the participating institutions. Until this is achieved, the degree diploma cannot be awarded to the students who have already graduated during the past four years and hence the validity of the degree awarded must be questionable.
2. Since the programme is entirely delivered in English and the style and language used in written examinations is of a highly variable and sometimes poor standard, the checking and approval of every examination paper by a native English speaker must be undertaken prior to student assessment. This point was raised previously and still has not be adequately addressed.
3. There is evidence of inconsistent and poorly communicated practice in the assessment of multi-part modules. In the case of the Physics & Mathemathics for Biotechnologists module, the examination comprises two separate papers. In the event of a student failing to achieve an overall pass in this module due to one failing component, only the failing component should be reassessed.
4. Some modules e.g. General & Inorganic Chemistry are being taught by individuals with limited English language skills so creating difficulties for student comprehension.
5. Some students are still progressing to the subsequent year of study without having obtained the requisite number of modules in the previous year. Contrary to the regulations, this year, students in the second year were found to lack one or more first year modules. A mechanism has been proposed to the Teaching Committee to over come this deficit since students must pass all first year modules in order to receive a degree (TC Appendix).
6. Normally, students should not be permitted to be assessed for a single module on more than two occasions. Failure to attend for examination without a justification considered acceptable by the Teaching Committee will count as a failed attempt. Such students should be required by the Teaching Committee to either repeat the course for a single module failure or repeat the year for failure in a number of modules.
7. The Coordinator and Teaching Committee should ensure that:
a. all staff delivering lectures or other materials are adequately proficient in spoken and written English
b. duplication in content should be minimised wherever possible, e.g. in microbiology/virology
c. sufficient lecture or other materials must be provided to allow for adequate assessment to take place (e.g. Business & Project Management). This is a continual problem.
d. comprehensive curriculum content descriptors are available at the start of each module.
e. the module content as advertised in the Booklet should correspond to the content of the module actually taught

With the support of the Lifelong Learning Programme of the European Union

EUROBIOTECH – European Biotechnology Agr. n° 2007-2566 / 001-001 project n° 134310-LLP-1-2007-1-IT-ERASMUS-ENW
This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein

8. The Coordinator and Teaching Committee are encouraged to consider the location, timing and delivery of Biomaterials and Biocompatibility module, which has previously been delivered solely in Terni, requiring all students to undertake significant travel on a daily basis. The effectiveness of this module might be improved by delivering lectures at the Aldo Capitini Institute and travelling to Terni on a single day for the demonstration of equipment rather than on five consecutive days. This point was raised previously and does not appear to have been addressed.
9. Improved arrangements for identifying and distributing possible stage laboratories are needed. Students should be provided with electronic guides to project report writing, exemplar student project reports and be required to sign a front page declaration that the work presented is entirely their own, and not plagiarised in any way. In addition, students should receive oral instruction on the preparation of a thesis prior to leaving for a Stage in the first year.
10. Students should receive feed-back on their previous Stage theses by the end of the November following the completion of the thesis.
11. The coordinator and teaching committee are encouraged to enhance electronic access to journals via an English language portal, as students have repeatedly found this to be problematic. Simple guides to University of Perugia information systems should also be provided.
12. More consistent and larger scale access to internet resources are desirable for the numbers of students accessing the undergraduate programme. In particular, access to on-line journals via the library of the University of Perugia should be possible.
13. All students have complained of the lack of a Tutor on-site at the Aldo Capitini Institute.
14. Greater efforts should be made to promote and advertise the 1st level programme within the participating Universities, more widely across the European Union and further afield.
15. The web-site has been found difficult to access and when found has been seen to contain out-of-date information. A system should be in place to address these problems./
16. There is concern that the Tutor and Staff in the Secretariat have not been paid in 2007 and do not appear to have contracts. The apparent non-payment by the University of Perugia is to be deplored. Without a strong and active Secretariat and an on-site Tutor, the programme will be unable to run.

CONCLUSIONS
1. The International Degree in Biotechnology is a most valuable and highly important development in European education. Four cohorts of students have now successfully completed the programme that is effectively providing biotechnological knowledge and training.
2. A limited number of administrative difficulties continue to affect the programme, which would benefit from rapid resolution of these issues and strong leadership.
3. Students are clearly benefiting from the international experience, both in Perugia and elsewhere on their stage periods. This should enable the International Biotechnology Degree graduates to progress to postgraduate research & education opportunities, gain high quality employment and contribute to the successful development of the biotechnology sector in their home countries or elsewhere in Europe.

TEACHING COMMITTEE APPENDIX
It is clear, once again, that students have been permitted to progress to the next year with failed modules. The following procedures are suggested to the Teaching Committee for their approval as a mechanism to overcome these problems.

1. SPADOLINI A. has progressed from 1st to 2nd year with 6 courses not passed. She should be required to pass to retake the first year. Mitigating circumstances need to be discussed.
2. CHANKOVA P. has progressed from 1st to 2nd year with 6 courses not passed. She has been interviewed and has agreed (a) to resit the two failed 1st semester courses in January and (b) to repeat the second semester of the 1st year.
3. TASSI M. has progressed from 2nd to 3rd year with I failed module from the1st year and 2 failed modules from the second year (each of these modules was failed at the resit examinations). In addition, she did not attend the examination for I x 2nd year module. She should be required to repeat the 2nd year and to be re—examined in the first year failed module without which she cannot be awarded a degree.
4. SHAKAROVA k. Z. has moved to second year carrying 2 failed modules from the first year. She will retake the lectures in Bioethics, she should read the accompanying book and be assessed through 2 x 1500 word essays from a choice of four essays. To be arranged.
5. DODEV, S. T., KALMAR, Z. should resit the immunology examination in January 2008. Kalmar has been interviewed and has agreed to this proposition.
Although the Teaching Committee have agreed on the standardised application of a 5% per week penalty for project theses handed in late, this has not been applied even to theses submitted more than one year late. The QAA Committee are concerned that
i) students can deliver a thesis that s up to 18 months late without a penalty.
ii) This disadvantages students submitting on time and is having an adverse effect upon the attitudes of the current students.
iii) Due to the messages passed back to their Universities by current students, there is an adverse effect

With the support of the Lifelong Learning Programme of the European Union

EUROBIOTECH – European Biotechnology Agr. n° 2007-2566 / 001-001 project n° 134310-LLP-1-2007-1-IT-ERASMUS-ENW
This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein

upon recruitment of new students to the programme.
It is proposed that the penalty should be modified to a 10% penalty for each period of six months, or part of each six months period, of lateness i.e.

Up to 6 months	6-12 months	12-18 months
10%	10%+10% = 20%	10%+10%+10%=30%

QUALITY ASSURANCE AND ASSESSMENT VISIT TO INTERNATIONAL MASTERS DEGREE BIOTECHNOLOGY MEDICAL APPLICATION BASED AT PERUGIA UNIVERSITY, ITALY, 27th NOVEMBER – 2nd DECEMBER 2007

VISITING TEAM:
Professor P.B.GAHAN
King's College London
England
Professor K. M. A. GARTLAND
Glasgow Caledonian University
Scotland
Professor R. WYNDAELE
University of Aarhus
Denmark

INTRODUCTION
1. This report presents the findings of a quality assurance and assessment review of the International Masters Degree Biotechnology Medical Application, based at the Aldo Capitini Institute in Perugia.
2. The Masters degree commenced in September 2004 with the second group of students completing the degree in July 2007. It is the teaching and progress of students in both years of the Masters degree that are being assessed.
3. Currently, there are 5 students in the first year and 9 students in the second year of the Masters programme.
4. The students of the Masters programme have a fixed syllabus for the first semester of each of the two years of study with projects being undertaken in other laboratories during the second and fourth semesters.

INTERNATIONAL MASTERS DEGREE BIOTECHNOLOGY MEDICAL APPLICATION
The regulations relating the Masters are as those for the first level degree.

AIMS AND OBJECTIVES OF THE COURSE
Aim
To prepare specialist workers in diagnostic applications for the identification of diseases in animals and humans. The students will obtain the masters degree in Biotechnology Medical Application.
Objectives
1. To offer a Master's degree programme to students from nine Universities in eight European countries
2. To permit students who have competed a first degree in biotechnology, or its equivalent, to have further specialized studies.
3. To provide students with the possibility of experiencing current research, its methodology and significance through practical laboratory experience "stage" in the second semester of the first year and a research project in the final year. Each of these intensive practical experience phases will occur in either an industrial or a University laboratory.
4. To encourage students to further develop their critical thinking.
5. To enable to students acquire an international dimension through following the study programme in Italy, in the English language and with the "stages" being taken in a country not of the student's origin.
6. To provide pastoral support and guidance to aid students in maximising their study achievements

POSITIVE FEATURES
1. The programme is based on two semesters of taught courses, the first and third semesters, and two Stages, each of 6 months based other Universities or enterprises.
2. A wide range of teaching methods is employed including lectures, practical classes together with some problem-solving sessions, discussions and directed reading.
3. The teaching accommodation is generally good and the teaching laboratories are equipped for the

With the support of the Lifelong Learning Programme of the European Union

EUROBIOTECH – European Biotechnology Agr. n° 2007-2566 / 001-001 project n° 134310-LLP-1-2007-1-IT-ERASMUS-ENW
This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein

subjects being taught. The IT facilities have been improved by the installation of eight connection points and a wifi network. However, there have been intermittent problems with the wifi network.

4. From the limited amounts of teaching available during the scheduled visit; two teaching sessions were observed one lecture and one bioinformatics practical session involving data interpretation, hypothesis generation and testing using electronic tools. These sessions were well- taught and highly effective learning experiences.

5. The students were happy with the way in which the course was organized and with the content.

6. Masters students were uniformly highly appreciative of the excellent Secretariat support provided at the Aldo Capitini Institute.

7. An innovative approach was being taken to assessment in the Neuropathology module, where a problem solving style was evident. The pictorial and interpretive aspects of this examination were both challenging and stretching for the students. This type of challenge was considered highly appropriate for a Masters level course, enabling the better students to demonstrate the depth of their knowledge.

8. There is an evident sense of community within the International Degree student population, which leads to a clear sense of belonging and of international cooperation. Students find this spirit of collaboration and mutual self-help highly supportive and are uniformly grateful for this feature of their integrated experience.

ASPECTS REQUIRING FURTHER ENHANCEMENT

1. There is a lack of clearly defined aims and objectives for the Masters level programme.

2. As yet, the Masters degree level statutes do not appear to have been formally agreed and legally signed off by the Rectors of the participating institutions. Until this is achieved, the validity of the Masters level programme must be questionable.

3. The Coordinator and Teaching Committee should ensure that:

a. all staff delivering lectures or other materials are adequately proficient in spoken and written English

b. sufficient lecture or other materials must be provided to allow for adequate assessment to take place. This is a continual problem.

c. comprehensive curriculum content descriptors are available at the start of each module.

d. the module content as advertised in the Booklet should correspond to the content of the module actually taught.

4. In general the lectures have been good though there has been a distinct lack of practical experience to accompany some of them apparently due to insufficient equipment and funds to purchase kits.

5. Since the programme is entirely delivered in English and the style and language used in written examinations is of a highly variable and sometimes poor standard, the checking and approval of every examination paper by a native English speaker must be undertaken prior to student assessment.

6. The course Biomedical Optoelect was not logically organized and confusing. There was no text and no indication of what to read to better understand the course.

7. There is still considerable difficulty in accessing on-line Journals and books, which can only be accessed from Monteluce. This is very important for students of a Masters programme especially as they are unable to access an adequate library.

8. There are not enough power point presentation facilities for more than two parallel lectures at the same time.

9. Students should receive feed-back on their previous Stage theses as early as possible so that they can benefit from this before undertaking their 2nd year thesis project. In addition, they require an early feed-back in order to be able to inform their home Universities of their progress.

10. When students have to undertake studies outside of Perugia e.g. at Udine,

i) they should be given information about the placement at an early stage in order to be able to prepare for this move, and
ii) a mechanism should be in place for refunding the extra expense involved.

11. Greater efforts should be made to promote and advertise the Masters level programme within the participating Universities, more widely across the European Union and further afield.

12. The web-site has been found difficult to access and when found has been seen to contain out-of-date information. A system should be in place to address these problems.

13. There is concern that the Tutor and Staff in the Secretariat have not been paid in 2007 and do not appear to have contracts. The apparent non-payment by the University of Perugia is to be deplored. Without a strong and active Secretariat and an on-site Tutor, the programme will be unable to run.

CONCLUSIONS

1. The Masters degree in Biotechnology Medical Applications is a valuable and important development in European postgraduate education. One cohort of students has now successfully completed the programme that is effectively providing advanced level, specialized training.

2. A number of administrative difficulties continue to affect the programme, which would benefit from rapid resolution of these issues and strong leadership.

3. Students are clearly benefiting from the international experience, both in Perugia and elsewhere on their stage periods. This should enable the Masters level graduates to gain high quality employment opportunities and contribute to the

With the support of the Lifelong Learning Programme of the European Union

EUROBIOTECH – European Biotechnology Agr. n° 2007-2566 / 001-001 project n° 134310-LLP-1-2007-1-IT-ERASMUS-ENW
This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein

knowledge economy and successful biotechnological economic development in their home countries or elsewhere in Europe.

Furthermore, after the presentation of Prof. Peter B. Gahan, the Teaching Committee decides to send a letter to the Teachers of the next year with all the indications for the programme and the exams. The Teaching Committee accepts also the reduction of marks for the thesis when the student is not able to finish in time the thesis work. It was therefore established

The Coordinator observes that there is no sufficient participation of the Universities especially as regards the students, in fact the number of students enrolled in the last two years decreased and it is necessary to know in May-June the number of students who intend to follow the course before starting a new cycle.

The Coordinator invites also the partners to find the scholarships for their students using the social funds especially the East countries.

Prof. Vincenzo Costigliola (European Medical Association) informs that the University of Tay Peg expresses the intention to make an agreement with Perugia University in order to permit to some students to participate to these courses. The other partners demonstrates to be in favour of this proposal which is approved.

Finally the Coordinator presents to the Teaching Committee the balance of the first course financed by the MiUR to Perugia University in which the amount to be paid by the partner as co finance is reported.

This is just a remind because the year 1007/2008 will be the last year and at the end it will be necessary to present the final report.

FIRST LEVEL "JOB CREATION ORIENTED BIOTECHNOLOGY"

Costs imputable to the international nature of the project and only to one cycle of it

A. organisational costs	
General costs regarding secretariat/information/communication	*Euro 15.000,00*
Tutoring and orientation/language formation	*Euro 13.465,00*
Cost of supporting didactic material (excluding supporting didactic equipment)	*Euro 11.000,00*

B. Students mobility Costs			
	N	Total Months	Prevision costs (Euro)
Italian Students	*10*	12	*12.000,00*
Foreign Students	30	24	*144.000,00*

B. Italian Teachers mobility costs				
Role	N	Months	Days	Prevision costs (Euro)
Ordinary Professor	17	2	75	*8.500,00*
Associate Professor	4	1	20	*2.000,00*
Contract Professor	5	1	25	*10.000,00*
PhD	4	1	20	*1.000,00*
TOTAL	30	5	140	*21.500,00*

B. Foreign Teachers mobility costs				
Role	N	Months	Days	Prevision costs (Euro)
Ordinary Professor	32	2	160	*32..000,00*
Associate Professor	10	2	50	*10.535,00*
Contract Professor	1	0	5	*2..000,00*
PhD	2	0	10	*1.000,00*
TOTAL	45	8	225	*45.535,00*

B. Technical/Administrative Personnel mobility costs				
	N	Months	Days	Prevision costs (Euro)
Italian Personnel	0	0	0	*0,00*
Foreign Personnel	1	0	5	*600,00*

Total Admissible Costs (A+B)

Euro 263.100,00

University Contribution	*70.000,00*
Taxes and/or enrolment contribution	*10.000,00*
Italian partners contribution	*20.000,00*
Foreign partners contribution	*40.000,00*
ADISU	5.600,*00*
TOTAL (A)	145.600,00

Contribution requested to MIUR (B)	*117.500,00*

TOTAL (A+B)	Euro *263.100,00*

With the support of the Lifelong Learning Programme of the European Union

EUROBIOTECH – European Biotechnology Agr. n° 2007-2566 / 001-001 project n° 134310-LLP-1-2007-1-IT-ERASMUS-ENW
This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein

MASTER "BIOTECHNOLOGY MEDICAL APPLICATION"
Costs imputable to the international nature of the project and only to one cycle of it

A. organisational costs	
General costs regarding secretariat/information/communication	*Euro 12..000,00*
Tutoring and orientation/language formation	*Euro 10.000,00*
Cost of supporting didactic material (excluding supporting didactic equipment)	*Euro 12..000,00*

B. Students mobility Costs			
	N	Total Months	Prevision costs (Euro)
Italian Students	*10*	12	*24..000,00*
Foreign Students	30	24	*144.000,00*

B. Italian Teachers mobility costs				
Role	N	Months	Days	Prevision costs (Euro)
Ordinary Professor	6	1	30	*4.200,00*
Associate Professor	4	1	20	*2..400,00*
Contract Professor	0	0	0	*0,00*
PhD	2	0	10	*1.000,00*
TOTAL	12	2	60	*7.600,00*

B. Foreign Teachers mobility costs				
Role	N	Months	Days	Prevision costs (Euro)
Ordinary Professor	30	2	60	*24..000,00*
Associate Professor	2	0	10	*1.200,00*
Contract Professor	0	0	0	*0,00*
PhD	2	0	10	*1.000,00*
TOTAL	34	2	80	*26.200,00*

B. Technical/Administrative Personnel mobility costs				
	N	Months	Days	Prevision costs (Euro)
Italian Personnel	2	1	20	*5.000,00*
Foreign Personnel	2	1	20	*6.100,00*

Total Admissible Costs (A+B)
Euro 246.900,00

University Contribution	*100.000,00*
Taxes and/or enrolment contribution	*15.000,00*
Italian partners contribution	*10.000,00*
Foreign partners contribution	*30.000,00*
ADISU	5.000,*00*
TOTAL (A)	160.000,00

Contribution requested to MIUR (B)	*86.900,00*

TOTAL A+B Euro	*246.900,00*

Then, as regards the Master Prof. Galeotti from Udine University sent a document (in Italian) presented to the Teaching Committee by the Coordinator.

With the support of the Lifelong Learning Programme of the European Union

EUROBIOTECH – European Biotechnology Agr. n° 2007-2566 / 001-001 project n° 134310-LLP-1-2007-1-IT-ERASMUS-ENW
This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein