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TO: Jan Gouveia, Vice President for Administration, University of Hawai'i System

FROM: Stuart P. Donachie, Chair, Department of Microbiology

SUBJECT: Re: Space needs for the Department of Microbiology in 'Snyder Prime'

DATE: 25th November, 2015

This ten-page memo provides the Department of Microbiology's response to a proposal ('Preliminary Program Documents, New Building for the Mānoa Campus'), and outcomes of related meetings and documents both prior to and subsequent to that proposal, which have assigned space to the department in a planned new building, currently termed 'Snyder Prime', on the Henke Hall site.

We herein inform you that the department had no role in developing any aspect of the plan presented in the 'Preliminary Program Documents'. Further, we did not agree with the building program needs described therein, nor that the functional space assumptions described are appropriate for the department's instructional and research needs. Little of the input we subsequently provided about program size and space needs during the 'charrette' is reflected in the modified plans that followed.

Prior to addressing specific points about 'Snyder Prime' since its inception, the Department of Microbiology regrets to inform you that it cannot support the current 'Snyder Prime' plan. However, the Department of Microbiology will be happy to discuss with you modifying the current plan so it adequately, properly, and sensibly addresses the department's instructional and research needs.

The department continues to have serious concerns about the lack of faculty consultation and aggressive tactics employed throughout the planning of 'Snyder Prime'; these approaches, described below (¶6-12), are not consistent with best practices for shared governance. For example, data supporting the department's instructional needs and staffing levels were not solicited by the MPC at any time during preparation of their 'Preliminary Program Documents'; the MPC's subsequent calculations for the project are thus seriously flawed.

The currently assigned 472.5 sq. ft. (1.5 modules) laboratory spaces for each of ten faculty is inadequate. We describe here how this figure likely arose, and why our instructional and research programs need larger laboratory spaces, and for 12 faculty, with up to 60 of their students, post-doctoral researchers, researchers, and guest scientists. The department's entire instructional and research programs, plus projected faculty and students, simply cannot be accommodated in the space assigned (20,541 sq. ft.).

The department also recommends reversal of a decision to have a teaching laboratory shared between the Microbiology and Biology departments. A 5th Microbiology teaching laboratory was originally agreed upon during the charrette. That was later removed after minimal consultation and reliance upon incomplete data about the instructional program (¶12.ii, iii).

We note that this project has long been described as, "A replacement for Snyder," and, "A new home for Microbiology." We also appreciate the genuine concern for the department we have felt from some quarters. However, 'Snyder Prime', as currently defined, provides woefully less than an adequate home for the Department of Microbiology's vibrant instructional and research programs. We look forward to revising the plan with you.

Overview

The Department of Microbiology was established at the University of Hawai'i at Mānoa in 1946. However, microbiology in Hawai'i was first recognized when the American Society for Microbiology established its Northern California and Hawai'i branch in the 1920s. The department currently comprises five faculty, one researcher, one junior researcher, one post-doctoral researcher, and 21 graduate students. In the last five years we lost 4 faculty members, but we hired only one due to the hiring freeze. Therefore, our recent years cannot be used to project needs; five years ago we had 8 faculty and >40 graduate students. Moreover, our recent permanent Dean recognized Microbiology's potential, and initiated growth of Microbiology to 12 faculty. This was in turn reflected in the design of the renovated Snyder, and recruitments were underway to achieve and accommodate 12 Microbiology faculty.

1) **i. The Department of Microbiology hosts understrength, but productive faculty.** The department offers the only undergraduate Microbiology degrees in Hawai'i. In AY15, our instructional faculty taught ~3600 SSH in the College of Natural Sciences (CNS). The department is responsible for both undergraduate and graduate programs in Microbiology, an undergraduate program in *Molecular and Cell Biology* (MCB), and participates in the undergraduate Marine Biology and other programs. We are especially proud of our MCB degree, which in the five years since its inception has reached ~80 majors, and is still growing; this program was built by two Microbiology faculty (one now retired) and one from Biology. Two of our faculty were nominated recently for *Excellence in Teaching* awards. The department's performance in research funding and publications matches or exceeds that of larger instructional units, *vis.* two of our faculty have received the *Regents' Medal for Excellence in Research*, and one currently has an NIH RO1 award. The department supports numerous aspects of the research enterprise of the university.

ii. Our graduates enter nursing, pharmacology, dentistry, and other health related fields. They conduct research in biotechnology, and in health and environmental sciences, or become physicians or professors. They also work in State and Federal institutions, *e.g.*, Hawai'i Board of Water Supply, Hawai'i Department of Health, HPD's forensic laboratory, the ATCC, FBI, NIH, USDA, WHO, and other agencies. Since most aspects of the Life Sciences today require knowledge and experience of basic microbiological techniques, the importance of the department in research, instruction, and service cannot be overstated: almost 2000 students in 11 degree programs use Department of Microbiology courses each year (Tab. 1). This will increase as the utility of 'molecular techniques' and bioinformatics grows in everyday applications.

2) **i. Microbiology's current faculty size is critically low.** The department's current faculty size threatens the integrity of both its instructional and research programs. The current five instructional faculty is down from nine in 1996, and seven in 2014. However, 3 faculty were lost in 2014 alone, through one sudden death (Bacterial Physiologist, full Professor), a retirement (Immunologist, full Professor), and denial of tenure (Virologist). These faculty taught high enrollment courses, two of which with their associated laboratory sections are required for our Microbiology BS degree. As a result of these losses we have had to cancel courses, and turn away students seeking directed research opportunities (¶3, 4). One more faculty (full Professor) will leave by mid-2016, and yet another is already past retirement age! Only three faculty will soon remain, and we are also faced with the prospect of both senior and junior faculty members leaving if space and research needs are inadequate. This is not a healthy situation for a department that has served the university, the student population, and the community for ~70 years. We also have one research faculty, a junior researcher, and a post-doctoral researcher.

ii. The extreme difficulty we have had in accommodating program growth, and even to plan for the future, is due in no small part to a lack of support when it comes to filling open positions. Two recent searches were canceled abruptly by the VCAA despite excellent candidate pools: a high-profile candidate for a still open position was ready to join the department with his new NIH R01 award, but was denied in the final stage by the OVCAA. Another open search was cancelled when the 'hiring freeze' took effect, after we'd

finished interviewing shortlisted candidates. While hiring seems to have resumed around campus, we are still unable to do so.

Tab. 1. Number of majors using Microbiology courses in their degrees

College/School	Degree program using MICR courses	No. of majors per fall semester				
		2010	2011	2012	2013	2014
CTAHR:	Food Science & Human Nutrition	82	98	122	111	123
	Biological Engineering (CTAHR)	30	33	31	42	47
	Molecular Biosciences and Biotechnology	-	-	-	-	4
	Tropical Plant and Soil Sciences	38	33	43	43	45
	Plant and Environmental Biotechnology	12	12	18	15	18
	Total	**162**	**176**	**214**	**211**	**237**
CNS	Biology	717	781	811	827	822
	Marine Biology	317	322	354	354	327
	Microbiology	78	71	72	78	89
	Molecular Cell Biology	-	13	41	61	59
	Total	**1112**	**1187**	**1278**	**1320**	**1297**
SONDH/ JABSOM	Nursing	350	366	430	455	433
	Medical Technology	8	10	10	14	9
	Total	**358**	**376**	**440**	**469**	**442**
	Totals	**1632**	**1739**	**1932**	**2000**	**1976**

3) <u>i. Program cuts.</u> A full cadre of faculty must be accommodated if we are to serve higher enrolments, more courses, more laboratory sections, and more students who need directed research credits to complete their degrees. To maintain the health of our program and to continue serving the University, we have long projected the need for 12 faculty. This will comprise the current five faculty, one researcher (who is also a graduate faculty member), four current openings for instructional faculty, one internal position transfer (Mānoa), and one new position.

ii. *Current status:*

- *Microbial Physiology* (MICR 431): Death of full Professor in Fall, 2014. Cancelled in Spring 2015; taught by Lecturer in Spring 2016.
- *Microbial Physiology Laboratory* (MICR 431L): Death of full professor in Spring, 2014. Canceled in Spring 2015. Not offered in 2016.
- *Immunology* (MICR 461): Retirement of full Professor. Taught by Lecturer in Fall 2014 and 2015.
- *Immunology Laboratory* (MICR 461L): Retirement of full Professor. Taught by Lecturer in Fall 2014 and 2015.
- *Virology* course (MICR 490): Denial of tenure. Taught by Lecturer in Fall 2014 and 2015.
- *Virology Laboratory* (MICR 490L): Denial of tenure. Taught by Lecturer in Fall 2014 and 2015.

- *Microbes and their Environment* (MICR 485): Retirement of full Professor. Not offered since 2009.
- *Microbes and their Environment Laboratory* (MICR 485L): Retirement of full Professor. Not offered since 2009.

iii. The death of a permanent faculty member left course requirements for our Microbiology BS degree unstaffed in Spring 2015 (*Microbial Physiology* MICR 431; *Microbial Physiology Laboratory* MICR 431L). We will hire a Lecturer for MICR 431 for Spring 2016, but no laboratory will be offered. Students will receive waivers in order to graduate, as they did in Spring, 2015. We have been able to maintain our graduation rates, but these cannot be sustained indefinitely while the quality of our degrees erodes.

iv. *Virology* (MICR 490) and *Virology Laboratory* (MICR 490/L) are essential for anyone aiming to work on viruses, and provide important information for Microbiology students. An emerging effect of not having a Virology faculty member is that the department now lacks its own TAs with virology experience, and must find qualified students elsewhere. We expect ongoing issues in teaching MICR 490L, plus the imminent graduation of the current TAs, to force the laboratory's cancellation in Fall, 2016, and until the open Virology position is filled.

v. That *Microbes and their Environment* and the associated laboratory (MICR 485/L) have not been offered since 2009, when the faculty member retired, is remiss. An environmental microbiologist must teach such a course and associated laboratory, and provide research opportunities in the field. This is especially true when one considers the range of habitats in, and geographic isolation of Hawai'i.

4) i. Directed research opportunities for high school, undergraduate, and graduate students. The loss of permanent faculty has degraded our ability to provide research training for students. Directed research, during which students undertake specific projects in a laboratory, is required in the Marine Biology BS degree (to which we contribute), our Plan A Master's degree, and of course the PhD program. Lecturers hired each semester have no laboratory space, and cannot provide these training opportunities.

ii. Contributions of faculty *versus* lecturers: Instructional and Research faculty bring in national funding that enhance the reputation of the University, and provide research opportunities for local high-school students; temporary Lecturers do not. Instructional and Research faculty mentor undergraduates in the development and execution of their Undergraduate Research Opportunities Program (UROP) work; Lecturers do not. Two UROP students published their work in peer-reviewed journals this year (Prisic *et al.*, 2015; Zepeda *et al.*, 2015). Other work is in review (*e.g.*, Hayashi *et al.*). The Microbiology faculty has a history of working with high school students in Science Fairs; Lecturers do not. Science Fair students from our laboratories have placed highly in National and International competition, received university scholarships, and published, *e.g.*, Iris Kuo from 'Iolani School discovered a new bacteria species in Mānoa valley (Kuo *et al.*, 2013). Iris also testified in the State Legislature in support of having the new species recognized as Hawaii's official State Microbe (HB 293). The potential for such scholarly accomplishments vanishes in a department of Lecturers without their own laboratories!

5) i. Snyder Hall renovation. The Department of Microbiology is the original occupant of Snyder Hall. Built in the early 1960s, the building was said in 1986 to be in need of renovation. This was repeated in the department's 10-year reviews in 1996 and 2006. By 2012, plans for a renovation of Snyder Hall were finalized through consultation with the faculty and Chairs of the Departments of Microbiology and Biology, with Dr. Vassilis Syrmos, architects, and others. The plan had the Biological Electron Microscopy Facility (BEMF) permanently move elsewhere because a return to a renovated Snyder would have incurred the cost of two moves. The renovated Snyder would have included the Department of Microbiology's instructional and research programs, a BSL-3 laboratory, a Genomics core (the existing ASGPB), and another shared core facility. The department was assigned 3.67 of the five floors in the renovated building (~47,000 gross sq. ft., 34,770 net assignable sq. ft.). The Department of Biology was assigned the remaining 1.33 floors. No other occupants were assigned to the building.

ii. The renovated Snyder design comprised research laboratories for 12 Microbiology faculty on two research floors, in tune with the then CNS Dean's vision for Microbiology in the college. This reflected the growing importance of microbiology, molecular biology, and the growth of our degree programs, cf. Microbiology BS/BA/MS/PhD, Molecular and Cell Biology BS. The number of majors we host doubled between 2010 (78) and 2014 (148), and will continue to increase. Moreover, ~10% of majors graduating from the College of Natural Sciences (CNS) come from Microbiology. The need to accommodate the increase in graduate students that more faculty will mentor was factored into the design and space allocation of the renovated Snyder. We were told to 'pack to leave' in 2012; colleagues in the Department of Biology that were in Snyder Hall were asked in 2013 to move out in anticipation of renovation. The next communication about the renovation came from a member of the MPC in Spring 2015, when he casually mentioned the cancellation during an unrelated meeting!

6) i. 'Snyder Prime'. In mid-2015, Hawai'i Biotech approached a number of people at UH Mānoa with a proposal to renovate (or 'refresh') and lease part of the existing Snyder Hall. Once the proposal cleared informal walk-throughs and exploratory discussions, the proposal was brought to the attention of the University of Hawai'i System. As Hawai'i Biotech later withdrew from talks, three members of the Department of Microbiology participated at different times in meetings about the proposed new building (*aka* 'Snyder Prime'). We thus saw first-hand how space allocations and the building's location developed during summer, 2015. Senior administrators variously described 'Snyder Prime' as, "The new home for Microbiology." There was also, "Microbiology on the top floor with the rest of the building as surge space." Or, "...five Microbiology faculty offices and research laboratories in a research only building." Members of the MPC once cited the department's graduate student body as 'only 3 GAs', and assigned student office space accordingly. This overlooked the larger number of TAs. It also overlooked graduate students from other departments who work full-time in our laboratories in Snyder Hall; we are graduate faculty in other departments, and host their students. However, this showed that the MPC was not working with the right data, nor were they consulting the Department of Microbiology.

ii. The MPC never did inquire directly to the Department of Microbiology faculty how many students were in the department, nor how many researchers, post-doctoral fellows, *etc.* were present. Enrolment has fallen as faculty have been lost, but we obviously have substantially more than three graduate students (*i.e.*, 21)! Similarly, the MPC assigned offices and research spaces for only five faculty, as pleas to consider a sensible hiring schedule and subsequent need for space were dismissed with the wave of a hand. The department contends that one simply cannot assign space on the assumption that the Department of Microbiology will comprise five instructional faculty for the next fifty years, especially when they currently have four open instructional positions!

iii. As the permanent Dean of the College of Natural Sciences left in the summer of 2015, the VCAA could have been the department's only advocate in the Mānoa administration. However, leading up to the release of the 'Preliminary Program Documents', every element of 'Snyder Prime' was dictated to the Microbiology faculty as a generic allowance per instructional faculty, with no feedback allowed on program size (*i.e.*, numbers of students, or research personnel) or need for specialized facilities. Where there was no inquiry, there was no input! The department never saw the proposal submitted on its behalf (in the 'Preliminary Program Documents'), nor were they asked to submit comments, or respond to any part of the plan; one would expect such input to be part of a consultative process.

iv. Similarly, the Department of Biology, which had long been waiting for space in the renovated Snyder, and which relies on some of Microbiology's facilities, was not included in the original 'Snyder Prime'. When the Microbiology Chair asked, "What about Biology?" the answer was, "Their needs are met in Edmondson." Planning for Biology's inclusion in 'Snyder Prime' only began after their faculty learned of the plan in August 2015, and expressed their concern, such as at a BoR meeting.

v. Contrast this lack of consultation with Microbiology and Biology with the VCR's advocacy for PBRC, especially though his asking two PBRC senior faculty in the summer to determine how much space would

be needed to accommodate all of PBRC except the Bekesy and Kewalo labs, in a new building. Also, with the VCR stating he has to find space for [Person 1], and later for [Person 2], individuals who are very senior members of PBRC. Nobody on the MPC cited a need to find space for a named faculty member in Microbiology, in Biology, or in Botany.

vi. Coincidentally, the Department of Botany was never mentioned by the MPC in early meetings with Microbiology about 'Snyder Prime'. One would not have expected Botany to have been mentioned earlier, anyway, given they were never part of the original Snyder renovation. They have also never been related programmatically to Microbiology. The Department of Botany did, however, appear in the 'Preliminary Programming Documents'!

7) i. Space 'demands' and space assignments. Let us consider the OCI's memo (Re: Criteria Development Charrette conducted on October 29-30) dated November 5, 2015, addressed to the UH Mānoa Chancellor, and the statement:

> "...the substantial increases in space demanded by the [Microbiology] department above what was included in the Preliminary Program Documents place the project's CIP budget in grave danger,"

That is disingenuous. Microbiology did not demand space; the fact nobody in the department was even asked about program needs negates any reference to what has become known as 'delta' (the difference between space assigned in the 'Preliminary Program Documents' and that developed (or requested by a department) during recent 'space' meetings, *vis à vis*, 'charrette'! Space assignments in the 'Preliminary Program Documents' are constructs of, and reflect other interests; in Microbiology's case they reflect no input from the department.

ii. The OCI memo's summary is similarly flawed:

> "...the risk presented to a successful design-build project in an expedited time frame lies in the inability of the College and Biology and Microbiology Departments to make decisions and communicate with faculty."

CNS cannot be criticized for failing to accommodate a plan another senior administrator suggested might be "fundamentally inexecutable as delivered to OCI [by the MPC]." The Department of Microbiology has seen 'Snyder Prime' develop from the beginning without its input, yet at any stage could have provided constructive recommendations on how such a project should proceed. Having a new interim Dean who both lacks a biology background and entered the process well after it began has not been helpful. Especially as the OCI's 5th November memo notes, "RFD [designer] will return on November 9 and 10 to fine tune the program with the Interim Dean of CNS." Fine-tuning the program with the end users would have been more appropriate, at least for the end users who were part of the original Snyder renovation! Including units in the 'Preliminary Program Documents' that were not part of the original Snyder renovation must also have required the MPC's input, and agreement.

iii. If the floor space of the original Snyder and 'Snyder Prime' are even modestly equivalent, is there any wonder that adding occupants to the latter may not work? In effect, the 'Preliminary Program Documents' simply crammed as many units and people into 'Snyder Prime' as the MPC had to accommodate by late August. By then, 'Snyder Prime' changed from a 'research only' building with five Microbiology faculty their research laboratories, and (most of) PBRC, to all of Microbiology's instruction, research, faculty and staff, plus a substantial space for eight Biology faculty and their research laboratories, Biology teaching laboratories, two Botany researchers, and some of PBRC. While Botany's inclusion has centered on, "Their labs are collapsing," that cannot justify requiring the original occupants of a renovated Snyder to fit into that much (*i.e.*, ~2,200 sq. ft.) less space! Or the exclusion of Biology faculty members who were expecting space in the renovated Snyder, but who have now been 'unselected' by the Interim Dean of CNS. Moreover, while PBRC "projects the *Drosophila* lab will be housed in 'Snyder Prime'," the current director of the *Drosophila* lab (in Gilmore Hall) did not know that!

iv. With respect to, "...inability of the College and Biology and Microbiology Departments to make decisions and communicate with faculty," it must be borne in mind that everyone communicated very

effectively in designing the 2012 Snyder renovation plan. As Dr. Syrmos asked in a recent meeting, "Why didn't you guys just use the original Snyder plan as a starting point?" Indeed. On the other hand, that plan did not include PBRC, nor did it include Botany, or the *Drosophila* Laboratory. Nor did it have a 'theme', beyond 'Life Sciences'. Coincidentally, nobody in Microbiology or Biology knows where the current 'Snyder Prime' theme came from: designated occupants from these departments do not work in the 'theme' (*e.g.*, Biology's neurophysiology, and behavior are not 'biome' related).

8) i. The 'Preliminary Program Document'. September's meeting in the Campus Center announced the new building would comprise "...space for the Microbiology faculty to grow to ten faculty, and the department's instructional program." This was the first time space was publicly assigned to both Microbiology's instruction and research programs. Previously, the MPC had been adamant that the department's instruction and research would be split between two buildings. It was also the first time the department's long-held plan to grow to 12 faculty was publicly scaled back to 10 faculty! Nobody presenting at that meeting had sought input from the department about that. This meeting was also the first pubic mention of the Department of Biology having *any* space, a surprise given they had never been at the table during the summer's discussions about 'Snyder Prime'. It was also the first public mention of the Department of Botany, and of PBRC (including the BEMF) being in 'Snyder Prime'.

9) i. The 'charrette'. The Department of Microbiology has demonstrated willingness to compromise. Prior to the charrette, the department faculty and staff worked together to project their instructional, research, and other space needs. That was the first time everyone had discussed 'Snyder Prime' space, and they meticulously and honestly reduced their projections compared to the original Snyder renovation that provided ~34,770 assignable sq. ft. (~47,000 gross sq. ft.) to 12 faculty in the department (Tab. 2). The department thus projected their instructional and research needs would require 13,097 sq. ft., and 23,110 sq. ft., respectively (Tab. 2). Compare that to the space assigned to the department in the original Snyder renovation.

Tab. 2. MPC/OCI space assignments, and Department of Microbiology projections

Source	Instructional Program	Research Program	Total
Snyder Renovation	-	-	34,770[1]
'Preliminary Program Documents' (MPC)	7,291	12,097	19,388
Microbiology's pre-charrette projection	13,097	23,110	36,207
Microbiology agreed to during charrette[2]	10,505	22,250	32,475
October 2015 Workshop #1 (OCI)[3]	10,505	14,398	24,903
November 9/10, 2015 Workshop (OCI)[4]	8,488	12,053	20,541

[1]~47,000 sq. ft. gross; [2]Conclusion of charrette; [3]Post-charrette modification without Microbiology input; [4]Hard copy of spreadsheet given to Microbiology Chair on 9th November, 2015.

ii. *Instructional Program space:* In September's 'Preliminary Program Documents' from the MPC, the Department of Microbiology's instructional space was assigned a total of 7,291 sq. ft. (Tab. 2). The origin of this allocation cannot be attributed to the Department of Microbiology, because no program needs or input were solicited. The department faculty and staff, however, projected that 12 faculty, more laboratory courses, and increased enrollments, would require a fifth classroom. During the charrette, the lab designer (John Lewis, RFD) projected the space needed to accommodate such an instructional program could be accommodated in 10,505 sq. ft. (Tab. 2). We accepted that. We did not 'demand' the 13,097 sq. ft. we had arrived at before the charrette.

iii. *Research Program space:* In September's 'Preliminary Program Documents', the Department of Microbiology's research program was assigned 12,097 sq. ft. (Tab. 2); that was for ten (according to the

'Plan') faculty, and thirty students. Once again, the origin of this space allocation or faculty size cannot be attributed to the Department of Microbiology, because no specific program needs or input were solicited. That the mean numbers of students and undergraduates per faculty were improperly counted was reflected in insufficient laboratory space (551.7 sq. ft./PI[1]), and office space for students (10 workstations at 120 sq. ft. each, to accommodate 30 students[2]).

iv. We have consistently stated that the mean number of undergraduates, graduate students, post-doctoral researchers, and researchers per faculty is five. Today, we have an average of five group members per faculty. Twelve faculty can thus be reasonably expected to host 60 undergraduates, graduate students, post-doctoral researchers, researchers, and an occasional guest scientist. This is not unreasonable, given we had over 40 students alone only several years ago. Of course 60 students and others will not all appear tomorrow because of our current strength, but they can reasonably be expected once the faculty is at full strength again. Based on decades of education and research in microbiology, plus expansion of research and education in molecular biology and health related fields in universities globally, one would also expect that to be the case during the 50-year life span of the building. It would be cynical to not allow hiring, or dismiss the prospect of hiring, in order to 'lock' the department into a minimal space allocation arrived at without consultation or agreement.

v. During the charrette, John Lewis did not change the figure we projected for laboratory space for 60 undergraduates, graduate students, post-doctoral researchers, *etc.*, totaling 10,890 sq. ft. However, through discussion with the faculty he did reduce or expand other spaces. We did not 'demand' our pre-meeting research space projection of 23,110 sq. ft. (Tab. 2). The department faculty, in good faith, worked with Mr. Lewis and left the charrette believing they had agreed upon research space of 22,250 sq. ft. (Tab. 2).

10) i. Post-charrette developments. On the morning of Monday 9th November, the Microbiology Chair was asked to visit a CNS office. The Chair considered this a likely follow-up to the OCI's memo:

> "OCI concludes that in order to bring this project within a comfortable level of risk, the following actions need to occur by Monday, November 9, 2015:
>
> Microbiology Department: The Office of the Manoa Chancellor shall confirm that the building program needs to conform to the functional space assumptions provided in the Preliminary Program Documents. More specifically, the project will be designed for 10 Faculty positions, and labs that do not have assigned personnel will be built to a "generic" laboratory specification that may be adapted for shared use with other users."

ii. When asked, the Microbiology Chair declined to accept that the different research space allocations now shown in the tables (October 2015 Workshop #1. cf. Tab. 2) were correct. Specifically, that the total research space shown then, at 14,398 sq. ft. was not the 22,250 sq. ft. the Microbiology faculty, quite literally, left on the table at the end of the charrette (Tab. 2). The Chair was assured in no uncertain terms that this was the outcome of the charrette! The Chair was further assured that if Microbiology did not accept this figure then the entire project would collapse, that everyone would blame Micro', that everyone higher up is already laughing at 'Nat Sci', that Micro' would not be able to hire anybody, Snyder will collapse, and the department will disappear. Another Microbiology faculty member arrived. The bluster continued as a yet more senior member of CNS arrived, and also stated that Microbiology should agree. Other Microbiology faculty then arrived. While the disagreement over figures was not resolved, it was said that Mr. Lewis would arrive that day, and would be able to talk about the calculations.

11) i. Assigned research space. Upon meeting with Mr. Lewis on 9th November, the department faculty was shocked to hear he had changed the size of the research laboratory space after the charrette; that change brought the space in line with the MPC's 'Preliminary Program Documents' and the CNS office's expectations, neither of which involved the department's input! Given the 'Preliminary Program

[1] p. 10, 'Preliminary Planning Documents' RLAB 4 RESEARCH LAB 5,517 SF
[2] p. 10, 'Preliminary Planning Documents' OFC 10 workstation = 1,200 SF

Documents' assigned a total of 5,517 sq. ft. in four research laboratories to ten faculty, that equates to 551.7 sq. ft. per faculty. At the end of the charrette, the faculty believed they'd agreed to 907.5 sq. ft. for each of the 12 projected faculty. For context, we refer you to the faculty numbers that will be realized upon filling open positions and receiving one transferred position (=11). However, Mr. Lewis' table now showed a reduction to 10 faculty, at 472.5 sq. ft. each!

ii. Moreover, the total space for Microbiology Research was reduced yet again. In the "November 9/10, 2015 Workshop" column provided in a hard copy to the Microbiology Chair, the assigned research space is now 12,053 sq. ft. (cf. Tab. 2). That matches almost exactly the space assignment dictated for the department by the MPC in their 'Preliminary Program Documents'.

iii. It is a remarkable achievement for the 'design team' to conclude with a figure that so closely matches that in the 'Preliminary Program Documents' (cf. Tab. 2). All with so much apparent team effort, but in fact zero to negligible input to the 'Preliminary Program Documents' by the Department of Microbiology, and so little consideration of what the department projected during the charrette. The faculty are left with the impression that the charrette was simply an exercise designed to give the impression that the faculty were consulted, and that everyone agreed. The former is true insofar only as the faculty were occasionally in the same room as the 'decision makers'; the latter, that everyone agreed, is simply not true.

12) i. Assigned teaching space. The same can be said for the teaching space assigned to the department (8,488 sq. ft.) (Tab. 2). Certainly it is higher than that in the 'Preliminary Program Documents' (7,291 sq. ft.), but that, too, was developed with no input from the department. It is also less than that projected by the department both prior to (13,097 sq. ft.) and by the end (10,505 sq. ft.) of the charrette. We recognize it does not include a 'shared' (5th) laboratory, but even that started as a solely Microbiology teaching laboratory, as described below (12.ii).

ii. Late on Monday 9th November, the Microbiology Chair was asked to meet at 8 am the next day, "...to discuss the needs proposed by your faculty in the previous October meeting." The Chair invited a senior faculty member to that meeting so they could consult, and provide some confidence that other faculty would be in support. Upon arriving at the meeting, however, the senior faculty member was immediately approached and told he wasn't invited to the meeting. He was asked to leave, and immediately escorted from the room! He then waited outside for 2 hours while the meeting proceeded.

iii. One of the first questions then put to the Chair was, "Which teaching labs are used on which days, and by which sections on each day of the week?" That would be a challenge for any Chair! However, a 'Department liaison' (from the CNS 'Space Committee') had already been tasked with finding the answer, and began reciting how each Microbiology teaching laboratory was used in the last two years! As we saw previously with the MPC (¶6.i), data based on information found online are subject to error. This gave rise to a change in what the department had projected, with their 5th teaching laboratory being replaced by a laboratory to be shared with the Department of Biology. Specific details of how the teaching laboratories are used are beyond the scope of this memo, but are available upon request.

iv. Canceled courses and those that will be offered once open positions are filled were mentioned earlier (¶3). Canceled course space needs are not on schedules, but they represent 'potential' demand that will be realized once new faculty are in place and those laboratory courses are taught. The department thus urges reconsideration of the decision to have a shared Microbiology/Biology teaching laboratory, and instead have a 5th dedicated Microbiology teaching laboratory.

13. i. Concluding remarks. On Tuesday 10th November, Mr. Lewis noted that the Microbiology research laboratories cover 1.5 modules. He suggested, "The first priority in the next phase should be to ask the contractors to consider increasing those to two modules, or 630 sq. ft." Such a modification should not be left to the contractor to decide if their profit margin allows it!

ii. The Department of Microbiology rejects the currently listed 472.5 sq. ft. (1.5 modules) for each of ten faculty; we have outlined how we have always planned on sharing space among 12 faculty, and can

already 'account' for 11 of those. We are certainly open to discussing increased laboratory square footage for each of 12 faculty. This simply reflects the need to accommodate 12 faculty, their 60 students, post-doctoral researchers, researchers, and guest scientists.

iii. The current assignment of five 240 sq. ft. 'workstations' for graduate students does not meet projected needs: 60 students would have 20 sq. ft. each; even 50 students would have only 24 sq. ft. each. Increased laboratory areas will accommodate students who do not have access to an office, *per se*. Larger laboratories will thus provide a mix of space in which some students will spend substantial 'research time', while later they will spend more time in an office. In the actual design phase we would incorporate additional student-specific workstations in the laboratories. That will allow better use of space with a modest increase in square footage.

iv. We cannot accept a plan that will move us from one building to another, but then not permit proper growth or even accommodation of our department. As the main users of the building being vacated, and in the way 'Snyder Prime' was presented to us, others in the university, and even the media, we do expect to be included in the planning. We also expect to be consulted about our program needs, not forced into a space that will put our teaching and research in danger of further decline.

References (undergraduates underlined)

Hayashi K, Busse HJ, Golke J, Anderson JA, Chaplin MA, Donachie SP (in review.) *Rheinheimera kaneoheense* sp. nov., isolated from a shark-fishing hook off O'ahu, Hawai'i. *International Journal of Systematic and Evolutionary Microbiology*

Kuo I, Saw J, Kapan DD, Christensen S, Kaneshiro KY, Donachie SP (2013) *Flavobacterium akiainvivens* sp. nov., from decaying *Wikstroemia oahuensis*, Hawai'i. *International Journal of Systematic and Evolutionary Microbiology* 63:3280-3286

Prisic S, Hwang H, Dow A, Barnaby O, Pan TS, Lonzanida JA, Chazin WJ, Steen H, Husson RN (2015) Zinc Regulates a Switch between Primary and Alternative S18 Ribosomal Proteins in *Mycobacterium tuberculosis*. *Molecular Microbiology* 97:263-280

Zepeda VK, Busse H-J, Golke J, Saw J, Alam M, Donachie SP (2015) *Terasakiispira papahanaumokuakeensis* gen. nov., sp. nov., a *Gammaproteobacteria* from Pearl and Hermes Atoll, Northwestern Hawaiian Islands. *International Journal of Systematic and Evolutionary Microbiology* 65:3609–3617 doi: 10.1099/ijsem.0.000438

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