



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ

HELLENIC REPUBLIC

**Α.ΔΙ.Π.**

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HELLENIC QUALITY ASSURANCE AGENCY

ΑΝΩΤΑΤΗΣ ΕΚΠΑΙΔΕΥΣΗΣ

FOR HIGHER EDUCATION

## **EXTERNAL EVALUATION REPORT**

DEPARTMENT: Molecular Biology and Genetics

UNIVERSITY: Democritus University of Thrace

Version 2.0

April 2011

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### External Evaluation Committee

The Committee responsible for the External Evaluation of the Department of Molecular Biology and Genetics of the Democritus University of Thrace consisted of the following five (5) expert evaluators drawn from the Registry constituted by the HQAA in accordance with Law 3374/2005 :

1. Prof. Barbara Papadopoulou (President)

(Title) (Name and Surname)

Laval University, Quebec, Canada

(Institution of origin)

2. Prof. Thimios Mitsiadis

(Title) (Name and Surname)

University of Zurich, Zurich, Switzerland

(Institution of origin)

3. Prof. Dimitris Grammatopoulos

(Title) (Name and Surname)

University of Warwick Medical School, Coventry, UK

(Institution of origin)

4. Prof. Manolis Dermizakis

(Title) (Name and Surname)

University of Geneva Medical School, Switzerland

(Institution of origin)

**N.B.** The structure of the “Template” proposed for the External Evaluation Report mirrors the requirements of Law 3374/2005 and corresponds overall to the structure of the Internal Evaluation Report submitted by the Department.

The length of text in each box is free. Questions included in each box are not exclusive nor should they always be answered separately; they are meant to provide a general outline of matters that should be addressed by the Committee when formulating its comments.

## **Introduction**

### **I. The External Evaluation Procedure**

- **Dates and brief account of the site visit.**
- **Whom did the Committee meet ?**
- **List of Reports, documents, other data examined by the Committee.**
- **Groups of teaching and administrative staff and students interviewed**
- **Facilities visited by the External Evaluation Committee.**

### **II. The Internal Evaluation Procedure**

**Please comment on:**

- **Appropriateness of sources and documentation used**
- **Quality and completeness of evidence reviewed and provided**
- **To what extent have the objectives of the internal evaluation process been met by the Department?**

The external evaluation committee (EEC) site visit of the Molecular Biology and Genetics (MBG) Department (Dept), Democritus University of Thrace (DUT) was carried out on the 21<sup>st</sup>-23<sup>rd</sup> February 2011.

Briefly the EEC site visit included:

On **Day 1**, informal meeting with the Acting Head of the Department and the Faculty members group responsible for the Internal Evaluation Report (IEG).

On **Day 2**, visit to the facilities of the Dept (research and teaching laboratories and associated facilities) and informal discussions with members of the Dept followed by a series of formal presentations by Faculty members and discussions on the presentations. This was open to all relevant groups (students, Faculty and administrative staff).

The presentations were focused on the following topics:

- a brief presentation of the MBG Dept
- the Undergraduate Programme
- the proposed Graduate and Post-graduate Programme
- the research activities of the MBG Dept
- the Undergraduate support services
- the perspectives on the internal evaluation process and targets identified for future development of the MBG Dept

On **Day 3**, closed meetings with specific groups: cohorts of undergraduate and graduate students, administrative staff, technical staff and staff of the academic Faculty. The visit was completed with an exit meeting between the EEC members, the Acting Head of the Dept, the Vice-Rector of DUT responsible for academic affairs and the IEG. The EEC did not meet with any representatives of alumni (currently not existing) and employers, as well as with relevant social bodies, local and regional organizations.

The EEC examined the following:

- Internal Evaluation Report of the MBG 2004-2008
- The Course guide 2009-10 that also contained an introductory section about the DUT and the Alexandroupolis campus and the MBG Dept.

The EEC met with cohorts of undergraduate and graduate / postgraduate students, administrative staff, technical staff and staff of the academic Faculty.

The visit included assessment of classrooms, teaching and research laboratories, core research facilities and supporting infrastructure.

The consensus opinion among EEC members was that the IER did not accurately depict the current state of function of the MBG Dept. During the period 2004-2008 the infrastructure available to this Dept was inappropriate for a modern academic institution in the 21<sup>st</sup> century and severely impaired the Faculty efforts for developing any substantial research activity and supporting its teaching duties, especially at such a critical stage of its development. Significant delays in the process of decision-making bodies and lack of continuity in leadership contributed to this situation.

From 2008 the infrastructure was significantly improved by relocation to a newly constructed purpose-built facility. The members of the MBG Dept invested remarkable individual and collective efforts by attracting external funding that allowed them to develop fully operational structures and enhance their research and teaching activities.

The time gap between the internal evaluation (2004-2008) and the site visit (2011), especially in cases where there were considerable changes in the MBG Dept, raises issues of relevance of the process that the HQAA may have to consider in future evaluations.

There were no issues identified in the quality and completeness of the evidence reviewed. The Faculty members were very helpful in providing accurate account of the past and present documentation and were able to respond quickly to any requests for additional documentation.

The opinion of the EEC members is that the objectives of the internal evaluation

process were only partially addressed by the Dept. They were clearly able to identify operational problems associated with lack of substantial state funding, poor or slow communication between the Dept and the central administration (at the University or the State level) and other issues associated with their geographical position and socio-economic development of the region. However, the Dept did not demonstrate a clear vision about its future development in relation to its position within the University and the Hellenic academic environment in general. In the absence of senior Faculty members and proper mentorship, managerial experience and vision, the Dept was slow in developing a long-term vision. Their focus was primarily on external factors that hampered or delayed their development and on ways to overcome these problems. Consequently, they did not initiate an in-depth self-evaluation process that would allow them to identify contributing factors internally and propose ways for improvement. Their long-term goals to develop their departmental research and teaching portfolio rely mostly on support from the government without a strategic planning on how to implement their vision for the Dept.

**The general opinion of the EEC is that the MBG Dept has the potential to achieve more both in teaching and in research and that they should develop the necessary structures to maximize this potential.**

## **A. Curriculum**

*To be filled separately for each undergraduate, graduate and doctoral programme.*

### **APPROACH**

- **What are the goals and objectives of the Curriculum? What is the plan for achieving them?**
- **How were the objectives decided? Which factors were taken into account? Were they set against appropriate standards? Did the unit consult other stakeholders?**
- **Is the curriculum consistent with the objectives of the Curriculum and the requirements of the society?**
- **How was the curriculum decided? Were all constituents of the Department, including students and other stakeholders, consulted ?**
- **Has the unit set a procedure for the revision of the curriculum?**

The main objectives of the Dept of Molecular Biology and Genetics (MBG) are to promote the advancement of life sciences and the training of scientists in gaining experience in medical research, biotechnology and in the teaching of life sciences. The programme's curriculum aims at providing high levels of education in most areas of molecular and cellular biology and genetics and also in selected areas of clinically applicable research. The Dept is generally well organized and structured to achieve these goals. Important decisions about the programme's objectives and orientations are taken collectively by the Faculty members.

The teaching material is of high quality, is updated regularly and covers most

important areas in the field of molecular biology and genetics with few exceptions, however. **Not enough emphasis was given on the genomics field. Courses in computational biology need also to be more emphasized. There is also an excessive teaching of medically relevant topics such as physiology, clinical immunology, etc. without any link to a professional Master programme, for example.** This may be due to the administrative dependence of the MBG Dept to the nearly located Medical School.

**The curriculum is generally consistent with the objectives of the programme. However, in its current form does not explore other potential career options (for example, jobs in the hospital or the industry).** The lack of emphasis on courses on genomics and computational biology and the excessive teaching of medically relevant topics without a systematic follow up are relevant examples of inconsistency between the objectives of the Curriculum and the requirements of the society.

Decisions about the curriculum are taken by all constituents of the Dept, including student representatives. It was not clear, however, whether the Unit has an established mechanism for interacting with stakeholders (e.g. industry).

Procedures to revise, up-scale and improve the teaching material and the didactic methods or practical modules (laboratories) are well established. Minor revisions in the curriculum are implemented on an annual basis. More substantial evaluation of the programme and possible revisions are taking place every 4 years.

## IMPLEMENTATION

- **How effectively is the Department's goal implemented by the curriculum?**
- **How does the curriculum compare with appropriate, universally accepted standards for the specific area of study?**
- **Is the structure of the curriculum rational and clearly articulated?**
- **Is the curriculum coherent and functional?**
- **Is the material for each course appropriate and the time offered sufficient?**
- **Does the Department have the necessary resources and appropriately qualified and trained staff to implement the curriculum?**

The goals of the MBG Dept have successfully been implemented for the most part by the curriculum. The structure of the curriculum rational is adequate and its objectives are clear and appear to be functional.

The programme (curriculum) for the undergraduate studies in molecular biology and genetics is of high standards and compares well to other Institutions in general. Although there is currently not recognized graduate programme by the State in the Dept, criteria for graduate studies are well established and this is reflected by the quality of the graduate students within the Dept.

The didactic material for each course seems appropriate and up-to-date. However, there is clearly a problem with the practical courses in the laboratory due to



limitations in resources and technical personnel.

The academic staff is appropriately qualified to implement the curriculum. However, financial resources are limited and are clearly insufficient to provide the best possible exposure of the students to modern research methodologies. The value of practical courses is limited due to the high ratio of student/ teaching staff and to the limited number of a highly qualified personnel (e.g. technicians, research assistants, etc).

## RESULTS

- **How well is the implementation achieving the Department's predefined goals and objectives?**
- **If not, why is it so? How is this problem dealt with?**
- **Does the Department understand why and how it achieved or failed to achieve these results?**

Generally, the goals and objectives of the MBG Dept are well implemented. Although many of the aspects in molecular biology and genetics are covered, **there is not enough emphasis on genomics courses**. This is not in agreement with the objectives of a Molecular Biology and Genetics Dept with modern thematic areas. The Faculty members recognized this gap and are planning to introduce Genomics as an obligatory course in the next academic year. **There is also an excessive emphasis in preclinical studies** (e.g. physiology, clinical immunology, etc) without necessarily having the appropriate expertise within the Dept. Furthermore, **there is no operational plan for reinforcing effective interactions between the Faculty members and the students and clinician researchers in the Medical School**. This is may be misleading for the students and could raise false expectations. Disproportional emphasis was given to High School teaching as a career option and a Faculty position was recently dedicated towards that aim. **Given the uniqueness of their thematic amongst other Greek Universities, the MBG Department should nurture, encourage and stimulate in a first place the interest of students for research. They have to continue their efforts towards the development of a modern and unique educational programme that can be clearly distinguished from a standard Dept of Biology in Greece. This constitutes an exclusive shelling point as well.**

## IMPROVEMENT

- **Does the Department know how the Curriculum should be improved?**  
**Which improvements does the Department plan to introduce?**

The MBG Dept did not present a concrete plan for improving the Curriculum, when necessary, neither in the internal evaluation document nor during the site visit. The only proposed improvements relied on external decisions and consisted in reducing the ratio of student/teaching staff and in obtaining additional funding for better supporting the student's laboratories.

However, the Dept positively responded to suggestions made by the EEC for implementing improvement processes.

## ***B. Teaching***

### **APPROACH:**

**Does the Department have a defined pedagogic policy with regard to teaching approach and methodology? Please comment on :**

- **Teaching methods used**
- **Teaching staff/ student ratio**
- **Teacher/student collaboration**
- **Adequacy of means and resources**
- **Use of information technologies**
- **Examination system**

The teaching methods used by the MBG Dept are generally appropriate. The students are satisfied from the level and quality of the courses and the combination of the didactic and laboratory methods used. However, it is important that the teaching staff envisages to move slowly from the classical way of delivering information to more interactive methods that would allow students to participate more actively during the course, to develop critical and independent thinking and to learn in a more effective way.

The teaching staff/student ratio is unsatisfactorily low. Considering that the teaching staff has to oversee approximately 400 students every year, this creates major problems in accommodating all the students, especially for the practical modules involving laboratory work. Moreover, the heavy teaching load of the Faculty members has a significant impact in their research activities. **The Dept has persistently requested a maximum intake of 40 students per year. However, this request has not been granted. The EEC members feel that this is a critical issue that needs a high and urgent consideration from the government not only to increase the quality of training offered by the Dept, but also to allow Faculty members to develop a solid independent career as researchers and to rise sufficient funding for their research programmes.**

The teacher-student collaboration is very satisfactory. The Faculty members are close to their students. The conditions are favourable for daily interactions and discussions as students participate actively in the life of the Dept.

Adequate infrastructure and several key facilities (e.g. teaching rooms, laboratories for practical work, computer room, library, etc) became available only after 2008. Currently, the infrastructure is appropriate and allows high quality teaching. However, given the large number of students, resources are insufficient. **There is a clear need for an auditorium. Also, the technical personnel (ETEP) is insufficient to meet the demands of the course. An increase in Faculty members could**

**fulfil this need, but recruitment has to be targeted and strategic.**

Information technologies are adequate but their teaching could be improved further by decreasing the number of students and by offering more courses or exercises in computational biology.

The examination system is appropriate and well adapted to the students needs. However, the Dept should be more flexible in accommodating students for repeating their practical laboratory work in order to avoid delays in their studies. Nevertheless, this measure relies directly on more technical personnel.

**IMPLEMENTATION**

**Please comment on:**

- **Quality of teaching procedures**
- **Quality and adequacy of teaching materials and resources.**
- **Quality of course material. Is it brought up to date?**
- **Linking of research with teaching.**
- **Mobility of academic staff and students**
- **Evaluation by the students of (a) the teaching and (b) the course content and study material/resources**

Teaching material and resources are adequate. There is a good balance of hard copy (text books, original articles, etc) and electronic teaching material that is offered to the students. The e-class platform facilitates teaching procedures and is well appreciated by the students. The course material is generally critically selected and up- to date. When necessary, additional material is provided to the students mainly through the e-class platform.

The link between research and teaching is excellent. The Faculty members make good use of their research projects and the undergraduate students are encouraged to actively participate in research activities early in their studies. This helps students to gain experience in research, to learn new techniques, and participate in all levels of research activities. Exposure of students to a research environment stimulates their interest and facilitates their integration in research laboratories abroad, as part of their undergraduate and graduate studies.

The mobility of academic staff and students is also good. Several students perform part or the totality of their undergraduate thesis in laboratories abroad or in other Universities and Institutes in Greece through programmes of the European Community (e.g. Socrates-Erasmus, Leonardo, etc) mainly in laboratories of collaborators of the Faculty members.

There is a mechanism in place for the students to evaluate their professors and the course content and study material/resources. The students are satisfied from the level and general knowledge of the teaching staff and from the close collaboration with their professors.

**RESULTS**

**Please comment on:**

- **Efficacy of teaching.**
- **Discrepancies in the success/failure percentage between courses and how they are justified.**
- **Differences between students in (a) the time to graduation, and (b) final degree grades.**
- **Whether the Department understands the reasons of such positive or negative results?**

Although the efficacy of teaching is satisfactory, the ratio of student/teaching staff has to be decreased as a matter of priority.

Discrepancies in the success/failure percentage between courses seem generally good, and no major problems were identified by the EEC members.

Differences between students in the time to graduation and final degree grades seem reasonable but should be further improved with the implementation of the new policy (maximum 8 years). However, the MBG Dept, similarly to all Departments in Greece, should find ways to better monitor the process for a shorter graduation and to encourage students to complete their studies within the 4-year period.

The MBG Dept is aware of the positive and negative issues related to teaching procedures and delays in graduation. The faculty members work hard to overcome the difficulties and correct this situation.

**IMPROVEMENT**

- **Does the Department propose methods and ways for improvement?**
- **What initiatives does it take in this direction?**

The teaching methods are generally adequate. However, **the Dept needs to implement a more formal system to introduce upgrades and revisions in the content of courses and to modify the Curriculum over time. Also, the Dept has to diversify on the teaching methods and to envisage novel interactive methods to deliver information to the students.**

Although the quality of the teaching programme is very good, more actions need to be taken in order to improve or to reach higher standards of undergraduate education. At least for the elective courses, prerequisite courses should be applied. **The top priority of the MBG Dept is to implement a graduate programme.** The EEC members recognize the tremendous efforts undertaken by all Faculty members into that direction. It is acknowledged that there is a need to increase the technical personnel, but this depends clearly upon external funding. In the mean time, the Faculty members propose to implement the notion of the virtual lab to facilitate the organization of practical modules.

Although there is an assessment of the teaching by the students, there is no formal

procedure to benefit from the feedback.

The notion of small group support and discussion through the establishment of the academic tutor system should be implemented. At present, the Faculty members are reluctant to implement this measure because of heavy teaching load, but the EEC members feel that the implementation of such a system should be put forward.

## **C. Research**

*For each particular matter, please distinguish between under- and post-graduate level, if necessary.*

### **APPROACH**

- **What is the Department's policy and main objective in research?**
- **Has the Department set internal standards for assessing research?**

It is important to state from the outset that the MBG Dept from its foundation (year 2000) until 2008 had faced very serious issues with almost complete lack of resources such as limited and low quality space, absence of vital elements for research such as benches and basic molecular biology equipment and in addition the very slow flow of funding from the Greek government to research. In that respect, many of the shortcomings of the Dept for the whole period of evaluation (2004-2008) are due to those difficulties as described below. However, besides these difficulties they have managed to attract substantial funding (more than 1 million Euros for the period in question and more after that) and build resources that now put the Dept in a very good position to eventually play important role in Greek and European research. The EEC recognizes that they do deserve to be congratulated for their tremendous efforts and accomplishments.

The main objectives of the MBG Dept are outlined in the FEK and are:

- Advancement of life sciences
- Education and training of scientists to perform research in life sciences and apply their knowledge and experience in medical research, biotechnology and life sciences.

These objectives are largely and for the most part represented in the current research portfolio of the Dept. **However some needs have been identified such as the insufficient number of Faculty members, the deficit of a major research and teaching area such as Genomics, and finally the lack of clinically relevant research although this is stated as an important objective of the Dept.**

During the site visit, the EEC did not identify a clear process of self-assessment by the Dept as a whole. **The EEC members felt that the Dept is slow in developing a long-term vision.** This is partly due to the major obstacles encountered in the past but also to the lack of senior faculty members (only one full professor who arrived recently) and therefore a deficiency in proper mentorship, managerial experience and vision. **The ECC feels that the talent and dynamism of these young Faculty members would greatly benefit from the experience of more senior researchers to channel the Dept to an international success more effectively.**

### **IMPLEMENTATION**

- **How does the Department promote and support research?**
- **Quality and adequacy of research infrastructure and support.**
- **Scientific publications.**
- **Research projects.**
- **Research collaborations.**

So far, the Dept has had limited capability for research due to major problems in setting up adequate infrastructure, the lack of a graduate programme and teaching overload. However, they have attracted substantial funding and now they have slowly started to produce interesting research primarily with undergraduate and a few PhD students. The quality of research and infrastructure is good but could be further improved, as also acknowledged by the members of the Dept. **There is an urgent need for a restricted area to work with radioactive material and an animal facility for carrying out research in a more efficient way.**

The number of publications directly coming from work in the Dept is good given the circumstances but there seems to be more potential in the near future. This potential comes from the diversity and importance of ongoing research projects, which seem to be of international standards. Individually, the Faculty members of the Dept are very well trained and are pursuing research in interesting and internationally competitive areas. They have also established several collaborations in Greece and abroad, but mainly with their former graduate and postgraduate mentors.

**While the short- mid-term research planning for each laboratory looks good and is improving with time, the EEC members felt that the Dept failed to demonstrate a long-term strategic vision.** The EEC recognizes the value of intellectual independence and acknowledges the importance that each lab has to work on its own specific questions. However, **the Dept has to develop its niches in selected areas of research based on critical mass and excellence that will not only attract additional funding for a state-of-the art infrastructure but will also create opportunities for all members of the Dept. In this respect, a more senior and visionary leadership will be necessary to drive the very talented and energetic young Faculty to a successful Unit.**

## RESULTS

- **How successfully were the Department's research objectives implemented?**
- **Scientific publications.**
- **Research projects.**
- **Research collaborations.**
- **Efficacy of research work. Applied results. Patents etc.**
- **Is the Department's research acknowledged and visible outside the Department? Rewards and awards.**

There is a good spread of expertise and outputs such as publications and funding and no specific area seems to lag behind. In the international standing, the Dept is currently known from the individual connections and collaborations that each Faculty member undertakes, as well as from a number of scientific meetings organized by the Dept. However, there is still no reputation of the Dept as a whole in the international

arena. Although the Faculty members have done a remarkable effort in getting out of a difficult period with success and in attracting funding and developing a set up for the Dept, they are still vulnerable to further research development that would allow them to become internationally competitive. This may be attributed to several factors: 1) the lack of a sustaining support from the Institution and the government; 2) the lack of a Graduate programme; 3) the heavy teaching load of the Faculty members; 4) the lack of a continuous leadership and senior members in the Dept; 5) the lack of a mid- and long-term vision and strategic development; and 6) the difficulties to competitively attract external funding in a more systematic and durable way.

It is not relevant to specifically evaluate number of publications, patents and other achievements for the years 2004-2008 because of the major problems encountered during that period. However, it is worth mentioning that the Dept members did a very good job under the circumstances.

### IMPROVEMENT

- **Improvements in research proposed by the Department, if necessary.**
- **Initiatives in this direction undertaken by the Department.**

The Dept and the individual Faculty members have proposed a number of solutions for improvements. These rely mainly on external support by the government for a better building capacity and infrastructure and for a substantial increase in funding rising for research in Greece, the creation of a recognized graduate program and the recruitment of additional (more senior) Faculty members in the Dept. These are fair and necessary requests since it is crucial that Greece realizes the importance of investing more in research to support and create internationally competitive standards. The EEC felt that the Dept had not a clear vision/plan, at least as it appeared from the internal evaluation report and the presentations and discussions with the members. No concrete plan was presented of where the Dept was going for the next 5-10 years in terms of funding initiatives and resources, research priorities and strategic objectives. The availability of such a visionary plan would enable not only the efficient use of any support provided by the government or the Industry but also the attraction of additional funds and resources from other funding agencies (EU, foundations etc). **The EEC is concerned by the absence of alternative mid- and long-term plans to support research activities within the Dept.** This is an important issue considering the current economic situation in Greece.

In this respect the EEC feels that there is need to:

- **Create more synergies in the current structure, especially with the relevant Departments of the nearby Medical School. There is a great potential for such synergistic actions and the Direction of the Dept should implement the policies and necessary conditions to facilitate and encourage such collaborations.**
- **Identify common areas of interest and hubs of research excellence. These should be few (maximum 3) and focused (not sections with long, poorly defined and all-inclusive names)**
- **Refrain from expanding the research interests when hiring new Faculty members but instead aiming at increasing synergy and critical mass**

**within existing areas of excellence.**

**The EEC strongly recommends that the Dept develops a strategic plan for better implementing its goals and research objectives in the next 5-10 years in order to accomplish more and to become internationally competitive.**

The EEC also recommends the creation of a Board of Research composed by internal and external members to continuously develop and revise the Dept's research strategy in the short-, mid-, and long-term.

**The EEC also proposes the strategic recruitment of 2-3 senior (in terms of experience) but very active scientists that will allow further development of the MBG Dept and the transition from the current highly potent state to scientific excellence and international reputation.**

### ***D. All Other Services***

*For each particular matter, please distinguish between under- and post-graduate level, if necessary.*

#### **APPROACH**

- **How does the Department view the various services provided to the members of the academic community (teaching staff, students).**
- **Does the Department have a policy to simplify administrative procedures? Are most procedures processed electronically?**
- **Does the Department have a policy to increase student presence on Campus?**

The various services provided by the MBG Dept to the students and the personnel (e.g administration, technical support, text books, computers, library, website, cleaning services, etc) seem generally appropriate. However, several important issues need to be resolved shortly. These concern the following:

1. The lack of a student canteen at a close distance from the Dept.
2. The lack of adequate student rooms (the solution of renting a number of hotel rooms is judged as not satisfactory since these rooms should be available for other purposes during the summer).
3. The lack of sport facilities.
4. The bus connection between the Dept and down town is not as frequent as it should be.

The Dept has a policy and they are making an effort to improve several of the administrative procedures. These efforts are still in progress. Most of the administrative work is processed electronically and a continuous effort to further development was noticed.

The Dept has no policy established to increase the participation of the students in the



teaching activities. However, generally the students do attend the courses and are actively participating in the practical modules (laboratories). Moreover, several of them are involved in the research activities within the Dept.

#### IMPLEMENTATION

- **Organization and infrastructure of the Department's administration (e.g. secretariat of the Department).**
- **Form and function of academic services and infrastructure for students (e.g. library, PCs and free internet access, student counseling, athletic-cultural activity etc.).**

The infrastructure and the organization of the Dept administration are satisfactory.

Although computers and internet access are provided to the students, the presence of Wireless (WiFi) internet connection would be necessary. The WiFi access will facilitate the use of university resources from any place of the Dept.

Similarly, although the University library is subscribing in many e-journals, journals edited by Nature, Science and Cell Press are not accessible. This is unacceptable in any proper academic institution and a special effort should be made to give access to these top journals for the students and the personnel.

There is lack of student counselor (tutor), educational advice and contact point for resolving problems. Although, we did not notice any particular problem with the students, tutoring should be in place to advise and guide the students.

The Dept lacks athletic infrastructures. However, the construction of a sport facility is under way.

#### RESULTS

- **Are administrative and other services adequate and functional?**
- **How does the Department view the particular results.**

The services provided by the Dept seem adequate for the students. However, there are not enough administrative resources to support the research activities of Faculty members. For example, grant deadlines were missing because the Dept has no dedicated personnel to monitor this type of activities.

#### IMPROVEMENTS

- **Has the Department identified ways and methods to improve the services provided?**
- **Initiatives undertaken in this direction.**

The Dept is restrained in teaching technical support resources. The Dept requests systematically the decrease of the number of students from 100 in average per year to 40. Also, hiring additional technical personnel (~2) would facilitate teaching in the laboratories. The Dept currently works in implementing the virtual lab platform to improve teaching of the various laboratory techniques.

The Dept needs a WiFi internet access to speed up and facilitate access to important and relevant information for the students and especially for graduate students.

It is also important that the Dept has a subscription to leading journals such as Nature, Science, Cell, etc.

It would be suitable to merge research administration with the departmental administration in order to improve communication, efficiency and training. The administrative staff should be proactive at looking for funding opportunities from the government and elsewhere, communicate this information to the Faculty members on time and assist them with the whole process.

The Dept in collaboration with the Institution has to establish a clear policy for the visiting professors that wish to conduct work in the Dept as part of a collaborative effort with the faculty members.

#### **Collaboration with social, cultural and production organizations**

**Please, comment on quality, originality and significance of the Department's initiatives.**

The quality of the Dept's initiatives is satisfactory. Members of the Dept try hard to increase their visibility locally, nationally and more recently internationally with the organization of a number of scientific meetings. The administrative personnel should be more proactive in promoting the activities of the Department and increasing its visibility within the local community.

#### ***E. Strategic Planning, Perspectives for Improvement and Dealing with Potential Inhibiting Factors***

*For each particular matter, please distinguish between under- and post-graduate level, if necessary.*

**Please, comment on the Department's:**

- **Potential inhibiting factors at State, Institutional and Departmental level, and proposals on ways to overcome them.**
- **Short-, medium- and long-term goals.**
- **Plan and actions for improvement by the Department/Academic Unit**
- **Long-term actions proposed by the Department.**

#### **Inhibiting factors**

**i) State:**

- Lack of sustained funding and proper infrastructure

- Lack of long-term planning
- Delay in the decision making process
- Instability of legal framework in research
- Inflexible financial regulations
- Delay in approval of a Graduate Programme within the Dept
- Failure to satisfy fair requests of the Dept for reduction of the student number from 100 to 40 per year

**ii) Institutional:**

- Lack of essential infrastructure for the period 2004-2008
- Lack of vision about the strategic position and role that the MBG Dept should play in the scientific arena in Greece
- Unclear relationship with the nearby Faculty of medicine
- Problems due to the physical separation of the Dept from the University decision makers (>100 Km)

**iii) Departmental:**

- Lack of internal senior leadership with a good understanding of the specific forces of the Dept
- Lack of long-term vision and strategic plans to position the Dept within Greece and internationally, to attract new funding opportunities and to identify specific areas of excellence for further development
- The difficult period of 2004-2008 was an obstacle for any future planning
- Limited benefit from the opportunities of better interactions and collaborations with the nearby Medical School

**Proposals:**

The solutions to most of the problems mentioned above proposed by the Dept are largely dependent on external actions mainly from the government. The EEC feels that while these are important and fully justified requests that have to be put forward, the Dept has to develop an effective action plan to secure funding for longer periods and to maintain the level of research at international standards. The Dept should therefore look at more innovative solutions to overcome most of the problems in more proactive, creative and unconventional ways.

***F. Final Conclusions and recommendations of the EEC***

*For each particular matter, please distinguish between under- and post-graduate level, if necessary.*

**Conclusions and recommendations of the EEC on:**

- **the development of the Department to this date and its present situation, including explicit comments on good practices and weaknesses identified through the External Evaluation process and**

### **recommendations for improvement**

- **the Department's readiness and capability to change/improve**
- **the Department's quality assurance.**

### **Proposals:**

- As part of the international scientific community, the EEC members feel that the obstacles identified at the State level as a major impairment in the development of the MBG Dept are unacceptable and unjustified (even in such difficult financial times) and that immediate actions should be taken to allow research in Greece to develop further and to become more competitive internationally.
- The Dept has to work systematically and in close collaboration with the University and other potential partners to develop a long-term vision in order to increase its visibility in the local, national and international arena and to orient more effectively its research efforts.
- The Dept has to generate a coherent strategic research plan for the next 5-10 years to better channel research activities in the future, create niches of excellence, and attract substantial funding for further development.
- The Dept needs to be more strategic in its recruitment plan. It would be important to hire 2-3 senior researchers of an international caliber to ensure leadership, managerial and mentoring capacity and to maximize the full potential of the current Faculty members.
- The Dept has to find ways to develop more solid and durable research partnerships with the nearby Medical School. Create a research structure such as a Biomedical Institute would clearly strengthen these interactions.
- The Dept should encourage strategic initiatives with the private sector and explore entrepreneurial opportunities, when they arise.
- The Dept has to initiate and establish a process of self-assessment of research and teaching activities.
  
- The MBG Dept has demonstrated admirable levels of creativity, adaptation and problem solving capability in the previous difficult years. The EEC members feel that this represents a great basis for success in the future and they highly encourage the Dept's members to continue their current enthusiastic approach for seeking funds to support research activities and improving the teaching environment for their students. The EEC noticed that the Dept has not yet developed a long-term strategic vision to explore and exploit future opportunities. With the appropriate senior leadership and support from the State and the University, the Dept could achieve a lot more. There is a lot of potential among the junior Faculty members and what is needed is a catalyst to streamline the energy and talent of the current members so that they achieve true scientific excellence.

The EEC feels that this Dept has a lot to offer to the Greek and international scientific community but needs the appropriate guidance and support by all the relevant stakeholders to achieve excellence.

The Members of the Committee

Name and Surname	Signature
1. Barbara Papadopoulou	
2. Thimios Mitsiadis	
3. Dimitris Grammatopoulos	
4. Manolis Dermitzakis	