

Senate Research Committee (SRC)
February 13, 2017
Minutes of the Meeting

These minutes reflect discussion and debate at a meeting of a committee of the University of Minnesota Senate; none of the comments, conclusions, or actions reported in these minutes represents the views of, nor are they binding on, the senate, the administration, or the Board of Regents.

[In these minutes: Core Infrastructure; Research Animal Resources; Introduction to Interim Vice President for Research; Postdoc Issues Debrief]

PRESENT: Michael Kyba (chair), Catherine St. Hill, Carol Carrier, Al Levine, Boyd Kuhmer, Tucker LeBien, Claudia Neuhauser, Suzanne Paulson, Claire Stewart, Bill Arnold, Jayne Fulkerson, Sumanth Gopinath, Vladas Griskevicius, Hinh Ly, Nelson Rhodus, Teresa Rose-Hellekant, Jeffry Simpson, Philip Zelazo, Kristina Burrack, Rachel Edwards, Sidharth Gs, Amrit Vasdev

REGRETS: Jennifer Franko, David Roberts, Jeanette Gundel

ABSENT: Lisa Johnston, Gregory Cuomo, Logan Spector

GUESTS: Tom Hays, member, Core Infrastructure Workgroup, and associate dean for research, College of Biological Sciences; Mark Suckow, director, Research Animal Resources (RAR)

OTHERS: Pamela Webb, Office of the Vice President for Research (OVPR); Dan Gilchrist, OVPR; Kathy Brown, Office of Human Resources; Scott Lanyon, Graduate School; ETTY DeVeaux, Graduate School; Ken Horstmann, Total Compensation; Rilyn Eichens, Minnesota Daily

Chair Michael Kyba welcomed the committee and the members introduced themselves.

1. Core infrastructure - Kyba welcomed Tom Hays, member, Core Infrastructure Workgroup, and associate dean for research, College of Biological Sciences, to provide an update on the work of the Core Infrastructure Workgroup. Hays noted that the initial workgroup to review core research facilities was convened in January of 2015 at the request of President Eric Kaler. Through Brian Herman, vice president for research, Office of the Vice President for Research (OVPR), and Brooks Jackson, vice president for health sciences, Office of the Vice President for Health Sciences, the group was charged to recommend a vision to sustain essential, state-of-the-art infrastructure at the University, and to recommend “how to best maximize the use of core facilities, reduce costs and back-office operations across [the University’s] core facilities, and [provide] the best structure and/or mechanisms for oversight,” said Hays. The workgroup was composed of Kenneth Beckman, director, University of Minnesota Genomics Center; Vadim Gurvich, associate director, Institute for Therapeutics Discovery and Development; Greg Haugstad, director, College of Science and Engineering Characterization Facility; Frances Lawrenz, associate vice president for research, OVPR; Tucker LeBien, associate vice president

for research, OVPR, and vice dean for research, Medical School; Claudia Neuhauser, director, University of Minnesota Informatics Institute; Beth Nunnally, associate vice president, Academic Health Center; Srirama Rao, associate dean for research, College of Veterinary Medicine, and chair, Council of Research Associate Deans; Tim Schacker, associate director, Clinical Translational Research; Sue Paulson, finance director, Controller's Office; and Hays.

Hays reported that the final workgroup report and recommendations to President Kaler followed the committee's thorough review of research facilities, which led to the identification of "core research infrastructures" based on metrics to assess the breadth of the user base and key financial characteristics. One key recommendation was that core research infrastructures should be prioritized for centralized funding, and that a Core Research Infrastructure Accountability Committee (CRIAC) should be established to advise the vice president for research and vice president for health sciences on the optimal coordination of shared services, the accountability of research cores for efficient management, and strategic planning for future infrastructure needs and investments. The group additionally recommended the following:

- Optimize efficiency of core research infrastructure through integrated oversight and by sharing common operational activities where additional efficiencies can be derived; for example, some units might integrate purchasing, financial accounting and billing, external sales, or marketing practices.
- Develop a coordinated and sustainable centralized funding model to support core research infrastructure. Currently, the University is very decentralized, so funding from the OVPR is pushed down to the academic units, and the cores are funded by subsidies from colleges, though not all participate.
- Foster access to research core instrumentations and high-value technical services by faculty and external users. Build and maintain a streamlined database of research infrastructure capabilities, technologies, and associated expertise available on University campuses.
- Leverage high-quality research infrastructure service centers to provide valuable educational experiences to students and postdocs who desire advanced training in the use of various technologies and methodologies. Additionally, facilitate career development opportunities for expert staff within the core research infrastructure to add to the overall personnel resources.
- Establish a new academic culture in which discipline-focused faculty hires are tied to the hiring of technologists (faculty experts and/or P&A staff experts) that expand tool development and data analysis in core facilities.

The working group's initial list of "core research infrastructures" recommended for funding attention and coordinated oversight were:

- Center for Magnetic Resonance Research
- Minnesota Supercomputing Institute
- Research Animal Resources
- Center for Mass Spectrometry and Proteomics
- Characterization Facility
- Minnesota Nano Center
- University Imaging Center

- Flow Cytometry Facility
- University of Minnesota Genomics Center

CRIAC was established by President Kaler, and met on a regular basis in FY16 to consider how best to address the increasing demand for research technologies and associate expert research staff, as well as the increasing costs of supporting core infrastructures, said Hays. The group collected data and information, which led to a focus on three major themes:

- Understanding the unique challenges of staffing core infrastructure with the technical and computational expertise necessary to maximize research activities, guard research integrity, and increase research revenues;
- Characterizing the revenues, expenses, and subsidies associated with each of these core infrastructures;
- Development of a funding model.

CRIAC arrived at several conclusions that shaped the set of priorities and requests of their final report, noted Hays. First, for the nine most broadly utilized research infrastructures, the group's analyses suggested that the research cores are generally operated in an efficient manner, and that significant savings would not be gained from consolidation of accounting and management practices. Hays said that CRIAC members felt that a plan to maximize usage of expensive instrumentation in research core facilities and to minimize duplications outside of those cores was needed, including the need for better oversight and a new culture surrounding the purchasing of expensive instrumentation at the University. Second, said Hays, CRIAC suggested that the path to sustainable support of modern research technologies is through the building of a research ecosystem that can accelerate and expand research which can then better compete for external funding. Technology underpins new discoveries, he noted, as well as the translational impact of those discoveries. Technology has become sufficiently complex that core research facilities work collaboratively with the research community to extend the boundaries of knowledge; to maximize discovery, and by extension, external funding, the University must recruit, develop, and apply these technologies in the most creative and rigorous ways, said Hays.

Additionally, as technology is rapidly changing, so are the instrumentations and faculty use of core research facilities, reported Hays. The University must maximize investments, maintain oversight of the outcomes from those investments, and keep core facilities relevant to conducting research at the leading edge. CRIAC has proposed an annual review of core infrastructures using an evolving set of metrics to inform the funding of core infrastructures.

CRIAC made the following recommendations:

- Grow the research infrastructure, specifically increasing PhD-level expertise, through investments in additional PhD expertise for CRIs, in order to drive collaboration, accelerate research output (data to publication pipelines), and grow research revenues.
- Authorize CRIAC to provide collective University oversight for the nine core research infrastructures, in consultation with directors, technical experts, and stakeholders.
- Establish policies to discourage independent, redundant purchases of capital equipment outside the core research infrastructures, in an effort to minimize unnecessary purchases of expensive instruments. Currently, only 20% of capital equipment was purchased in the

research cores; a suggestion is to require additional clearance for purchases over \$50,000.

Bill Arnold suggested that it will be important to make sure that graduate students and postdocs can use the research cores as a component to their education, and that they not be only easily accessible to faculty. Hays replied that he agreed this would be important.

Arnold asked if this additional oversight would increase costs. Hays responded that currently, some cores are highly subsidized, which is not sustainable. Arnold said that he thought the \$50,000 threshold suggested for capital equipment purchases was too low. Hays noted that there would likely be tiers for purchasing capital equipment, at \$50,000, \$100,000, and \$250,000.

Hinh Ly asked how much capital equipment that has been purchased is redundant. Claudia Neuhauser replied that this is mainly an issue in the mass spectrometry facilities and with microscopes; CRIAC did a very broad sweep of available resources, she said, and it is not clear whether it would be beneficial to house these items in a central location, though the University should consider this to maximize available resources. Hays suggested that this decision may be based on the density of users.

Al Levine said that negotiating startup packages with faculty impinges on this issue. Hays responded that the committee has had conversations about a potential “voucher” program for use in research cores, where if the vouchers are not used they are pulled back into the system, which may help with the start-up issue.

Jeffrey Simpson asked if maintenance costs were figured into the budget. Hays responded that the group is still consulting with University Finance, and looking into cost efficiency with contract vendors.

Kyba suggested that there are two possible models for investment in research core facilities: investment in people (faculty), or investment in support. He provided the example of Flow Cytometry, where after-hours access could increase use, making the infrastructure investment more effective, but the core facility model does not always lend itself well to enabling such use. Might this after-hours need increase the cost if support was increased, he asked? Hays replied that the group was not rigid in the need for accommodating use of sophisticated instrumentation, and that these types of situations could be addressed on a case-by-case basis. Tucker LeBien added that most directors of core facilities are already amenable to after-hours needs; there would just need to be a process for accountability.

Arnold said that advertising for the research cores should be centralized. Hays responded that this is in process.

Ly noted that if increasing PhD-level expertise in the cores was a goal, the University would need to take into consideration a career path and make sure to consider whether or not tenure-track positions would be a viable option (since research, service, and teaching are all part of tenure consideration). He suggested three to five year contracts may be more appropriate.

2. Research Animal Resources - Kyba introduced Mark Suckow, director, Research Animal Resources (RAR), to discuss the current state of RAR and challenges. Suckow provided an overview of RAR, noting that they comprise more than 250,000 square feet, have 15 facilities, and more than 130 employees. In addition, he said, RAR provides veterinary service for an additional 17 sites. RAR is accredited by the Association for Assessment and Accreditation of Laboratory Animal Care, International (AAALAC), and serves over 400 principal investigators (PIs) that have over \$150 million in research involving animals.

The RAR annual budget is approximately \$18 million, with a 30% subsidy. Personnel account for 40% of the budget, the space cost pool 29%, supplies (including feed, bedding, lab diagnostics, and other) 12%, and animal purchases 16%. Currently, Suckow said, a caged mouse costs \$0.77 per day, or \$0.83 when irradiated feed is required. Expenses for RAR include labor, bedding, feed, case and replacements, sanitation, veterinary care (including preventative care), environmental monitoring, and space. Any increase in costs to RAR can have a great impact on cost of services to PIs, which impacts their grant budgets. Environmental monitoring for research animals is very tightly regulated and controlled; any lack of consistency can skew research results.

Facility security is a high priority for RAR, noted Suckow, due to animal rights protestors, curiosity seekers, vandalism, and biosecurity barrier concerns. On April 5, 1999, he said, 100 animals were freed, causing \$2 million in damage. RAR seeks to strike a balance between responsible awareness and paranoia, and constantly looks to assess what the right amount of communication about RAR services should be, he added.

Ly asked how RAR's cost per mouse per day was in comparison to the University's peer institutions. Suckow responded that other institutions have a different structure, so it is a bit like comparing apples to oranges; still, RAR's costs are in the middle of the Big 10.

Catherine St. Hill asked if Suckow had advice to researchers completing grants on the best way to interact with RAR staff. Suckow replied that RAR veterinarians want to engage with researchers, as it is part of their job to help research get done at the institution. He suggested researchers reach out to RAR staff any time they have questions or need assistance.

Boyd Kuhmer asked if RAR managed controlled substances for animal research. Suckow replied that RAR did not manage controlled substances for investigators.

St. Hill asked about RAR's range of services. Suckow responded that RAR can assist with animal handling, dosing, and sampling, and can work on more specialized needs as required, either by identifying resources or innovating solutions.

Sumanth Gopinath asked how best to answer protester's concerns regarding the treatment of animals in research. Suckow said that it is important to emphasize that since this is a very tightly regulated aspect of research, protocols need to be approved by IACUC with detailed specifics on the research project; work on animals can begin only once these protocols are approved. Additionally, he said, RAR has eyes and ears in the research facilities, and can report issues

immediately. While the ethics of the use of animals in research is a subject that finds many opinions, RAR seeks to operate at the highest level.

Suckow added that RAR is constantly looking at ways to consolidate space to minimize costs, though PI's want animals close to their labs or offices, and closing a facility can disrupt a research project. LeBien noted that before Suckow became director of RAR, two facilities were closed to save space costs.

3. Introduction of Interim Vice President for Research - Kyba introduced Al Levine, interim vice president for research, OVPR. Levine noted that he will be in the position for one year, and that candidates for the permanent position would be invited to interview. Levine gave an overview of his background, which includes 26 years at the VA Medical Center, a position as the dean of the College of Food, Agricultural, and Natural Resource Sciences, a previous appointment as the vice provost for faculty affairs, and an appointment as the president of the Obesity Society.

Hinh Ly asked about the Research Infrastructure Investment Program. Levine responded that Francis Lawrenz is coordinating this, and that funds have been set aside.

4. Postdoc issues debrief - Kyba provided an overview of issues discussed by the committee regarding the FLSA increase in salaries for postdocs, and effects of this increase on postdoc training and the availability of positions. In fall of 2017, SRC sent a letter to college deans, campus chancellors, and another to faculty, encouraging researchers to request any funding needed to cover salary increases for postdocs from their colleges.

Arnold noted that postdocs are happy with their new pay level, and that most PI's were looking to deal with the increase on their own level through rebalancing grants, or by other means.

Kyba reported that the Medical School faculty sent a letter to the college requesting bridge funding to cover the increased costs of postdoc salaries. The Medical School responded that they would deal with this issue on a case-by-case basis, rather than establishing a college fund. Kyba said that PIs may be under pressure to reduce postdoc contracts. Arnold replied that it varies by department whether or not postdocs are cheaper to support than graduate students; in his department, he said, it is slightly cheaper to support a graduate student.

Hinh Ly asked Kathy Brown, vice president, Office of Human Resources (OHR), if OHR had pulled data on graduate students and postdocs. Brown responded by saying that the ninth paycheck of the year could be pulled for the past five years, which could show multi-year compensation trends. She said she would pull this data and provide it to the committee. Brown added that a district court decision in Texas stopped the implementation of the FLSA increase (raising the non-exempt floor to \$47,476) just before it was to take effect. The University had already prepared for the increase, and so went ahead, with the knowledge that most peer institutions had chosen to do the same. In order to remain competitive in the market, she added, it is important that the University move ahead with this increase as planned. Ken Horstmann, director, Total Compensation, noted that before this change, the average postdoc yearly salary

was between \$40,000-\$41,000.

Brown asked the committee if they supported all new postdoc hires being hired at the \$47,476 base rate. Kristina Burrack replied that the Postdoctoral Association was in favor of keeping the base rate at the new level. Kyba said that since market forces will be a factor in compensation without setting a base rate, setting this rate may limit PI flexibility. Scott Lanyon, vice provost and dean of graduate education, Graduate School, said that the Twin Cities deans have not advocated for a lower base rate for postdocs, and are in favor of keeping the base rate at \$47,476.

Jayne Fulkerson asked if OHR could pull data on the average number of part-time postdocs and the average amount of time spent in their position, which may help to track if postdocs are having their appointments reduced. Lanyon noted that his office surveyed HR leads in the colleges to ascertain how many postdocs have had their appointments shortened due to the increase; four in the College of Pharmacy have had their appointments shortened, and possibly a few postdocs in the College of Biological Sciences.

Levine asked about training grants, and asked if the University should be paying graduate students' tuition. Lanyon responded that this is a typical practice, and any change would have huge implications to the institution.

Kyba noted that the NIH rate for fellowships is at the \$47,476 rate for 0-level postdocs, a very competitive rate; he said there is a bit of a disconnect if the University offers this same rate for postdocs who are unfunded. Burrack replied that postdoctoral fellows are not considered employees of the University, and have different benefits, taxes, etc. She said that in many ways, postdocs funded by fellowships are actually penalized. PI's are able to supplement postdoc pay with non-sponsored funds, she added. Brown and Lanyon noted that they had met with the Postdoctoral Association, and that they would explore the possibility of bringing postdoctoral fellows the same benefits as postdoctoral researchers.

Ly asked about salary compression created by the increase. Burrack responded that the Postdoctoral Association is concerned about salary compression, but are still appreciative of the new rate. She added that a tiered system based on years of service can help this issue. Brown replied that the Postdoctoral Associate is a three to five year job classification, and after that time, they should be moved into a research job family; this will level out salary compression issues, she noted.

Kyba asked what the institution could do to help faculty manage these increased costs, while helping postdocs remain in their positions, since training programs may suffer. Lanyon said that while dealing with these issues on a case-by-case basis is not ideal, it is probably working in the short-term, as colleges are likely to help their productive faculty and postdocs. In the long-term, he said, PIs need to look at their postdoc strategy.

Hearing no further business, the meeting was adjourned.

Barbara Irish

University Senate Office