

כ"ד בתמוז תשפ"ג
13 ביולי 2023

לכבוד
גב' ענת חיינה
האגף להערכת איכות במל"ג
ירושלים
לענת שלום רב,

הנדון: תגובה לדוח הוועדה להערכת איכות במדעי החיים – אוניברסיטת תל-אביב

קראנו בעיון את דוח הוועדה להערכת איכות במדעי החיים, ואנו מודים לה על עבודתה.
רצ"ב התייחסות פרטנית של הפקולטה למדעי החיים לכל אחת מן ההערות שהעלתה הוועדה. התייחסות זו מקובלת עלינו לחלוטין.
בשולי הדברים אדגיש כי נראה שחלק מהערות הוועדה נעוצות באי הכרה של מערכת ההשכלה הגבוהה בישראל ושל האילוצים שבהם היא עומדת.
בנוסף, אנו מצרים על כך שחלק מהערות הוועדה לא הביאו בחשבון הסברים ונתונים רלוונטיים שכבר נכתבו בדוח ההערכה העצמית ובנספחים שהגישה הפקולטה, וכן על אי דיוקים מסוימים, שאינם תואמים את המציאות בפועל באוניברסיטת תל-אביב, למשל בכל הקשור לסדרי העדיפות בענייני בינלאומיות ומגוון. ייתכן כי אלה נבעו מן הזמן הקצר שעמד לרשות הוועדה לצורך הביקור בקמפוס.

בברכה,

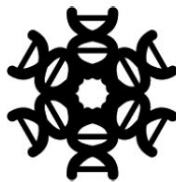


פרופ' אייל זיסר
סגן הרקטור

העתקים:

גב' סיגל מורדוך – מ"מ סמנכ"ל הבטחת איכות ומגוון

פרופ' מרק שטייף, הרקטור
גב' שרון פלדמן, המזכירה האקדמית



POINT-BY-POINT RESPONSE TO THE COMMENTS OF THE COMMITTEE FOR THE EVALUATION OF THE FACULTY OF LIFE SCIENCE STUDIES AT TEL AVIV UNIVERSITY

Executive Summary

Life sciences at Tel Aviv University (TAU) covers a broad range of biology. The Committee was especially impressed by the zoological and botanical gardens, which are a unique national/international resource.

We thank the Evaluation committee for their serious and comprehensive work. The faculty will implement the committee suggestions which undoubtedly will considerably improve the faculty's teaching and research outcomes. We are also grateful to the committee for rating our research as outstanding.

While some of the concerns raised by the committee represent real issues/weaknesses that need to be improved, we believe others probably have originated because we failed to accurately present the strength of our faculty and its complexity in the SER and during the meeting with the committee members. This is illustrated for example by two measures:

i) In terms of research outcome, we are very successful in recruiting competitive grants. The average grants that individual PI receives is ~\$205,454, higher than all other Israeli Universities and very close to that of the Weizmann Institutes of Science (~\$215,861).

ii) The LSF is the largest faculty in Israel in terms of the number of undergraduate students (~1,200 students). Half of them study in excellent double tracks programs (e.g., Sagol School, Medical School, Computed Sciences, Chemistry, and Psychology), in addition to the excellent students that study in the faculty excellent tracks (Ecology, Biotechnology, and the Biology excellence research track). Moreover, the admission to the faculty in recent years is very high (~800 students per year of which ~350 students are accepted). This indicates that students prefer to study at the LS at TAU. Consequently, the bar for acceptance at our faculty is higher than LSFs in other universities.

We believe that our remarkable success in research outcomes and ability to recruit excellent students, is due to the faculty's continuous priority of recruiting the best young PIs and providing them a strong umbrella for their need to excel, as well as by providing the students with an excellent teaching environment.

Individual scientists are strong, but the Committee is concerned by the lack of cohesion, and school and faculty-wide processes, to make things run smoothly.

The faculty administration consists of the Dean, the four schools' heads, the vice deans for teaching, research, and international academic relations as well as the Administrative Director. This team meets regularly during the academic year to discuss, implement and coordinate, both

short-term as well as long-term plans across the faculty. Furthermore, in the recent year, we have been discussing with university management, a five-year strategic plan, which includes *inter alia*, future planning for recruitment of new faculty members how to strengthen the faculty teaching and research and maintenance and renovating the faculty facilities.

As mentioned above, we believe that in addition to the high quality of the faculty researchers, the strength of the faculty research also depends on the umbrella that we provide to the faculty researchers, junior and established faculty members as well as the faculty management's continuous long-term planning and vision. For example, for many years there was a discussion within the faculty management on whether to keep some of the research disciplines within the faculty (e.g., Plant Sciences). The decision was to keep these disciplines and moreover even to strengthen them. We are very glad that the outcome of this policy was acknowledged by the committee.

Individual labs should not be responsible for their own maintenance (electricity and A/C, for example).

We agree that researchers should not be responsible for the maintenance of their labs. Notably, in the last five years, in contrast to the past, we invested 1.5 million NIS in the maintenance of individual labs, including in electricity and A/C as well as investment in the renovation of midterm labs. We will continue our effort to improve the involvement of the faculty in maintaining the research lab and this issue is included as a part of the five-year strategic plan which aims to enable the faculty to take over the responsibility for maintaining individual labs.

how space is allocated and organized. Who decides how many students a lab can/should take? If a lab is very productive and secures increased funding and attracts more students and postdoctoral fellows, is the PI restricted to the initial lab space allocated for recruitment? Transparent processes and expectations must be put in place.

Each recruited faculty member receives a typical laboratory of the size of ~ 80-100 sqm. However, this size is not fixed and could be reexamined according to the demand for very successful labs with an increasing number of students and personnel. Specific requests for additional space are submitted to School heads and discussed individually with the School head and faculty administration. Many labs of successful faculty members reach the size of 200 sqm. Recently, we formed a committee, headed by Prof Tal Pupko (Former School head) and representatives of the four schools to reexamine space allocation and organization in the faculty and to examine if the current faculty space can be more efficiently reallocated. Regarding the number of students a PI can take, there is no real restriction, and the PI can take as many students/post-Docs as he chooses, provided that he can secure their support.

the Committee did not understand how the faculty (PIs) size was determined (from the point of view of what was desirable for the schools).

Four years ago, at the beginning of the term of the current dean, the faculty management (which includes the heads of Schools and vice deans) together with university administration conducted an in-depth discussion about the optimal size of the faculty in terms of the number of PIs in general and within each school. It has been decided to determine the number of PIs in each School (not a fixed number) according to two criteria:

i) Teaching needs - This is determined based on the number of faculty students, considering the planned increase in the number of students in the years to come. The faculty policy, decided a

long time ago, is that students have to be taught by teachers who are actively engaged in the subject thought. For example, all chemistry courses are taught by PIs from our faculty who are also experts in chemistry. Moreover, we encourage our teachers to teach at non-FLS schools. This includes the Sagol School of Neurosciences, Porter School of Environment, and the Steinhardt Museum of Natural History.

ii) Research outcomes - The budgeting system of the CHE to TAU relies on research outcomes (grants and the number of papers published by the institution). Thus, the number of PI in each school was determined to provide a positive balance of schools' and faculty income and expenses.

The Committee was rather confused by the nominal reorganization of schools/departments that had taken place quite recently. We found it hard to understand the rationale for such reorganization, moreover, in some cases, it appeared that the merged departments continued to operate separately (albeit collaboratively) within the school (e.g. neurobiology & biochemistry/biophysics).

Five years ago, the university and faculty management decided to restructure the faculty into schools. This led to extensive discussions among the faculty members, faculty management, and university leadership regarding the structure of these schools. Although different structures were considered, they all took into account the faculty's goal to preserve the faculty's strong Zoology and Plant Sciences fields. One of the suggestions was to generate schools whose members will come from different departments, but which share similar orientations. For example, merging all organismal researchers into one school, the ecological researchers into a second school, and the molecular researchers into a third school. However, most department heads at that time and the former Dean (Prof Daniel Chamovitz) excluded this possibility because they were worried that such change would "dilute" the zoological and botanical fields. In line with the vision of maintaining strong Zoology and Plant Sciences fields, after restructuring the four schools, the actual number of PIs in these two schools increased over time (2) whereas in the other two it decreased (2). It should be noted that the faculty is aware that this restructuring is not optimal and may need adjustment in the future and therefore we will reexamine the current structure in the future. We feel, however, that at least some of the issues raised by the evaluation committee are "labor pains" and that additional time is needed to evaluate the success or failure of the current schools' structure.

The Committee did not discern an overall vision for the Faculty of Life Sciences. Related to this point, there did not seem to be good communication between the rector, deans, and heads of schools - regarding where life sciences wanted to go and how to get there, amongst other things.

On pages 6-7 and 13-14 of the SER, we detailed the mission statement of the faculty e.g., "The Faculty of Life Sciences focuses on fostering excellence in both research and teaching, with the mission to be among the top Life Sciences faculties in the world. Specifically, our goals are to promote the highest level of multidisciplinary research and interdisciplinary education in Biological Sciences and to raise the next generation of Bioscience researchers and educators. Additional objectives are to be involved with, and support the needs of, the community by providing public services including lectures to nonscientific audiences and by increasing the public awareness of topical biology-related issues". In many ways, this reflects our vision. To implement our vision, we are and will: i) Continue our number one priority to recruit the best junior faculty members across different biological disciplines, and to provide them generous start-up packages,

facilities, departmental support, and access to the faculty's high-quality MSc and PhD students. ii) Recruit the best graduate students by increasing the number of fellowships for excellent students. iii) Purchase “heavy” and regular equipment for the interdepartmental center. iv) Provide logistic support, via the vice dean of teaching, to enable teachers at the faculty to implement innovative methods of teaching.

Regarding the communication between the Faculty management and the rector, the Faculty management has excellent communication with the TAU leadership including the rector, and the faculty vision, plans regarding future development, and growth directions are frequently discussed together. This is illustrated for example by the five-year strategic plan that has been discussed between the faculty and TAU leadership in the last year and which is expected to be approved by the TAU management soon. This five-year strategic plan includes for example additional support to the FLS to improve teaching, research, and infrastructure (detailed below).

Many activities at TAU seemed to be ‘managed’ in an ad hoc fashion. There are many problems with this approach. Globally, the trend is for explicit and transparent guidelines for everything. For example: requirements for tenure and promotion - these were not stated in any up-to-date-document, and they were not referred to in any annual reviews of the junior faculty by a consistent group of senior faculty or deans. This example illustrates a key issue with management at TAU.

Regarding the “ad hoc management, we do not think that this indeed reflects the situation in the faculty management. The Faculty has a vision for the faculty research and teaching and acts according to long-term strategic plans which is based on the vision and changing needs. Of course, sometimes issues arise that need to be addressed in an Ad hoc manner, and even then, the issues are dealt according to the faculty’s vision.

The committee is absolutely right that guidelines and transparency should be implemented in all aspects of the LFS activities including requirements for tenure and promotion. This is the faculty policy which we believe is also implemented. For example, regarding the absence of guidelines for requirements for tenure and promotion, please note that these guidelines were provided to the evaluating committee in the SER, (supplementary material 3.4.1 III). The document that details these guidelines was formulated in 2015 and was updated in July 2020. Notably, each of the faculty members has received this document by email. Moreover, the content of the document is explained in detail by the dean and head of Schools to each newly recruited faculty member in the annually conducted personal meetings.

There seems to be no appreciation that the challenges faced are common to other institutions, both nationally and internationally. TAU would benefit by examining approaches other institutions, internationally, have taken (often with evidence-based assessment of their impact) and deciding which they can employ in their own situation. The Committee notes that there is not one key activity to be implemented, but rather several smaller ones which each contribute to the solution.

Regarding the issue of adopting approaches taken by other institutions, we agree with the committee that it is important to learn from the experience of others facing similar challenges and we absolutely are trying and will try to implement such approaches, pending their suitability to TAU standards and structure. In this regard see below the discussion regarding approving PhD thesis.

Similarly, for PhD students, the internationally adopted norm is to have a thesis defense, which includes an external committee member. All committee members must have read the thesis by the defense date, students are examined verbally, and the decision is made essentially immediately - pass, fail, major revisions. TAU does not have this procedure, but the Evaluation Committee could not discern why not - no arguments were made in favor of the current system. It seems universally accepted that the procedure described above works well for all concerned. Again, TAU should look globally and adopt what works.

We agree that the current procedure for evaluating PhD thesis is not good enough and requires improvements such as adopting the thesis defense procedure. Indeed, this issue was clearly discussed in the SER (3.3.2D). Moreover, as mentioned in the concluding meeting between the faculty leadership and the evaluating committee, and also in the SER, we have already begun the process of implementing Ph.D. defense in the faculty prior to the visit of the committee. This included inter alia evaluation of this process in other universities. The faculty Ph.D. committee has finished constructing the details of the faculty Ph.D. defense procedure, which will be brought to the faculty council for approval in the very near future. Once this suggestion is approved by the faculty council, it will be passed to be approved by the higher university Ph.D. committee.

Observations

3.1 The institution and the parent unit

Understanding the relationships between the Faculty of Life Sciences, the parental unit, and other programs within the TAU was therefore a critical part of the evaluation process by the Committee. However, the Self-Evaluation Report (SER) did not detail these issues to any degree and the feedback over the course of the onsite visit was contradictory, as detailed below.

We regret that the SER and the onsite visit of the committee in TAU did not convey to the evaluation committee the fruitful effective and productive interaction between the Faculty of Life Sciences, the parental unit, and other programs within the TAU. We will refer below to the specific points raised.

The Committee was therefore appreciative of the opportunity to meet the Rector and Vice-Rector to learn more about the overall vision of TAU and the role that the Faculty of Life Sciences plays within that vision. Unfortunately, this meeting did little to dispel key concerns that the Committee identified in the SER. Profs Shtauf and Zisser shared the Committee's concerns about the makeup of Schools within the Faculty of Life Sciences, and the lack of integration between, for example, the Faculty of Medicine and the Faculty of Life Sciences but appeared unable or unprepared to address these issues.

The rationale behind the makeup of Schools within the Faculty of Life Sciences was discussed above.

Regarding integration between the FLS and the Faculty of Medicine: TAU has an independent Faculty of Medicine which is divided into several Schools that are in charge of providing degrees for Medical doctors, dental doctors, and health professionals (e.g., Nursing, physiotherapy, and occupational therapy). In addition, almost 100 medical doctors from affiliated hospitals are faculty in the Medical School. The researchers of the faculty of Medicine focus their research on those fields that enable them to teach the different students of the Faculty of Medicine and thus, many

aspects of the research fields in the FLS are not related to those of the faculty of medicine and vice versa and cannot be integrated.

Although some of the research conducted by faculty of Medicine researchers may overlap with that conducted by some of the researchers in the FLS, we believe that this does not justify the integration of the two faculties. It should be noted that such overlap exists in all Israeli Universities that have both faculties, and all Universities preserve the independency of these Faculties.

Nevertheless, we are intensively cooperating with the Faculty of Medicine in the unique aspects where we have shared research interests. For example, we have several joint programs with the Faculty of Medicine, e.g., undergraduate Biomed degree, joint Ph.D. MD. Program, a joint cancer biology research center (CBRC), and the recently established center for advanced immunotherapy located at Sourasky Medical Center (Ichilov). Given our understanding of the importance of collaboration between the two faculties, we plan to further strengthen such collaboration by creating more joint centers.

More to the point, Profs Shtauf and Zisser deflected responsibilities for issues both upwards (e.g., the Rectors does not control funds for some specific activity) or downwards (e.g., the Schools in Life Sciences should be integrated but it is “very difficult” and the Dean is “too careful”), did not have objective data to support any proposed directions (“trying very hard to be attractive to women faculty,” but could provide no studies or policies to support this statement), and generally took a laissez-faire attitude to management and improvement. The Committee is concerned that this may reflect long-term frustration with attempting to effect change within TAU and within the Faculty of Life Sciences, which raises concerns about leadership at multiple levels. This is discussed further here and in section §3.3.

Leadership concerns are likely to contribute to many lost opportunities manifested at the meetings the Committee had with every level of management, where there was little or no evidence for coordination up and down the hierarchy or across programs with shared focus. Examples abound and many are detailed below,

We regret that the SER and the personal meeting with the committee have not demonstrated the effective (at least in our view) “coordination up and down the hierarchy or across programs with shared focus” and we will refer below to the specific points raised by the committee.

With regard to Women’s recruitment. It is important to note that according to the Israeli law, affirmative action (positive discrimination) is prohibited. Nevertheless, the FLS is aware of the current low number of women faculty members and made its best effort to encourage women to apply to faculty positions and to accept those who fulfill the requirements. In fact, five of the eleven PI recruitments made since Prof. Azem started his term as a Dean, were women. In one of the Schools, NBB, the last two recruits were women. This information can be found in Table 12 of the supporting documents (3.4.3) of the SER. It will take time to correct this gender issue. However, it will be illegal also to go in the direction of recruiting only women or to decline the application of excellent males.

To address the underrepresentation of women in faculty positions, we are in the process of implementing a range of measures and initiatives. These include targeted recruitment efforts, proactive outreach to women scientists and researchers, and the establishment of mentorship and support programs to assist women in advancing their careers within the FLS. We are also committed to providing a supportive and inclusive work environment that promotes equal opportunities for career development and advancement.

To further enhance our efforts, we will undertake comprehensive studies and assessments to gather objective data and identify any barriers or challenges that women faculty members may face. This will allow us to develop evidence-based policies and strategies aimed at creating a more inclusive and supportive environment for women faculty members.

Our recent success in increasing the number of newly recruited women faculty is an example of the active action the faculty takes to improve short- or long-term challenges that the faculty face.

but to cite some specific examples: 1) there are competing PhD programs (e.g., the School of Biomedicine and Cancer Biology in FLS versus Faculty of Medicine) which impacts student experience, level of core services, research opportunities, etc

Although some of the Ph.D. programs in the FLS and Faculty of Medicine may overlap with respect to research fields and thus may seem to compete with one another, we disagree with the committee that such competition “impacts student experience, level of core services, research opportunities, etc”. As mentioned above and below the two faculties cooperate in many aspects, such as their core facilities and scientific interaction such as seminars, teaching, and collaborative research. If there is a competition, it is a healthy competition, which can exist also between researchers within the faculties, a competition that encourages researchers to excel, but does not affect the research opportunities and experience of the students as they can choose the program they want to attend, or use the core facilities of both faculties, which are opened to students regardless of their faculty affiliation.

2) there are differing expectations and opportunities for students across the 4 schools of the FLS even with a single degree (e.g., time spent TAing, how well they are aware of expectations etc.);

The Ph.D. program of all Schools’ students is administered and regulated by a single faculty committee (comprised of representatives of the four schools). Only the escort of the students during their studies is conducted at the level of Schools. Most importantly, all Ph.D. students across the faculty, in all schools are regulated by a single protocol (included in SER 3.3.1) and the scientific expectation for all of them regardless of the school they belong is the same.

Regarding the TAs, many, but not all, faculty Ph.D. and MSc students serve as Teaching Assistants in undergraduate courses. This is not obligatory, and we cannot legally force them to teach. Many of them do not want to serve as TAs, because they want to spend most of their time in research. Others want to serve as TAs since it provides them with additional income. However, the extent they teach is also not obligatory. In recent years, due to the teaching reform implemented at the FLS, the number of TA positions in the faculty has increased. Thus, we have more TA positions available than we can fulfill. There are no differences between TAs (restrictions or salary) from the various schools.

3) there was a disconnect between the focus of higher leadership on the urgent need for renovation and the opinions of the faculty, where more space was more important than renovation;

As mentioned above, we are in the process of planning and implementing a five-year strategic plan. This plan will also provide a solution for the urgent need, acknowledged by the university

management, for the renovation of the deteriorating buildings, labs, and lecture halls of the faculty.

The faculty as well as the university leadership, are also aware of the need for additional space. However, providing a solution to this issue is a long-term process that requires additional new buildings, a process that impacts the whole university's long-term plans. According to the CHE's regulations, the university can spend only a limited fraction of its budget for new constructions. Thus, the expectation is that the university will cover most if not all construction expenses from philanthropic donations. To achieve this, the faculty and university need to make an extra effort to convince potential philanthropes to donate money for this purpose, a process that takes time and is not immediate, in particular with the nowadays economic situation. Meanwhile, to partially ease the heavy weight of the shortage in space, the Faculty is evaluating the excitant space to assess if it can be reorganized to answer new and urgent needs.

4) the Vice Dean for Teaching articulated proposed changes that were made without student input and without supporting data, and in some instances provided contradictory statements (the Vice Dean indicated that a further move to hybrid is important, something which some students disagreed with, but also noted that with remote teaching it is harder to identify students that are struggling and had no proposal as to how to address this); etc
It is hard to envision effective positive change in TAU without a clear vision; engaged leadership; coordination across all levels within the FLS; and coordination across related Faculties/Schools (e.g., Sackler and Sagol) and museums across TAU.

We thank the committee for raising these points. We feel that the committee got the wrong impression about the teaching in the faculty and the coordination within all parties which are involved in the faculty teaching. We regret that we could not convey to the evaluating committee the high priority of the faculty toward improving all aspects of teaching within the faculty.

The FLS continuously strives to define a clear path for adapting teaching in the faculty for the current challenges. The decisions taken regarding teaching are based on serious discussions with teachers, students, and educational experts. We conduct surveys as well as discussions with students' representatives to assess the changes we make. Recently, the faculty has submitted a detailed proposal for the university LEAD project (a flag project that focuses on identifying innovative ways to address strategic disruptions in academia) that details the challenges, proposed directions, and implementation strategies in the coming years. Saying that, the vice Dean will consider the suggestion to improve feedback mechanisms from the students and the coordination with related faculties and schools.

Regarding the presumed contradiction of hybrid teaching with the challenge to identify struggling students - we thank the committee for raising this point. The faculty aims at enhancing active learning on campus as it believes that learning through active experiences is the best way to engage with the students and promote learning. Hybrid teaching (or flipped class) is one methodology that can be used to do that, as it focuses on active interactions between the students and the teacher during the live class (enabled by self-learning some of the material at home). We agree with the committee that hybrid teaching should not come at the expense of struggling students. Hence hybrid teaching should be accompanied by quizzes and home assignments that allow tracking students' progress and we will further develop methodologies for assessing student progression. Moreover, the faculty has recently hired a dedicated counselor to track and help struggling students.

All of the above are to be coupled with a change in management culture, focusing on defined, well-articulated, and transparent processes, data collection and review for all processes, open discussion about all initiatives — including opportunities for feedback and then for tracking of stated objectives, etc. In short, the interests of the faculty members, staff, and students of the Faculty of Life Sciences are not best served by the current structures and management culture, neither within the Faculty or within TAU.

The faculty management will take this criticism by the committee into account and will strive to improve the management culture that would promote transparent, data-driven decisions, feedback, and tracking of all aspects raised by the committee, including teaching.

3.2 Internal Quality Assurance

The Evaluation Committee found that the Faculty of Life Sciences of Tel Aviv University provided an extensive self-evaluation report. We acknowledged that the faculty seriously took the self-evaluation process by dedicating a specific assistant and a team headed by a professor and the Faculty management. The FLS has also addressed many of the points raised by the previous CHE evaluation committee, while mentioning that some concerns could not be addressed without better support from the University Leadership.

The Evaluation Committee however raised several criticisms on the self-evaluation process that became clearly apparent during the visit day and were a source of great concern. While data were collected, the Committee felt that SER was not taken as an opportunity for a collective introspection of the Faculty. Students and faculty members should have been better solicited to identify the weaknesses and the strengths of the Faculty, also no overarching vision of the Faculty mission was articulated to the Committee.

While the role of the Dean was recognized by the Evaluation Committee, a collegial spirit gathering the various parties of the faculty members is clearly missing. As a consequence, many important issues were raised during the visit that are not mentioned in the SER.

The SER was prepared by a team headed by a senior faculty member, the faculty management (i.e., the Dean, the vice Dean for teaching, the vice Dean for research, and the Administrative Director), and the SER committee. Notably, the SER committee included representatives of all Schools. These representatives together with the School's heads were responsible for communicating with the School's faculty members. Moreover, different parts of the report were prepared by faculty members from all schools and the head of the SER committee approached the school's heads with specific issues such as the school's heads managerial independence and power (3.4.2.A) and infrastructures that need improvements (3.7.3) as well as individual junior faculty members to identify weaknesses in the promotion process. Therefore, the SER was the outcome of joint efforts of the SER committee with all Schools heads and their faculty members and moreover was approved by the school's heads before its submission. We thus believe that the SER accurately represents a collective introspection and a collegial spirit gathering the various parties of the faculty members. Furthermore, many of the important issues that were raised during the committee visit at TAU were mentioned in the SER. Nonetheless, we accept this committee's comment and in the next SER, we will try to better solicit faculty members to identify weaknesses. Regarding the involvement of students in identifying the weaknesses and strengths of the faculty - The Vice Dean for teaching is in constant contact with representatives of students at the beginning and end of each semester and solving urgent issues raised by the representatives of

students throughout the academic year. Therefore, we believe that the vice dean for teaching, who participates in the preparation of the SER was aware of the students' view of weaknesses in teaching and this was incorporated into the SER. Regarding the students' view of other faculty issues, we incorporated their input given our multiple discussions with student representatives and also with selected students during the preparation of the SER. Nonetheless, we take this comment very seriously and we will make additional effort to solicit students to identify weaknesses in faculty performance and to improve accordingly the faculty performance.

Regarding the faculty mission, this was written in the SER (see pages 6-7 and 13-14). Accordingly, the mission statement of the faculty was defined as "The Faculty of Life Sciences focuses on fostering excellence in both research and teaching, with the mission to be among the top Life Sciences faculties in the world. Specifically, our goals are to promote the highest level of multidisciplinary research and interdisciplinary education in Biological Sciences and to raise the next generation of Bioscience researchers and educators. Additional objectives are to be involved with, and support the needs of, the community by providing public services including lectures to nonscientific audiences and by increasing the public awareness of topical biology-related issues". In many ways, this reflects our vision. We also detailed ways (e.g., to recruit the best young scientists) to achieve our vision.

Moreover, the University Leadership did not seem to be aware of issues in the Faculty of Life Sciences, and could not articulate a specific vision. They mentioned points (space used by emeritus professors, no willingness of professors to duplicate class sections because of the shortage of lecture rooms that can accommodate the enrolled students in courses) that were not relevant issues for the Faculty. These disparities between the Faculty of Life Science and University Leadership are a source of concern. They need to better work together to improve Faculty life.

In our view, the communication between the Faculty and the University Leadership is very good and the faculty leadership continuously discusses with the university leadership the Faculty's needs and vision. Nonetheless, will try to improve this communication.

The Committee found the numerous folders and sub-folders provided with supporting documents to the SER difficult to navigate, and urge consolidation of the files into a more user-friendly format for future evaluations. Much information found in the SER itself should be moved to supplementary materials to facilitate its reading (ex. The list of learning outcomes of each track).

We absolutely agree with this comment, indeed we also mentioned this weakness in the SER (section 2.8- weaknesses). Notably, however, the SER report was structured according to a fixed template that was provided by the CHE and according to its accompanied instructions, on how to organize the folders and subfolders. We hope the CHE will take this comment into consideration and will improve accordingly the template to be used in the future.

Further, during the visit day, some groups with whom the Committee met were not representative. For example, there were only three alumni that are still linked to the university, and a few MSc students. The Committee should have had the opportunity to meet with the heads of schools independently.

As mentioned above, CHE has dictated to the faculty a tight and fixed Schedule for the various meetings. This schedule however did not include any indication that a separate meeting with School heads is requested and the schedule did not allocate time for such a meeting. Given this situation, the faculty management discussed this issue with the Schools' heads, and it was decided that the schools' heads will join the concluding meeting (there were no clear instructions on who should join this meeting in addition to the Dean). Furthermore, we asked the CHE to modify the schedule, so that it will allow visits to the zoological and botanical gardens, which were not originally planned by the CHE, and which the faculty considers as an important faculty value.

We agree that contact with alumni is a weak point of our faculty and improving this issue is one of the faculty priorities for the future. Given our insufficient contact with alumni and that we could not pick post-Docs or alumni that are holding positions at other universities (or in TAU) we ended up with only three alumni.

The CHE guidelines requested that the evaluation committee meet with up to eight MSc and Ph.D. (without specifying the number of MSc or Ph.D. students). The committee met with eight MSc and Ph.D. students.

3.3 The Department/Study Program

The Faculty of Life Sciences is composed of four schools. The School of Zoology is the largest in Israel and has unique resources to support research not only into traditional zoological disciplines, but also into conservation, habitat protection, etc. Similarly, the School of Plant Sciences and Food Security is a unique and exceptional resource in Israel and also has unique aspects including understanding human impact and the protection of key flora. These two Schools stand out and form the basis of a potential expansion into research and education on the impact of global/climate change, which is a major, emerging focus of research and education throughout the world.

A major reasoning behind the current Schools' structure was to keep and even strengthen the two unique and leading disciplines of Zoology and Plant sciences. We are very glad that we have succeeded in accomplishing this goal.

The two other schools are more complex and reflect a somewhat artificial attempt (apparently in response to the administration concerns about numbers of faculty in some schools) to yoke together diverse schools and interests. Biomedicine and cancer biology don't necessarily go together seamlessly, and biomedicine would be more naturally aligned with the Faculty of Medicine.

As mentioned above the structure of the schools was implemented seven years ago. The University management only requested to restructure the departments into schools, however, the structure of the schools was not imposed by the university management but was decided by the faculty following extensive discussions between the department heads (six at that time) and the former dean. We do not exclude the possibility that we will reexamine this structure in the future. However, we need first to examine whether the changes made have a positive or negative impact on the Faculty and schools' performance. The overall vision of the faculty is to keep all disciplines of biology strong, including Zoology, Botany, Neurobiology, Biochemistry, and

Biomedicine. Such evaluation requires sufficient time to accurately assess the performance of the current structure.

Neurobiology is not a natural (or exclusive) partner with biochemistry and biophysics and, again, would be naturally aligned with the School of Neuroscience.

The changes suggested by the committee will require forming a new School (or faculty) and the transfer of all researchers that are engaged in neuroscience research, from all over the campus (i.e., Medical School, Psychology, Biomedical engineering and exact sciences), into such school or faculty. Such a process will require the restructuring of all these faculties and of the university. Another option to include neuroscience under one umbrella, is the model of the Sagol school, in which these researchers are members of their current faculty (e.g., the members of the school of Neurobiology, Biochemistry and Biophysics), but affiliated to a central School.

We think that Neurobiology is a central discipline in Life Sciences and thus should be included as one of the major disciplines in the FLS and the affiliation of faculty members that work in the neurobiology field with the Sagol school gives them the neuroscience umbrella. Although the current structure of the School of Neurobiology, Biochemistry, and Biophysics may seem odd with respect to its name, the school is functioning very well and there is fruitful communication among the school members without affecting the strength of the school's different disciplines.

We learned that the merger of six schools into four happened in 2015; and, over the course of the Site Visit day the Committee repeatedly learned that, while the combined departments were "functioning," there were still some things to iron out. It is the opinion of the Committee that the structure of the schools be reevaluated, and the process of reevaluation be done at the level of the Rector, such that thoughtful decisions could be made that include Sagol, Sackler and other Schools and Faculty. It should be noted that other institutions have confronted these problems and have found successful solutions; we urge TAU to seek out examples that might benefit their situation.

As mentioned above, The FLS does not object to a reevaluation of the structure of the faculty schools. However, this should be done after having sufficient time to effectively assess the functioning of the different schools. We also agree with the committee that such evaluation should be made also at the level of the rectors because major restructuring will involve changes in the structure of other faculties.

The presence of multiple doors to a Ph.D. degree in life sciences (and especially biomedicine or neuroscience) is a structural issue which must be addressed. Specifically, the Committee feels that there should be a single entry to a single graduate Life Sciences/Biomedicine Program that includes the Faculty of Medicine [FOM], FLS and Sagol. (Note that, although we were not able to learn about the degree to which the Sagol School for Neuroscience was, or was not, integrated into either the FLS or FOM, the website suggests that it is independent, such that there are potentially three ways to apply to overlapping and redundant programs).

As mentioned above there is only one entry to PhD studies in the FLS. This is also the case for the Sagol students that choose to conduct their studies and the umbrella of the FLS. Furthermore, in our view, the Biomedicine Ph.D. program of the Faculty of Medicine does not harm the FLS

students going to biomedicine studies and *vice versa*. Adopting the committee's suggestion to have "a single graduate Life Sciences/Biomedicine Program that includes the Faculty of Medicine [FOM], FLS and Sagol" should be made at the level of the Rectors and the deans of almost all university faculties because with nowadays multidisciplinary research, many students from other faculties beside FLS and Medicine are engaged in Life Sciences/Biomedicine research.

Similarly, the issue of minimal interaction and engagement by the School of Life Sciences with biotech and industry could be ameliorated by a joint effort across Sagol, FOM and FLS, because Sagol and FOM seem to already prioritize industry relationships. Such engagement could potentially benefit collaborative research projects and provide internships or research laboratory spaces for the FLS students.

We absolutely agree that interaction and engagement with biotech and the industry are very important, and this has been and will continue to be a major goal of the faculty.

In fact, the LSF interacts at all levels with biotech and industry as exemplified by: (i) the deep involvement of Faculty members in projects managed by the Ramot tech-transfer office (26 million NIS for 2023, the highest among TAU faculties). Typically, such involvement takes the form of different types of interactions ranging from consulting contracts and scientific services to commercialization of patents and involvement in the leadership of biotech companies. (ii) An additional level of interaction between industry and the LFS is at the level of students. Here, we would like to point out the academic Course "Innovative practical horizons - a career in life sciences" and the recently founded career club. The latter is intertwined with a broader initiative of the university and has supported a growing gamut of activities ranging from seminars to job-fairs.

In addition, a new course which is engaged with companies will be launched next year. In this course "Applicative Internship in Technologies for alternative protein industry" the students will perform research projects at companies as part of course requirements.

The Committee was surprised and concerned that the greater context of the Faculty of Life Sciences with TAU was not addressed, and the Committee is concerned that this reflects resistance to integration, which is to the detriment of TAU. For example, the Committee did not meet representatives from Sagol or the museum of natural history.

As mentioned above the FLS does not resist integration and we believe that our actions in general and those referred by the evaluating committee "For example, the Committee did not meet representatives from Sagol or the museum of natural history" prove it.

Accordingly, regarding the Sagol school, as mentioned above the Sagol school is virtual and includes members from all the campus that are engaged with Neuroscience research. The faculty is very well integrated into the Sagol school. Accordingly, twenty-three faculty members of FLS are affiliated to the Sagol School of Neuroscience. These members are encouraged to teach courses and supervise graduate students of the Sagol School of Neurosciences. The current head of the School (Prof. Yosi Yovel) and the former two Heads (Profs. Uri Ashery and Yaniv Asaf) are members of FLS. The instructions received from CHE did not indicate or allocate time to include additional meetings with non-faculty schools or institutions (not from Medical School, Museum, Medical engineering nor exact sciences) with whom the faculty has very tight academic relations. Nonetheless, the committee met members of the Sagol School of Neuroscience, although not as

representative, e.g., the Dean of FLS Abdussalam Azem, Uri Ashery (first head of Sagol School), Arnon Lotem (head of Zoology School) and Omri Wurzel. The head of the committee that prepared the SER report (Reuven Stein) is also a member of Sagol School of Neuroscience. Thus, the faculty is very well integrated with the Sagol school and the spirit of the Sagol school was opened to the committee both via the SER and by the meeting with Sagol school members.

Similarly, this is also the case with the Museum of natural history. Twelve faculty members of FLS are also affiliated with the museum, of which nine are conducting their research in the Museum of Natural History and serve as curators in the museum. Moreover, FLS faculty members are heavily engaged in different activities of the museum including teaching. Furthermore, the students of FLS are encouraged to take courses given by the museum. Recently, following demand from the museum researchers, we established in the museum a molecular Biology service laboratory, in which the faculty supports half of the technician salary costs. Finally, the faculty has recently recruited two new faculty members that also hold a joint appointment with the museum (Shay Rotics & Tom Shlesinger).

As mentioned above, the CHE did not instruct the faculty to arrange meetings with other closely related academic units, e.g., the museum. Nevertheless, we included among the faculty members that met with the committee, two of the senior members of the museum, Prof Noa Shenkar and Prof. Shay Meiri, who both serve as curators in the museum. In this regard, the list of junior and senior researchers that the committee met was made to cover all units of the FLS, including members of the museum and Sagol school.

Students expressed frustration with several aspects of the graduate school experience, which are detailed further below. While MSc students have a standard thesis defense, PhD students do not. Rather, dissertations are evaluated by an internal committee and sent to an external committee member for evaluation. The Evaluation Committee was told that this evaluation takes an average of 4-6 months, but one of the interviewed students has been waiting more than 10 months to receive the initial feedback. The Committee believes in the strongest possible terms that this practice for evaluating PhD thesis is inappropriate. Students who have secured postdoc opportunities overseas cannot begin visa applications without their degree in hand, and the uncertainty accompanying the current thesis review process places them at a major competitive disadvantage. The Committee urges the Faculty to immediately institute a standard thesis defense procedure, with a definitive meeting date, as is common in many, if not most, academic institutions in Israel and worldwide.

An elaborated example of the process can be: Upon submission of PhD dissertation, reviewers should be contacted (including at least one international reviewer – the external reviewer may participate via Zoom if travel is not possible) and an oral exam scheduled, which will occur within 6-8 weeks from the date of the dissertation submission. For example, during that time, the reviewers would read the thesis, and provide written comments and questions at least 2 weeks before the oral exam. The student would then review the questions and prepare responses, together with the mentor and other experts. At the thesis defense, discussion between the examiner and student would take place, beginning with the questions submitted and extended to other areas as needed. At the end of this, the examiners would meet briefly with a representative of the program and pass or fail the student. If the student passes the exam, the examiners would alternately request no changes, minor changes (to be completed within 4 weeks), or major changes (to be completed within 8 weeks). In parallel, the student will give a public lecture, either immediately before the thesis defense or in the week preceding the thesis defense. The examiners would attend the lecture (including remotely).

As mentioned above and in the SER report, we absolutely agree with this committee's comment, and we are already in the process of implementing a defense thesis process.

The composition of the Faculty of various schools should be reevaluated and perhaps organized to better suit the purposes and integration of the diverse fields of study. P.h.D. degrees have a few "entrance doors" to overlapping programs, and there is no mechanism or clear standards for the evaluation of P.h.D. dissertations. All these require significant modifications.

These points have been extensively addressed above.

3.4 Teaching and Learning Outcomes

During the visit, several concerns about teaching and learning outcomes were raised, notably by students, that should be addressed.

The Faculty of Life Sciences does not have access to teaching rooms of sufficient capacity to host first year students enrolled in the required courses. Some stakeholders suggested that this was just a transient issue due to an increased on-site attendance following the COVID pandemic. Students however testified that the overpacked teaching room did not encourage them to attend the course on-site. The Committee recommends discussions with the University heads to solve these issues, as large teaching rooms seem to be available in other faculties on the campus.

We thank the committee for raising this point. The current situation is as follows: First year introductory classes (~500 students) are split into two classes of 250 each. The current capacity of our largest rooms is 250 seats. In the first week of the semester, the classes can be rather full, so we open an overflow class. Starting from the second week of the semester, the attendance typically drops (this also occurred prior to COVID) and there is no use of the overflow rooms. In any case, these classes are also broadcasted live via Zoom and recorded. Second-year courses typically have lower attendance (~50%, this is again unrelated to COVID) and hence we have had no issues of packed classes. Hence, class management provided solutions for all those who wish to attend as well as those who wish to participate online. This year we had no complaints from the students or the teachers on this issue (and we actively approached the students about this issue).

Another issue raised by students is inadequate preparation for introductory courses, and inadequate description of course prerequisites. For example, some courses given in the first year start too abruptly without providing the basics. Not all students have the required familiarity with the material, and as a consequence, some of them have difficulties grasping the content. The fact that most courses in the first semester are in physics, chemistry, and math, and life sciences courses being introduced only later in the curriculum, could discourage some students to continue, possibly contributing to the high attrition rate.

The Evaluation Committee recommends that course prerequisites be explicitly made available to students before they sign up, and updated as needed. The curriculum should be reevaluated so that course order provides appropriate instruction sequences. The Evaluation Committee

further recommends the creation of a gradual learning curve: Implement 'boot camp' courses, and possibly placement exams, prior to the beginning of the semester to bring undergraduates to the level required for first year courses. Incorporate this remedial preparation into the TAU curriculum – would obviate the need for students to pay for expensive external courses. The Evaluation Committee also recommends development and implementation of a robust advising team including professors for all students enrolled in the FLS programs to support the students throughout their studies.

Introductory courses typically assume basic high school background in math, but not much else. There are no requirements for prior knowledge in chemistry or physics. We have offered in the past optional boot camp courses prior to the start of the first semester but attendance declined to almost zero. This may be due to the unique situation in Israel, in which almost all students enter university following a compulsory army service, typically lasting 2-4 years, and they do not have time for pre-semester courses. We emphasize to the students the importance of preparation for the first semester, in particular to students who did not study sciences in high school, and we recommend particular free massive open online courses (MOOCs) in chemistry, python, and physics. The MOOC in chemistry is also integrated into the syllabus of the general chemistry course in the first semester. Furthermore, before the beginning of the 1st year, we actively give students access (via Moodle) to an online biology course taught by two faculty members, preparing them for the Introduction to Biology I course that all students study in the first semester. Nevertheless, the faculty will reconsider the committee's suggestion for boot camp courses, possibly including placement exams.

The first year indeed contains introductory courses in math, physics, and chemistry that are required for modern life science studies. It also contains the three large introductory biology courses that provide the basic knowledge across the main disciplines of biology. The first biology course is taught in the first semester. In addition, the faculty has made a significant effort in recent years to relate the introductory courses to biology. Many of the introductory courses (Chemistry, extended math, part of physics I, python) are given by life science faculty members who highlight the relevance of the tools learned to biology (giving biological examples). This is also manifested by the high grades given in the feedback surveys for most of these courses.

We thank the committee for highlighting the importance of prerequisites and course order. For the disciplinary obligatory courses (typically in the second year), these have already been determined and implemented. The faculty acknowledges that prerequisites and course order are partially lacking for the electives, and we are striving to complete this important process.

We thank the committee for the suggestion to develop and implement an advising team for all students enrolled in the FLS programs. We do have faculty members who serve as academic advisors/mentors for the 1st year students. We acknowledge that many students are not aware of that. The faculty will work towards making the advising team more accessible and increasing its visibility. The faculty has recently hired a dedicated student counselor as part of this effort.

Many BSc courses have lectures in Hebrew with English support (slides and textbooks). The mix of the two languages did not facilitate the learning by students. A suggestion is that courses are given either in Hebrew or in English, with the appropriate support (courses given in Hebrew could have additional support in English available on Moodle).

The faculty considers scientific reading and writing in English as major skills that need to be acquired by life science students. These skills are becoming more and more relevant for many of the potential jobs and future studies of our graduates. The faculty Curriculum Committee has discussed how to promote English literacy many times over the past years, and it believes that English should be integrated in multiple places during undergraduate studies, and not be restricted to a few specific courses. BSc students are required to take two courses taught entirely in English during their degree, including a scientific literacy course given in English. Since the scientific textbooks are all in English (e.g., Pearson's textbook for the 1st year introductory courses in biology), the reading material is naturally in English. Saying that, we make a particular effort to provide support in English for students, for example by providing a list of relevant terms and their translation to Hebrew. The committee raised the issue of English presentations in classes given in Hebrew. Another tool often used by lecturers to improve the scientific literacy in English of the students is the usage of presentations in English also in courses taught in Hebrew. While this may be confusing to some students, we believe that considering the translation given in class by the lecturers, and appropriate studying at home, this bi-lingual teaching optimally prepares the students for biology research.

Most courses are recorded, and many are also offered live on Zoom. The Committee learned that some important courses, for example, the course on Python, were given remotely with little individual support. Students also noted that equipment failure can preclude students from attending lectures online. In other cases, there is a "virtual TA", available to answer only emails on the course. It appears that not all faculty have dedicated office hours for courses. We heard from students that one reason for choosing to go to a University was for frontal teaching, not online classes. The Faculty must address these issues.

Indeed, the policy of the university and the faculty is to offer recordings of most courses. While we think it is important to engage the students in frontal teaching (preferably through active learning), we also think class recordings provide an important way to review class material, as well as offer the option to learn independently (an option which some students prefer).

In addition to the recordings of frontal teaching, there are few courses that are given in a flipped class format. The Python course is an example of such a course, where the students go over interactive online material and then practice in class and in TA sessions. The TA sessions in Python are given in smaller groups (40 students per class). The students also have online support if needed.

In some of the first-year classes and many of the second-year classes, there are indeed virtual TAs. These TAs are available to answer questions either in the course online forum (which is open to all students) or via private emails. Our experience shows that many students take advantage of these options.

Regarding technical difficulties with the recordings and other online services: Naturally, some technical difficulties can arise from time to time, but these are rather infrequent. All technical problems of the students and teachers are addressed by the faculty computing support team and by the university support team for the Moodle platform.

Following the committee's suggestion, the faculty will re-evaluate how to provide additional support for the students in this course and make sure office hours by the faculty are given in all courses.

The Evaluation Committee asked students about their independent research experiences. The consensus opinion was that information about research opportunities is difficult to obtain. The

Committee was surprised to learn that there are strong disparities between the BSc research projects offered in the third year. There seem to be no clear guidelines on how long the research projects should be. Furthermore, student researchers are generally supervised by graduate students, with apparently only little input from lab heads. Finally, it appears that students receive no formal feedback on their research work. Students' access to the list of research projects proposed by the faculty is also in dire need of improvement. To address these issues, the Committee recommends that the Faculty centralize and regularly update information about research opportunities, either online or through an office. Information about research opportunities and requirements for achieving academic credit should be easily accessible. The Committee also believes that a mechanism for providing undergraduates with constructive feedback on their research performance should be formalized.

We thank the committee for raising this important point. The faculty fully accepts the recommendation by the committee to structure the research project in a more unified manner, and to make the regulations of the research project clearer to both faculty and students.

Students conveyed that because some laboratory courses or sections have a delayed start at the beginning of the semester, the students may find it impossible to change or drop the specific lab course, due to an arbitrary deadline for adding or dropping classes. This problem must be addressed administratively.

The laboratory courses start either at the beginning of the semester or in the middle of the semesters and last a total of 6 weeks. Admission to these courses is done by bidding before the beginning of the academic year. After the bidding, the students are allowed to change or cancel their choice, whether the courses start at the beginning or in the middle of the semester. However, once the course starts the students cannot change or drop the course anymore. This is because, on the one hand, the number of students that can attend a given course is limited and barely meets the demand, and on the other hand the course lasts only 6 weeks. So, if a student change or drop a course, for example after two weeks (as is allowed for the faculty regular courses) his/her space cannot be fulfilled by other students, because new students cannot enroll in a course after that a third of the course has passed.

Students felt that their course evaluations were not taken into consideration by instructors or the Faculty. The Committee recommends a better dialogue between students and faculty members to improve course quality. For instance, a short moment should be taken at the end of the course by the teacher to discuss the evaluation. In addition to student surveys, the Vice Dean of Teaching could assess course quality issues by interviewing selective students, and other faculty members (or the Vice Dean) sitting in on classes. These are common and recommended means of assessment.

The university policy regarding course evaluation surveys is that teachers and TAs can see the student evaluations only after the exam is graded (for clear reasons). Nevertheless, the faculty will consider developing avenues for dialogue between students and faculty prior to the end of the courses.

The vice dean for teaching often discusses teaching issues with both student representatives and teachers as well as reviews recordings from selected classes. The faculty will work on mechanisms

whereby additional assessment of teaching will be performed by the vice dean and/or additional faculty members.

The Evaluation Committee recommends that student representatives be added to the FLS Teaching committee to provide their input when discussions are underway.

The Committee felt a disconnection between faculty members and students. A better dialogue between the two parties would improve teaching and help students to cope with the difficulty inherent to at large University.

The faculty accepts this recommendation and will work to improve the dialogue between students and faculty members. In particular, we will hold joint sessions of the teaching committee and student representatives.

3.5 Students

Nonetheless, a number of issues suggest room for improvement.

The Evaluation Committee noted the high attrition rate of undergraduate students (with ~50% not completing their studies). One explanation offered by the Dean and by faculty members was that students leave the program to pursue medical studies. Students remarked that while the first year of studies is manageable, there is a large increase in the workload in the second year, which may account for some students leaving the program. Lacking data, the Evaluation Committee was not able to verify these speculations. The Evaluation Committee strongly urges the Faculty to track the reasons for student attrition and to develop evidence-based intervention plans to address the attrition issue.

Our records show that most attrition occurs within and after the 1st year. As the committee suggested, we are currently working on an evidence-based plan to mitigate attrition. Together with the newly recruited student adviser we have identified specific indicators that will allow us to identify students that are experiencing difficulties at early stages during the first and second semester, and actively approach them with specific suggestions and extracurricular support programs.

The Evaluation Committee was told that many of the Arab students needed support during the first year because of their need to master academic and scientific Hebrew in the lectures. They said that some more advanced students provided peer support in and outside of class. As described above, placement exams and possibly a “boot camp” might be valuable for the students for whom Hebrew is not their first language; this might include international students as well as Arab-Israelis.

The Faculty indeed has extensive dedicated programs for support of Arab students, that as the committee points out, face unique challenges. These include a mentoring program by Arab students from more advanced years, dedicated homework groups, and support programs by the new Equity, Diversity, and Community Commission of the university. The faculty will consider the suggestion for boot camps and placement exams prior to the beginning of the first semester.

The Evaluation Committee also learned that most undergraduate students commute to the university, and that there are no programs on campus that encourage student community building. The absence of such efforts probably reduces the interest of international students who come alone (without family support) for their studies. The Evaluation Committee encourages the Faculty to review their efforts in this area, which may help promote internationalization of the program.

We agree that the housing of TAU, Israelis and international students, undergraduate and graduate needs to be improved. TAU is currently supplying dormitories for 3000 students, of which a quarter are allocated to international students. An additional 1000 units will be built soon as the CHE's planning and budgeting committee has approved its participation in financing this project. The FLS will encourage the TAU management to continue the effort to build additional dormitories.

Nonetheless, it should be noted that the Lowy International School is making a true effort to improve the housing situation for international students. For example, they started centralizing the housing application of international students and enabling them to secure housing from abroad so that they have access to it as they land (if available). Today, over 90% of international students applying for on-campus housing are able to receive it.

As for community building, the fact that most international students live on campus means that there are extensive opportunities for them to engage in social activities while at TAU, including clubs, workshops, meeting with influential Israelis, trips to locations in Israel, and more.

In general, it seems that support for international students in TAU is not a priority.

Internationalization in general, and providing excellent services for international students on campus in particular, are high on the TAU list of priorities, and the university dedicates significant resources to developing and improving these services.

LSF International graduate students receive, as any other student, the same fellowship of at least 125%. The fellowship covers both tuition and living expenses. PI's are entitled to increase the fellowship up to 175%. In addition, intranational students, like Israeli students are entitled to serve as TAs. Notably, The Lowy International School has recently opened annual calls to support International graduate students with a supplemental scholarship.

The Lowy International School also supports international students by other means such as: There are dedicated personnel who support and guide the students from the first moment when they reach out and all through their time at TAU. The students benefit by a designated staff and updated information when it comes to visas, housing, student life, health insurance, bank accounts, and more. In addition, effort has been put into translating a wide range of documents and forms from Hebrew to English in order to enable the students to function without knowing Hebrew while in Israel.

Interviews with graduate students suggested that most are satisfied with their overall research experiences; however, a number of issues were raised that the Committee feels need to be addressed. Students experience a serious financial burden, as their salaries are not commensurate with the high cost of living in Tel Aviv. Many students earn supplemental income

by becoming Teaching Assistants. However, it appears that different schools have different restrictions on the number of sessions students are allowed to serve as TAs.

Furthermore, the Committee received ambiguous information regarding uniformity of pay levels. Some students suggested that TAs in other Faculties (e.g. Computer Science) receive 2-3 times higher compensation per hour of teaching. The Committee believes that to attract strong graduate students, which serve as the backbone of scientific research at TAU, the Faculty must work with University administration to standardize TA salaries, eligibility and opportunity, to offer more fellowships, and to subsidize student housing to a greater extent.

One should discriminate between fellowships given to graduate students and TA salaries. Each graduate student receives a fellowship, which for excellent students could reach 175%.

In addition, the FLS's Ph.D. and MSc students are offered to serve as TAs in undergraduates' courses. TAs receive a salary which depends on the number of hours they serve as TAs. As mentioned above, serving as TA is not obligatory, since we cannot legally force students to teach, and many of them actually refuse to serve as TAs. Due to our teaching reform, the teaching load per TA increased and thus less students volunteer to be TAs and the faculty has in fact free AT positions that cannot be fulfilled. We are not aware of different restrictions between different schools in TA positions.

Regarding the "uniformity of pay levels", the salary of a TA teaching in the university (per hr) is uniform for all university students and is determined by the agreement between the university and the TA's labor union. The salary is linked to the hours taught and we are strict in implementing it. Notably, considering the actual investments of the faculty's TAs in the courses they teach, de facto, in some justified cases, they received even higher salaries than they should get according to the agreement.

The high cost of living in the Tel Aviv area is indeed a real issue for students and administration. However, the fellowship income provided to our graduate students is comparable to other institutions, and for excellent students they are even higher.

At both the graduate and undergraduate levels, the Committee found that career preparation information was not sufficient. Most students do not pursue academic postdocs, yet, information regarding alternative careers for life science graduates was hard to come by. The Committee was told by interviewed faculty members of a recently implemented course that addresses this concern. Interviewed students were, however, unaware of this course. The Committee believes that developing a career counseling program accessible by all students is critical. While there currently is a single career counselor covering several hundred students, this does not address most Faculty of Life Sciences student needs.

We thank the committee for this comment and will make an additional effort to better advertise the currently available course for career preparation.

The FLS has already established an office with dedicated personnel to promote information and job opportunities for LFS students. This includes a web page listing job opportunities as well as open days allowing students to meet companies and other entities which offer jobs to our graduates. We will continuously evaluate the performance of this new office and if needed, we will add additional staff.

Career planning could take advantage of an outstanding cadre of alumni from the Faculty. However, it appears that the Faculty does not maintain detailed alumni records. The Committee recommends integrating alumni into students' career planning strategy. It does not necessarily

mean an institution-level alumni association, or approaching alumni for large donations, but taking advantage of the links established by new graduates to better inform current students about career opportunities.

We thank the committee for this comment and agree with this assessment. Indeed, one of the initiatives of the "Career-club" is to invite lectures from alumni who currently hold key positions in the biotech industry. For example, the lecture of Dr. Omri Amirav-Drory, the founder of Tech.bio, which talked about "what the industry is looking for in Biology graduates". We are in the process of expanding this initiative, including "online" means. We also plan to offer students non-formal (e.g., ad-hoc lectures) and formal lectures (as part of a course) given by our alumni to integrate alumni into students' career planning strategies.

3.6 Academic Faculty and Human Resources

The Evaluation Committee learned from the SER that improvements in the processes for tenure and promotion to Associate Professor (which are separate) have been made in recent years. However, discussion with various faculty members suggests that clearer and more timely information on promotion requirements should be provided to new faculty. The process is perceived by faculty members as being somewhat informal, in the sense that criteria for promotion to Associate Professor represent a higher bar that is quantitative rather than qualitative. However, how many more papers or grants needed, for example, to reach this bar seems to be opaque, and the time it takes to complete this process is long. Also, it seems that there may be different norms for the different Schools and the Evaluation Committee recommends that consistency and transparency of the promotion process be further strengthened across the Faculty.

We agree with the Evaluation Committee that although the processes of tenure and promotion to Associate Professor (which are separate) have been improved in recent years, there are some aspects that need to be improved. Indeed, this was clearly stated in the SER report e.g., "Notably, the SER also identified several weaknesses of which we were previously unaware. One example is the need to improve certain aspects regarding recruitment and promotion, such as the need to better define the criteria for awarding tenure with or without promotion to Associate Professor as well as the transparency of the promotion process" (page 19, from bottom). Nonetheless, it is worth noting that, as mentioned in the SER, the document which defines the criteria for promotion (see 3.4.1 supporting documents- III) is given to all faculty members. Furthermore, formal meetings (including a written summary of the meeting) are conducted by the Dean with every newly recruited junior faculty member annually, until they get tenure. In these meetings, their dossier is evaluated in terms of weaknesses and strengths.

We believe that in most cases the criteria are appropriate and adequate to evaluate the candidate's qualities. The comment that "the criteria for promotion to Associate Professor represent a quantitative rather than qualitative" and "the number of papers or grants needed to reach the Associate Professor bar seems to be opaque", needs to be clarified. The FLS promotion policy (including that of awarding tenure together with promotion to Associate Professor) is to award faculty members according to their excellence in research measured by various aspects such as quality and number of papers published, research grants received, etc. Additional criteria include teaching quality and success in receiving patents (as detailed in the criteria document).

This policy is in most cases appropriate and adequate to evaluate the candidate's qualities. However, as acknowledged in the SER, the faculty agree that there are weaknesses and challenges (see 3.4.1 C) in the promotion processes and the SER also suggested strategies to address these challenges (see 3.4.1 D). For example, 1) The existing document describing the criteria and the procedure for recruitment and promotion will be improved to better define the requirements for tenure with or without promotion and quality over quantity. This document will be distributed to all faculty members. 2) We will establish for each candidate an online Excel table, available to the candidate, which will indicate: (i) dates when the distinct milestones in the promotion process were achieved as well as (ii) key correspondences with the candidate. These tables will enable the candidates to follow the progression of their promotion and will make the process more transparent with respect to the progress from one stage to another.

We agree with the committee that the time required to complete the promotion process is too long. Indeed, this was acknowledged in the SER (Page 93, bottom). The faculty will encourage all the parties involved in the process to shorten the time it takes. Notably, however, the Bottleneck in most cases are the reviewers, which provide their evaluation after a very long time.

Regarding the comment that "there may be different norms for the different Schools" we believe that this is not the case because the Dean and the faculty committee for appointments and promotion stick to the same criteria (3.4.1 supp iii) for every nominated, regardless of the school to whom it belongs.

Importantly, newly hired faculty are assigned a senior faculty mentor and they meet with the Dean annually. Regardless, the Committee heard that there is significant heterogeneity in the frequency of meetings and there is concern from some faculty members that the mentors may be too senior and distant from the current realities of starting a new lab, interacting with graduate students, and managing a team, so the advice and guidance may or may not be helpful. The Dean and Heads of Schools should pay greater attention to provide a more suitable match for mentor and mentee.

A mentoring process was established in our faculty seven years ago. It is relatively successful and many of its features were adapted by other faculties at the university. As mentioned in the SER, the role and duties of the mentor are very well defined (see supporting document 3.4.4.) and both the junior and the mentor are required to provide the Dean's annual reports. In addition, the mentors are asked to participate in a workshop aimed at teaching them how to be good mentors. We are aware, however, that this process is not optimal and thus we have already implemented changes along the way and will continue to do it in the future, considering the committee's suggestion. We also formulated a new document (see Appendices 2A and 2B) which defines the mentoring process, including who can serve as a mentor, to maximize the success of the mentoring process.

Furthermore, post-tenure mentoring should also be provided since the promotion to Associate Professor and, then, to Full Professor, are separate processes

We thank the committee for this comment, and we will implement this suggestion. This will be done at the level of the schools that will be responsible for their PIs.

As discussed in other sections, the Evaluation Committee heard concerns from both faculty and students that the graduate student stipend is too low. This makes it difficult to recruit students,

especially those interested in interdisciplinary training, such as computational biology where there is significant competition from industry. The base stipend for students is too low and while faculty members often supplement it from their grants, there is a limit to how much they can support. TA-ships in the Life Sciences are also limited as means of increasing student income. The Committee recommends a systematic assessment of graduate student stipends in the Life Sciences, given that most students that enter graduate school live in Tel Aviv, one of the most expensive cities in the world.

We are glad that the Evaluation Committee acknowledged this important issue that was also raised in the SER. The faculty is making an effort to increase the level of the stipend income of the students, at least, those who belong to the excellent track, which receive 175% stipend. The five-year strategic plan aims to increase the number of stipends for excellent students.

There has been a change in the policy for the institutional status of Lab Managers assigned to each faculty's research: instead of a tenurable status fully paid for by institutional funds, these positions are currently funded at the 50% (or lower) level by the institution on an annual basis and must be supplemented to appropriate levels from grant (laboratory) funds. This precludes long-term commitment from the PI and a long-term sense of job security on behalf of the Lab Manager. In the absence of a more heavily post-doc driven research environment at TAU (and in Israel in general), long-term employment of Lab Managers is the basis of student training and lab-research continuity. A reversal in the status of Lab Managers is the explicit wish and desire of faculty members at TAU. This includes the ability to raise salaries as needed beyond the annual 3% max allowed by the university.

We are glad that the Evaluation Committee acknowledged this very important issue, which was also pointed out in the SER as one of the serious weaknesses in the faculty performance. We are aware that this is a complicated issue which is also linked to the format of the collective agreements that the university has with the workers' organizations, and therefore not every change is under the university's control, although several options are currently being examined for a gradual change in the subject of the employment of research workers.

Funding and status for professional and knowledgeable Core facility staff scientists are also needed at a level that assures competitiveness with alternative career options for these staff. Currently, there is a feeling amongst the faculty that core staff scientists are not up to date in their training and dedication for the otherwise state-of-the-art core facilities to allow high quality data acquisition and initial analyses as is typically done at core facilities. The Faculty also faces similar issues with the IT personnel and support at TAU; many such staff have the option of going to industry with their skill sets, and those remaining at the University may not provide the fullest service and assistance for faculty and student needs.

We thank the Evaluation Committee for bringing up these issues. We agree that the professionalism and number of the core staff scientists and IT personnel need to be improved. We are therefore in the process of increasing the number and quality of these personnel.

Many policies and processes regarding promotion and progress along the faculty ranks need to be formalized for transparency.

The Lab Manager's status needs to be revisited at the Institutional level. IT personnel and Core Staff Scientist recruitment and retention should generate staff with sufficient technical skills to meet faculty and student research needs.

These points were extensively addressed above.

3.7 Diversity

Diversifying TAU appears not to be a priority or part of any vision for the Faculty of Life Sciences. The Committee believes there must be a commitment to addressing deficiencies in this area of the program writ large. There are data within and outside TAU on demographics and many examples and strategies available for remediating deficiencies. The Evaluation Committee strongly advises making a commitment to and achieving Diversity at every level.

Although diversity, at all levels, is of high priority for FLS and TAU administration (Appendix 4), we agree that this issue needs to be improved. The specific points raised by the evaluation committee are addressed below.

The fraction of Arab students reflects the demographics of Israel, but drops precipitously from 15.8% among the BSc students to 7.2% in the MSc cohort to 4.7% among Ph.D. students. It is unclear from the data provided if there is disproportionate attrition of Arab students during their BSc, despite the statement that there are specific support services for this cohort of undergraduate students. As described in the Student section of this evaluation, far too many students do not complete their BSc degree and more than half take longer than the funded 3 years of study. The Committee urges TAU to devote more resources to cultivating and supporting this minority group through successful completion of their studies. If financial needs are contributing to the reason students leave, this must be addressed, just as social and health needs, or tutoring in language fluency for academic success. The data indicate that no Ethiopian students are enrolled in the MSc or Ph.D. programs, and only one in the BSc program. No data were presented about other minority groups in the student body. Efforts should be made to include students of Ethiopian origins, and other under-represented groups in the student body of the Faculty of Life Sciences.

We thank the committee for bringing this point out as we also did in the SER.

Regarding "No data were presented about other minority groups in the student body" Please note that this information was included in the SER **Table 14**, Equity of Minorities (excel appendix) in Supporting documents section 3.5 III.

The university has established a new unit – The Equity, Diversity and Community Commission aimed to deal with all aspects of Equity and Diversity on campus, including gender, Arabs, first-generation university students, people with disabilities, the LGBT community, members of the Ethiopian community, and the ultra-Orthodox. The faculty has also established its own Equity and Diversity committee to promote Equity and Diversity in the faculty by perusing the following tasks:

1. Establish an up-to-date database of the makeup of its student body.
2. Identify and define concrete goals to increase Equity and Diversity among the above-mentioned groups.

3. Advise measures and steps aimed at expanding the representation of minorities.

Among the actions that can be taken to improve the representation of minorities is via admission. The Faculty of LS follows the university policy of a strict non-discrimination policy in its admittance procedures based on objective academic criteria. Nonetheless, in line with the university policy regarding minorities, the faculty has adopted a number of designated admittance tracks for members of minority groups, as a proactive measure to increase the number of students from these groups in our student body. The unique tracks are:

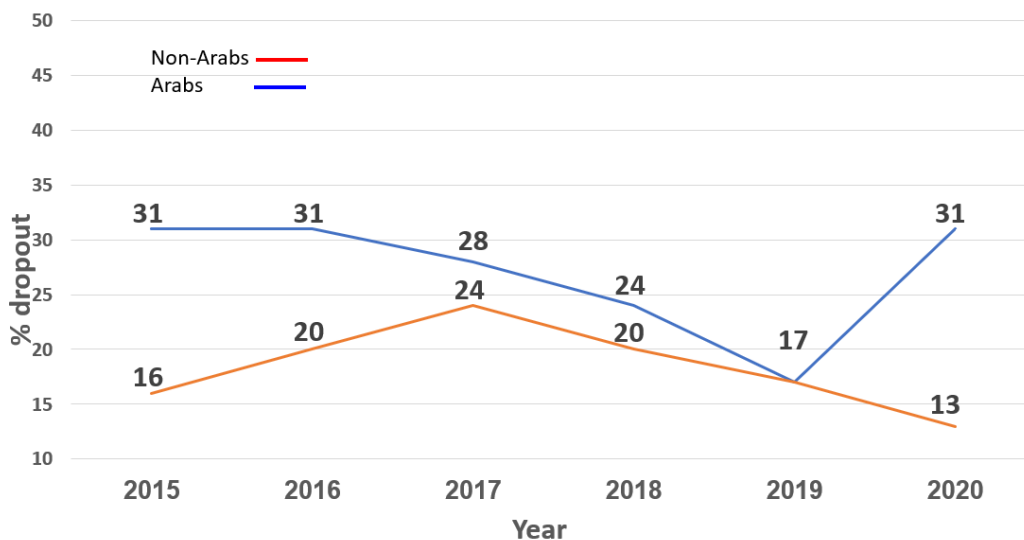
- 1) Students from the periphery (Periphery excellence program);
- 2) Students from disadvantaged backgrounds;
- 3) Students of Ethiopian descent;
- 4) Students graduates of the Ultra-orthodox educational system and
- 5) Students with disabilities.

The FLS is working with the Equity, Diversity and Community Commission to promote diversity within the faculty. In addition, the Office of the Dean of Students promotes academic and social support, as well as mentoring students from minority groups: Arab students, students of Ethiopian descent, students with disabilities, and students from ultra-Orthodox backgrounds.

Regarding the dropout of the FLS undergraduate Arab students, below please find the corresponding data for the 1st year students. As shown the % of dropout rate was reduced in the last years. However, 2020 was exceptional as the % of dropout rate increased. This probably reflects the COVID-19 situation that affected the Israeli Arab population more than the rest of the population.

The faculty is also making a special effort to increase the number of Arab graduate students (MSc and Ph.D.). This includes a special recruiting day for Arab students and allocating extended fellowships for excellent Arab students. We will increase the number of fellowships allocated to this purpose thus encouraging Arab students to pursue of advanced degrees.

Dropout of First year students in the Faculty of Life Sciences; Arab versus non-Arabs students



The absence of Ethiopian students in the MSc and Ph.D. programs, and the low representation in the BSc program, are carefully examined to identify and address the underlying barriers that limit their participation. Efforts are made to actively recruit BSc students of Ethiopian origins at the

university level through the Equity, Diversity and Community Commission and the Dean of Students. These days, with the support of the Goodman Family Foundation, research is being promoted to understand the situation, challenges, and tools through the Cohen Research Institute, and a proposal for a five-year university plan is submitted. Besides, through “Admas”, a program which aims for making higher education accessible to people of Ethiopian origins, these students get assistance in the admission process. In addition, they are offered a comprehensive support system which includes: personal support by a team of program advisors, academic support, educational workshops and social enrichment activities, and assistance in financing various services.

The Hebrew language requirement for undergraduate courses discourages the application of foreign students. Students we spoke with indicated that most classes were hybrid with lectures in Hebrew, PowerPoint presentations and textbooks in English, some quizzes in English, and final exams in Hebrew; this induced dissonance in class and learning, especially for those students who are not fluent in both languages. All courses should be taught in a consistent language. Students indicated that some instructors spoke with accents that made understanding the lecture challenging; language lessons (elocution) should be made available to all faculty who are not native speakers of the language in which the course is taught.

There are two different issues raised here: First, regarding the comment “The Hebrew language requirement for undergraduate courses discourages the application of foreign students”. Since the official language of teaching in all universities in Israel at the undergraduate level is Hebrew, this puts a barrier for foreign students from enrolling. This is a decision that is not at the hand of the faculty but rather at the level of the CHE in Israel.

The second issue is the use of English material in classes given in Hebrew. As pointed out in a previous section, since English is the language of Science (and in particular of Biology), and since all textbooks, publications, and online materials at the university level are in English, the faculty considers the practice of English as an important skill for our students that needs to be integrated at all levels of study, and not be restricted to specific English courses. Moreover, the majority of scientific phrases and definitions in biology cannot be accurately translated into Hebrew and thus are used in English. While we understand that having reading material in English may provide an additional challenge for our students, we believe that in the long run, this prepares them better for a career in life science.

Saying that, we should (and in most cases we do) provide our students with a specific material that helps them deal with English terminology (such as a list of relevant terms in Hebrew and in English). We also agree that class presentations, whenever possible, should be in Hebrew (though in some cases slides are taken from English textbooks). The BSc students are required to have a certain level of English, and therefore are generally required to either pass benchmark exams in English, or take English classes offered by the university.

At the graduate level, most MSc and PhD courses are taught in English and all presentations are made in English, again with the aim of training our graduate students at the international level. This also encourages international students to participate in all our graduate programs.

At the graduate level, faculty members pointed out burdens when international students are involved. It appears that the International Office in the University did not meet many of the needs of these students, and many faculty members in the Faculty of Life Sciences had to assist the international students. Specifically, faculty had to facilitate visa applications and other bureaucratic activities. The Evaluation Committee recommends that TAU enhance the staffing of this central International office and make it effective for all international personnel.

We thank the committee for bringing up this issue. Although the International Office in the University assists international students in various aspects there are still issues that need to be better addressed e.g., as pointed out by the evaluation committee, visa applications and bureaucratic activities. Consequently, we have recently appointed a Vice Dean for international affairs at the faculty (Prof. Nir Ohad). He is in the process of evaluating these issues at the level of the faculty and suggesting an operational program to improve the way our faculty hosts international students. At the same time, it's important to emphasize that several of the difficulties faced by international students in Israel are outside the power of the university to change, especially those involving visa issues.

No data were provided about postdoctoral fellows, their numbers, their country of origin, gender, or minorities among this group.

Data regarding the number of postdoctoral fellows were provided in Table 8 (excel document) of the Supporting documents (3.4.3). It should be noted that we have followed the instruction of the CHE regarding the structure and content of the SER and thus this information about the number was provided as requested in Table 8. We were not instructed to provide additional information regarding their country of origin, gender, or minorities among this group. Nonetheless, we added here this information in the table below (for 2020-2921).

Country	Men	Women	Total
Argentina		1	1
Bolivia		1	1
China	5		5
France	1	1	2
Georgia	1		1
Germany	1	2	3
India	11	5	16
Italy		1	1
Korea	1		1
Mexico	1		1
Poland	1	1	2
Switzerland		1	1
USA	2	3	5
Total	24	16	40

Only one Arab, the Dean, is among the faculty members in the Faculty of Life Sciences. When we asked about this situation, the Dean said that no Arab candidates applied in the last 20 years

when searches were undertaken. Other faculty members said they did not know any Arabs, so they could not reach out to solicit applications. While the pipeline may be limited, they must make better efforts to locate and recruit Arab colleagues into the FLS. Further, the cultivation of their own Arab students, encouraging them to do postdoctoral fellowships and academic careers, will ultimately lead to a new generation of Arab scientists that may join the TAU faculty. Note, this advice applies for all under-represented groups.

We agree with the committee that it is a real issue that there is only one Arab faculty member, and that this urgently needs to be improved. We believe initial stems at the faculty level are being taken as the number of Arab students in the faculty has increased in recent years, and hopefully, some of them will continue their academic careers and become faculty members in Israeli universities in general and in TAU FLS in particular. Moreover, the dean has recently actively contacted three excellent Arab candidates regarding their recruitment to FLS as faculty members. Unfortunately, one of them decided to accept a position offered at Lausanne University, one decided to stay in the US, and the third one accepted a position at the School of Chemistry (TAU). We will continue to make special efforts to recruit Arab faculty members and to encourage our graduate Arab students to do postdoctoral fellowships and to process into academic positions, pending on the regulations of the Israeli law.

In this regard, the Neubauer Family Foundation at TAU supports Arab PhD Fellows financially and it has played a pivotal role in empowering cohorts of talented individuals from the Arab community to continue advanced degree studies in the STEM areas and to join Tel Aviv University.

There were few non-Israeli faculty members, which is dissonant with the goal of Internationalizing aspects of the Faculty of Life Sciences and programs. The Evaluation Committee thinks that the internationalization of the Faculty of Life Sciences should be a priority. New approaches should be implemented to attract colleagues from other countries (international advertising, invitation for seminars, contact of potential non-Israeli candidates...). The Faculties should explore the successful strategies that other institutions around the globe have put in place in this aim.

We agree with the Evaluation Committee that it would be better to have more non-Israeli faculty members to increase the internationalizing aspects of the FLS. Notably, we do not have a policy to exclude the application of non-Israeli candidates. Nonetheless, in view of the brain drain that the Israeli academia and high-tech industry are facing in recent years, we believe that we should also encourage excellent Israeli scientists from abroad to apply for positions in Israel. It is also important to note that immigration policies in Israel are such that non-Israeli faculty who are not eligible to immigrate face some challenges which not all are willing to meet in terms of their status.

Approximately a quarter of the Biology Faculty members are female, mostly at the most junior levels. We were told that a strong effort is underway to recruit more female faculty members. The SER indicates the Faculty of Life Sciences has a goal of achieving 45% women among the faculty by 2025. Given the small number of faculty searches every year, this goal will be impossible to achieve unless many older male faculty members retire simultaneously in the next 3 academic years. The Evaluation Committee commends this initiative to increase the

number of female faculty members, but would like to see a realistic goal, and a specific mechanism to achieve it.

We thank the committee for acknowledging the recent faculty's strong effort to increase the number of female faculty members.

In response to the goal of achieving 45% women among the faculty by 2025, we agree that this target may be too ambitious given the current circumstances. However, we want to emphasize that it remains a high priority for the faculty to significantly increase the representation of women faculty members as soon as possible. We are fully committed to this objective and have already taken steps to actively address the gender imbalance within our faculty.

While we recognize the challenges associated with achieving the specific numerical goal within the given timeframe, we assure you that our commitment to increasing the number of women faculty members remains unwavering.

While two of the four schools are headed by women (those programs that were combined in the recent realignment), the most senior nine TAU leaders (two Rector office and the seven FLS leaders) we met were exclusively male. TAU and the Faculty should recognize that female faculty should be brought into these forward-facing leadership roles.

We agree with the committee's notion that female faculty should be brought into leadership faculty positions. Indeed, the current Dean tried very hard to convince faculty women to accept leadership positions e.g., Vice Dean for teaching/research. None of them agreed.

Nevertheless, we remain committed to actively encouraging and supporting female faculty members to consider leadership positions within the faculty. The Dean will continue to make additional efforts to engage with and convince qualified female faculty members to assume leadership roles.

Student Maternity leaves are for 15 weeks only, and this may negatively impact funding from lab PI, who continues to pay a student on leave. This also is penalized in terms of the time for fellowship support for graduate students.

Regarding Student Maternity leaves, the FLS follows the maternity and parental rights and benefits according to TAU policy (see attached file): "An advanced degree student (Masters, Doctorate, Post Doctorate) that gives birth during her studies, is entitled to 15 weeks of maternity leave. Her scholarship may not be discontinued during this period. Hence the student continues to receive this income after giving birth. In order to accommodate for this maternity period, an extension of the research period may be granted for an additional 15 weeks. TAU offers a "Rector's Scholarship" (at the rate of 100%) at the end of the original degree period, as needed.

There are also uncompensated needs to address family illness, which may prevent a student from attending class or attending to research projects. Both TAU and the Faculty of Life Sciences must devise a solution, and CHE must increase support for students who are new mothers.

Regarding the need to compensate students for family illness- To the best of our knowledge there is no clear university procedure regarding compensation of student's family illness, in all Israeli

universities. Nonetheless, in unique cases and upon request, the FLS supports its graduate students for family sickness, upon request from the faculty.

Military reserve interruption(s) in a student's program of study are not uncommon in Israel. Accommodation must be made to enable students on military reserve to complete their degrees without penalty. If this means extensions of deadlines or delays in taking examinations, accommodation should be easily and routinely made. There should be no penalties in the period of fellowship support for student-soldiers, either.

We absolutely agree with the committee that "accommodation must be made to enable students on military reserve to complete their degrees without penalty". We are not aware of such penalties in FLS. Nonetheless, we will check it out and ensure that if happens, it will not happen again.

Accessibility issues were raised by students, by faculty (during the facilities tour), and also by the Evaluation Committee itself. We noted that although there are handicapped stalls in bathrooms, the architect or builder put an obstruction in the placement of the sink in one visited by the Evaluation Committee. Many buildings have stairs at the entrance, posing a challenge for people with mobility issues. By contrast, the Botanical Garden has been recently renovated for mobility-accessibility throughout the park.

Many classrooms have been accommodated to allow for wheelchair seating in the front row. However, students with visual or hearing impairments are not specifically addressed. Further, we were told that the TAU office for disabilities is understaffed and unable to assist students in need. Other disability concerns such as neuro-diversity seem completely overlooked. The Evaluation Committee recommends that consideration of these students (and faculty) be given priority and accommodated as appropriate for each individual.

We thank the committee for bringing up this issue. We agree that the faculty needs to accommodate faculty students and members with disabilities. We have initiated a comprehensive shift to make our infrastructure accessible to students with disabilities as the committee has observed ("Many classrooms have been accommodated to allow for wheelchair seating in the front row"). The process has not yet been completed and will continue. For example, the specific needs of students with visual or hearing impairments will be accommodated, and measures will be taken to ensure that these students have equal access to educational resources and a supportive learning environment. This may include providing assistive technologies, captioning or sign language interpretation services, and adapting teaching materials to accommodate diverse learning needs. We will prioritize raising awareness and implementing appropriate accommodations to support students and faculty members with various disabilities, including those related to neurodiversity.

Tel Aviv University offers an admission track for candidates with disabilities as part of the Tzavta program in preparation for bachelor's degree studies. Tzavta is a project established for young men and women with functional disabilities. The project makes the entrance phase to academic studies accessible by participating in university courses in a "special status", in addition to getting support and mentoring in educational and social issues for one academic year. The process has not yet been completed and will continue.

We are aware of the concerns raised about the TAU office for disabilities being understaffed and unable to adequately assist students in need. We recognize the importance of having sufficient resources and support systems in place to cater to the diverse needs of our students. We will work together with the TAU office diligently for disabilities to address the staffing issue.

To summarize, the faculty's goal is to ensure that students with disabilities receive the support they require to thrive academically and personally. We are committed to ensuring that our facilities, services, and support systems are inclusive, accessible, and cater to the diverse needs of our community.

The faculty will establish a committee that will be responsible for monitoring and improving the accommodation of the faculty community with special needs.

There is little vision or reflection by TAU and the FLS leadership about the value of Diversity and ways to address the conditions. Minority populations in students are low to absent, and drop with academic degrees, and similarly with faculty. Disabilities, military commitments, and motherhood are handled suboptimally. The most senior levels of Leadership (both at the university level and in the Faculty of Life Sciences) are male and efforts to increase diversity are recommended.

The University and the Faculty absolutely recognize the value of Diversity and take measures to improve it. We take this comment very seriously and as specified above some actions have already been taken and we will continue our effort to increase Diversity in the faculty.

The specific points mentioned were addressed above.

3.8 Research

Nonetheless, while the research is indeed “top notch” the Committee is under the impression that the Faculty’s noteworthy research accomplishments are achieved despite enduring challenges,

We are glad that the evaluation committee considers the faculty research as “top-notch”.

The faculty vision is that the success of research depends on recruiting the best young scientists and providing them with attractive start-up packages as well as by providing all faculty researchers high quality core facilities at the faculty of FLS and other faculties or institutions affiliated or not affiliated with the FLS (e.g., the Nanocenter, MRI facility, Blavatnik center for drug development and the Museum). We believe that this vision is being implemented and contributes to the faculty's top-notch research.

We are aware of the challenges that our faculty members face, and these challenges should be addressed. Below we discuss the action taken by the faculty to improve the specific points raised by the committee.

Which stem mostly from the lack of:

1. Communication between the Institution and the Faculty, which seems to be mostly ad hoc.

As mentioned above we have built a five-year strategic plan with the institution (TAU management) aimed to improve various aspects of FLS performance e.g., in teaching and research. This interaction will continue to address the challenges that the FLS is still facing.

2. Transparency and consistency in policies at all levels (institutional, Faculty, and School).

We agree that transparency and consistency in policies are important requirements that we believe we strictly follow. For example, all documents provided to the committee, including for promotion processes, are open to all faculty. Nonetheless, we will take into account the committee's comments in this regard and will seek to further improve these issues.

3. Strategic Planning and Implementation; vision and procedures are apparently non-existing and should be implemented.

As mentioned above we have built a five-year strategic plan with the institution. This plan takes into account our vision and plans for the faculty development. We believe the strategic plan will considerably improve the performance of our faculty.

The support provided by the institution is limited at best. Institutional, as well as Faculty funds that can serve for scholarships or to initiate new research avenues within established and new laboratories, etc., seem to be limited or lacking.

The Institution is making a true effort to support the FLS's needs, however, the committee is right that this support is limited in various aspects as pointed out in the SER and during the committee's visit to TAU. We are in discussion with the institution to increase the support to the faculty.

The Evaluation Committee learned that the amount of overhead funds (indirect grant money) being placed back into the Faculty is often utilized for the routine maintenance of PI's labs.

See below our response to this comment.

Another aspect that could enhance the research possibilities, as well as funding, would be to implement the possibility (at the Faculty and School levels) for "sponsored research agreements" with industry. This could increase the student research slot possibilities, could enhance the breadth of research being conducted, flow additional overhead, and complement other external funding.

All the issues related to industry "sponsored research" is conducted via the university company Ramot (Tel Aviv University Tech Transfer Company). It should be noted that FLS tops all other TAU faculties in the amount of sponsored research contracts signed via Ramot (26 million NIS/year) (updated to 2023), also mentioned in the SER, pages 121 and 125.

The Evaluation Committee was unclear as to whether there is a mechanism in place for evaluating research achievements, coordinating multi-lab research endeavors, etc. It was also unclear whether mid-career researchers are supported and helped to sustain impactful research after tenure and until promotion to the Associate (as well as full) professorship level(s).

While the Committee agrees that the level of research conducted by the entire Faculty is outstanding, it is the Committee's impression that this is despite the support and structure behind the research endeavors. It is the Committee's recommendation that the Institution and the Faculty implement a more structured (as opposed to ad hoc) strategy for planning and then implementing research support.

A mechanism for evaluating research achievements - As mentioned in the SER (page 124), each year, we evaluate all researchers in the faculty according to criteria of grants obtained, students supervised, and papers published. This evaluation serves as a criterion for awarding money to the research labs in the context of the "technician model" (the partial support for technicians' salaries). The researchers at the bottom of the list meet the Dean to discuss their low achievements. We also assess the research achievements at a collective level as support that is annually distributed to the four schools is based on performance parameters (heavily influenced by performance in research).

Support to mid-career researchers - We thank the committee for bringing up this issue. Indeed, as mentioned in the SER this is a weak point in the faculty's research that needs to be improved.

The faculty has a limited amount of funds to directly support mid-career research, and in general, the faculty's priority is to aid young faculty members. However, some Faculty-level initiatives are in place to support the research of mid-career faculty members. These include: (i) support renovating mid-career research labs, (ii) A matching support in purchasing expensive equipment (e.g., a cell sorter). This is very important because "big acquisitions" are frequently limited to the period following recruitment, using the "start-up" budget.

3.9 Infrastructure

The Faculty of Life Sciences is currently based in 3 main buildings as well as the new teaching lab annex, with research labs positioned at the new Natural History Museum building and future (but limited) space coming online in the Nanoscience Building. In addition, two entirely unique resources exist for the Faculty: the Botanical Gardens and the Zoological Gardens. Both of these field facilities are excellent and carry out public outreach functions as well as basic and applied research roles, in plant and crop sciences, zoology, and even in neurobiology.

Despite these resources, the Evaluation Committee was told that this generally large Faculty is limited by research space. The Evaluation Committee was shown an example of a current faculty member who has ~90 sq m of research labs for ERC-funded research, with 10+ grad students working side by side. Overall, the lack of space seems to preclude future recruitment plans for new faculty for whom research space simply does not exist. Construction is ongoing for a new Life Sciences building for research space, but in return, the Faculty will be giving up one of its own buildings for expansion by the Engineering Faculty.

The Evaluation Committee is right (as mentioned above) that space, in general, and for faculty members' research labs in particular, is lacking. The faculty will get additional space for one research laboratory in the new Roman Abramovich Nanoscience and Nanotechnology building once it is opened. The faculty has not been asked to give anything in return (there was a misunderstanding in this issue). Nonetheless, this additional lab will not substantially ease the acute space shortage in the faculty, and this remains a critical challenge to the faculty and university leader to improve as soon as possible.

The Evaluation Committee also learned that the overhead fund from external grants that flows back to the Faculty is very limited (~6%), and distributed to the individual labs. The individual laboratories are then expected to utilize these insufficient funds for the maintenance of their often old lab space, like fixing air conditioning units and electrical outlets. The Committee

recommends that more of the overhead funding should flow back to the Faculty, and that the FLS should centralize the management of these types of infrastructure issues, not PIs, so that there is more consistent and timely support, and less stress, for faculty members. Many institutions have a school or department Facilities Manager who oversees the maintenance and repair of laboratories; FLS might want to adopt this model.

Regarding the ~6% overhead. This point needs clarification. The support that TAU receives from the CHE (via its Planning and Budgeting Committee) is based *inter alia* on the university's success in recruiting students and obtaining external grants. From the relative contribution of the FLS to the budget allocated to TAU by CHE, the university then budgets the faculty to cover the basic needs of the faculty, such as students' fellowships. If after this budgeting there is a leftover, the faculty receives an additional support, which is 6% of the leftover. This additional support is then allocated by the faculty to the faculty's schools for their use as determined by each school.

We agree that faculty members should not be responsible for basic maintenance such as air conditioning units and electrical outlets and the budgeting of the coming five-year strategic plan takes this issue into account. Having said that, it should be noted that the faculty has a dedicated superintendent unit that is responsible for basic daily maintenance. If more expertise is needed the faculty outsource the service.

Teaching space is also limited, in terms of maximum classroom sizes, whereby 300+ enrollment large introductory biology courses are channeled into classrooms with 250 occupancy limits. The Evaluation Committee heard mixed views regarding large classroom utilization. The Rector seemed to indicate that the Faculty could simply use existing classrooms with multiple sections to accommodate teaching needs, while the FLS leadership rely on a lower percentage of student attendance in large courses to accommodate their needs in these classrooms. Students, on the other hand, feel frustrated at times that the classes are full and there are no seats, with overflow rooms accommodated via Zoom.

Classroom renovations are ongoing at Life Sciences, to generate updated space with IT facilities for simultaneous ZOOM classrooms and electrical outlets for student computers and tablets. This will positively impact the student and faculty experience for in-person learning.

We thank the committee for acknowledging the faculty's effort to improve the student and faculty experience for in-person learning.

Regardless, better coordination of large classroom utilization across TAU should be pursued in the near term. Similarly, an ongoing process is in place for renovating teaching laboratories to complement the new teaching labs in the annex building which serve both University needs and high school biology Olympiad students.

The faculty teaching office will coordinate with other faculties the use of their large classroom when the faculty will not be able to provide sufficient seats in its own lecture halls. Regarding the teaching labs as mentioned by the committee, an ongoing process is in place for renovating all teaching laboratories.

Plans have also been approved to renovate existing space to consolidate all Core facilities housed at the Faculty of Life Sciences into a centralized and updated facility space. In turn, these facilities, including Next Generation Sequencing, are complemented by access to use core facilities at the Faculty of Medicine of TAU, focused mostly on imaging resources. Staff support

in these facilities is not always considered adequate, and there was concern that there is insufficient access and support in the Core facilities during specific times of the year (e.g., summer holidays), and there is a need for operations in these facilities to align with research needs of the Faculty.

Staff supporting core facilities - The faculty agree with the committee that the quality and quantity of the staff that support the core facilities is not always adequate. This issue needs to be improved. We are in the process of recruiting additional skilled staff.

Insufficient access and support to the Core facilities - The core facility is available for users all the year (twenty-four hours a day, seven days a week, by special ID card). The technical support staff is available all the year during the university's official working hours, which do not include weekends and official holidays as determined by the Israeli law and the university agreement with the labor unions, unless in urgent cases. Thus, we cannot force our staff to work during weekends and holidays.

Regarding large-ticket new equipment, these are typically purchased from new faculty start-up funds or external research grants. Occasionally, the purchase is done in collaboration with Core facilities where specific faculty contribute partially to the purchase costs in return for usage-hours for these particular PI, while the instrument also serves the larger needs of the Faculty and the University. The Evaluation Committee heard from faculty that the equipment needs upgrading and that some key items to support current faculty are missing (e.g., mass spectrometry, NMR, and flow cytometry).

Starting two years ago, the university allocates the FLS every year around 7 million NIS to purchase and upgrade equipment, including large ticket equipment, for example, last year the faculty purchased for the core facility a state-of-the-art flow cytometry machine. Regarding mass spectrometry and NMR machines, currently the demand for these large-ticket equipment is limited and does not justify investment in this equipment, in particular since their use can be outsourced by national centers such as the Nancy and Stephen Grand Israel National Center for Personalized Medicine at the WIS.

Overall, the library seems convenient regarding its location and generous with respect to opening hours, with extended hours offered during the exam periods, but space is limited for study groups for students. As with other universities in Israel, TAU would benefit from a nationwide unified contract with publishers to access e-journals and databases country-wide.

The Gitter-Smolarz Library services both FLS and the faculty of Medicine. Notably, like other universities in Israel, the library is part of the national agreements with publishers to access e-journals.

Regarding space, in 2013, the library was renovated to adapt the study areas in the library to technology and the dynamic study patterns of today's students. In addition to the traditional quiet reading spaces, new areas were added to the library where speaking is allowed - 13 spaces for learning in groups, an eating area, and a pop room for learning and resting. As part of the project, special emphasis was placed on thickening and strengthening the computing infrastructure in the library, and for this purpose, the electrical and communication infrastructures were renewed, and dozens of computer stations were added.

Sufficient and functional research and teaching space is the major limiting factor and constraint for the Faculty of Life Sciences. Many plans and much progress are in place to renovate faculty labs and teaching spaces, but the square footage available in the current buildings belonging to the Faculty is finite. It remains unclear, however, whether a strategic plan exists about which older labs are in queue for renovation and at what level of the administration this progress plan is formulated.

The issue of space shortage and renovation of faculty labs and teaching spaces is indeed a major limiting factor and constraint of the FLS and was discussed in large detail above. We thank the committee for acknowledging the faculty's effort to renovate faculty labs and teaching spaces and for emphasizing that the square footage available in the current faculty buildings is finite and thus needs to be improved.

Regarding a strategic plan of renovating older labs, this important need is recognized by the faculty and the five-year strategic plan mentioned above aims to renovate all old teaching labs in the next two years.

Conclusions and Recommendations

4.1 Conclusions

Whether the different arms of the Life Sciences Faculty fit cohesively into a single administrative unit remains an open question, even after the organizational restructuring that took place years ago at the levels of the former departments.

The higher administration and the Life Sciences faculty all indicated to us, and we agree, that space limitation is a serious constraint on the current and future growth of Life Sciences at TAU; while a new building (for FLS) and additional research space in the Nanoscience compound are coming online, a current building is being taken away for growing the Engineering Faculty instead.

The Evaluation Committee is also unclear about how faculty recruitment and growth are being strategically planned at the Life Sciences – it seemed to the Committee as if the proportional representation of the current 4 units had to remain stable as a primary guiding principle for new recruitment. This implies a need for both more planning at the level of the Faculty and, perhaps, even beyond the Faculty, in collaboration with the Faculty of Medicine and the higher administration's vision for TAU biomedical and life sciences in general.

Several of the decisions, reviews, and plans for the Faculty of Life Sciences seemed to be managed through 'ad hoc' means. This goes contrary to globally accepted principles of explicit and transparent procedures, decision making, and accountability. Such principles and processes are especially important for tenure and promotion (to be included in a future self-review), including the annual reviews of junior faculty on their way to tenure, and for the efforts being made to recruit a more diverse faculty using institutional steps rather than personal who-knows-whom approaches. The Evaluation Committee also found the policy of separating tenure and promotion at the associate professor level unusual, and not necessarily most productive for those involved with split decisions.

Finally, the Evaluation Committee highly recommends restructuring the PhD dissertation defense process to include an oral defense presentation followed by an in person examination so as to avoid unnecessary delays in the external processing of solely written thesis examinations.

All these points have been addressed in detail above.

4.2 Recommendations

Our response to all the recommendations appears in the table attached.