**PLT RESEARCH INFRASTUCTURE**
**SUBCOMMITTEE REPORT**
**JUNE 4, 2004**

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**Introduction**

The PLT Research Infrastructure Subcommittee met several times during the spring semester 2004 to discuss the state of research infrastructure on the UMBC campus, and to make recommendations for improvement. We used as source documents the task force report of May 31, 2000 on the Research Culture and Environment at UMBC, the Graduate School Self Study of 2002 and the external Graduate School Review of November 13, 2002. Each of these reports made specific recommendations and suggestions, and the PLT Subcommittee used these as a starting point. In addition, we solicited input from a variety of constituents, both faculty and staff, including representatives of the library, physical plant, OIT, EHS, and the administration. Finally, meetings were held with department chairs and with the Research Council, at which feedback was solicited.

As noted by the Graduate School Review, "The overall accomplishments in these areas [graduate studies and research] are impressive..." Nevertheless, this report warned that, "...further progress requires a firmer foundation on which to be built. Indeed, in our judgment, simply sustaining the current array of graduate and research programs requires significant investments in infrastructure, particularly within the Graduate School itself, and fundamental changes in certain aspects of campus culture and some realignment of priorities." The Review also made specific suggestions, which will be considered in the body of this report.

In order to comply with UMBC's mission as a research university, the committee believes that three basic principles must guide the development of research support infrastructure.

• *A representative of the research enterprise must be involved in decision making at the highest levels of the institution.*

• *Faculty in all areas must be provided with appropriate infrastructure and support to enable them to conduct research/scholarship, safely and effectively.*

• *A decentralized incentive structure for internal funding should be provided to enable most funding decisions to be made at the college/departmental level, and to provide an incentive structure that rewards faculty for research activity, particularly on-campus activity.*

**Current State of the Infrastructure**

As the Self-Study of the Graduate School (2002) states (p. 63), "Although UMBC's research effort has grown substantially, service provided to faculty members has not kept pace." This is an important observation, and the consequences of decreasing support to faculty for research threaten UMBC's status as a research university.

Infrastructure for support of research takes several forms, each of which is important, to enable faculty and students to maximize the results from their efforts. Most important are the creation of an atmosphere at all levels of the campus that is supportive towards research, and the recognition that support of research activity is a high priority. This requires that decisions at the highest level be made with research in mind and with appropriate input. The current administrative structure provides for a Vice Provost for Research, who also is also responsible for graduate studies in his role as Dean of the Graduate School. The committee believes that this structure provides neither adequate attention to the needs of the research enterprise nor the necessary input at the upper levels of the administration.

*Direct Support – New Faculty*

A major consideration in hiring outstanding research faculty is the existence of an adequate startup package. These startup costs for new faculty are handled at the Dean level (Arts & Sciences or Engineering), although funding is provided through the office of the Vice Provost for Research and Dean of the Graduate School from DRIF funds. Amounts, and even the existence, of startup funds are highly variable, depending upon the department that the new hire will be joining, the amount of the request, and the skill of the department chair in negotiating. Startup allocations in Science and Engineering are somewhat lower than other Research I institutions, and funding for startup in the Arts, Humanities and Social Sciences is minimal, or even nonexistent in many cases. Startup funds may be used by a new faculty member for summer salary, equipment and/or supplies, but rarely for personnel (technicians, graduate students or postdocs). The current budget for startup costs is under severe stress, with only ca $600,000 being allocated across campus for FY 2005. In addition, this account has a significant deficit. A mechanism to address the inadequate amount of available startup funds must be a major priority.

*• Direct Support – Current Faculty*

A variety of support is available to current faculty for research related expenses. Faculty can occasionally obtain support for travel, publication costs, supplies and equipment from the Deans' accounts, although funding in Arts &Sciences for this type of support has diminished considerably in recent years. The Vice Provost for Research oversees annual funding for Summer Faculty Fellowships and Special Research Initiatives. These funds provide support to new faculty and to pilot projects, and are intended as an incentive for faculty to obtain preliminary data so that they can then secure external funding. It is not clear to what extent these awards are successful in acting as seed money for external funding. An important source of research support, particularly for faculty in the Arts, Humanities and Social Sciences has been faculty leave to conduct research in the form of awards from the Provost's office. However, budget cuts have resulted in these awards being eliminated in the past year. A university-wide

computer replacement initiative is intended to provide all faculty members with sufficient computer power for teaching and research, and this initiative is working well. In Science and Engineering, there are a machine shop, a glass shop, and a photographic facility, all of which are staffed, but are not university-wide facilities and are instead supported at the Department level. An annual workshop devoted to the grant application process is run by MIPAR. An incentive for faculty to obtain external funding for their research is the ability to obtain 12 month funding with benefits through the Sponsored Research Appointment provision.

• *Library*

The library is an important research component for all faculty members, but particularly for those in the arts, humanities and social sciences. The state of the library holdings and service was documented in the task force report of May 31, 2000 on the Research Culture and Environment at UMBC. Little has been done since that time to address the deficiencies found in that report. In fact, FY04 budget cuts and inflation pressures contribute to a shortfall this year of $345,000 in the materials and serials budgets. It is crucial that support for the library be increased.

• *Office of Sponsored Research*

The Office of Sponsored Research (OSP) provides direct support for grant and contract funded research. The addition of PeopleSoft has increased the complexity of this operation, and OSP is now running two separate databases to track grants and contracts. Because of these increases and limited resources, OSP has not been proactive in providing information to sponsors as required by federal regulation (resulting in a possible impact on future funding) or to other central or departmental administrative units. Potential audits from federal sponsors are of concern for OSP. Federal regulations and oversight are increasing in human subject protection; animal welfare issues; conflict of interest; research misconduct; data acquisition, management and ownership; mentor/trainee responsibilities, publication practices; peer review; and collaborative science.
Faculty are concerned that OSP does not provide services comparable to other university offices, such as assistance with the preparation phase of the proposal. This is especially true for the Arts and Humanities. The 2000 DS-2 audit noted a deficiency at UMBC in developing written policies and in communicating these policies to the campus. Since then, many of these items have been addressed but many more await execution.

• *Environmental Health and Safety (EHS) and Radiation Safety*

UMBC has an EHS office to monitor these areas and make sure that we are in compliance with federal regulations. This office is understaffed (3 full time positions) relative to other universities, which have 10 - 40 persons in environmental safety and health departments. For example, numbers of full-time professional staff at PLT exemplar institutions are: UDelaware (13), UCSB (33), UPittsburgh (10), Carnegie Mellon (10). Radiation Safety is handled through the Radiation Safety Office at UM,B, which appears adequate for our needs at this time.

• *Facilities and Management*

Maintenance of facilities, both routine and emergency, is a crucial aspect of support for research. This topic was discussed in great detail in the Research Infrastructure Task Force Report of 2000. This area has shown significant improvement since that report, and the details are documented in the appendix.

**Status of the Recommendations of the Research Culture and Environment Task Force of 2000**

The Task Force Report of 2000 recommended that a series of steps be undertaken in several areas:

- Creation of a Research Council
- Grants Management
- Facilities and Management
- The Library
- Faculty Development
- Incentives to Seek Outside Funding
- Graduate Assistantships

The first goal, creation of a Research Council, has been achieved, and there has been significant response to the facilities and management issues. However, most of the other recommendations have not been implemented. This PLT Research Infrastructure Subcommittee strongly believes that, with few exceptions, the recommendations of the previous Task Force are still worthy of implementation. An evaluation of the status of the recommendations of the Task Force of 2000 is included in this report as an Appendix.

**Recommendations of the Subcommittee**

*1. A representative of the research enterprise must be involved in decision making at the highest levels of the institution.* A recent article in Project Kaleidoscope reviewed the success of the UMBC Meyerhoff Program and examined the components that made it work. The final paragraph states: "Also of special note, the high level campus administrative support… appears to be a critical component that has made a substantial difference in the implementation and ongoing effectiveness of the program at UMBC. It remains unclear to what extent intervention programs … can succeed when high level university administrators are not actively involved." The same can be said for research.

*1a. A Vice President for Research should be appointed to enable university-wide decisions to have appropriate input from the research enterprise.* The Vice President for Research should report directly to the President. (S)he should be responsible for achieving the university's research goals, including planning, developing and administering research policy and procedures for UMBC, technology transfer, regulatory compliance, intellectual property and economic development. The committee believes that it is crucial for the development of UMBC to have a full time advocate of research at the highest level on campus.

*1b. The Vice President for Research should be provided with the necessary staff and budget to accomplish these goals.*

*2. Tenure-track faculty in all areas (arts, humanities, social sciences, sciences and engineering) must be provided with the necessary infrastructure and support to enable them to conduct research/scholarship.* In keeping with the research orientation of UMBC, research faculty must have appropriate tools and infrastructure specific to their discipline to enable them to conduct state-of-the-art research, whether or not this research is appropriate for external funding.

*2a. Adequate startup funds must be provided for new research faculty in all departments.* These funds may range from relatively small amounts for summer stipends and travel to larger amounts for those whose research requires sophisticated equipment. Without these funds, UMBC cannot be competitive in hiring and keeping the best research faculty. Funds for summer salary for new faculty should come from the startup budget and not from SRIS summer salary support.

*2b. The Humanities Center should be transformed into a research entity as well as a teaching entity, starting with funding of a graduate assistant for the Center.* The funding of other Centers for the arts, humanities and social sciences should also be considered, as well as those in the sciences. The object of such a research Center would be to support faculty research in the humanities by encouraging interdisciplinary collaboration, building a humanities community on campus, increasing scholarly interaction among UMBC faculty and visiting faculty from other institutions, and providing access to a common area where faculty from various disciplines could meet. All of these activities directly affect research productivity and help maintain an environment suitable for humanities research at UMBC.

*2c. The Library needs to be adequately funded, as proposed in the Research Task Force Report of 2000.* Access to electronic journals needs to be enhanced, as well as restoration of the library materials budget, including FY04 cuts and serials/subscriptions cuts and inflation ($345,000), acquisition of major databases - Web of Science (citation databases--$141,957) and SciFinder ($7,700). Additional personnel are needed, which should include two staff lines - one professional librarian and one support person.

*2d. The Office of Sponsored Programs needs to be adequately staffed and funded to provide both pre-award and post-award service to all faculty, including uniform campus-wide grant management support with area-specific grant managers.* The doubling of UMBC grant/contract funding over the past 5 years, with little increase in OSP staffing, has diminished the services provided to research faculty, such as training in grant writing, editorial commentary on applications and assistance in locating funding. OSP staff should include a compliance officer and a grant writer to provide faculty with special assistance to locate grant funding sources, interpret guidelines, and to advise and assist with proposal submissions. There must be training of OSP staff in discipline-specific grant procedures in order to aid faculty with their grant applications. Workshops and services to promote grant applications also need to be developed.

*2e. The Provost's Awards for research leave, or a similar program, should be restored.* Access to research leave is essential for faculty productivity across the university. Visible support for research in this manner also provides incentive for faculty to be productive researchers. Some of these awards should be earmarked for mid-career faculty.

*2f. The Environmental Health and Safety Office needs to be adequately staffed.* It is important that this office have the necessary staff, as the EPA has been conducting safety inspections throughout the country. Examples of recent fines are: MIT ($550,000), Yale ($69,000), Brown ($500,000), Manhattan College ($111,000). Several of these fines were for unsafe laboratory practices. It is the responsibility of EHS to monitor these operations. EHS has one person with expertise in the chemical sciences, but is in need of someone to monitor the biological sciences.

*2g. The Office of Information Technology needs to be adequately staffed.* This office could be expanded to provide more immediate service to research faculty and students.

*2h. A method for bridge funding for productive faculty needs to be developed.* Productive faculty that lose funding for short periods of time need to be able to continue their research programs without the necessity of shutting down their laboratories. Some mechanism for enabling these faculty members to continue research needs to be developed. In keeping with other recommendations of this document, this funding should be at the Dean or departmental level.

*2i. Core facilities and service centers should be developed to encourage innovative and interdisciplinary research, with charges to grants and contracts as appropriate.* New areas of research often involve the use of equipment and facilities that are either unfamiliar to an individual investigator or that are beyond the financial resources of one individual or even a single department. Facilities that serve more than one faculty member, and often more than one department, should be developed. If these facilities can be provided by the institution, possibly through the collaboration of departments, then individuals on campus can more easily initiate research in new areas and can have access to needed facilities that they cannot afford to access individually. Partial funding for these service centers could be obtained through charges to grants and contracts in many cases. A current example of such a core facility is the mass spectrometry facility operated by the Chemistry & Biochemistry Department with additional funding from the Biological Sciences and Chemical & Biochemical Engineering Departments and the Vice Provost for Research. This facility provides mass spectrometric services, including consulting, to faculty in all three departments. Another example of a core facilities might be an imaging/printing facility that could be useful to the arts departments and the science/engineering departments.

*2j. Incentives are needed for faculty to conduct research, especially on campus research.* Teaching loads for research-active faculty must be commensurate with loads at other, established research universities. Productive faculty with a special need should be considered for internal fellowships, such as the Provost's awards, and funds at the Dean's level to enable a rapid response to relatively minor research related expenses (<$2000). Research related activities on campus should not shut down during holiday periods (Christmas, Spring Break, etc). Ordering

and receiving supplies, access to the Library, etc must be maintained in order to enable faculty to continue research activities during these periods. Other needs of graduate students and other researchers (e.g. food service) at off hours, such as weekends, need to be addressed as well. An inventory of UMBCs capabilities (equipment, facilities, etc) should be developed to make faculty aware of the campus assets. This should include old computers, equipment, etc that may be of use to others.

*2k. Necessary support personnel must be available to research active faculty.* This includes machining, electronics, computer personnel, photographic services and departmental technicians. These may be part of service centers, as discussed in 2i.

*2l. The number of graduate assistants and their stipends must be increased across departments.* The lack of adequate financial support for graduate assistants severely hampers the recruitment of graduate students, and consequently research productivity.

*2m. A provision for research leave for junior faculty should be made.* Junior faculty are in particular need of release time for research. In addition, such leave provides a tool for recruiting top faculty. Junior leave has become standard at comparable research institutions.

*3. A decentralized incentive structure for funding must be provided to enable many funding decisions to be made at the college/departmental level, and to provide an incentive structure that rewards faculty for research activity, particularly on-campus activity.* The research activity at UMBC has clearly outgrown the current funding mechanism, from the perspective of both developing and distributing funds. The most obvious example is the difficulty in funding startup costs for the science and engineering departments. Both additional funds and a new method of allocation of these funds are necessary.

*3a. A mechanism of allocating startup funds to departments on an annual basis should be explored.* The current mechanism, which allocates funds on a "when needed" basis makes it impossible for Deans and Department Chairs to rationally plan for faculty hiring. Even if the total amount of funding for startup costs is not increased (and it needs to be!), a knowledge of the resources available will allow linkage of faculty hiring to budget considerations.

*3b. Review and revise DRIF allocations, including the development of a written policy for management of DRIF and SRIS.* A majority of DRIF should be returned to support research activities rather than being used as general funds to support unrelated campus activities. Spending of DRIF dollars should be reported in a transparent and coherent manner. We need to think of DRIF as funding the true cost of research, and not just as a revenue stream. An analysis of DRIF should be undertaken, so that an intelligent conversation about its use can be begun.

*3c. Funding should be allocated to Deans and/or departments for support of research at the local level.* Examples would be support for publication costs, computers, monograph costs, permission fees, reprint services, photographic services, etc. Quick access to small amounts of funds (<$2000) for these types of costs is crucial.

*3d. Funding for faculty travel at the Dean's level must be restored.*  Travel to professional meetings is essential to the process of scholarly development.  Travel to at least one conference per year should be fully funded for research active faculty.  Travel to two conferences per year should be the goal.

*3e. College/departmental based fund-raising should be considered.*  The possibility that funding for specific departmental-based initiatives might be facilitated through decentralized fund-raising should be explored.  Targeted fundraising for research is important, and this may be best done at the college/departmental level.

*3f. A model for space allocation within departments based upon research success, as measured through discipline-appropriate metrics, should be explored.*  Space is a limited resource that will influence the ability to increase research activity.  Although it is preferable that space allocation be managed at the department level, departments that are particularly successful in their research may need additional space.  At present, there are few options to provide them with the space they need.  The TRC, which has been our overflow area, is now fully occupied.  In addition, the humanities and arts departments have long outgrown their allocated space in the Fine Arts Building.

*3g. Restrictions on the use of grant and contract funds must be reduced.*  The most egregious example is the inability of PIs to offer salary increases from grant funds to staff in their laboratories during university wide salary freezes.  These types of restrictions hinder PIs from effectively managing their budgets and can cause loss of valuable personnel.

**Priorities**

The Subcommittee has identified three important areas as the highest priority.

- The Subcommittee believes that the appointment of a Vice President for Research is the most important step that can be taken for the improvement of the research infrastructure of UMBC.  A Vice President for Research will ensure that the effects of university policy and decisions on the research enterprise are given high priority at the decision-making level.

- It is crucial that the entire support system for grant and contract funded research be overhauled, so that it is responsive to the needs of its constituents.  The lack of uniform, campus-wide grant management support is the biggest difficulty facing funded faculty with regard to research.  It was viewed by the Research Culture and Environment Task Force of 2000 as "the single highest priority," and a "crisis," and there has been no significant change for the better since that time.

- The library must be supported at a level commensurate with a research institution.  This concern was addressed forcefully in the Research Task Force Report of 2000, but the situation has not improved since that time.

In addition, although almost all of our recommendations require additional funding, some of these recommendations require only modest additional funds (2b, 2e, 2m, 3a, 3b, 3e, 3f, 3g), and these recommendations can be readily implemented.

Finally, it is important to revisit and implement the recommendations of the Research Culture and Environment Task Force of 2000.

**APPENDIX TO PLT RESEARCH INFRASTUCTURE**
**SUBCOMMITTEE REPORT**
**JUNE 4, 2004**


**STATUS OF THE RECOMMENDATIONS OF THE RESEARCH TASK**
**FORCE OF 2000 AS OF May 31, 2004**

*Recommendation 1. Creation of a Research Council*

*Recommendation 1A: The Task Force recommends that, effective Fall semester 20001, UMBC establish a Research Council***:**    This Research Council has been established and is functioning.

*Recommendation 1B: We recommend that the Research Council begin a discussion of decentralization of research support, using models found during the site visits, and present a model of "best practices" to the Faculty Senate for review by April, 2001.*  The Research Council has not done this, and to the knowledge of this committee, there have been no formal discussions, although many informal discussions on this topic have been held at various administrative levels.

*Post Awards Grants Management***.**  The report stated that "without question the single highest priority of the majority of the members of the Research Task Force is to solve the post awards grant management problem, which is perceived by many as a crisis."  It is obvious to all on campus that this situation has gotten much worse since that time, as virtually no information is available to PIs.  The PLT subcommittee notes that the grant management module of PeopleSoft may not be an appropriate solution to this problem in the long term.  Both a short term solution and a long term plan are necessary.

*Recommendation 2: We recommend that the University provide an electronic grant budgeting and tracking system, based in the short term on Award Trak, with sufficient training and support to be implemented within the first three months of FY2001.*  Quite a few departments have implemented this system, although it was done through the departments and it is not university-wide.  This system, however, is functioning poorly at present due to the lack of adequate financial reports to the departments.

*Recommendation 2A:  UMBC should develop a hierarchy of support for grants management so that communication across Academic and Administrative Affairs units are clear and that lines of communication flow directly from central grants administration to the academic units and vice versa.*  While the "hierarchy" that was envision is in place, it is apparent that communication among the involved units is still less than optimal.  We note here also that there seems to be some duplication of functions in this area, particularly in the area of budget review.

*Recommendation 2B: We recommend that UMBC should immediately begin to develop a comprehensive training program for staff performing grants.*  There has been no program

developed on campus to meet this need. The only discernable difference in this area has been the introduction of business managers' meetings, which do not provide the necessary training.


*Recommendation 2C: We recommend that all staff performing grants management should have a modern desktop computer (Pentium 233 or greater with at least 128MB of RAM capable of running the latest version of Microsoft Office and Netscape:* Computer access for grants management staff appears adequate.

*Recommendation 2D: We recommend that the University Computing Center establish a six month contract with Rebecca Barker of BecTec Solutions, the developer of AwardTrak, to produce enhancements to AwardTrak.* This recommendation was implemented.

*Recommendation 2E: UMBC should add to the UCS a new position that will provide support for grants management software within the context of our Financial Systems group.* This has not been implemented.

*Recommendation 2F: The hierarchy established under Recommendation 2A will be responsible for monitoring the success of the deployment of AwardTrak across the UMBC campus and the success of the implementation of EShadoe at College Park. By February 2001, this group should determine if, as we begin to implement the new financial, human resources, and student information reporting system at UMBC, it would be more sensible to continue developing AwardTrak or move to another system such as EShadow for Fiscal Year 2002.* We are not aware of any study of the two systems that has been done, but it is appears that UMBC will depend on PeopleSoft for grants management. There is some skepticism on campus about whether this is the correct decision.

*Recommendation 3: Facilities and Management*

*Recommendation 3A: UMBC should in FY 2001 hire a qualified person to supervise the "research physical plant," including construction and renovation of facilities.* Mark Demshak was hired for this position, although he has left UMBC, and there is no one in that position at the present time. There is currently a search going on for his replacement.

*Recommendation 3B: Physical Plant should, as soon as possible, receive a new line with which to hire a technically sophisticated person who would be the focal point for receiving all requests for all repairs needed in the science and engineering labs.* A new person, Marjorie Gill was hired in this position.

*Recommendation 3C: A guidebook explaining physical plant policies should be written.* Physical Plant policies have been posted on the web.

*Recommendation 3D:  A system for monitoring and tracking repairs must be implemented immediately:*  The current work management system is being updated, and new systems are being evaluated.  The cost of new software has been estimated to be about $100,000.

*Recommendation 3E:  Inspection and documentation of systems installed by outside contractors must be mandatory:*  This is now routinely done.

*Recommendation 3F:  A technical point of contact should be established for each building or group of buildings:*  See 3B.

*Recommendation 3G:  An adequate number of technicians must be provided to physical plant to make sure that prompt service is provided***:**  Although service from physical plant has improved, more people are still needed, particularly in the areas of HVAC, electrical and plumbing.

*Recommendation 4: The library as a research facility.*

*Recommendation 4A:  The task force recommends that for FY 2001, the library's budget be augmented by an additional $100,000 for materials and staffing, over and above what is needed to continue the current level of staffing, subscriptions, and book and monograph acquisitions:*  This recommendation has not been implemented.

*Recommendation 4B:  That in each year between FY 2002 and FY 2007, the library's base budget be augmented by additional increments of $100,000 per year, over and above what is needed to cover inflationary expenses:* The library budget has received no increases above inflationary increases, which have been funded until this fiscal year. This fiscal year, the library absorbed a 5% budgetary cut in journal subscriptions and a $25,000 cut in monograph purchases.

*Recommendation 5:  Faculty Development*

*Recommendation 5A:  We recommend that the Vic-Provost for Academic Affairs undertake a survey of all PCs currently used by UMBC full-time and part-time faculty, to ascertain the age, power and platform of the PCs:*  This was not done, as it would have required significant resources.

*Recommendation 5B:  We recommend that by September, 2001, all faculty with PC's that are five years old at that time receive funds with which to purchase up-to-date computers.  We further recommend that a policy with regard to the purchase of peripheral equipment also be developed:*  Access of faculty to computers at the present time appears to be adequate or nearly adequate.

*Recommendation 5C:  In order to continue an orderly progression towards meeting the IT Committee's proposal for a three year replacement policy, we recommend that by September 2002, all faculty with PC's that are four years old by that date receive funds*

*with which to purchase up-to-date-computers.  We further recommend that the policy developed earlier with regard to peripheral equipment be adequately funded:*  No policy has been developed as yet.

*Recommendation 5D:  We recommend that by September 2003, funds be made available so that the three year replacement policy recommended by the IT Steering Committee can be implemented:*  No additional funds beyond the ca. $100,000 per year that was in place for this purpose in 2000 have been allocated.

*Recommendation 5E:  We recommend that the Provost (or the Vice-Provost for Academic Affairs) immediately set aside $20,000 for the creation of a Laptop Lending Library, to be run either by UCS or the Deans' offices, for the use of faculty needing to borrow laptop computers for field research or conference presentations:*  About 6 laptops for lending were purchased.

*Recommendation 5F:  With regard to supplementary budgetary support, the Research Task Force further recommends that the UMBC computer replacement policy be supplemented immediately by the allocation of funds to the operating budgets of those departments with demonstrated shortfalls in their existing computer resources:*  This recommendation was not implemented.

Recommendation 5G:  *We recommend that over the longer term the administration consider phasing out the Replacement Initiative, devolving the amount of funds to the individual departments and programs:*  This policy has not been implemented.

*Recommendation 5H:  We recommend that the Office of the Provost undertake a survey of salaries of junior faculty, to ascertain the actual dollar value of 50% of the median academic year salary of UMBC junior faculty in FY 2001:*  Although this survey does not appear to have been carried out, the dollar value of these awards was increased (see below).

*Recommendation 5I:  We recommend that the figure determined under Recommendation 5H above, or a higher figure, become the new value of the award for FY 2001:*  These awards were increased to $30,000 for FY2002.

*Recommendation 5J:  We recommend that the yearly award be indexed by the annual rate of inflation, or the annual percentage salary increase for University of Maryland faculty, or the annual percentage increase for junior faculty:*  Not implemented.

*Recommendation 5K:  We recommend that this program be expanded, so that more faculty can receive Research Fellowships:*  There was no expansion of the number of these awards, which was 3 in AY 2000-2001, AY 2001-2002 and AY 2002-2003.  In academic year 2003-2004, this program was suspended for FY 2004.

*Recommendation 5L:  We recommend that departments be given funds to hire part time faculty to replace faculty who receive UMBC Research Fellowships.*  The Dean of Arts

and Sciences has been passing on the money from the Provost's office that has been given to him for this initiative. Typically, this has been about $25,000 per year, except for AY 2002-2003, in which there was no money from the Provost's office, but in which the Dean still reimbursed the departments.

*Recommendation 6: Incentives to seek outside funding: We recommend that one business manager position for the use of academic departments be created in FY 2002:* This has not been done.

*Recommendation 7: It is recommended that the support gap for graduate assistantships between UMBC and UMCP, that is, the number of graduate assistants as a percentage of the graduate student population, be closed over a five year period. To do this, UMBC should set a goal of adding $400,000, or about 20 FTE graduate assistantships per year, to the base budget over a 5-year period:* Although there has been a large increase in the total GA budget since FY 2001 (ca. 25%), it is not clear how much of that is real. That is, some or all of this increase may be due to moving tuition expenses into the GA budget.