EVALUATION OF PHARMACY SCHOOL AT BEN-GURION UNIVERSITY

COMMITTEE FOR THE EVALUATION OF PHARMACY SCHOOLS IN ISRAEL

December 2021

Section 1: Background and Procedures

.1 In the academic year 2021-2022 the Council for Higher Education [CHE] put in place arrangements for the evaluation of study programs in the field of Pharmacy in Israel.

.2 The Higher Education Institutions [HEIs] participating in the evaluation process were:

- Ben-Gurion University
- Hebrew University

.3 To undertake the evaluation, the Vice Chair of the CHE appointed a Committee consisting of[1]:

- Prof. Cate Whittlesea, Professor of Pharmacy Practice, Head of the Research Department of Practice and Policy and Associate Director of Clinical Education UCL School of Pharmacy University College London, United Kingdom. *Committee chair*.
- Prof. Linda Awdishu, Chair of the Division of Clinical Pharmacy, University of California, San Diego Skaggs School of Pharmacy and Pharmaceutical Sciences, USA.
- Prof. Daniel Kurnik, Director of Clinical Pharmacology at Rambam Health Care Campus and Clinical faculty member in the Medical School at the Technion, Israel.

Ms. Pe'er Baris-Barnea served as the Coordinator of the Committee on behalf of the CHE.

.4 The evaluation process was conducted in accordance with the CHE's Guidelines for Self-Evaluation (February 2019). Within this framework the evaluation committee was required to:

- Examine the self-evaluation reports submitted by the institutions that provide study programs in Pharmacy.
- Conduct virtual site visits at 2 institutions participating in the evaluation process.
- Submit to the CHE an individual report on each of the academic units and study programs participating in the evaluation.
- Set out the committee's findings and recommendations for each study program.
- Submit to the CHE a general report regarding the evaluated field of study within the Israeli system of higher education.

.5 The evaluation committee examined only the evidence provided by each participating institution — considering this alongside the distinctive mission set

[1] The committee's letter of appointment is attached as **Appendix 1**.

out by each institution in terms of its own aims and objectives. This material was further elaborated and explained in discussions with senior management, faculty members, students and alumni during the course of each one-day visit to each of the institutions.

.6 This report deals with the Pharmacy School at Ben-Gurion University. The Committee's visit to Ben-Gurion University took place on 5-6.12.21. The schedule of the visit is attached as Appendix 2.

Section 2: Executive Summary

We, the external committee members, take our roles and responsibilities seriously and have made recommendations aimed at improving the faculty and student experience during the educational process. Consequently, all suggestions are made in good faith and are endorsed by the committee as a whole. We appreciate the opportunity to provide this feedback. We have divided our recommendations as 'essential', 'important' and 'desired'. We wholeheartedly support the essential changes recommended within the executive summary as outlined below. The body of the document contains further explanations for our recommendations.

We have acknowledged with a commendation the engagement with stakeholders across Israel in the development of the B.Pharm and MSc programmes. We also give a commendation for the implementation of experiential learning in the 7 weeks of clinical rounds undertaken in Year 3 of the B.Pharm program in affiliated health systems identified as a highly valued learning experience.

Essential recommendations include the need to establish a new reporting structure within Health Sciences whereby the School of Pharmacy is led by a Dean who reports to a senior leader, e.g., the Dean of Faculty of Health Sciences, responsible for the oversight of all health professional schools. Administrative offices should be established within the School of Pharmacy responsible for the oversight of admissions, student affairs/academic oversight, education (preclinical and experiential) and research.

The committee considers that the School of Pharmacy would benefit from the development of a formal strategic plan based on input from all stakeholders including faculty, clinical instructors, current students, alumni, professional societies, and the Ministry of Health. This should be endorsed by the Dean of the Faculty of Health Sciences with appropriate funding to achieve the proposed plan. The School of Pharmacy, the School of Biomedical Research, and the Faculty of Health Sciences should review the sustainability of annual admission of more students to the B.Pharm programme than the number funded by the CHE.

A needs assessment to identify the number of clinical pharmacy faculty needed to oversee the B.Pharm and MSc courses, clinical rounds, and internship is essential. Recruitment of

clinical faculty into academic appointments on a clinical academic track to balance the representation of pharmaceutical sciences and clinical pharmacy is required. These recommendations will provide for greater autonomy for filling faculty positions and ensure an appropriate balance of clinical, teaching, and research expertise is maintained. Clinical research should be strengthened by enlarging and enhancing the clinical faculty.

It is essential to increase the tenure-tracked core faculty of the School of Pharmacy, particularly in the clinical fields. This requires increasing the proportion of pharmacists among the faculty members. The development and implementation of criteria for recruitment and promotion of clinically oriented faculty is also needed. The standing and association of the many adjunct faculty members with the School of Pharmacy should also be formalised.

A needs assessment to determine the number of administrative staff to support the B.Pharm and MSc programs is required to support the leadership, faculty and students. Increasing the administrative staff to relieve the workload of the academic staff members and free them for more essential tasks is an essential recommendation of the Committee. In addition, there should be a review of the support (academic and administrative) required to disseminate internship information and to support students in applying and gaining an internship is required. A clinical faculty member should be appointed as the Director of the internship committee. Routine communication and support between the School of Pharmacy and internship sites should be developed.

A documented quality assurance procedure is required which describes how the internship committee assesses the stability and quality of placements sites and staff for the B.Pharm year 3 clinical rotations and 6 month internships. A syllabus for the internship experience outlining learning outcomes, including essential core activities, should be developed. The School of Pharmacy, with input from students, should review the guidance and documentation provided at the start of their internship. This is to ensure activities and recording is clear and learning consistent across the cohort. Learning outcomes, including essential core activities should be developed for the clinical rounds to support students and work-based supervisors to ensure these are achieved / completed. A strategic plan should be developed to expand internship sites. A robust peer review mechanism for ongoing formal assessment of teaching quality for all staff who teach on the B.Pharm and MSc programmes is also required.

It is essential that the School of Pharmacy needs to further develop a robust mechanism to support a holistic review to ensure that not only new material relevant to the learning outcome of the programme are included/updated, but that redundant or outdated material is also removed. This should build on the School of Pharmacy faculty, adjunct staff, and stakeholder review of the B.Pharm course content currently undertaken. This review should include streamlining the existing curriculum using integrated science curriculum models to redesign the delivery of foundational science courses, review foundational

science courses, and expansion of clinically oriented content, e.g., pharmacotherapy courses. A review of assessment used for clinical / professional skills should be undertaken to ensure standardised and robust methods are used to assess students' performance against learning objectives, including work-based assessment skills in the B.Pharm clinical rotations and internship. It is essential to develop and establish introductory pharmacy practice experiences in the first- and second-years to expose students to the profession of pharmacy. The clinical rotations should be expanded to include acute care, ambulatory care clinics, and pharmaceutical industry. Areas where there is strong evidence for clinical pharmacy improving patient outcomes, e.g., diabetes, hypertension, anticoagulation etc., should be included.

Clinical research should be encouraged during the B.Pharm with more classes incorporated to teach the tools of clinical research included both in the B.Pharm and MSc programs.

In view of the lack of a standardized definition of the status and competencies of a clinical pharmacist in Israel, it is unclear what the learning objectives and competencies of the MSc graduate in community clinical pharmacy are, how they map to the internationally accepted competencies of a clinical pharmacist, and how the limited scope of the 2-year part-time program can achieve these. It is essential to undertake a curriculum summit[2] including senior academic faculty, adjunct faculty, clinical instructors, and ideally stakeholders, to develop a set of competencies or core entrustable professional activities for the MSc graduate. This is to define the set of professional competencies and map the coursework to these competencies, to support standardization of the definition of a clinical pharmacist in Israel.

Important recommendations are to encourage the faculty to utilize a wider range of teaching and evaluation methodologies that will enhance student learning. This can be achieved with other faculty from the schools of medicine, nursing, and dentistry to develop cased based interprofessional education, implement simulation training, student peer feedback and reflection etc. Problem-based learning or team-based learning methods could also be used to intermix students from the various health professions in small groups. The new simulation center provides an opportunity for the School of Pharmacy to further explore the use of simulation in both the B.Pharm and MSc programmes and also interprofessional learning with other healthcare professional students. In addition, the School of Pharmacy should review the credit value of the B.Pharm and also consider options for other entry level degrees, e.g. MSc or PharmD.

The Committee identified that it is desirable to encourage the continued recruitment of faculty members with diverse backgrounds in gender, ethnicity, and religion.

[2] A dedicated curriculum review event which includes faculty and stakeholder representation

Section 3: Observations

3.1 Introduction

The Ben-Gurion University (BGU) describes its mission statement, aims. and goals of the institution as:

a) To constitute a scientific, educational, and cultural center that promotes the development and advancement of the State of Israel, particularly in the Negev
b) To maintain, develop, and advance education, teaching, and research in many fields of human knowledge
c) To help share the spiritual, cultural, and moral values of the State of Israel, and to contribute to the development of its society and economy
d) To help in the spiritual and cultural absorption of Jewish immigrants from all
e) countries to Israel and to develop academic programs for Jews living outside Israel

Its duties are listed as:

a) To establish and maintain research and teaching institutions, especially in Beer-Sheva and the Negev region.
b) To encourage and develop the humanities and the social sciences as well as, engineering and technology, natural and health sciences to engage in research, teaching, and other activities for the advancement of these sciences. To ensure the professional level of the academic staff, to enhance their ability to impart knowledge and to spread values of culture, education, and learning to the University's students and the population of the Negev region and the country as a whole.
c) To constitute an academic community based on close cooperation between teacher-researchers and students.
d) To engage and to train an academic cadre in academic research and instruction'.

The School of Pharmacy describes its mission 'to provide training at the highest level in various fields of pharmaceutical sciences allowing its graduates to practice in different settings – private and chain pharmacies, hospitals and clinics and the pharmaceutical industry. An additional goal is to strengthen the Beer Sheva credo, which espouses a humanistic approach to care with special emphasis on community-oriented services; commitment to training diverse groups of health

care professionals including students from various minorities and under privileged populations including those students from rural and peripheral towns'.

The School teaches the B.Pharm which leads to registration as a pharmacist in Israel. The School also teaches the MSc Community Clinical Pharmacy and Regulatory Management together with a range of continuing education courses linked to the role of pharmacists in Israel e.g. medical cannabis and vaccination.

It should be noted that the School of Pharmacy was originally a School within the Faculty of Health Sciences. Recently this structure has changed, and now it is within the School of Biomedical Research, one of the Schools within the Faculty.

During our review of the self-evaluation report and our meetings and discussions at the event, we felt that the majority of these values were supported by the faculty, students and alumni, specifically in the engagement of the faculty staff to support of B.Pharm and MSc students in their career aspirations.

3.2 Management and Administration

The organizational structure of the School of Pharmacy is described in the self-evaluation report and is structured as a "virtual school" reporting to the School of Biomedical Research. The School of Pharmacy has two education programs; B.Pharm and MSc Community Clinical Pharmacy and Regulatory Management program which are oriented towards training pharmacists. The self-evaluation was performed for both programs. There is a large body of students across the programs. In the academic year 2018/2019, there were 283 B.Pharm and 62 MSc students. This year, 65 B.Pharm and 32 MSc students were accepted into these degrees.

The organizational structure of the school includes a Director of the School of Pharmacy and Deputy Director who oversee the administrative staff (i.e. school coordinators) and the various school committees (e.g. admissions, teaching, thesis, internship). The School of Pharmacy is a virtual school with no equipment belonging to the school but rather this is in the Department of Biochemistry. Resources, facilities, funding, structure, and support are determined by the Dean of the Faculty of Health Sciences. Faculty recruitments are made into research departments outside of the School of Pharmacy. The organizational structure is quite different from most other international schools where the School of Pharmacy is an autonomous school within the health sciences. Additionally, in most other international schools the Dean of Pharmacy leads an administrative unit of Associate Deans (i.e., Offices of Admissions, Student Affairs, Education, Research) and Department Chairs to effectively carry out the mission of the school which includes teaching, research (pharmaceutical science and clinical/healthcare), and

university service. Clinical care may also be provided in schools where a hospital or other healthcare facilities are under one organization or where partnership arrangements have been established. The reporting structure of the School of Pharmacy to the Director of the School of Biomedical Research creates inequity in resource allocation and budgeting compared to the School of Medicine. The committee found this to be an unusual situation and views this as a concern for the program since the School of Pharmacy does not have sufficient funding to support increased student admission into the academic programs, nor the autonomy to recruit senior academic faculty independently of the School of Biomedical Research.

Recommendation (Essential): Establish a new reporting structure within Health Sciences whereby the School of Pharmacy (and other health professional schools) are led by their respective Dean who reports to a senior leader, such as the Dean of Faculty of Health Sciences, responsible for the oversight of all health professional schools. Establish administrative offices within the School of Pharmacy responsible for the oversight of admissions, student affairs/academic oversight, education (preclinical and experiential) and research. This would allow the School of Pharmacy to have greater autonomy and potential for independent growth and development.

During the interviews, the committee was informed that there are four full-time senior academic faculty who are clinical pharmacists. It is unclear how many total senior academic staff are within the School of Pharmacy because of the structure detailed above. Clinical pharmacy faculty are not eligible for Professorial track unless their research productivity is prolific. The School of Pharmacy has part-time clinical instructors at Soroka Hospital, Barzilai, Assuta and Hillel Yafe hospitals who oversee the clinical rounds provided in the B.Pharm program. These sites are compensated by the School of Pharmacy for providing the experiential learning rotations for students.

The committee is concerned about low numbers of clinical pharmacy faculty with academic appointments since this jeopardizes the input of clinical pharmacists in the curricular design and experiential training of pharmacy students. Clinical faculty are thought leaders who are critical to advancing the profession of pharmacy in Israel through development of state-of-the-art training which ensures future B.Pharm graduates have the knowledge and skills to practice at an advanced level elevating the profession. The committee believes that the lack of clinical faculty in senior academic staff is not in the best interest of the students being trained for the profession of pharmacy.

Recommendation (Essential): Conduct a needs assessment on the number of clinical pharmacy faculty needed to oversee the B.Pharm and MSc courses, clinical

rounds, and internship. Recruit sufficient clinical faculty into academic appointments of a clinical academic track to balance the representation of pharmaceutical sciences and clinical pharmacy. These recommendations will provide for greater autonomy for filling faculty positions, to ensure an appropriate balance of clinical, teaching, and research expertise is maintained.

In the report and during interviews, it was noted that there are two administrative staff for the entire school, and this leads to undesirable delays. These staff are responsible for all the administrative workload for the two-degree programs as well as supporting the School's leadership and interactions with the Ministry of Health.

Recommendation (Essential): Conduct a needs assessment for the number of administrative staff to support the B.Pharm and MSc courses. Appoint sufficient staff to support the leadership, faculty and students in the School's academic mission.

During our interviews, the committee noted the lack of a written strategic plan for the School of Pharmacy. The discussions highlighted an informal plan of expanding student enrolment, creating a direct B.Pharm-MSc program and development of pharmacist specialization.

Recommendation (Essential): The committee considers that the School of Pharmacy would benefit from the development of a formal strategic plan based on input from all stakeholders including faculty, clinical instructors, current students, alumni, professional societies, and the Ministry of Health. This strategic plan should be endorsed by the Dean of the Faculty of Health Sciences with appropriate funding to achieve the proposed plan.

In this area of evaluation, the Committee determined that Ben-Gurion University clearly fails to meet the acceptable threshold level of performance.

3.3 QA & Self-Evaluation Process

It is the consensus of the review team that the report submitted was difficult to navigate and understand with a lot of information presented. For example, although interesting, the information presented about Ben-Gurion University's foundation and development could have been reduced. It would have been helpful if the report had been more concise with a better explanation of programmes described in a way which allowed the review team to clearly understand the student pathway through each programme.

Although figure 2 (p23) attempted to depict the B.Pharm degree, it was not comprehensive, and additional information was presented in another table (p 24 38). Therefore, a figure for each degree programme depicting the component

courses (compulsory and elective) at each level (including credit value) would have been helpful. For the MSc Community Clinical Pharmacy and Regulatory Management this should clearly describe the two tracks (with or without thesis) including both core and optional components. The table provided (p38 to 42) was hard to understand without a supporting figure showing the two student pathways.

Providing the additional course files for each programme and arranging the MSc as elective and compulsory courses and the B.Pharm in each year was helpful. Additionally, it was not immediately clear from the description that the MSc program is a 2-day part-time program during which students in general continue their regular job, rather than a full-time study program.

Figure 1 (p 22) was useful to understand the internal School of Pharmacy committee structure. However, a clearer explanation of the function of the School Committees and their relationship with the faculty committees would have been helpful. During the meeting the Head of the School of Pharmacy provided an update of the new structure of the Faculty of Health Sciences. This was clearer and supported the panel's familiarization with the faculty and School of Pharmacy.

Self-evaluation reports are designed to critically examine a department's structure and substance, judge its overall effectiveness relative to its goals and learning domains, identify specific strengths and deficiencies, and indicate a plan for necessary modifications and improvements. The process should include an assessment of the appropriateness of each programmes goals to the demonstrated needs and expectations of the stakeholders, the program's effectiveness in meeting set thresholds for established outcomes.

We understand from the self-evaluation report that data for this was collected and collated by School of Pharmacy staff with input from other offices (Rector and Dean) to prepare this report. Staff worked together as "task forces" responsible for addressing the various sections, and commented on the self-evaluation report which was submitted in 2019. The report should be reviewed and proofread for presentation, considering the review will be undertaken by a panel who will not be familiar with the BGU School of Pharmacy organization structures and processes and also the associated degree programmes. The report must demonstrate self-reflection and analysis were used to identify what is needed to improve the programmes. Strengths and weaknesses were identified but this could have been enhanced with further analysis of action to address weakness.

Recommendation (Essential): For the next CHE review, an organized and self-reflective self-evaluation report and appendices will be required. This report and appendices should be reviewed and proofread for both presentation and understanding. It should be written taking into consideration that a panel

unfamiliar with BGU will be undertaking this evaluation. The report must demonstrate self-reflection and analysis were used to identify what is needed to improve the programmes.

Of concern it was noted in the self-evaluation report that 'The Planning and Budget Committees' expectation (in coordination with the Ministry of Health) is that BGUs School of Pharmacy will graduate 45 B.Pharm students each year' (p 70). However, the School is admitting 60 to 65 students each year. The Head of School presentation reported an aspiration to admit 90 B.Pharm students each year. This was a concern to the panel as the School of Pharmacy only receives resources for 45 B.Pharm students. Although an argument was presented in the report that 60 students were recruited to take into consideration 'drop out' however table 6 (p 81) does not identify this as a significant issue with more than 45 students graduating each year. In addition, it was reported that there is currently a national shortage of pharmacists in Israel.

Recommendation (Essential): The School of Pharmacy, the School of Biomedical Research and the Faculty of Health Sciences need to review the sustainability of annual admission of more student to the B.Pharm programme than the number funded by the CHE. This is because this impacts on academic and administrate resources for teaching, assessment, and student support at the School of Pharmacy and wider facilities (e.g., library) at BGU and also the year 3 clinical rotations and the internship support. The mechanism to obtain more funded B.Pharm student should also be explored with the Ministry of Health and the CHE given the reported shortage of pharmacists is Israel.

Of concern with the self-evaluation report is the lack of any description and associated documentation of the ongoing institutional or departmental processes involved in quality assurance of the experiential placements in the B.Pharm We would have expected documentation on the QA process for initially including a site for the B.Pharm clinical rotations in year 3 and also the 6-month internship undertaken before registration as a pharmacist. However, during our meetings we learned of the role of the internship committee which checked the internship and assessed a learning plan for this period (and referred it back to the site for revision if inadequate) and reviewed student reports. It was reported that if it was identified from the student report that the internship was unsatisfactory then remedial action was required before another student would be able to undertake their internship at this site. It did not appear the quality assurance of the 6-month internships took place during the internship. We were also informed that some sites wishing to host the year 3 clinical rotation were not considered suitable.

Recommendation (Essential): A documented quality assurance procedure must be written which describes how the internship committee assesses the stability and

quality of placements sites for the B.Pharm year 3 clinical rotations and the 6-month internships. Quality assurance should be extended so that it takes place before, during and after these students are engaged in the internship. This documentation and process should include both the site facilities and learning outcomes for this experiential learning and also the suitability of the pharmacist or other health care professional (as appropriate) to supervise the students' learning in the placement/internship. This should also include assessment of their teaching/mentoring and as well as professional practice experience. We recognize that this will require additional administration and recommend that additional dedicated administrative support is essential for this QA process.

It was explained that the School of Pharmacy provides support to students about the internship period, application process and also supports them to gain an internship. Discussions during the meetings identified that extensive student support was appropriately provided and this was a heavy workload for the member of staff involved.

Recommendation (Essential): The School of Pharmacy should undertake a review of the support required to disseminate internship information to students and also to support students in applying and gaining an internship. This review should consider the requirements for both academic and administrative staff.

The role of stakeholders (referred to by BGU as Professional Partnership) to develop the MSc in Community Clinical Pharmacy and Regulatory Management was detailed in the self-evaluation report and also outlined at during the meetings. It was also clear from the meeting discussions that the content of this degree and of the B.Pharm took into consideration the new roles undertaken by pharmacists in Israel. We had the opportunity to meet adjunct academic staff (not solely in healthcare) who held significant roles in Israel. Their expertise and insight were used to develop and deliver the MSc and B.Pharm programmes. It was reported that international programmes leading to licensure as a pharmacist were reviewed to develop the BGU B.Pharm. We were pleased to see that these roles and that of the clinical pharmacist were being included in the B.Pharm degree. The continuing professional development courses offered by the School of Pharmacy were also focused on supporting them to gain "personal authorization" to undertake these roles.

Commendation: The engagement with stakeholders across Israel in the development of the B.Pharm and MSc programmes is acknowledged by the panel.

The self-evaluation and meetings with faculty described a mechanism for continual review by staff of the content of the B.Pharm and MSc degree. Initial plans, which have not yet been ratified, for changes to the B.Pharm degree were also discussed.

However, students reported that some courses appeared not essential to the study of pharmacy (e.g., Physics/mechanics).

Recommendation (Essential): Building on the School of Pharmacy faculty and adjunct staff and stakeholder review of course content for the B.Pharm, the School of Pharmacy needs to develop a robust mechanism to support a holistic review to ensure not only that new material relevant to the learning outcome of the programme are included/updated but that redundant or outdated material is also removed.

Linking the outcome of the B.Pharm program to registration of these students as pharmacists in Israel was challenging for both the review panel and the School of Pharmacy, BGU, because the registration exam has not been run for a number of years. In addition, the degree outcomes could not be mapped by the review panel to outcomes required at registration, as these do not exist. The development of a set of required outcomes/ competencies for the initial registration as a pharmacist in Israel are important as they ensure the competency of the workforce in delivery of patient- and medicine-related outcomes. They also support curriculum review by the School of Pharmacy to ensure the B.Pharm degree meets the needs of patients and other stakeholders, e.g. healthcare teams and organization and the pharmaceutical industry. No learning outcomes for the year 3 clinical rounds and B.Pharm internship could be identified. The report referred to an Internship Evaluation Form (p 55) but this was not provided to the panel.

Recommendation (Essential): Learning outcomes, including essential core activities, should be developed for the B.Pharm. internship and the clinical rounds. This will support both students and work-based supervisors to ensure the learning outcomes are achieved and essential core activities are completed.

The B.Pharm degree programme, although including clinical and professional practice, does not appear to have a culture of formal programme and student learning outcomes and assessment linked to both skills and knowledge for patient-focused outcomes. A list of tasks is identified for the clinical rotations. It is acknowledged that frameworks such as WWHAM and role play were used in the degree. The School had in the past used Objective Structured Clinical Exams (OSCEs) but found this resource-heavy and logistically challenging, and these were therefore no longer used. By definition, student learning outcomes are also linked to the comprehensive performance of students in the all aspects both pharmaceutical science and healthcare. Practical reports were assessed in pharmaceutical sciences. However, robust assessment of clinical knowledge and skills in workshops in response to roleplay, presentation, and in the workplace has not been developed to ensure standardization of these assessments. Training of staff to undertake such assessment in a robust and standardized way was also not

present. For example, experiential (work-based) assessment tools were not used in the B.Pharm clinical rotations or the internship. OSCEs or other standardized frameworks were not used to assess application of knowledge and skills, understanding, and behaviours/attitudes.

Recommendation (Essential): The School of Pharmacy needs to review its assessment of clinical / professional skills to ensure standardized and robust methods are used to assess students' performance against learning objectives. This should include work-based assessment skills in the B.Pharm clinical rotations and internship.

It was reported that teaching surveys are routinely conducted by the Academic Development and Teaching Promotion Unit and the Students Organization. This feedback is used by the School of pharmacy to update and refine both the B.Pharm and the MSc. However, there appears to be no formal assessment process for routinely evaluating teaching by staff, e.g. peer review. The Academic Development and Teaching Promotion Unit provided courses to raise the level of teaching quality at BGU. These opportunities were promoted to staff, with some mandatory for new faculty members. It was not clear if these courses were also available to clinical instructors. It was reported that the Unit for Improving the Quality of Teaching and Learning provided course and support in response to the COVID pandemic to all staff to adapt both teaching and assessment online.

Recommendation (Essential): The School of Pharmacy needs to develop a robust peer review mechanism for ongoing formal assessment of teaching quality by all staff who teach students on the B.Pharm and MSc programmes.

In this area of evaluation, the Committee determined that the Ben-Gurion University is below the acceptable threshold level of performance.

3.4 Study program

The School of Pharmacy has two main programs; B.Pharm and MSc programs which are oriented towards training pharmacists.

The Bachelor of Science in Pharmacy (B.Pharm) is a 3.5-year program followed by a 6-month internship in community, hospital pharmacy, or industry. It was noted to the committee, that historically 98-99% of the graduates pass the licensing exam resulting in removal of the licensure examination requirement for Israeli pharmacy graduates. The committee was not given information on the outcomes post-graduation such as the percentage of graduates gaining employment or those who continue their post-baccalaureate education.

The B.Pharm degree is 198 credit hours, and the curriculum appears to be balanced between basic sciences and pharmacy-specific topics. Student feedback was that the workload was heavier in year three compared to years one and two. Students noted that years one and two had many introductory courses which were not difficult, but year three courses were challenging in workload and students could not give all thirteen courses full attention. The students highlighted a disconnection between the B.Pharm coursework and practice of pharmacy in some of the foundational courses such as physics or herbal medications. Additionally, students felt the organic chemistry courses could be streamlined to one course.

Recommendation (Essential): Conduct a curriculum summit[3] including senior academic faculty, clinical instructors, representatives from internships to streamline existing curriculum and introduce greater clinically oriented content. Consider integrated science curriculum models for redesigning the delivery of foundational science courses. Consider conducting a peer review of the foundational science courses and expand clinically oriented content such as pharmacotherapy courses.

A deficiency identified by the committee was the lack of interprofessional education despite well-established health professional schools on campus. The School of Pharmacy faculty is responsible for teaching medicine, nursing, and physiotherapy students in addition to the pharmacy students.

Recommendation (Important): Consider using problem-based learning or team-based learning methods to intermix students from the various health professions in small groups. Introduce patient cases that involve aspects pertinent to various disciplines to enhance group discussions and promote an understanding of interprofessional team member roles and scope.

The School of Pharmacy has an Internship Committee which oversees the internship program. The Chair of the Internship Committee provides education to students on the internship selection and requirements, provides a template syllabus to initiate new internship sites and reviews the student notebook for completion of the internship requirement. Students are required to find their own internship, which is a paid experience under supervision of the registered pharmacist. The students are required to maintain a notebook and documentation of clinical scenarios or services provided. The notebooks are reviewed by the School of Pharmacy staff to ensure the students are achieving expectations. However, there does not appear to be any audit of sites or quality control process. Additionally, the students note that the learning experience varies by site and they are not given enough preparation on the expectations for the types of clinical

[3] A dedicated curriculum review event which includes faculty and stakeholder representation

responsibilities they should be engaged in during the rotation. The Chair of the Internship Committee is not a pharmacist. The Chair must have knowledge of pharmacy regulations and requirements to further develop the internship program.

Recommendation (Essential): Appoint a clinical faculty member as the Director of the internship committee. Develop a syllabus for the internship experience outlining the learning objectives and expected activities for the internship site. Develop a strategic plan to expand internship sites and a process for quality review of the internship sites. Establish routine communication and support between the School of Pharmacy and internship sites using newsletters and professional development seminars for supervising pharmacists.

Commendation: Implementation of experiential learning in the structure of 7 weeks of clinical rounds in affiliated health systems is a highly valued learning experience that distinguishes the Ben Gurion University School of Pharmacy. The focus of clinical training includes intensive care, internal medicine, compounding, pediatrics, intravenous infusion preparation, and infectious disease. This is in addition to the community-based internship. These clinical rotations are highly regarded by students and considered by students to be the most valuable learning experience in the curriculum.

International schools of pharmacy have developed introductory pharmacy practice experiences in years 1 or 2 to introduce the students to the profession of pharmacy and build their professional identity as a pharmacist. The current curriculum is lacking introductory practice experiences. These experiences are critical since BGU students are not exposed to the practice of pharmacy until the fourth year of the curriculum.

Recommendation (Essential): Develop and establish introductory pharmacy practice experiences in the first- and second-years exposing students to the profession of pharmacy. Expand fourth year clinical rotations to expose the students to the different career pathways of acute care, ambulatory care clinics and pharmaceutical industry. Consider developing rotations in areas of clinical pharmacy with strong evidence for improving patient outcomes such as diabetes care, hypertension management, anticoagulation, etc.

The MSc in Community Clinical Pharmacy and Regulatory Management is a two-year, 40 credit program which aims to train practicing pharmacists to develop qualifications in clinical pharmacy for the community setting and regulatory management for all settings. This program is part-time, two days per week, while the practicing pharmacist continues to work with their employer. Students may

enter one of two tracks; one with a required independent research project mentored by senior academic faculty, and one without the research requirement.

The curriculum includes pharmacotherapy courses, a medication adherence course, regulatory courses, and "clinical fields" where the student practice theory under supervision. The regulatory courses include Introduction to the Regulation of Medicine, Pharmacovigilance and GCP and CRA. The Facilities of the Ministry of Social Affairs clinical field engages students in evaluating drug related problems encountered by older adults and patients with disabilities. The Pharmaceutical Counselling clinical field is a virtual field, engaging students in providing drug information to patients. The last clinical field is with Maccabi Health Services in which students meet with patients for 8-12 meetings with the aim of improving medication adherence. The faculty noted plans to add a new course with a new clinical field entitled "Medication Reconciliation in Hospital and Community transitions."

The MSc program has defined Intended Learning Outcomes; however, these are not oriented to clinical competencies. Much international work has been done in the development of pharmacist competencies or entrustable professional activities. We refer the faculty to the American Association of Colleges of Pharmacy Core Entrustable Professional Activities for New Pharmacy Graduates, the Center for the Advancement of Pharmacy Education Educational Outcomes[4], and International Pharmaceutical Federation Global Advanced Development Framework which outlines competencies for pharmacist practitioners[5]. A clinical pharmacist should be trained to achieve core competencies which will enable him/her to be an independent practitioner and contribute to patient care in a variety of settings, including hospitals and ambulatory care. The committee is concerned that the MSc program is too limited and does not provide enough experiential learning opportunities to meet these learning objectives. Reducing the training in the MSc program only to the field of "clinical pharmacy in ambulatory care", assuming that the patients will be less complex, does not account for the fact that hospitalized patients will be eventually discharged to ambulatory care, and that therefore a clinical pharmacist should be competent to consult complex patients irrespective of where they encounter them. The committee is concerned that a two-year part-time MSc program cannot achieve learning outcomes that would be expected from a competent clinical pharmacist. On the other hand, the MSc program appears to give an excellent opportunity for pharmacists with years of working experience to continue their professional development while remain

[4] Haines ST, Pittenger AL, Stolte SK, et al. Core Entrustable Professional Activities for New Pharmacy Graduates. American Journal of Pharmaceutical Education 2017; 81 (1) Article S2

[5] FIP. FIP Global Advanced Development Framework, version 1 2020 available at https://www.fip.org/file/4795

working in their job, and in this respect appears to offer a unique opportunity as continuing professional development program.

Recommendation (Essential): Conduct a curriculum summit including senior academic faculty, adjunct faculty, and clinical instructors to develop a set of competencies or core entrustable professional activities for the MSc graduate. To achieve a more standardized definition of a clinical pharmacist in Israel, stakeholders from the Ministry of Health and professional Pharmacist Organizations need be included in this process. The curriculum and scope of the MSc program can then be mapped to this set of competencies, and changes to the curriculum and program scope can be made to align them with the set of core competencies. This process will aid in standardization of the definition of a clinical pharmacist in Israel.

In this area of evaluation, the Committee determined that Ben-Gurion University is below the acceptable threshold level of performance.

3.5 Teaching and Learning

It is noted that all new faculty members are provided professional development in teaching skills. Teaching evaluations are overseen by the Unit of Teaching Technologies as well as the Head of the Teaching Committee. Faculty with poor teaching evaluations are invited for discussions with the Head of the School and the teaching committee. The university promotes the use of various teaching methods such as simulation, flipped classroom, massive open online courses, self-recording of lectures by lecturers. Faculty reported traditional didactic lectures, problem-based learning, clinical seminars, and workshops employed. The self-evaluation indicates that the most common assessment method in didactic courses is multiple choice written exams.

Recommendation (Important): Encourage the faculty to utilize a wider range of teaching and evaluation methodologies that will enhance student learning. This can be achieved through a concerted effort with other faculty from the schools of medicine, nursing, and dentistry to develop cased based interprofessional education, implement simulation training, student peer feedback and reflection. There may be an opportunity to utilize the Health Sciences simulation center to a greater extent and learn new teaching methodologies from other health professional faculty of medicine, nursing, dentistry.

In this area of evaluation, the Committee determined that Ben-Gurion University meets the acceptable threshold level of performance.

3.6 Faculty

The School of Pharmacy is not an independent school within the Faculty of Health Sciences but belongs to the newly-named School of Biomedical Research (formerly "Department of Clinical Biochemistry and Pharmacology"), from which 11 faculty members are recruited to teach science courses. Additionally, there are 2 clinically-oriented tenured faculty members. Those 13 faculty members are tenured or on tenure-track and represent the "first tier" of the teaching faculty according to the Self-Evaluation Report; altogether, there are 4 pharmacists among those 13 senior academic faculty members. Faculty members from various other faculties are recruited to teach specific courses, e.g., cell biology, microbiology, immunology, and genetics, and represent the second tier of the teaching faculty. Additionally, a wide range of adjunct faculty members, mostly physicians and pharmacists from various hospitals or individuals associated with regulation/Ministry of Health or pharmaceutical industry, act as clinical instructors, teaching clinical topics and supervise the students during their clinical rotations in the respective hospitals (3rd and 4th tier of the teaching faculty). Thus, the school relies to a large extent on teaching staff outside the core faculty of the school, and the criteria for appointment, evaluation, academic advancement, and compensation for these teachers do not appear to be clearly regulated.

Faculty members in the School of Biomedical Research are recruited and promoted based on their research achievements (publications, grants, graduate students, conference presentations) and their teaching assessment (based on student assessments). It is not clear what the recruitment and promotion criteria are for clinical faculty.

Recommendation (Essential): The standing of the School of Pharmacy as an independent institution dedicated to the training of pharmacists would be strengthened if it were an independent school within the Faculty of Health Sciences, similar to the School of Medicine, rather than a subdivision of the Institute of Biomedical Research. This would grant the school greater autonomy for filling faculty positions.

The close collaboration with the School of Biomedical Research and the recruitment of teachers from other faculties can be useful for teaching courses with a science orientation. However, the clinical teaching would be greatly strengthened if the School appointed many more clinical full-time tenure-tracked teachers to its core faculty.

Recommendation (Essential): Increase the tenure-tracked core faculty of the School of Pharmacy, in particular in the clinical fields. Enlarge the proportion of pharmacists among the faculty members. Develop and implement criteria for

recruitment and promotion of clinically oriented faculty, since they are likely different from those of more basic research scientists. Similarly, regulate the standing and association of the many adjunct faculty members with the School of Pharmacy.

While female students constitute about 85% of the student body, the percentage of female core faculty members is considerably lower (about a third). Similarly, as a result of a strong outreach program into minorities, students from various non-Jewish minorities constitute about 50% of the student body, but only 1 member of the core faculty is non-Jewish.

Recommendation (Desirable): Continue encouraging recruitment of faculty members with diverse backgrounds in gender, ethnicity, and religion.

In our virtual meetings with senior and junior faculty members and clinical adjunct faculty, the staff appeared highly motivated and involved in the academic program. The core faculty of the school is rather small, and the faculty as a whole appears to work cohesively as a group, with a family-like open atmosphere and great accessibility for students. As the faculty is small, particularly in the clinical field, and administrative assistance is limited, workload for each faculty member appears to be high. The committee observed that some faculty members were entrusted with so many responsibilities that they appeared indispensable, potentially creating problems in cases of unexpected absences. This problem is certainly aggravated by the increasing student numbers admitted during the last 1-2 years.

Recommendation (Essential): Increasing the administrative staff to relieve the workload of the academic staff members and free them for more essential tasks.

In this area of evaluation, the Committee determined that Ben-Gurion University is below the acceptable threshold level of performance.

3.7 Research

Faculty members from the Biomedical Research Institute who are also associated with the School of Pharmacy are active researchers in a variety of fields in pharmacology and pharmaceutical science, including advanced drug delivery (using specific polymers or nanomaterials), pharmacometrics, PK and PD of metabolites, advanced pharmaceutical preparations for improved drug absorption, pharmacology of natural ephedrine alkaloids, modulation of CNS inflammation by medications in various diseases, and more. They have been awarded competitive grants from both national and international foundations. There is little clinically oriented research performed by the core faculty, reflecting the low numbers of clinical core faculty.

The School of Biomedical Research offers graduate studies (MSc and PhD) in basic and applied pharmacology and pharmaceutical sciences, during which the students perform research as part of their degree requirements. The MSc in Community Pharmacy and Regulation is a part-time program with the option for a thesis track. About half of the graduates opt for the thesis track and perform in this framework small clinical research projects, often supervised by tutors in the clinical setting. We also note that Faculty structure does not allow PhD students to be part of the School of Pharmacy. Therefore, the School of Pharmacy's mission does not include research at doctoral level.

Recommendation (Essential):

Strengthen clinical research by enlarging and strengthening the clinical faculty. Encourage clinical research even during the undergraduate studies, and incorporate more classes to teach the tools of clinical research both in the B.Pharm and MSc program.

In this area of evaluation, the Committee did not grade the Ben-Gurion University as research is not undertaken by staff in their role as member of the School of Pharmacy but as member of the Faculty of Health Sciences.

3.8 Students

The committee met with current students and alumni from both the B.Pharm programme (9 current and 7 alumni) and the MSc in Community Clinical Pharmacy and Regulatory Management (9 current and 6 alumni). The MSc students represented those on the thesis and non-thesis track.

The current B.Pharm students who met with the committee described the degree as challenging with a lot of courses included in years 1 and 2. They also identified some courses they considered poorly linked to the role of the pharmacists e.g. physics/mechanics and herbal medicines. There were mixed views of the relevance of mathematics/general chemistry course for future pharmacists. The students recommended condensing organic chemistry A and B into one course. They also explained that 13 courses in year 3 were challenging and resulted in them having to prioritize their focus on some but not all 13 courses.

Recommendation (Essential): The School of Pharmacy should review the courses within each year of the B.Pharm to identify and remove those poorly aligned to knowledge and skills required by pharmacists.

Current B.Pharm students discussed how much they enjoyed the clinical rounds undertaken in year 3 and explained they gained more on these than solely academic learning. Some students had specifically chosen BGU because of these

clinical rounds. The students explained that there was a committee and faculty member in charge of the internship. They recommended some changes to improve the internship, including a syllabus of activities/tasks/learning objectives to support consistency of learning. Similarly, they recommended more guidance for recording their internship in the 'notebook' (what to record and what activities to participate in during the internship).

Recommendation (Essential): The School of Pharmacy, with input from the B.Pharm students, should review the guidance and documentation provided to students as they embark on their internship, so that activities and recording is clear and learning consistent across the cohort.

Discussions with the alumni B.Pharm students identified a concern that they only received a B.Pharm degree although they completed 198 credits. It was suggested that the School of Pharmacy could consider an entry level MSc or PharmD.

Recommendation (Important): The School of Pharmacy should review the credit value of the B.Pharm and also consider options for other entry level degrees, e.g. MSc or PharmD.

The alumni identified the B.Pharm as a good foundation for a career in community pharmacy. However, they varied in their opinion about the benefit of undertaking the B.Pharm for a career in industry. Some suggested chemistry might be a better foundation, while others cited the regulatory aspects of the B.Pharm program as useful in an industrial career.

Current students on the MSc programme worked in a variety of settings and described that, in addition the 2 days of week of formal teaching at the School of Pharmacy, there was a significant amount of independent study in their own time, which was in some cases linked to their current role. The part time nature of the MSc was identified as an enabler allowing them to engage in a postgraduate study program, which included an opportunity for research as part of their MSc thesis.

The six alumni from the MSc programme described how they had used this part-time postgraduate degree to upskill and update in the areas of clinical pharmacy and/or regulatory affairs. The combination of both aspects was the reason why some enrolled on this MSc. The alumni had a range of jobs which included regulatory affairs, quality assurance, as well as clinical pharmacy services. The MSc program admits pharmacists who have been working for at least 2 years after their graduation, so the MSc program was for many an opportunity to update knowledge and skills in the area of clinical pharmacy and regulation. The opportunity to do so while still employed was identified as a major benefit. The barrier of undertaking the PharmD (at HUJI) which required a pharmacist to leave employment while on this programme was identified. Reasons for enrolment in

this programme were linked to professional development by these alumni rather than using the MSc as a way of changing jobs. However, they reported some alumni had changed roles after having completed the MSc. The alumni suggested that the course was relevant and they received support from faculty. However, lack of administrative support was identified. Students reported that their feedback on the course had been used by the MSc course team to develop the programme.

Recommendation (Essential): The School of Pharmacy needs to review the administrative support for the MSc Community Clinical Pharmacy and Regulatory Management.

In this area of evaluation, the Committee determined that Ben-Gurion University is below the acceptable threshold level of performance.

3.9 Infrastructure

The committee's visit was virtual, we could therefore only get a limited perspective of the school's infrastructure and facilities. The School of Pharmacy is located across the street of the main campus of the Soroka Medical Center and the Ben Gurion University Faculty of Health Sciences, facilitating the collaboration with the hospital's clinical units and physicians (e.g., for the clinical rotations of the BSc program). Some courses during the undergraduate program are also taught in facilities on the main campus. The school has access to 3 fully-equipped large lecture halls, mid-sized seminar rooms, and smaller classrooms. Fully equipped teaching laboratories for the undergraduate courses are located in the Pathology building of the Soroka Medical Center. The school will also have access to a newly developed Simulation Center which will allow integrating simulations into the curriculum.

Recommendations (Important): The new simulation center provides an opportunity for the school of pharmacy to further explore the use of simulation in both the B.Pharm and MSc programmes. It also would allow simulation activities to plan for interprofessional learning with B.Pharm and other healthcare professional students at BGU.

In this area of evaluation, the Committee determined that the Hebrew University clearly meets the expected threshold level of performance.

Section 4: Recommendations

Recommendation (Essential): Establish a new reporting structure within Health Sciences whereby the School of Pharmacy (and other health professional schools) are led by their respective Dean who reports to a senior leader, such as the Dean of Faculty of Health Sciences, responsible for the oversight of all health professional schools. Establish administrative offices within the School of Pharmacy responsible for the oversight of admissions, student affairs/academic oversight, education (preclinical and experiential) and research. This would allow the School of Pharmacy to have greater autonomy and potential for independent growth and development.

Recommendation (Essential): Conduct a needs assessment on the number of clinical pharmacy faculty needed to oversee the B.Pharm and MSc courses, clinical rounds, and internship. Recruit sufficient clinical faculty into academic appointments of a clinical academic track to balance the representation of pharmaceutical sciences and clinical pharmacy. These recommendations will provide for greater autonomy for filling faculty positions, to ensure an appropriate balance of clinical, teaching, and research expertise is maintained.

Recommendation (Essential): Conduct a needs assessment for the number of administrative staff to support the B.Pharm and MSc courses. Appoint sufficient staff to support the leadership, faculty and students in the School's academic mission.

Recommendation (Essential): The committee considers that the School of Pharmacy would benefit from the development of a formal strategic plan based on input from all stakeholders including faculty, clinical instructors, current students, alumni, professional societies, and the Ministry of Health. This strategic plan should be endorsed by the Dean of the Faculty of Health Sciences with appropriate funding to achieve the proposed plan.

Recommendation (Essential): For the next CHE review, an organized and self-reflective self-evaluation report and appendices will be required. This report and appendices should be reviewed and proofread for both presentation and understanding. It should be written taking into consideration that a panel unfamiliar with BGU will be undertaking this evaluation. The report must demonstrate self-reflection and analysis were used to identify what is needed to improve the programmes.

Recommendation (Essential): The School of Pharmacy, the School of Biomedical Research and the Faculty of Health Sciences need to review the sustainability of annual admission of more student to the B.Pharm programme than the number

funded by the CHE. This is because this impacts on academic and administrate resources for teaching, assessment, and student support at the School of Pharmacy and wider facilities (e.g., library) at BGU and also the year 3 clinical rotations and the internship support. The mechanism to obtain more funded B.Pharm student should also be explored with the Ministry of Health and the CHE given the reported shortage of pharmacists is Israel.

Recommendation (Essential): A documented quality assurance procedure must be written which describes how the internship committee assesses the stability and quality of placements sites for the B.Pharm year 3 clinical rotations and the 6-month internships. Quality assurance should be extended so that it takes place before, during and after these students are engaged in the internship. This documentation and process should include both the site facilities and learning outcomes for this experiential learning and also the suitability of the pharmacist or other health care professional (as appropriate) to supervise the students' learning in the placement/internship. This should also include assessment of their teaching/mentoring and as well as professional practice experience. We recognize that this will require additional administration and recommend that additional dedicated administrative support is essential for this QA process.

Recommendation (Essential): The School of Pharmacy should undertake a review of the support required to disseminate internship information to students and also to support students in applying and gaining an internship. This review should consider the requirements for both academic and administrative staff.

Recommendation (Essential): Building on the School of Pharmacy faculty and adjunct staff and stakeholder review of course content for the B.Pharm, the School of Pharmacy needs to develop a robust mechanism to support a holistic review to ensure not only that new material relevant to the learning outcome of the programme are included/updated but that redundant or outdated material is also removed.

Recommendation (Essential): Learning outcomes, including essential core activities, should be developed for the B.Pharm. internship and the clinical rounds. This will support both students and work-based supervisors to ensure the learning outcomes are achieved and essential core activities are completed.

Recommendation (Essential): The School of Pharmacy needs to review its assessment of clinical / professional skills to ensure standardized and robust methods are used to assess students' performance against learning objectives. This should include work-based assessment skills in the B.Pharm clinical rotations and internship.

Recommendation (Essential): The School of Pharmacy needs to develop a robust peer review mechanism for ongoing formal assessment of teaching quality by all staff who teach students on the B.Pharm and MSc programmes.

Recommendation (Essential): Conduct a curriculum summit including senior academic faculty, clinical instructors, representatives from internships to streamline existing curriculum and introduce greater clinically oriented content. Consider integrated science curriculum models for redesigning the delivery of foundational science courses. Consider conducting a peer review of the foundational science courses and expand clinically oriented content such as pharmacotherapy courses.

Recommendation (Essential): Appoint a clinical faculty member as the Director of the internship committee. Develop a syllabus for the internship experience outlining the learning objectives and expected activities for the internship site. Develop a strategic plan to expand internship sites and a process for quality review of the internship sites. Establish routine communication and support between the School of Pharmacy and internship sites using newsletters and professional development seminars for supervising pharmacists.

Recommendation (Essential): Develop and establish introductory pharmacy practice experiences in the first- and second-years exposing students to the profession of pharmacy. Expand fourth year clinical rotations to expose the students to the different career pathways of acute care, ambulatory care clinics and pharmaceutical industry. Consider developing rotations in areas of clinical pharmacy with strong evidence for improving patient outcomes such as diabetes care, hypertension management, anticoagulation, etc.

Recommendation (Essential): Conduct a curriculum summit including senior academic faculty, adjunct faculty, and clinical instructors to develop a set of competencies or core entrustable professional activities for the MSc graduate. To achieve a more standardized definition of a clinical pharmacist in Israel, stakeholders from the Ministry of Health and professional Pharmacist Organizations need be included in this process. The curriculum and scope of the MSc program can then be mapped to this set of competencies, and changes to the curriculum and program scope can be made to align them with the set of core competencies. This process will aid in standardization of the definition of a clinical pharmacist in Israel.

Recommendation (Essential): The standing of the School of Pharmacy as an independent institution dedicated to the training of pharmacists would be strengthened if it were an independent school within the Faculty of Health Sciences, similar to the School of Medicine, rather than a subdivision of the Institute

of Biomedical Research. This would grant the school greater autonomy for filling faculty positions.

Recommendation (Essential): Increase the tenure-tracked core faculty of the School of Pharmacy, in particular in the clinical fields. Enlarge the proportion of pharmacists among the faculty members. Develop and implement criteria for recruitment and promotion of clinically oriented faculty, since they are likely different from those of more basic research scientists. Similarly, regulate the standing and association of the many adjunct faculty members with the School of Pharmacy.

Recommendation (Essential): Increasing the administrative staff to relieve the workload of the academic staff members and free them for more essential tasks.

Recommendation (Essential): The School of Pharmacy should review the courses within each year of the B.Pharm to identify and remove those poorly aligned to knowledge and skills required by pharmacists.

Recommendation (Essential): The School of Pharmacy, with input from the B.Pharm students, should review the guidance and documentation provided to students as they embark on their internship, so that activities and recording is clear and learning consistent across the cohort.

Recommendation (Essential): The School of Pharmacy needs to review the administrative support for the MSc Community Clinical Pharmacy and Regulatory Management.

Recommendation (Essential): The School of Pharmacy needs to review the administrative support for the MSc Community Clinical Pharmacy and Regulatory Management.

Recommendation (Important): Consider using problem-based learning or team-based learning methods to intermix students from the various health professions in small groups. Introduce patient cases that involve aspects pertinent to various disciplines to enhance group discussions and promote an understanding of interprofessional team member roles and scope.

Recommendation (Important): Encourage the faculty to utilize a wider range of teaching and evaluation methodologies that will enhance student learning. This can be achieved through a concerted effort with other faculty from the schools of medicine, nursing, and dentistry to develop cased based interprofessional education, implement simulation training, student peer feedback and reflection. There may be an opportunity to utilize the Health Sciences simulation center to a greater extent and learn new teaching methodologies from other health professional faculty of medicine, nursing, dentistry.

Recommendation (Important): The School of Pharmacy should review the credit value of the B.Pharm and also consider options for other entry level degrees, e.g. MSc or PharmD.

Recommendation (Desirable): Continue encouraging recruitment of faculty members with diverse backgrounds in gender, ethnicity, and religion.

Signed By:

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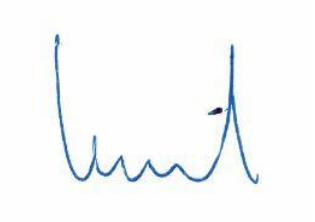
Prof. Cate Whittlesea Prof. Linda Awdishu



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Prof. Daniel Kurnik

Appendix 1 – Letter of appointment

October 2021

Prof. Cate Whittlesea
School of Pharmacy
University College London
United Kingdom

Dear Professor,

The Israeli Council for Higher Education (CHE) strives to ensure the continuing excellence and quality of Israeli higher education through a systematic evaluation process. By engaging upon this mission, the CHE seeks: to enhance and ensure the quality of academic studies, to provide the public with information regarding the quality of study programs in institutions of higher education throughout Israel, and to ensure the continued integration of the Israeli system of higher education in the international academic arena.

As part of this important endeavor we reach out to world renowned academicians to help us meet the challenges that confront the Israeli higher education by accepting our invitation to participate in our international evaluation committees. This process establishes a structure for an ongoing consultative process around the globe on common academic dilemmas and prospects.

I therefore deeply appreciate your willingness to join us in this crucial enterprise.

It is with great pleasure that I hereby appoint you to serve as chair of the Council for Higher Education's Committee for the Evaluation of **Pharmacy** departments. In addition to yourself, the composition of the Committee will be as follows: Prof. Daniel Kurnik and Dr. Linda Awdishu.

Ms. Pe'er Baris-Barnea will be the coordinator of the Committee.

I wish you much success in your role as a member of this most important committee.

Sincerely,

Prof. Ido Perlman
Vice Chair,
The Council for Higher Education (CHE)

cc: Dr. Varda Ben-Shaul, Deputy Director-General for QA, CHE
Ms. Maria Levinson-Or, Senior Advisor for Evaluation and Quality Enhancement
Ms. Pe'er Baris-Barnea, Committee Coordinator

Appendix 2 – visit schedule

Pharmacy Evaluation Committee - Schedule of online visit

Ben-Gurion University of the Negev

Sunday, December 5th, 2021

*The visit will be divided into 2 half days, starting at 04:30pm (Israel time)

*Meetings are conducted in a Q&A format

Time	Subject	Participants
16:30-	Virtual tour of facilities and infrastructure followed by a short Q&A*	10-min movie Director - School of Pharmacy, **Prof. David Stepensky**
16:45-	Meeting with the Dean of Faculty of Health Sciences	Dean, Faculty of Health Sciences, **Prof. Angel Porgador** Head, Institute of Basic Research, **Prof. Michal Hershfinkel** Director - School of Pharmacy, **Prof. David Stepensky**
17:15-	Break	
17:30-	Presentation by the Head of Pharmacy School	Director - School of Pharmacy, **Prof. David Stepensky** Deputy Director - School of Pharmacy, **Prof. Eyal Schwartzberg** Ex-Director - School of Pharmacy, **Prof. Shimon Ben-Shabat**
18:00-	Meeting with the Head of Pharmacy School	Director - School of Pharmacy, **Prof. David Stepensky** Deputy Director - School of Pharmacy, **Prof. Eyal Schwartzberg** Ex-Director - School of Pharmacy, **Prof. Shimon Ben-Shabat**
18:45-	Meeting with a Representative of the Teaching Committee (Q&A)	Associate Professor, **Prof. Ayelet David** Associate Professor, **Prof. Sigal Fleisher-Berkovich**

Monday, December 6th, 2021

16:30-	**Meeting with senior academic staff * (including academic heads of programs)**	Vice-Dean, Associate Professor, **Prof. Eli Lewis** Department Chair, Clinical Biochemistry & Pharmacology, **Prof. Esti Yeger-Lotem** Ex-Director - School of Pharmacy, **Prof. Shimon Ben-Shabat** Deputy Director - School of Pharmacy, **Prof. Eyal Schwartzberg** Associate Professor, **Prof. Ayelet David** Associate Professor, **Prof. Elie Beit-Yannai** Associate Professor, **Prof. Riad Agbaria** Associate Professor, **Prof. Sigal Fleisher-Berkovich** Associate Professor, **Prof. Arik Dahan**
17:45-	**break**	
18:00-	**Meeting with Adjunct academic staff *** Parallel sessions	**Denise Ainbinder,** Ph.D., Director of the Medical Preparations Registration Department, Israeli Ministry of Health **Segev Shani**, Ph.D., MHA, MBA, LLB, Chief Compliance & Regulatory Officer "Neopharm Group" **Nili Hayon Dickman,** Lawyer, Commissioner of Public Acceptance for State Health Insurance Law, Israeli Ministry of Health **Dorit Dil Nahlieli**, Pharm.D., MDI Health; Former Head of Pharmacovigilance Department, Israeli Ministry of Health **Miriam Cohen Kandli**, Phd, Head of GCP Inspection Unit, Israeli Ministry of Health **Uri Goren,** M.A, Director, Head of Digital Engagement and Capabilities, Teva Pharmaceutical Industries
18:00-	**Meeting with Clinical instructors*** Parallel sessions	**Eyal Schwartzberg**, Deputy Director - School of Pharmacy **Orly Shimoni**, PharmD, Pharmacy Services, Soroka University Medical Center

		Rimona Rotem, MHA, Ex-Head of Pharmacy Services, Soroka University Medical Center **Tamar Shechter**, PhD, Head of Pharmacy Services, Soroka University Medical Center **Elias Tanus**, MSc, Pharmacy Services, Hillel Yaffe Medical Center **Mahmood Mahajna**, PharmD, Clinical Pharmacist, Pharmacy Services, Hillel Yaffe Medical Center **Reut Itzhak**, PharmD, Pharmacy Services, Shiba Medical Center
18:30-	**break**	
19:00-	**Meeting with BA students**** Parallel sessions	**Anastasia Golubovsky** **Daniel Naftaliyev** **Hamza Zoabi** **Haya Haj Yahia** **Eman Tlalka** **Sarit Rosler** **Gabriel Greenberg Levitan** **Tal Rahamim** **Shani Eshel**
19:00-	**Meeting with MSc students**** Parallel sessions	**Liat Nissim** **Zafrir Ekshtein** **Fares Abulil** **Amir Zaher** **Kamelia Hamza** **Matan Milles** **Michal Nava Arnon** **Jenny Simma** **Hofit Daniel Nodelman**
19:30-	**Meeting with Alumni **** **(BPharm)** Parallel sessions	**Lena Kojukarov** **Yifat Zelinger** **Maria Taneev** **Ronen Shuster** **Mark Isakov** **Hen Popilski** **Ilya Idelman**

		Olya Marx Eti Malka
19:30-	Meeting with Alumni ** (MSc w/o thesis) (MSc with thesis) Parallel sessions	Ilanit Riterg Khalil Zahalka Dela Vinov Dudaie Tamir Obaid Tsyla Mishlis-Cohen Miri Trainin Udi Leher Alon Sandovski Alaa Artoul