Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

Quality Review of the School of Biochemistry & Immunology

21-25 March 2022

Review Team:

1. Professor Margaret Harnett, University of Glasgow, UK
2. Professor Elizabeth Smythe, University of Sheffield, UK
3. Professor Simon Sprecher, University of Fribourg, Switzerland
4. Professor Stefan Niemann, Research Center Borstel (FZB), Germany.

Internal Facilitator:

Professor John Parnell, Fellow Emeritus, TCD

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School of Biochemistry and Immunology

Introduction: The panel wish to extend their thanks to all those who participated in the review of the School which took place between March 21-25, 2022. Meetings with Officers of the College, academic staff, postdoctoral researchers, postgraduate and undergraduate students, and professional staff were very productive, with all groups displaying high levels of engagement with the review process. We appreciated the extensive information that was provided to us and the open conversations with those we met, which allowed us to gain a good understanding of the work of the School. During the meetings, it was also possible to gain insights into the performance and problems in different areas of activity. The panel appreciated the excellent organisation of the review process by the Quality Office and the assistance of the internal Facilitator.

The panel addressed the following Terms of reference for the School:

(i) The effectiveness of the School's governance, management and administration structures, and resources in delivering and supporting the achievement of its strategy and mission.

(ii) The Strategy of the School in terms of its fitness-for-purpose to respond to the College strategies, with specific reference to:

- **a. Undergraduate teaching and postgraduate taught and research programmes;**
- **b. postdoctoral development;**
- **c. the School's research strategy, participation in College Research Themes, and engagement with Trinity Research Institutes;**
- **d. emergent risks and opportunities in the relevant discipline, nationally and internationally.**

(iii) Opportunities between it and the School of Genetics and Immunology and with cognate units within the University, in education, research and the provision of infrastructure.

Preamble

The School has an outstanding record in research and teaching, as evidenced by high quality publications, substantial research funding, and significant international impact. The School is also highly regarded internationally in terms of the quality of its undergraduate degrees and postgraduate training which has been further boosted by the recent implementation of two very successful taught M.Sc. courses, one of which has a strong industrial component in order to generate a pipeline of graduates for the BioPharma sector.

The School has clearly benefitted from strong leadership since its inception and it is to be congratulated on the exemplary feeling of cohesion and collegiality which has allowed it to operate at a very high level in the face of considerable external challenges, including a difficult funding landscape, increased workload and the pandemic. The reviewers noted that this cohesion operates throughout all levels, with staff and students enthusiastic to contribute to the School and also to the wider scientific community in Trinity and beyond. This was evidenced by involvement in Trinity Research Institutes and also through provision of underpinning facilities within the STEM Faculty. Such collegiality has allowed the School to flourish despite a lack of administrative support causing excessive workloads. The panel were therefore pleased to note that the imminent appointments of a School Manager and an EO to administer postgraduate taught courses, should alleviate some of the significant administrative burden on academic staff.

In addressing the Terms of Reference, the panel recognised there are some major problems inherent to the relationship between the School and College that are impacting seriously on the School which need to be addressed:

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- Although the Schools are the main driver of activity in the College, the Heads of School have limited direct influence on decision-making and we feel this undermines the leadership role and reduces the incentive of Schools to innovate.
- Reform of the Baseline Budgeting Model (BBM) is essential as it is not currently fit for purpose. Specifically, the BBM does not provide an appropriate budget for Schools as critically, they have very little flexibility in terms of non-salary activities: ~90% of the budget is committed to salary costs, and these rise each year with normal incremental salary increases and promotions. Any flexibility is being further eroded as the cuts made to public sector salaries arising from the 2008-10 financial crash are being reversed, resulting in further increases to these costs, as does the accrual of Contracts of Indefinite Duration. Moreover, Schools are being disincentivized to innovate as additional activity does not result in sufficient reward; thus despite successful Schools such as Biochemistry and Immunology being required/encouraged to take more students with associated administrative burdens, there are no additional funds for contingency or increased innovation.
- A specific challenge for the School of Biochemistry and Immunology is the obligation to pay back the debt that arose from the overspend on the TBSI building. This has had the detrimental outcome that its considerable success in many areas has resulted in no tangible benefit for the School and inhibits further innovation. Crucially we are very concerned that this has a potentially damaging impact on strategic planning for maintenance of the current high profile of the School. We also noted that, as a result of this debt precluding staff recruitment across all categories, workloads within the School have increased significantly requiring senior academics, for example, to carry out basic administrative tasks, rather than focusing on their excellent research. We strongly recommend that this legacy debt be resolved.
- The School is primarily located within the TBSI and due to the success of both entities, is suffering severe space restraints that are hampering both the growth of existing groups and also the potential recruitment of new Principal Investigators. The reviewers were advised that there is additional space in the TBSI building that could be released via the Bursar to the School and the panel strongly recommend that this option be considered.
- We are concerned that there is a lack of transparency in the College in several key areas:

  -C*ollege income and budget distribution*: Schools receive 42.5% of additional income generated but it is unclear how the remainder is spent by the College and how that supports the School.

  -*Staff appointments*: The strategy underpinning release of posts is opaque and, during the pandemic, the final decisions on staff appointments were taken by a hiring subgroup that was quite removed from the School. We welcome the future plan to release posts in direct consultation with the HoS.

  -*Promotion*: Staff feel that promotion occurs very slowly. While the numbers of staff who can be promoted are inevitably constrained by the financial position of the College, staff felt that feedback received did not always reflect this.

  -*Undergraduate student numbers* across the College increase by a relatively small number but it is unclear how equitably these additional students are distributed to Schools, with concerns regarding disproportionate increases in workload and lowering of academic standards. Of particular concern is that currently students have the option to retake courses multiple times. Apart from academic concerns, this significantly adds to academic workload.
- The panel were surprised at the apparent absence of College-wide Governance with respect to:

  -formalised/centralised personal development plans for staff. HR informed us of planned courses for postdoc development. These would reduce workload burden on staff within the School who would otherwise need to provide this support, for example to successfully secure an Athena Swan award. These courses should not however incur a cost for the School. Importantly, their roll-out would contribute to greater transparency with respect to College funding streams.

  -lack of centralised online portals for assessment /feedback of UG/PG training, which again would substantially reduce the administrative burden on academic staff, optimising their focus on teaching and research.

- The lack of consistency in waiving the fee difference for non-EU students applying through international programmes will inevitably impact on drives for greater internationalisation, inclusion and diversity. Furthermore, the need to "top-up" the (differential) Ph D fees provided by various funding bodies to meet the high Trinity fees, is causing stress and hardship for students and staff.

Referring to the specific Terms of Reference:

The effectiveness of the School's governance, management and administration structures, and resources in delivering and supporting the achievement of its strategy and mission.

The School aims for, and achieves, excellence in teaching and research and the panel noted the exceptional collegiality which has allowed the School to operate at a very high level in the face of reduced science funding, increased student numbers and the pandemic. Communication within the School appeared to be very good at all levels although the mechanisms are largely informal via word-of-mouth.

Governance of teaching occurs via a curriculum committee and by agreement between course co-ordinators. There was increased workload during the pandemic with the pivot to online teaching. Additionally changes in course structures under the Trinity Education Project have resulted in students requiring remedial work in SF and JS years. Lacking a formal workload model, teaching distribution is broadly related to the research activity of the PI which can lead to some imbalances with some staff expressing a preference for increased rotation of roles to ensure that all PIs have sufficient opportunity to develop and maintain their research programmes. More rotation should be considered to foster the ability of PIs to build up their research profile and also obtain experience of other teaching and leadership roles within the School. Nevertheless, overall it was felt that teaching was distributed in a collegial way which was managed well by the School Leadership.

The panel noted evidence of very high and potentially increasing teaching workloads which has been exacerbated by insufficient administrative support. This has led, for example, to taught Masters programmes being administered at all levels by academic staff, involving basic "secretarial" procedures that are an inappropriate use of academic time and resources. The absence of a School Manager for the past 2 years has further impacted on the workload of academic staff who consequently have had to micro-manage support for the UG Moderatorship courses. The upcoming appointment of a School manager and Executive Officer should help alleviate these burdens and allow staff to focus more on their teaching and research.

Regarding College interactions, the School administrative staff have a good working relationship with staff in the Science Course Office and also with administrative staff in other academic Schools for which B & I provides service teaching. Executive Officers, who also work closely with M.Sc. course coordinators, expressed concern that communication across College is not always effective especially in the absence of a School Administrator. Additionally there were concerns relating to the increasing complexity of new central IT systems, but they reported that a new forum for all administrative staff is however proving beneficial.

The School research strategy, participation in College Research Themes, and engagement with Trinity Research Institutes;

The School has a well-established international reputation for the excellence of its research which is enhanced through interactions with Trinity Research Institutes including the St James Cancer Centre, Institute of Neuroscience, and the Centre for Research on Adaptive Nanostructures and Nanodevices. The existence of joint School academic appointments, e.g. with the School of Medicine, across the College fosters the interdisciplinary and translational potential of its basic research.

The panel noted there is an urgent need, recognised by the School, for a strategy to replace high impact academic posts due to forthcoming staff retirements over the next few years. Such planning has been hindered by the current legacy debt and this, coupled with high teaching and administrative loads, has had a detrimental effect on recruitment with consequent increased workloads, a situation that has been exacerbated by the pressures of dealing with COVID. While the strategy of the School

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is to seek to appoint the best people, the panel recommend that consideration be given to potential areas where synergies within the School and Research Institutes could be further exploited. The panel also recognised the difficulties in attracting the best talent to a city as expensive as Dublin without being able to offer attractive start-up packages, which is currently impossible given the limitations of the BBM and legacy debt. Thus, in the current climate, the School has focussed on building expertise and capacity 'from the ground up' which is seen as a more effective approach to recruitment than seeking to recruit from abroad.

The School has excellent research facilities and this infrastructure underpins research across the STEM Faculty. Much of this infrastructure has been secured through external funding and a particular challenge has been to maintain, service and replace older standard equipment. The value and contribution to the success of the School of the Chief Technical Officer and associated professional staff, such as dedicated personnel to run research facilities, e.g. Flow Cytometry, is well-recognised and supported by the School.

Undergraduate, postgraduate taught and research programmes:

Undergraduate education: The School offers 4 UG Moderatorship courses with ~84 students in the 4th year as well as providing teaching to UG Science students. Teaching laboratories are of an exceptionally high standard and notably during the pandemic, the School managed to continue 90% of labs for students due to the commitment of academic, technical and administrative staff all working together.

However, the following concerns represent threats to the continuing success of these courses:

- The School is rightly proud of the calibre of its Capstone projects. At present, funding of the Capstone projects is not adequately supported within the College funding model and requires subsidy by Principal Investigators. This is a huge burden for PIs as well as their postdocs and PhD students and directly impacts on research activity. Having to take more SS students for Capstone projects, as well as M.Sc. students is thus a threat to research excellence and needs to be considered in the context of discussions around the BBM described above. In other words, more resource or a different model (lower credit rating, different 'flavours' of projects) is required as the impact of increased numbers on Capstone projects is likely to be significant, not least on academic standards.
- Mechanisms for student feedback on modules appeared patchy and this could be standardised and staff administration burden alleviated by centralisation of processes throughout the College.
- A major concern is that the COVID-introduced option to retake courses/exams multiple times may be retained. Apart from academic concerns, this significantly adds to staff workload through setting additional course work and exams etc.

PG education

Historically the School was focused on undergraduate teaching, but in past 10 years, 2 taught M.Sc. programmes have been introduced, Immunology and Immunotherapeutics, the latter providing valuable industrial experience for graduates. Students were generally very satisfied and enthusiastic about these courses, in terms of content, structure and teaching although there were some issues identified with the organisation of placements in Immunotherapeutics as well as absence of placements in Big Pharma, which may at least in part have been the result of the Covid pandemic. The panel noted that the high workload and close assessment deadlines precluded students from undertaking paid work, although this was made clear to them at the outset.

PhD student numbers have risen to around 80 with students highly engaged, enthusiastic and integrated into research active and collaborative laboratories. Students have good opportunities for professional development, for example, their Biochemistry Society invites external speakers on a regular basis, arranging for students to host and talk with guest speakers. The annual PhD poster day was considered a very good opportunity to learn about other research within the School. Nevertheless,

- We identified considerable variations in PhD training in relation to transferable skills and organisation of thesis committee meetings across the School. We recommend more frequent thesis committee meetings (ideally every 6 months) with tasks related to the stage of PhD studies to aid the development of the students and their acquisition of both transferable and professional skills. This would benefit from centralisation of management of postgraduate training and UG and postgrad evaluation via an online portal, which should relieve some of the administrative burden on the academic staff while ensuring excellence in training.
- There was considerable concern about the working conditions for PhD students. A College wide issue is shortfall in PG student fees, which are higher in Trinity than in other Irish universities. The ability to support students in this is very dependent on the finances of individual PIs and is likely to be a source of considerable stress and potential discord in this cohort within the School.
- The College has an established system for ethics training for PhD students but there seemed to be little awareness of the issue of dual use, routes to commercialisation or intellectual property issues from the students' perspective. Additionally because students are paid by stipend rather than being salaried staff members, this could mean that ownership of work may not be well-defined.
- Another potential problem is the non-existence of a regular framework to get information from PIs if projects have a risk of Dual Use Research of Concern (DURC). As documentation of this by the School or the College has become mandatory e.g., for application for EU funding, the College should establish procedures for DURC screening and a committee dealing with DURC requests.

Postdoctoral development

- There is an active and engaged community of postdoctoral workers within the School. Although there is good interaction within this group on a professional level where research groups have links, there is relatively little interaction at a social level, currently because of the pandemic but also because of the physical structure of TBSI. Thus School research days and seminars have been reduced during COVID and have also largely moved online. Moreover, whilst ECRs working in immunology can avail of scientific interactions through two excellent fora, it would be beneficial to roll this out to other research areas for scientific and social reasons. This is especially important for new postdocs who may not have trained in Trinity.
- Discussions around career development differ, being dependent on individual PIs and we were surprised by the absence of any formal staff development reviews for staff. We understand that Human Resources is currently rolling out a university wide programme. We recommend that this process is distinct from promotion and performance but rather is based on self-reflection of what has been successful and what has not gone so well over the preceding year to allow postdocs to set achievable and meaningful goals for their development and progress of high-quality research. Appropriate training for reviewers and reviewees may be required to ensure the success of the scheme and we encourage staff to actively engage in this not only for the benefit of individuals and but also because there is a requirement for such procedures for EU funding and Athena Swan awards. To reduce workload burden on academic staff and ensure equitable compliance, this process should be administered centrally on a College-wide basis, at no cost to the School.

Emergent risks and opportunities in the relevant discipline, nationally and internationally

The School faces a number of challenges in the maintenance of its internationally-recognised scientific excellence. There is a general issue with science funding in Ireland for individual PIs as well as for essential infrastructure. Moreover, there is decreasing government funding across the University sector. For example, during the Covid pandemic new examination arrangements for secondary schools led to higher numbers of student being admitted to universities. Although additional funding was provided by the HEA, this is likely to be withdrawn whilst the government will probably seek to retain flexibility over increasing student intake without again providing additional funding. This coupled with other effects of the pandemic and very high living costs in Dublin present considerable challenges for the School.

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Opportunities for increased synergy and collaboration between the School of Biochemistry and Immunology and the School of Genetics and Microbiology and with cognate units within the University, in education, research and the provision of infrastructure.

The panel considered that both Schools were ideal as stand-alone entities with international reputations for excellence in their distinct disciplines. They are both of a size that is appropriate to allow staff and students to feel part of a shared endeavour. Nevertheless, there was clear potential and commitment from staff and students to identify further interdisciplinary synergies to produce excellent teaching and research across the four disciplines. The panel was particularly pleased to note that the Heads of both Schools were very open to increased synergies between the Schools and indeed presented clear ideas for how these synergies could be realised.

Specific suggestions included:

- Joint appointments: Appointment of a virologist would fill an existing gap between the Schools. The panel noted that there are already several joint appointments between the School of Biochemistry and Immunology and the School of Medicine so there is an effective working precedent for this.

- Joint awayday for PIs, in the first instance, to explore areas of novel cross-disciplinary collaboration.

- Joint PhD studentships to further facilitate cross-School research.

- Substantial underpinning research facilities exist which are of benefit to both Schools. For example Bioinformatics capability is providing excellent support and we recommend that further investment be considered to extend that capability. In that context establishing courses for training at all levels in Bioinformatics, as well as in other approaches such as imaging and flow cytometry, would be of enormous benefit to staff and students alike.

- A webpage providing a list of relevant facilities available to be assembled. This would not only benefit staff but increase visibility for recruitment by highlighting excellent underpinning infrastructure.

-Both Schools have Postdoc Societies which could be combined to increase critical mass and cross-fertilisation of ideas.

Recommendations

- We recommend that the Head of School has more direct input into decision-making processes beyond the current Heads of School forum. This could be through, for example, formalised meetings of the Heads of School with the Dean and the College Officers to discuss, approve and ratify School budgets, strategy and recruitment.
- The panel strongly recommend the clearing of the legacy debt and alleviation of space constraints to allow for strategic planning for replacement posts and synergies that are essential to maintain the international profile of the School.
- The School has invested considerable effort in building up infrastructure which underpins research across the Faculty. A major challenge is maintaining that basic infrastructure which is essential for world class research. Lack of appropriate resource allocation and the legacy debt threatens the sustainability of these core facilities. We therefore recommend that this be addressed in the reform of the BBM and the resolution of the legacy debt issue.
- Increasing the cohort of JS students and M.Sc. students is a threat to research excellence and needs to be considered in the context of discussions around the BBM described above. We suggest either a reconsideration of the credit weight of the Capstone projects or the provision of alternative 'dry' projects.
- We were surprised by the absence of any formal staff development reviews for staff and understand that Human Resources is currently rolling out a University-wide programme. We would encourage staff to actively engage in this not only for the benefit of individual staff but also because there is a requirement for such procedures for EU funding and securing an Athena Swan award.

- We identified variations in PhD training and thus the panel recommends centralisation of postgraduate training and UG and postgrad evaluation, which should relieve some of the burden on the academic staff while ensuring excellence in training.
- Overall workloads appeared to be very high and continually increasing and we are concerned about staff burnout. We strongly support staff having more freedom to focus on their excellent research outputs to exploit synergies. Greater transparency within the School through some form of workload model would be desirable.

Professor Margaret Harnett

Professor Stefan Niemann

Professor Liz Smythe

Professor Simon Sprecher

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School Response to the External Reviewer's Report

School of Biochemistry and Immunology

On behalf of the School community, I would like to thank the external reviewers for the considerable time and effort they have expended on their very comprehensive review of the School. I especially wish to acknowledge their productive engagement with the staff and students of the school during the course of multiple face-to-face meetings as well as the evident care and consideration they have exercised in the preparation of their report. The report presents a very thorough review of all aspects of the School's activities and structures and reflects the wide experience and differing perspectives of the reviewers. The reviewers followed a specific terms of reference for the review, which were to focus on (i) the governance, management and administration of the School in terms of delivery of its academic mission; (ii) School responses to College strategies with reference to teaching and research plus engagement with Trinity Research Institutes and (iii) to consider opportunities for increased synergy between the School and the School of Genetics and Microbiology.

The following is the School's high-level response to the report. Over the coming months, the School will work with the Dean of STEM and other College officers to develop an implementation plan that will respond to the specific recommendations in the report.

Overall

The contents of the report and the recommendations therein are very much in line with the consensus views and feelings of the School community on many of the key issues. It is especially pleasing that the reviewers acknowledge and compliment the internationally recognised record of achievements of the School in research and teaching. The panel also correctly highlight the exemplary cohesion and collegiality across all levels of the School as the key factor that has allowed the School to operate at such a high level despite facing considerable and increasingly difficult challenges in multiple areas. It is also welcome that the reviewers conclude that this situation is not sustainable and that several issues that impact on the School need to be addressed.

Staffing

The reviewers noted the evidence of very high and potentially increasing teaching - associated administrative workloads, in part due to changes in College policy regarding undergraduate and postgraduate education, which has been exacerbated by insufficient administrative support. They comment on the inappropriate use of academic time and resources in this regard. A school administrative manager was appointed in April but the need for an executive officer to administer our taught Masters programmes remains. There is also an immediate need for a replacement member of the academic staff to teach core biochemistry following the departure in 2020 of a full time member of staff who carried out these duties.

The panel concur with the School that there is a need to develop a strategy to replace high-impact academic posts due to staff retirements that will occur over the next few years. This strategy also needs to cover the retirement of key technical and administrative staff during

this period. For example, the key role of the School Chief Technical Officer and other associated professional staff in maintaining research facilities and infrastructure was specifically highlighted by the panel. The panel appreciated that the policy of the School is to seek to appoint the best people in all cases but the recommendation that consideration be given to potential areas where synergies within the School and Research Institutes and cognate Schools could be exploited is sensible and welcome. Indeed, this recommendation is consistent with the School's track-record of joint appointments, for example with the Schools of Medicine and Pharmacy. The School intends to develop, in conjunction with the Dean, a strategic plan for future staff recruitment. The intention is to commence this process with a school away day for staff to discuss ideas early in the new academic year. The School will also continue to maintain a policy of building expertise and capacity from the ground up through supporting applications from talented young researchers for Fellowships, e.g. SFI-Pathways and Wellcome Trust career development etc.

Finance

The panel agree that budgetary considerations and constraints clearly impact significantly on the capacity of the School to continue to perform at the highest level in research and teaching. The report identifies two financial issues that need be addressed. One of these, reform of the current base line budgeting model (BBM), is a College-wide consideration, while the other, the legacy debt associated with the capital loan to cover cost overruns associated with TBSI, is a School-specific issue. The School recognises that reform of BBM has occurred with the recent introduction the new Budget Planning & Allocation (BPA) model. This model will adjust the baseline to the 2022 financial year and adjust the percentage income returns to Schools for new students on existing courses and for income from new courses. It remains to be seen if the BPA model will improve the overall financial situation of the school, which is currently in deficit. A specific challenge for the School is the repayment of the capital loan, in principle by 2025. This is a critical issue because these repayments come entirely from School income from teaching and research, which has a detrimental impact on these activities as well as the morale of the School. Therefore, it is welcome that the panel strongly recommend the clearing of this legacy debt. The School is currently in discussions with the College Chief Financial Officer on how best to address this debt in an equitable manner.

Undergraduate, postgraduate taught and research programmes

The panel was able to meet and hear directly from students from all our programs plus the various course co-ordinators and directors of teaching and learning.

The panel noted the exceptionally high standard of teaching, especially in the laboratories and commended the School on the delivery of 90% of the laboratory classes during the pandemic, which reflected the commitment of academic, technical, and administrative staff. An issue raised by the panel concerned the support available for the final year Capstone projects and Taught Masters Projects, of which the School and College are rightly proud. These projects are essentially subsidised by the research activity/income of the various PIs and the standard of these projects would not be sustainable in the face of rising numbers of

students. The reviewers correctly concluded that further increases would require more resources or a change in the model. The School is aware of this challenge and is very much against further increases in numbers because of the impact on academic standards.

The panel raise several PG-specific issues in the review i.e., variability in training, inconsistencies in the thesis committee processes and an overall lack of central administrative support to ease the academic burden on PIs. These same issues were raised in a recent College-wide post graduate renewal survey, so the school is aware of them. The College plans to address these concerns as part of the PG renewal process and the School will actively engage with the PG renewal process to implement changes in these areas. It is worth noting that most PGR students have a very positive experience during their time in the School and most PIs are very supportive of their students. The planned recruitment of an executive officer specifically for PG administration will help greatly. However, the School is also mindful that there is always room for improvement so that we don't fail our more vulnerable students.

Research activities and research infrastructure

The reviewers highlighted the outstanding research output of the School and its international impact but noted that this activity faces the perennial challenges of funding for individual PIs, maintaining and developing essential key infrastructure and space. The School is aware that maintaining a track record of substantial funding will depend on strategic recruitment as well as supporting talented young researchers. The ability of the School to support cutting edge infrastructure/facilities is key to obtaining external funding from national and international funding bodies. As these facilities are entirely supported by School resources the reviewers correctly identify the current funding model and the legacy debt issue as issues that need to be addressed going forward. This not only affects existing facilities but any capacity to develop new or additional facilities. Even staying where we are is a challenge! Future space within TBSI is also an issue for recruitment and expansion of existing research groups, even allowing for joint appointments. The School would certainly be very interested in the future availability of space in the adjacent portion of TBSI.

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MEABHRÁN / MEMO

Chuig / To: **Quality Office**

Ó / From: **Professor Sylvia Draper; Dean of Faculty of Science, Technology, Engineering and Mathematics**

Dáta / Date: **Tuesday 9th September 2022**

Tagairt / Reference: **Dean's Response to Quality Review: School of Biochemisty and Immunology and School of Genetics and Microbiology**

First and foremost, I take this opportunity to extend my sincere thanks on behalf of the Faculty, to the members of the expert review panel: Professor Margaret Harnett, Professor Stefan Niemann, Professor Liz Smythe and Professor Simon Sprecher and internal facilitator Professor John Parnell. In particular, I valued my face-to-face meetings with the review team (in-person and virtual) which book-ended the review process.

The panel undertook a comprehensive review of the Schools of Biochemistry and Immunology and Genetics and Immunology, meeting all the relevant stakeholders (21st-25th March 2022 inc.) and provided considered and timely reports. These contain a set of frank and well-justified recommendations and propose a clear path for prioritising strategic and future directions.

Both reports recognise the collegiality, dedication and commitment of the staff in their respective schools and their tireless efforts during COVID-19 to ensure that they delivered a quality learning experience for their students, while retaining an international research profile that the reviewers describe as 'impressive'.

The review, undertaken jointly, of the two schools had a particular remit, namely to assess the effectiveness of:

(i) the governance, management and administration of the School in terms of delivery of its academic mission;
(ii) School responses to College strategies with reference to teaching and research plus engagement with Trinity Research Institutes;
(iii) consideration of opportunities for increased synergy between the two Schools.

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Many aspects of the two reports are identical and, in this respect I look forward to working with the Schools to implement the reviewers' recommendations in relation to:

(i) Seeking greater alignment and commonality in the organisation and progression of their students at both undergraduate an postgraduate level.
(ii) Progressing the filling of senior academic positions as part of consolidated strategic staffing plans that include inter-school considerations and their synergic roles in cognate Research Institutes.
(iii) Consolidating opportunities for joint or interdisciplinary appointments.
(iv) The design and implementation of a workload model that captures the diverse contributions of staff in terms of research, teaching and service.
(v) Understanding fully the outcomes and the consequences arising from the implementation of the new Budgetary Planning and Allocation (BPA) model.
(vi) Challenging perceptions around the 'ownership' of space so as to support the College's space allocation policy and create alternative flexible opportunities for using space effectively.
(vii) Working with the Dean of Research in terms of identifying fundings streams for the maintenance and upgrade of equipment.

Some of the recommendations proposed by the reviewers refer to areas that have been identified internally at college level as a priority. Some of these are, therefore, being addressed via on-going or completed actions around:

(i) the provision of academic and administrative supports to the directors of new courses e.g. within the Human Capital Initiative.
(ii) the capping of student numbers e.g. within the Biomedical and Biosciences stream (TR060). These have been communicated via the faculty-wide responses to CAO increases.
(iii) the HR review of staff development and career progression/opportunities for promotion e.g. changes to the decision-making and feedback processes in relation to Senior Academic Promotions are being led by the VP/CAO and Provost.

Actions that are being taken at Faculty level, which are relevant to the recommendations proposed, are the enactment of an agreement (STEM Strategic Day) to update and then share the College's space atlas across all the schools in the faculty, raising the need to resource the final capstone research projects in the context of the BPA model (highlighted in the Dean's consolidated Annual Faculty Quality Report) and ensuring that, where appropriate, STEM Heads of School are actively represented on decision-making committees e.g. University Council and principal committees.

The external reviewers have voiced some individual and School-specific areas of concern. Two significant examples are (i) disciplinary imbalances within the School of Genetics and Microbiology that need to be tackled e.g. by advancing research and teaching in areas such as Microbiome, Bacterial Genomics and Host Genetics and (ii) an obligation to repay the capital cost overrun on the Trinity Biosciences Institute by the School of Biochemistry and Immunology. The reviewers describe the latter as 'a constraint to innovation', although no payments on this loan have been made for

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several years. Following consultation with the Chief Finance Officer, a proposal to address this capital overrun will be brought for consideration at Planning Group in the next academic year.

In conclusion, I welcome the reviewers' comments and agree with the focus and/or intent of their recommendations. I note that both reports comment on the 'clear leadership' being shown by the two Heads of School and their Executive Committees. I echo this view and believe it is reflected in the Schools' responses which show considerable maturity and self-reflection. I commend the Schools on their impressive record to date in research and teaching, their creation of attractive new course offerings, their high quality publications and funding successes. I look forward to supporting them as they take the steps necessary to ensure that, in the period between now and the next review, we see both Schools grow from strength-to-strength.

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