

November 30, 2010

The Council for Higher Education
Jerusalem

Dear Sir/Madam,

Enclosed please find Prof. Kloog's response to the Evaluation Committee's report relating to the Biology/Life Science Study Program. Prof. Kloog is the Dean of the Wise Faculty of Life Sciences.

As for the Committee's comment that, "the exception was the department of Zoology to which we were given much less access; it was less well-integrated, and seemed to be isolated. Given the increasing importance of organism level biology and ecology, this is seen as a missed opportunity", we would like to suggest the following.


TAU has been a leader in Israel in biodiversity research for decades, in particular in zoology. It is particularly important to underline that the Department of Zoology maintains the I. Meier Segals Research Zoological Garden, the Botanical Gardens, and the National Collections of Natural History. We have here an impressive critical mass of scientists who are continuously studying and researching integrative biology. It seems at times, certainly as far as the zoologists see it, that organismal integrative biology at TAU has managed to survive the heyday of the molecular revolution and has retained its high academic strength by all international standards.

As indicated by the evaluating committee, biodiversity research is now flourishing at the global scale, and universities in advanced countries are building up strengths in this general field of research. We too shall retain our uncontested leadership in the field, here in Israel.

Faculty members of the Department of Zoology feel that the relevant program at TAU has perhaps lost some scientific fields that have been historically led by TAU such as wetland ecology, parasitoid ecology, ecotoxicology, taxonomy, etc. This, they hope, will soon be corrected.

I really hope that our university will manage to strengthen ecology and evolution, sciences that are to a great extent at the forefront of scientific research and in which TAU has relative strength and a strong national role.

Sincerely yours,



Professor Aron Shai
Rector of Tel Aviv University



TEL AVIV UNIVERSITY
אוניברסיטת תל-אביב

GEORGE S. WISE
FACULTY OF LIFE SCIENCES
OFFICE OF THE DEAN

Prof. Yoel Kloog, Dean

הפקולטה למדעי החיים
ע"ש ג'ורג' ס. וייז
משרד הדיקאן

פרופי יואל קלוג

12.11.2010

To the Council of Higher Education

RE: Response the Committee for the Evaluation of Biology/Life Sciences Study Programs

The Committee for the Evaluation of Biology/Life Sciences Programs (the "Committee") of the Council for Higher Education (CHE) was officially appointed by the Minister of Education in May 2009 for the purpose of evaluating higher education programs in Life Sciences in Israel. For this the Committee received detailed Self Evaluation Reports from the 8 Institutes of Higher Education that offer programs in Life Sciences. Based on these reports and visits of the Committee to the selected Institutes, an Evaluation Report was written and provided to the Institutes at the end of September 2010. The Institutes have been requested to respond to the Committee's report.

The following is the response of the George S. Wise Faculty of Life Sciences of Tel Aviv University (the "Faculty").

The Committee conducted a site visit of the Faculty on May 11 and 12, 2010. The Faculty sincerely appreciates the Committee's efforts and comments, many of which encourage and praise the achievements of the faculty, strengthen its positions and articulates the challenges the Faculty faces as expressed in the Self-Evaluation report. The Faculty has carefully reviewed the Committee's report which is extremely helpful, and would like to comment on specific issues that were raised.

General: The faculty was pleased to find out that overall the Committee seemed positively impressed with the Faculty achievements, its senior and junior staff, students, educational programs and research activities. The overall poor status of the infrastructure of the Faculty buildings was noted as well as a serious lack of Teacher Assistants, Lab Technicians and inadequate lecture halls for the number of students in the undergraduate programs. Much of the latter relates to difficulties to maintain proper teaching assistance system while coping with extensive budget cuts and lack of governmental funds. Re-establishment of proper teaching assistance and laboratory programs will surely be a primary mission of the faculty if and when the financial situation at Tel Aviv University will allow it. The committee noted a perceived sense of isolation of the Zoology department. In this respect we would like to proudly inform the Committee of major advancements in the status of the Zoology department since the visit of the committee in May 2009, with the recruitment of four new faculty members (more than in any other department) and the inauguration of the national collection of the biological history of our region, which is a major endeavor of Tel Aviv University to advance multi-disciplinary research and education on biodiversity and ecology. These issues will be further specified below.

Curriculum: Three major points were made:

- **-The School of Environment Studies is not part of the Faculty.** The Porter School was established to encourage inter-disciplinary education and research and was therefore not associated with a particular faculty but rather a virtual entity with rotating leadership from the various faculties, including the faculty of Life Sciences. This structure was envisioned to guarantee continuous involvement of all faculties and cover the multi-disciplinary facets of Environmental Studies. The current head of school, Prof. P. Alpert, is a leading expert on the dynamics of weather, and replaced Prof. Y. Benayahu of the Life Sciences faculty Department Zoology who concluded his term as the previous head of the school. Hence the program is being conducted as originally planned and participants are working together to successfully implement the main goals.
- **Need for Life Sciences BS in Ecology.** We are pleased that the Committee has emphasized this need as we already thought. We inaugurated this year a new BS program in Biology and Environment and expect that this will be an excellent program.
- **-The BS curriculum in Brain Studies.** The BSc program in Brain Studies is aimed at integrating behavioral and molecular neuroscience. The program is extremely successful and recruits leading students, year after year (ranking second only to medicine in campus). This has been achieved by few dedicated faculty members at the Department of neurobiology (Life Sciences) and Psychology (Social Sciences). There is a recognized need to increase the academic staff in neurobiology in the Faculty to continue and sustain the demands. The Department of Neurobiology has targeted this need and is actively seeking new faculty members with particular emphasis on state of the art approaches to follow on neuronal activity on time and space dimensions such as opto-neurobiology and brain imaging. Moreover, the faculty has recently recruited a new faculty member who is an expert in physiology, brain imaging and behavior and will join the Department of Zoology.
- **-Need for more cooperation between the Faculty and the Medical School.** This is a comment that is made throughout the report and well taken. Efforts to increase the cooperation between the two faculties are ongoing and can be improved. This should include infrastructure such as an equipment core facility, coordinated recruitment of young faculty, enhanced services such as bioinformatics and other facilities such as the Gitter-Smolarz Library of Life Sciences. The possibility of an MD/PhD program is very attractive and the Faculty is actively collaborating with the Medical School on such projects (2 joint students are currently enrolled). We are particularly pleased that the Committee has emphasized the need and strengths of such collaborations which will certainly continue to be pursued in the future.

Teaching and Learning: Three major points were made:

- 1 **-The Lab courses have been cut over the years** This situation is the results of the dramatic increase in the number of undergraduate students (over the last 20 years the numbers of first year students have gone up from 100 to 500 each year without any budget raise). Hence most laboratory courses are now given in the second and third years of the programs. In order to not exceed the capacity of the existing labs a bidding system has been introduced to ensure that students can take at least one lab course in molecular biology. Furthermore, a general compulsory introductory course to molecular biology is given in the first semester of the second year to all undergraduates. Efforts will be made to improve the infrastructure and equipment of the existing labs but no solution is currently available to increase the capacity of labs. This goes hand in hand with the overall lack of Teacher's Assistants.
- 2 **-A drop of Teacher Assistant positions.** The drastic cut in budget has led to serious cuts in Course

Exercise classes. Obviously additional support by the Planning and Budgeting Committee will enable the Faculty to increase the number of Assistants, provide better tutoring programs of undergraduates and improve the level of stipends which will relieve pressure on the MSc and PhD students.

- 3 **-Core Math and Physics courses need improvement.** All the BSc programs require core exact science courses generally completed in the first year. The core chemistry courses (inorganic, organic and physical chemistry) are well taken care of and taught by Dr. Yossi Tsfadia who is a superb teacher. The courses in Math and Physics are problematic as they are given by outside Instructors. Efforts to deal with the Physics program have still not been successful and improvement is necessary. This will need to be addressed in the coming years.
- 4 **-Collaboration with the Medical School.** The specific Combined Program of Life and Medical Sciences is a joint effort that allows some 40 high level students to study the spectrum of fundamentals of Life Sciences with special focus on the Human Anatomy, Physiology and Disease. This program provides students to specialize in either faculty. The option of opening up courses to the rest of the Life Sciences BSc students will be considered. The Graduate students of the Faculty are welcome to participate in courses given at the Medical School without restriction.

Infrastructure: The buildings of the Faculty are old and in need of renovation. Some facilities dangerously demand immediate attention, such as the working labs including labs in the Zoological Gardens. There is a general lack of up-grading basic out-dated pieces of equipment. The inability to implement a program for improvement stems directly from serious lack of dedicated funds. We thank the committee for the note on the need to invest in infrastructure. It is however important to note in this respect that despite tremendous difficulties, the University has recently decided to build a new facility that will serve as an active national collection of the natural history of our region, the first and only of its kind in Israel. This is a major endeavor and will provide modern infrastructure for faculty members in the fields of biodiversity and ecology. The evacuated space in the old buildings will be renovated and thus partially resolve the urgent need in renovation.

The Committee has drawn special attention to the Gitter-Smolarz Library. Indeed there is a problem due to severe lack of funding. The budget for the library is 4.7 million NIS a year which has not been adjusted for over 6 years. The annual increase of cost for e-Journal subscriptions has been 5-6%. Hence in effect the budget for renewal and updating subscriptions has dropped by more than 30%. So far since Jan 1 2010, 24 subscriptions were cancelled and 25 cancellations were necessary in 2009. The Library continues to make efforts to satisfy the needs of the investigators and students of both Faculties of Life Sciences and Medicine however without an increase in budget further cancellations are anticipated.

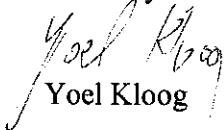
The committee members did not visit the Zoological garden and no new faculty members were met from the Department of Zoology. We apologize for this apparent misunderstanding which was by no means the result of plan or intent but rather the wish of the committee members. The Committee dictated clear guidelines and a very strict time table for its visit. As a result of the time limitations and despite the initiative of the Faculty, the Committee members chose not to visit the Zoological Gardens. It should however be noted that due to such constraints the committee members met with a selected group of Senior Faculty that included all six Departmental Chairpersons (including Zoology), the Head of the Graduate School and the Head to the Teaching Committee, hence all departments were equally represented (the Dean, as per the guidelines, did not participate in this meeting). As to the specific claim that no new faculty members were met from the Department of Zoology, again it was the committee's wish to meet only young faculty members who arrived in 2008 or later. At the time of the visit the most recent new

member in the Department of Zoology was Dr. Dorothee Huchon who joined the Faculty in October 2003 and had already been tenured in October 2008 and thus did not satisfy the criteria dictated by the Committee. This is no wonder, considering that Tel Aviv University underwent over 30% cut in academic staff (from 1300 to 930 members) in just two years, through retirement programs and low severely limited recruitment of new faculty members. We are pleased to report that the recruitment of new staff has since been re-started and there are four new recruits to the department of Zoology so as to replenish the lost teaching and research capacities .

Recruitment Policy. Since 2000 the Faculty was required to downsize by 22% as part of downsizing the academic staff in the University as a whole). The faculty has downsized its Senior Research staff in two years from 119 to 94 mainly through retirement which was not replaced. The Department of Zoology which is the largest department and had the highest number of retiring members downsized from 33 to 24 members (28%); the extent of the cut was similar in the other two large departments thus there were cuts of 22% in the Departments of Plant Sciences and Biotechnology. The two younger and smaller Departments (Cell Research and Immunology and Neurobiology) expanded from 12 to 14 and 9 to 11 members respectively to attain a more optimal size considering their research and teaching obligations. The situation has greatly improved with the recruitment of 17 new young faculty members between 2005-2010, to address mainly the need to replenish and sustain the teaching missions of each department. Of these new recruits, four joined the Departments of Zoology to reinforce **the disciplines of biodiversity and evolution and behavior**, and 13 joined to all other 5 departments in the disciplines of bioinformatics, systems biology, biophysics and nanotechnology, molecular microbiology and biotechnology and imaging (**2.6 faculty members/one of these disciplines**). So then here too the faculty welcomes the committees' comments and will strive to continue and add new excellent scientists in addition to those already recruited according to the teaching needs. We believe that the recruitment policy which is balanced and with high merit successfully addressed the teaching and research challenges that the faculty faced as also pointed out by the committee ("these issues did not seem to interfere with the research output that was superbwith an average output of from 2004 to 2008 of 8.6 papers per faculty member and average citation of 15 per paper"). We thus believe that the Faculty should continue to make every effort to recruit outstanding young scientist to strengthen the current Departments and further develop new areas of interest. Maintaining a leading role in Israel and a high level research and activity will depend on our ability to continue the policy of a balanced recruitment of the most talented young Faculty members.

The Faculty appreciates very much the time and effort of the Committee and looks forward to working with the Committee and the CHE to further improve the level of education in Life Sciences at Tel Aviv University.

Sincerely


Yoel Kloog