

UNIVERSITY OF CRETE - DEPARTMENT OF BIOLOGY

GRADUATE PROGRAMME
in
PLANT MOLECULAR BIOLOGY &
BIOTECHNOLOGY

EXTERNAL EVALUATION REPORT

External Evaluators:

- **Prof. H. Costantinidou, Aristotle Univ. of Thessalonika, Greece**
- **Prof. P. Costantino, Univ. di Roma "La Sapienza", Italy**
- **Prof. J. G. Scandalios, North Carolina State University, U.S.A.**
- **Prof. A. Sievers, Universitaet Bonn, Germany**
- **Prof. R. Strasser, University of Geneve, Switzerland**

E.P.E.A.E.K. 3.2a
Heraklion, Greece
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Background

The External Evaluation Committee (Professors John G. Scandalios, Helen-Isis Constandinidou, Paolo Costantino, Andreas Sievers, Reto Strasser) was selected and invited by Prof. Kalliopi Roubelakis-Angelakis to evaluate the Graduate Program in Plant Molecular Biology and Biotechnology (GPPMBB) of the Department of Biology of the University of Crete. The Committee met in Heraklion on March 20/22/2000 for the evaluation and was provided with abundant materials relevant to the reviewing process. The Committee met with Prof. Kalliopi Roubelakis-Angelakis for an overview of the Program and a discussion of the agenda for the evaluation process. The Committee then visited the facilities of the Department and met with individual Faculty members, who described their ongoing research and training activities relevant to the Graduate Program. Subsequently, the Committee requested and met with the group of students of the first year and, later on, those of the second year of the Graduate Program, and had with them an extensive question-and-answer session concerning the structure of the Program and their expectations and perspectives.

Introduction

It is the consensus of the Committee that given its short history, the University of Crete, has made, as a whole, remarkable strides in establishing itself as a premier Greek scientific and educational institution and a reference point at the national and international level. In particular, the recently inaugurated GPPMBB provides training leading to M.Sc. and PhD. Degrees, and the specific mandate of the Committee is was to evaluate the M.Sc. Program currently supported by the Greek Ministry of Education.

Following review, the Committee strongly feels that the financial investment of the Ministry in this Program is a worthy and rewarding commitment towards the training of Greek youth in scientific and technological areas of strategic importance for the development and competitiveness of Greece.

Permanent Teaching Personnel

The teaching personnel consist of experienced scientists from Greece who have been trained and worked successfully abroad in reputable institutions. The quality and quantity of their publications (approximately 15 papers/yr) reflect an internationally recognizable standard.

A high level of enthusiasm and willingness drives the faculty in producing an effective and synergistic effort to create a Graduate Program of high quality.

The permanent faculty serves effectively as researchers and teachers, exhibits both flexibility and adaptability to new situations and has good relationships among themselves and with their students.

Infrastructures

The total infrastructure and facilities at the Department of Biology are excellent for conducting modern plant biology. The GPPMBB operates in the new campus of the University of Crete just beside the University Hospital, the School of Medicine, the Department of Physics and the FORTH Institute of Molecular Biology. This ensures optimal cross-links and interdisciplinary interactions. In addition, other GPs encompassing other aspects of modern biology are also implemented in this campus. The laboratories are well equipped and all the facilities and infrastructures available to the GPPMBB-including the Ph.D. Program, as well as the administrative support, are adequate.

Space is sufficient at the moment and can still accommodate some growth in the number of graduate students. The distance between laboratories is short, making communication easy within the whole Department, and the campus can be reached with public transportation.

Students

The interview with the students participating in the GPPMBB produced the following impressions on the Committee: The students are motivated and proud to participate in this Program; they mainly selected this University due to the curriculum offered, its facilities, its teaching and scientific reputation; they enjoy the GPPMBB and consider it as well organized; they expressed a desire to be more represented in the University committees and would appreciate more information exchanges between laboratories and their fellow students. The Committee noticed significant intellectual progress between the first and second year students.

Graduate Program

The Program is constructed by modules, which are offered as blocks in time; eleven predefined modules are mandatory during the first year. Research training consists of three-month rotations in three different laboratories during the first year; one full year of training in a single research laboratory is then required to complete the M.Sc. program.

It is the committee unanimous perception that the courses offered, are of good quality. The research training is consequent and productive, due to the quality of the faculty and the exceptionally good ratio of teachers to students. The Committee feels that the Program should include such model plant systems as Arabidopsis and

maize whose genomes are currently rapidly being deciphered. The Committee also feels that a number of steps might be suggested to further enhance this already effective Program. For example, students might be selected by examination in addition to interview and could have a stronger representation in decision-making aspects of Program operation. The students should also be encouraged to interact with students participating in the other departmental graduate programs, e.g. via journal clubs, research discussions, and progress reports arranged by themselves.

The faculty should also consider partially revising the current rather rigid requirement of course modules and to provide some degree of flexibility for the students to pursue more individual training goals and self-responsibility.

Conclusions and Recommendations

Given the high quality and variety of the scientific environment provided by the University of Crete and the allied Institute of Molecular Biology at Heraklion, the students in Plant Molecular Biology and Biotechnology have a unique opportunity to attain an education of high international standards.

In particular, the Committee regards the GPPMBB as a significant achievement of the faculty in rationalizing, updating and providing added value to previously valid but less focused graduate programs. Its accomplishments to date are beneficial to the training of young scientists in important areas of modern plant biology. The Committee is convinced that continuation and enhancement of this Graduate Program is worthy, and strongly recommends its support with consideration to the points for improvement indicated above.

The External Evaluation Committee:

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Heraklion, March 21, 2000