Program Review

Biomedical Sciences
Master of Science (M.S.) Program

Joan C. Edwards School of Medicine

November 2009
Program Review
Marshall University

Date: __November 6, 2009__________________

Program: __Master of Science (M.S.) Program in Biomedical Sciences__

Date of Last Review: ___2004_______________________________________________

Recommendation
Marshall University is obligated to recommend continuance or discontinuance of a program and to provide a brief rationale for the recommendation.

Recommendation

Code (#):  
1. Continuation of the program at the current level of activity; or
2. Continuation of the program at a reduced level of activity or with corrective action: Corrective action will apply to programs that have deficiencies that the program itself can address and correct. **Progress report due by November 1 next academic year; or**
3. Continuation of the program with identification of the program for resource development: Resource development will apply to already viable programs that require additional resources from the Administration to help achieve their full potential. This designation is considered an investment in a viable program as opposed to addressing issues of a weak program. **Progress report due by November 1 next academic year; or**
4. Development of a cooperative program with another institution, or sharing of courses, facilities, faculty, and the like; or
5. Discontinuation of the program

Rationale for Recommendation: (Deans, please submit the rationale as a separate document. Beyond the College level, any office that disagrees with the previous recommendation must submit a separate rationale and append it to this document with appropriate signature.)

_1____ Vernon Reichenbecher and Richard Niles  
Recommendation: Signature of person preparing the report:  
Date: 11/6/2009

_1____ Vernon Reichenbecher and Richard Niles  
Recommendation: Signature of Program Chair:  
Date: 11/6/2009

_1____ Charles H. McKown  
Recommendation: Signature of Academic Dean:  
Date: 11/6/2009

N/A  
Recommendation: Signature of Chair, Academic Planning Committee: (Baccalaureate pgms only)  
Date:

_1____ Eldon R. Larsen  
Recommendation: Signature of President, Faculty Senate/ Chair, Graduate Council:  
Date: 1/22/2010

Recommendation: Signature of Provost and Senior Vice President for Academic Affairs:  
Date:

Recommendation: Signature of the President:  
Date:

Recommendation: Signature of Chair, Board of Governors:  
Date:
College/School Dean’s Recommendation

Deans, please indicate your recommendation and submit the rationale.

**Recommendation:**

Recommend continuation of the program at the current level of activity.

**Rationale:**
(If you recommend a program for resource development identify all areas for specific development)

The Master of Biomedical Science degree program offered by Marshall University, contributes to the mission of Marshall University and the School of Medicine by providing high quality education and research to students interested in science. The interdisciplinary program provides students with a broad-based background while allowing the student to pursue a specific area of interest.

In today’s world of unprecedented scientific discovery, both in terms of understanding disease processes and the development of new therapeutics, individuals skilled in high quality research knowledge and techniques are making significant contributions to the fields of scientific endeavor. The Master of Biomedical Science Program continues to train students who can contribute to the betterment of society through science.

The program serves as a catalyst for extremely productive research programs and the recruitment and retention of highly skilled faculty. The essential nature of these programs contributes to the continued accreditation of the medical school, the national reputation of Marshall University, economic impact on our region thorough competitive research grant awards and the education of WV students in the scientific arena. The program serves as a pipeline for students wishing to enter medical school or other graduate programs by enhancing their foundation in the sciences.

Therefore, I enthusiastically endorse the continuation of the Master of Biomedical Sciences program.

Charles H. McKown, Jr., MD

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Signature of Vice President for Health Sciences and Dean of the SOM

11/6/2009

Date
Marshall University  
Program Review

For purposes of program review, the academic year will begin in summer and end in spring.

Program: Master of Science (M.S.) Program in Biomedical Sciences  
College: Joan C. Edwards School of Medicine  
Date of Last Review: 2004

I CONSISTENCY WITH UNIVERSITY MISSION

BIOMEDICAL SCIENCES MISSION STATEMENT

The basic science departments of Marshall University School of Medicine offer graduate studies leading to the Master’s of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Biomedical Sciences (BMS). The primary mission of the BMS Program is to graduate students who are broadly based in the biomedical sciences with interdisciplinary training in one of the following current research clusters: Cancer Biology; Cardiovascular Disease, Obesity and Diabetes; Neuroscience and Developmental Biology; Toxicology and Environmental Health Sciences; and Molecular Mechanisms of Pathogenesis. The program is designed to be flexible and research oriented in order to develop the academic and technical capabilities of all students pursuing careers in academia or in the commercial biomedical industry. Since these research clusters cut across departmental boundaries, they provide each student with the opportunity to obtain a broad, diversified background in biomedical research. In addition to the core courses in Foundations of Biomedical Science and Statistics, the program places particular emphasis on communication skills, with a communication course that requires specific speaking and writing assignments. In addition, every semester students participate in a broad-based BMS Seminar Program and attend a comprehensive series of invited lectures from nationally recognized biomedical scientists. The BMS program also offers a non-thesis M.S. with an area of emphasis in Medical Sciences. This track is designed to help the competitiveness of students who wish to gain entry to allopathic or osteopathic medical schools. Students take a set curriculum with a few elective courses in mostly the second year. An attractive feature of this program is that these students take a number of the same courses and at the same time as medical students.
The BMS program contributes to the mission of the School of Medicine, i.e. to train competent new physicians and to advance medical knowledge through research, in that students in our program either help in producing new knowledge in biomedical research or in providing a source of highly qualified applicants for training as physicians by our School of Medicine. Likewise we contribute to the mission of Marshall University by providing education and training that will enable our students to contribute to society in either biomedical research, government administration of research, or as physicians providing care to patients. The program also contributes to the University's goal of advancing knowledge through the research performed by our students as part of their thesis or dissertation.

II  ACCREDITATION INFORMATION

Not applicable.

III  PROGRAM STATEMENT on Adequacy, Viability, Necessity and Consistency with Mission

A.  ADEQUACY

1  Curriculum: See Appendix I.

The BMS Program offers both thesis and non-thesis Master of Science (M.S.) degrees. All students are required to complete core courses in foundations of biomedical science, statistics, communication skills, seminar, and introduction to research. In addition, each research cluster has some additional specific course requirements for students who choose to do research in their cluster (see Appendix I). Students in the Medical Sciences area of emphasis take a standard two year curriculum with a number of elective courses especially in the second year. These students also must take the core courses in the BMS program. Thirty-six credit hours are required for a non-thesis Master’s and 32 for a thesis Master’s.

2  Faculty:

At present (Oct., 2009), the BMS faculty consists of 32 full-time faculty in the three basic science departments (Anatomy and Pathology; Biochemistry and Microbiology; and Pharmacology, Physiology and Toxicology) within the Joan C. Edwards School of Medicine. We do not have part-time faculty and have no immediate plans to employ such faculty members. Seven additional faculty from other clinical departments in the School of Medicine or departments in the College of Science hold joint appointments,
with various levels of graduate faculty status that enable them to participate in training of graduate students. Of the 39 full-time faculty, 23 are tenured. The rank of full-time faculty consists of 17 full professors, 11 associate professors and 11 assistant professors. Compared with the previous five year report, we have a recent trend toward an increased number of associate professors. We believe this is due to 1) state and national infrastructure grant awards which allow for the hiring of faculty at higher ranks, and 2) the economic recession which has allowed us to be more competitive and attract faculty at associate professor ranks to leave their university and come to Marshall. With the exception of new faculty, who have a one year grace period prior to assignment of teaching, all of the full-time faculty teach medical and graduate students. The BMS faculty have an exceptional record of teaching, research and service. This is documented in the Faculty Data Sheets (Appendix II).

3 Students

a. Entrance Standards:

Applicants to the BMS Program must meet the admission requirements of the Marshall University Graduate College and the Graduate Studies Committee of the Marshall University School of Medicine. Applicants must possess a baccalaureate degree with undergraduate-level course work including: one year of general biology, one year of general physics, one year of introductory chemistry, and one year of organic chemistry, all with associated laboratories. Qualified applicants are expected to have a minimum undergraduate GPA of 3.0 on a 4.0 scale. Applicant scores on the Graduate Record Examination (GRE) should total at least 1,000 (or average 6.5 on each part of the MCAT exam - medical sciences area of emphasis only). International students are expected to have a minimum score of 213 on the TOEFL exam. Three letters of reference are also required. Applicants to the M.S. degree program are accepted on a rolling admissions basis. These students are not eligible for an assistantship from the BMS program.

b. Entrance Abilities:

Currently, there are 26 BMS M.S. graduate students. The academic credentials of these students exceed the minimum requirements. Average admission values for these students are: undergraduate GPA 3.42, GRE verbal 478, GRE quantitative 633, and MCAT 23.1. This information is summarized in Appendix III.
c. Exit Abilities:

No standardized licensing or proficiency tests exist to measure the abilities of M.S. and Ph.D. degree graduates in biomedical sciences. Each graduate demonstrates his/her ability based upon performance in course work, successful completion of written and/or oral comprehensive examinations, and successful defense of the thesis or dissertation. See Appendix IV.

To qualify for the M.S. degree in Biomedical Sciences, a student must maintain at least a 3.0 GPA. A minimum of 36 credit hours for a non-thesis M.S. degree or 32 credit hours for a thesis M.S. degree is required. All students must pass Foundations of Biomedical Science (BMS 600), Statistics (PSY 517, EDF 517, or MTH 518), Communications Skills in Biomedical Sciences (BMS 660/661), Biomedical Sciences Seminar (BMS 680, 4 hrs), Introduction to Research (BMS 685), Thesis (BMS 681, M.S. thesis students only), and additional required course(s) as mandated by their area of emphasis. Elective courses approved by the student’s advisory committee provide the remainder of credit hours.

In addition to the successful completion of course work, the student must complete to the satisfaction of his/her advisory committee comprehensive subject-based examinations. Depending upon the requirements of the student’s area of emphasis, a thesis completed to the satisfaction of his/her advisory committee may be required for the M.S. degree. In cases where a thesis is required for the M.S. degree, the student must also orally defend the thesis to the satisfaction of his/her advisory committee. The advisory committee consists of three or more faculty members with appropriate expertise for the student’s area of emphasis.

4 Resources

a. Financial

Table 1. Personnel Support

<table>
<thead>
<tr>
<th>FY 2009</th>
<th>STATE</th>
<th>GRANTS/CONTRACTS/OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMS Faculty/Staff</td>
<td>$4,275,914</td>
<td>$762,961</td>
</tr>
<tr>
<td>BMS Student Stipends</td>
<td>$320,000</td>
<td>$155,800</td>
</tr>
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</table>
Table 2. Support Resources

<table>
<thead>
<tr>
<th>FY 2009</th>
<th>STATE</th>
<th>GRANTS/CONTRACTS/ OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>$100,000</td>
<td>$3,285,489</td>
</tr>
<tr>
<td>Oper. Budget Res./Grad Education</td>
<td>$150,000</td>
<td>$18,000</td>
</tr>
<tr>
<td>Oper. Budget 3 BMS Departments</td>
<td>$400,000</td>
<td>$45,000</td>
</tr>
<tr>
<td>Information Technology</td>
<td>$190,000</td>
<td>---------</td>
</tr>
<tr>
<td>Health Science Library</td>
<td>$500,000</td>
<td>---------</td>
</tr>
<tr>
<td>Animal Resources</td>
<td>$139,237</td>
<td>$43,484</td>
</tr>
<tr>
<td>Radiation Safety</td>
<td>$28,627</td>
<td>---------</td>
</tr>
<tr>
<td>Educational Equipment</td>
<td>$15,000</td>
<td>---------</td>
</tr>
<tr>
<td>Seminar Speakers</td>
<td></td>
<td>$10,000</td>
</tr>
<tr>
<td><strong>Total Table 1 &amp; 2</strong></td>
<td><strong>$6,116,778</strong></td>
<td><strong>$5,980,880</strong></td>
</tr>
</tbody>
</table>

In the current Joan C. Edwards School of Medicine budget, approximately $6,118,778 of the state-appropriated funds is allocated to the BMS program. This represents an increase from the amount allocated to the BMS program listed in the last five year program review ($5,068,772). This change is due in part to the increase in number of BMS faculty and increase in the operating budgets due to increased fee income from the Medical Sciences students. No program funds are used to provide stipends for M.S. students. The $320,000 dedicated to the student stipends in the BMS program is used to support the 13-14 Ph.D. stipends (assistantships) at $21-23,000/student. The remaining $155,800 is used to support 6-7 additional Ph.D. stipends. The bulk of these latter funds come from the STEM Fellows grant from the WV State Research Challenge fund. This grant was competitively renewed for an additional 4 years in January of 2009. It should be noted that not included in the Grants/Contracts/Other category is the large Infrastructure of Biomedical Research Excellence grant received in the summer of 2009. Although this is a state-wide grant, Dr. Gary Rankin, Chair of Marshall’s Pharmacology, Physiology and Toxicology Department is the PI and Marshall is the lead institution. This 5 year award amounts to ~$17.5 million over the five year period.

**Effect of Program Termination:** If the BMS program were to be terminated the state would recover the $320,000/year used for graduate stipends and administration of the program. Also the cost of administrative supplements to the Associate Dean, Director of Graduate Studies, one full-time staff member and one part-time staff member could be recovered. $182,721 in the animal resources budget might be recovered if the University decided to discontinue all research and training involving animals. However,
termination of this program would likely result in a loss of a significant number of productive faculty members who consider research and graduate education as essential to their professional development. This loss in turn would reduce the quality of medical education, because practicing scientists bring the latest information in their field to medical students and physician faculty members. Loss of this program would likely jeopardize accreditation of the medical school by the LCME. In addition if the BMS program were terminated most, if not all, of the collaborative thrust with the College of Science would be lost. It would likely result in many empty laboratories in the new Robert C. Byrd Biotechnology/Science building. Lastly, the University, through the BMS faculty, would likely lose a significant amount of F&A funds that accompany most of the grants awarded to our faculty. It should be noted that School of Medicine faculty currently bring in the majority of grant funds awarded to Marshall University.

b. Facilities

The majority of the BMS program is housed in the relatively new Robert C. Byrd Biotechnology Science Center located on the main campus of Marshall University. Most of the Anatomy section and all of the Pathology section of the Anatomy and Pathology Department is still housed in the Medical Education Building (MEB) on the Huntington VA Medical Center Campus. The BMS faculty and students currently occupy ~ 12,000 sq ft of laboratory space, ~3,200 sq. ft of shared core facilities and ~4,000 sq ft of faculty office space. The BMS administrative suite contains ~ 1,800 sq ft of office space for the Senior Associate Dean for Research and Graduate Studies, the Director of Graduate Studies and various staff members involved in BMS program affairs. The suite also contains a high throughput copier, computer grading equipment, a small kitchen and a conference room. Additional shared facilities with the College of Science include a 128 seat class room, and a 50 seat classroom. Both classrooms are equipped with ceiling mounted LCD projectors as well as video cameras for distance transmission of classes. There are also three large (350 sq ft) conference rooms equipped for video conferencing. Also a state-of-the-art animal resource center (~6,000 sq ft) is located on the first floor of the Biotechnology Center. The MEB contains ~ 74,887 sq ft of usable space. At the present time, approximately 20% of that space is used by BMS faculty, as well as some clinical faculty with active research programs. In approximately one year, the new Translational Genomics Research Institute will be completed. This facility is located on the top floor of the Edwards Cancer Center on the Cabell Huntington Hospital campus approximately one mile from the main campus. There will be a next generation sequencer located in the genomics core of this facility and the only one in the State of WV. In addition, there will be ~1400 sq ft of shared research laboratory space.
Students, faculty and staff in the Biotechnology Center have both Ethernet access to the main campus computer network, as well as WiFi access throughout this building. The IT infrastructure in the MEB includes a 110 port local area network based on Cisco Catalyst 4912 and 3524 switches with a fiber-optic, gigabit Ethernet backbone and Category 3 and enhanced Category 5 cable runs throughout the building, providing switched 10 Mbps or 100 Mbps service to all desktops. Wireless 802.11b ethernet connectivity is also provided in all classrooms, conference rooms, the computer lab, the student lounge and the health science library.

The main Health Sciences Library is located in the Robert C. Byrd Rural Health Center on the Medical Center Campus. It currently subscribes to 250 print journals and has access to 320 on-line journals. There is a branch library (3,000 sq ft) located at the MEB and shared with the Huntington VA Medical Center. Most students and faculty tend to use the electronic/on-line journals. This trend has been accelerated in recent years due to the popularity of "open access" journals that allow free access and download of their content. Thus the number of print journal subscriptions has been reduced by almost 70% from the last five year program report, the number of on-line subscriptions has increased from zero to 320 over the last five years. In addition many of the basic science departments have on-line subscriptions to specialty journals. This is supplemented with electronic delivery via email of articles that are not contained in the current holdings of the Health Sciences Library.

5. Assessment information

   a. Summary (see Appendix V for detailed information)

The previous five years of evaluations of our annual assessment reports are attached immediately following Appendix V.

Mastery of basic knowledge in the biomedical sciences is measured by performance of at least the level of grade “B” on examinations in BMS 600. An average of 92% of our students have met this benchmark. Major action taken included integrating the biochemistry and cell biology portion of the class and increasing the course from 3 to 6 credit hours.

Ability to make presentations of scientific material is measured by satisfactory performance on a seminar evaluation form. All of our students have met this benchmark. Major action taken included the addition of a scientific writing component of the communications course and the addition of a mini-symposium for Medical Science students.
Basic aptitude for scientific research is measured by a satisfactory evaluation of performance in three laboratory rotations. All of our students have met this benchmark. These laboratory rotations were implemented in 2005 as a result of the assessment of a need for more introductory laboratory experience.

Mastery of comprehensive knowledge of biomedical science is evaluated subjectively by each student’s advisory committee. Ninety-two percent of our students have met this benchmark. Study of the examination procedures led to the development of a unified style of exam for all students.

Mastery of comprehensive knowledge of biomedical science for Medical Sciences M.S. students is measured by a comprehensive objective exam. Students must obtain a score of 70% in order to pass. Seventy-five percent of our students met this benchmark. The exam is updated each year to reflect changes in course content.

The ability to design and conduct original biomedical research is measured by the successful completion and defense of a written Master’s thesis. No Master’s students completed a thesis during the period of this review, but several students are on track to complete a thesis in the next few years. As a result of analysis of our research program, action was taken in 2005 to change our areas of emphasis to reflect research areas, rather than discipline-based areas.

Student progress is also monitored in the following ways: satisfactory progress in research as judged by at least annual meeting by the student’s advisory committee; grades achieved in academic course work; performance on the MS comprehensive examination; research awards from either the BMS program or national professional societies; presentations at national or international scientific meetings; performance in the delivery of various types of seminars and lectures as evaluated by peers and the course director; and publications resulting from the student’s thesis research, and training grants applied for by, and awarded directly to, the student. For the students in the Medical Sciences M.S. area of emphasis, the metrics are GPA in programmatic course work, score on the MCAT national examination if taken while a student in our program, and medical school admissions. Another example of an action taken is to add another faculty advisor for the MS in Medical Sciences. This faculty member is assigned to the first year students and is proactive in helping students in solving academic course work problems.
b. Other Learning and Service Activities

The BMS students have a very active graduate student organization (GSO). They have helped the program in participating in our annual Open House for prospective students and in accompanying our graduate recruiter to colleges, where they give seminars and talk with prospective students. It should be noted that a representative selected by the GSO serves on the BMS program Graduate Studies Committee. This committee is the admissions and policy making body for the BMS program.

c. Plans for Program Improvement

As illustrated by the benchmarks in last year’s annual report the program has achieved a number of successes. However, there are four areas we have targeted for improvement. First, we wish to consistently achieve an 80% acceptance rate for medical sciences students who apply to allopathic or osteopathic schools of medicine. This is important because this area of emphasis brings a significant amount of funds into the BMS program. We are currently averaging 70—75% success rate for admission of our students into medical school. To bring this average to a higher level, we have an additional faculty advisor, Dr. Susan Jackman. She was chosen for her many years of service on our medical school’s admissions committee. Thus Dr. Jackman has the knowledge of what achievements and attributes are required to gain admission to medical school.

Time Line: August 2009 – Dr. Jackman agrees to serve as advisor for the first year students in the medical sciences area of emphasis.
September – December 2009. Dr. Jackman works with first year medical sciences students to prepare them for interviews by medical school admissions committee members. She also meets with students who are having academic difficulties and provides guidance and resources (tutors) for these students.
Spring semester 2010: Dr. Jackman counsels first year students who did not get into medical school in terms of strengthening their application or interview performance. She also works with students who will take the MCAT prep course and guides choices of courses for the second-year curriculum of the medical sciences area of emphasis.

Milestone: 50% of the first year students admitted into medical school by the end of the initial year and the additional 30% accepted into medical schools after completion of the MS in the medical sciences area of emphasis.

Second, we need to improve the quality and relevance of our BMS 600 course entitled “Biochemical, Cellular and Molecular Foundations of Biomedical Sciences.” BMS 600 is
our “flagship” course that all biomedical graduate students are required to take. Part of this course also serves as the biochemistry course for the Forensic Sciences students. The problems are that there have been too many different lecturers in the course, the biochemistry and cell/molecular biology sections are not integrated, and the different populations of students are not receiving non-lecture material (small groups, home work assignments, etc) to enhance their specific educational needs. To address these issues the Senior Associate Dean will convene a task force to review the course and produce a series of recommendations for action.

Time Line: January 2010, the Senior Associate Dean together with the course director appoints a task force consisting of a representative from each basic science department, a member of the forensic sciences program and two biomedical sciences student representatives; one from the Ph.D. track and one from the medical sciences area of emphasis. May 2010, the task force produces a written document containing a series of recommendations to address the problems outlined above. June 2010, after study by the Senior Associate Dean and in consultation with the basic science department chairs, recommendations for improvement to BMS 600 will be implemented. Depending on the recommendations, it may be necessary to phase them in over a two-year period.

Milestones: Course material integrated; student evaluation of the course at/or above 3.0 (1-4 scale, with 4 being the best score); non-lecture material customized for different populations of students.

Third, we need to increase the number of students applying for and receiving predoctoral fellowships. A long term goal of the BMS program is to increase the number of Ph.D. graduate students to approximately 40. As part of the financial plan to achieve this goal, we need to have more of our students supported by extramural predoctoral fellowships. We are progressing in this goal as evidenced by two students receiving NIH predoctoral fellowships this past ('08-'09) academic year, and several additional students getting partial national or state-funded NASA predoctoral fellowships.

Time Line: January 2010, proposal presented to Graduate Studies Committee recommending that Ph.D. students be required to submit their research proposal as part of their qualifying examination to an extramural organization for possible funding of a predoctoral fellowship. February 2010, Drs. Niles and Rankin to teach a grant writing/grantsmanship workshop for BMS graduate students. April/May 2010, top two ranking accepted applicants to the Ph.D. program encouraged to submit predoctoral fellowships with faculty guidance.
**Milestone:** 25% of BMS Ph.D. students to receive some form of extramural fellowship support by 2012.

**Fourth,** there is a need to stay connected with our alumni. This is important for several reasons. First, we need to track their subsequent careers after graduating from Marshall University as part of our program evaluation. Second, alumni can be a source of potential job leads for our students and also a source of contribution of funds toward development and improvement of the BMS program.

**Time Line:** January-March 2010, the alumni database is verified and updated. April 2010, a mock-up of an alumni newsletter is produced by our BMS graduate recruitment and public relations coordinator, Diana Maue. September 2010, a high quality BMS annual report and alumni news brochure is sent to all alumni. A pdf file is also posted on the BMS program website.

**Milestone:** 30% of alumni respond to questionnaire that requests updated career information. 10% of alumni contribute some financial aid to the BMS program.

**d. Graduate and Employer Satisfaction**

The best measure of graduate and employer satisfaction is either the number of students accepted into medical school (medical sciences area of emphasis) or the number of graduates employed or engaged in further training in biomedical sciences. As stated previously, ~70-75% of our medical sciences students eventually get accepted into medical school. As mentioned in the previous section, we are in the process of updating our alumni data base so that we will have better metrics to judge the graduate and employer satisfaction of our alumni.

**6. Previous Reviews**

The last program review of the Biomedical Sciences Program was prepared during the 2004-2005 academic year. The program was recommended to be continued at the current level of activity, with the designation as a program of excellence.

The three major weaknesses identified in the last program review included space, faculty salaries, and the student applicant pool. The deficiency in adequate laboratory and classroom space has been alleviated significantly by the opening of the Byrd Biotechnology and Science Center. Most BMS faculty and students are housed in this new facility. With the continuing growth of the BMS program and the initiation of MIIR,
however, additional space will be needed to adequately fill the needs of Marshall researchers and students. Faculty salaries, although still below national averages, have been improved by means of a School of Medicine basic science salary plan that includes rewards for productivity in research. The student applicant pool has been increased in both quality and quantity through an aggressive recruiting effort enabled largely by the hiring of a full-time graduate recruiter.

7. Strengths/Weaknesses

a. **Strengths**: The quality of the BMS faculty is a major strength of the BMS program. The faculty average 65 contact hours in the classroom with both graduate and medical students. This is somewhat lower than the last report (70.5 contact hours), due to a slight enlargement of the size of the faculty. However, it is still significantly higher than the average of basic science faculty at other medical schools, who average 43 contact hours per academic year. In addition to teaching, BMS faculty have an active research program. Despite the very restrictive funding rate for NIH grants, faculty have been obtaining awards at a rate that is higher than the national average. A very positive sign is that we have been able to recruit faculty from other universities. For example Dr. Elaine Hardman was recruited from the Pennington Institute at LSU, Dr. Richard Egleton was recruited from the University of Arizona, Dr. Nalini Santanam was recruited from LSU-New Orleans, Dr. Jung Han Kim was recruited from the University of Tennessee, Knoxville and most recently, Dr. Wei-ping Zeng was recruited from the University of Rochester. A summary of faculty achievements is provided in Appendix II.

Our student body has continued to improve in terms of entering GPA and GRE scores (see Appendix III). A very positive sign is that in the last academic year two students were awarded NIH predoctoral fellowships. These students are the first ones since establishment of the BMS program to secure these very competitive grants. Our students are also getting postdoctoral appointments at very competitive universities, such as the University of Michigan, UAB, and University Massachusetts Medical Center. Graduates are faculty at Brown University and Medical College of South Carolina among others. They have also achieved leadership positions in businesses such as L’Oreal and Applied Biosystems.

Another strength of our program is our emphasis on communication skills. This includes a formal course in speaking and writing in the first year followed by several different types of oral presentations such as a formal teaching lecture appropriate for graduate classes, a scientific talk to a lay audience, two presentations at scientific meetings, a scientific seminar midway through their research project and a final
dissertation seminar. Feedback from colleagues at other universities where our students have presented seminars has been uniformly positive.

The BMS program has continued to receive good support from the School of Medicine in terms of a basic science salary plan that rewards productivity in research, as well as monetary support of our teaching and research missions. The BMS program has also been the recipient of large infrastructure grants (INBRE and COBRE) from the NCRR. This has helped in the recruitment of faculty and upgrading of large multi-use pieces of equipment for our analytical and genomics cores. A revised version of the COBRE grant has recently been submitted with the aim of funding a Nutrition and Cancer Center.

Lastly, the hiring of a graduate recruiter (now program recruitment and public relations coordinator), Diana Maue has been a great asset. She has spearheaded the development of a brand new website, new advertising material and on-line applications. These recruiting efforts have resulted in an expanded and better qualified applicant pool.

\textbf{b. Weaknesses:}\n
\textbf{Space:} Although most of the BMS faculty moved into the Biotechnology Center two years ago, we are already short on space. This is due to having to reserve two 600 sq ft labs on each of the floors the BMS faculty occupy for President Kopp’s MIIR and to the hiring of new very research-active faculty members. A recent grant from HRSA to fund the completion of shell space on the top floor of the Edwards Cancer Center will help to alleviate the space crunch. It is likely that several BMS faculty who currently have labs in the Biotech Center will move their labs into space within the Edwards Cancer Center. The acquisition of this new lab space should temporarily address the acute issue of research space. Longer term, President Kopp has mentioned the possibility of research space for some BMS faculty in the planned Engineering/Nanotechnology building next to the Biotechnology Center on the main campus. Also a second building at the Fairfield Medical campus is part of the long range plans of the School of Medicine. This building could have research laboratories for basic and clinical faculty engaged in translational research.

The last current weakness is our inability to provide medical insurance for our graduate students. We have raised this topic with the former and current Provost, the former Dean of the Graduate School and with the Dean of the School of Medicine. None of these avenues has been successful. The GSC will again revisit this issue in the current 2009-2010 AY.
B. Viability

1. Articulation Agreement

Marshall University has signed exchange agreements with Universita’ dell’Aquila in Italy, with the Institute of Clinical Physiology, CNR, Siena, Italy, and with the Ceinge Research Institute, University of Naples, Italy for graduate students to spend short times (3-6 months) in the host country performing research that contributes to their thesis research. There is not formal delivery of courses, but students may sit in on a course of their choosing.

2. Off-Campus Classes – Not applicable

3. On-line Courses – Not applicable

4. Service Courses – The biochemistry section of BMS 600 is taken by Forensic Science students to satisfy their requirement for graduation

5. Program Course Enrollment – see Appendix VI

6. Program Enrollment – see Appendix VII

7. Enrollment Projection – as described under weaknesses in the previous section, the GSC has approved new policy on sharing financial responsibility that will result in a 50% increase in Ph.D. student enrollment beginning in the Fall of 2011. If we are successful in Ph.D. students obtaining competitive predoctoral fellowships from national funding agencies, we may be able to increase enrollment by another 15-20%. At this stage in the progressive development of Marshall to research university status, this is about the limit of our Ph.D. enrollment. We also project that we can increase enrollment of students into the Medical Sciences area of emphasis from the current 15-16 to 20 students. This increase is contingent on having an academically qualified pool of applicants and our ability to provide proactive advising to these students so that our goal of 80% success rate for medical school admissions can be obtained and maintained. With regard to enrollment in the MS program, we expect to enroll between 15 and 20 new MS students each year for the forseeable future. This number is largely limited by space available in the classroom.
C. Necessity

1. Advisory Committee

The M.S. and Ph.D. degree programs in Biomedical Sciences are supervised by the Graduate Studies Committee (GSC) which functions as the internal advisory and quality control committee of the Program. Actions of the GSC are subject to approval by the Dean of the Graduate College and the Graduate Council.

Functions of the GSC include:
   a. evaluation of student applications and selection of new students
   b. allocation of assistantships
   c. monitoring composition and activities of student advisory committees
   d. formulation of guidelines relating to: (1) student conduct; (2) student leave of absence; (3) responsibilities of assistantship; (4) academic progress; and (5) dismissal procedures
   e. review of curriculum
   f. review and recommendation of BMS faculty for membership in the Graduate Faculty of Marshall University

Organizational structure of the GSC includes:
   a. Coordinators of the five different Research Clusters serve as voting members of the GSC for as long as they hold the Coordinator position.
   b. The Senior Associate Dean for Research and Graduate Education serves as an ex officio member for an indefinite term.
   c. Director of Graduate Studies serves as the Chair of the GSC for an indefinite term. The Chair of the GSC only has voting privileges in case of a tie vote by members of the GSC.
   d. Two at-large BMS faculty representatives serve three-year terms. One of these at large faculty must be from the College of Science.
   e. One BMS doctoral student selected by the Graduate Student Organization is ex officio member serving an indefinite term.
   f. Deans of the School of Medicine and Graduate College or their designees are ex officio serving indefinite terms.

In addition to the GSC, the BMS program, as a result of obtaining a STEM Fellows grant from the WV Research Challenge program, has an external Advisory Committee. This committee consists of Joel Hockensmith, Ph.D. Assistant Dean for Graduate Education at the University of Virginia School of Medicine, Bob Sanders, Professor of Cell and Molecular Biology and former Associate Dean of the College of Life Sciences,
University of Texas – Austin, and Nancy Thompson, Assistant Dean of Graduate Studies, Brown University. The committee has visited Marshall twice and submitted recommendations that have mostly been adopted by the GSC. A third visit is anticipated for either the Spring of 2010 or Fall of 2010.

2. Graduates: see Appendix VIII

3. Job Placement

The educational and job placement of BMS students continues to be excellent. Students in our Medical Sciences area of emphasis have mostly gone on to the MD or DO degrees. Others from this area of emphasis have found positions in the allied health field such as physical therapy, pharmaceutical sales, etc. The BMS program sponsors alternative career speakers from industry, government, biotech patent law and scientific journalism. This allows students to examine different options for their career outside of bench research. As our alumni data base is updated and we establish greater contact with alumni and their current employers, we will be able to derive more information on job placement and employer satisfaction.

IV. Resource Development

Not Applicable
### Appendix I

#### Required/Elective Course Work in the Program

**Degree Program:** Biomedical Sciences M.S.  
**Person responsible for the report:** Vernon Reichenbecher

<table>
<thead>
<tr>
<th>Courses Required in Major (By Course Number and Title)</th>
<th>Total Required Hours</th>
<th>Elective Credit Required by the Major (By Course Number and Title)</th>
<th>Elective Hours</th>
<th>Related Fields Courses Required</th>
<th>Total Related Hours</th>
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<tbody>
<tr>
<td>BMS 600 – Cellular and Molecular Biology</td>
<td>6</td>
<td>Varies by area of emphasis and advisory committee – Electives are chosen from the Appendix I Supplement “Courses Offered in Biomedical Sciences”</td>
<td>8 - 23</td>
<td>EDF 517, PSY 517, MTH 518, BSC 517 or equivalent - Statistics</td>
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<td>BMS 660 – Communication Skills for Biomedical Science I (MS thesis students only)</td>
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<td>BMS 661 – Communication Skills for Biomedical Science II (MS thesis students only)</td>
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<tr>
<td>BMS 680 – Seminar</td>
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<tr>
<td>BMS 685 – Intro. to Research</td>
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<tr>
<td>BMS 681 – Thesis</td>
<td>up to 6</td>
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*Expand table as needed.*

Professional society that may have influenced the program offering and/or requirements:
Appendix I Supplement

**COURSES OFFERED IN BIOMEDICAL SCIENCES**

<table>
<thead>
<tr>
<th>Biomedical Sciences (Interdisciplinary)</th>
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<tbody>
<tr>
<td>BMS 600      Cellular &amp; Molecular Biology</td>
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</tr>
<tr>
<td>BMS 614      Basic Human Genetics</td>
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<td>BMS 624      Human Genetics</td>
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</tr>
<tr>
<td>BMS 630      Neuroscience</td>
<td>5 hrs</td>
</tr>
<tr>
<td>BMS 631      Neuroscience and Dev. Biol. Lit. Review</td>
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</tr>
<tr>
<td>BMS 632      Neuroscience Research Techniques</td>
<td>3 hrs</td>
</tr>
<tr>
<td>BMS 641      Molecular Developmental Biology</td>
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</tr>
<tr>
<td>BMS 651      Cancer Biology</td>
<td>4 hrs</td>
</tr>
<tr>
<td>BMS 660      Communication Skills I</td>
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<tr>
<td>BMS 661      Communication Skills II</td>
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<tr>
<td>BMS 665      CODRC Colloquium</td>
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</tr>
<tr>
<td>BMS 670      Basic Methods in Molecular Cloning</td>
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<tr>
<td>BMS 675      Special Topics</td>
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<tr>
<td>BMS 676      Special Topics</td>
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<td>BMS 677      Special Topics</td>
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</tr>
<tr>
<td>BMS 679      Special Problems</td>
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<tr>
<td>BMS 680      Seminar</td>
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<tr>
<td>BMS 681      Thesis</td>
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<tr>
<td>BMS 685      Introduction to Research</td>
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<tr>
<td>BMS 882      Doctoral Research</td>
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<td>ACB 620    Gross Anatomy/Embryology</td>
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</tr>
<tr>
<td>ACB 624    Microscopic Anatomy &amp; Ultrastructure</td>
<td>4 hrs</td>
</tr>
<tr>
<td>ACB 626    Advanced Histological Techniques</td>
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</tr>
<tr>
<td>ACB 628    Anatomy of the Nervous System</td>
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</tr>
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<td>ACB 632    Principles of Mammalian Development</td>
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<tr>
<td>ACB 637    Neuroanatomy Literature Review</td>
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<td>ACB 639    Neuroanatomy Research Techniques</td>
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<tr>
<td>ACB 640    Current Topics in Cell Biology</td>
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<tr>
<td>ACB 641    Electron Microscopy</td>
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<tr>
<td>ACB 643    Independent Study in Electron Microscopy</td>
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<tr>
<td>ACB 650    Research in Cellular Processes</td>
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<tr>
<td>ACB 655    Digital Video Imaging</td>
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<tr>
<td>ACB 660    Current Topics in Neurobiology</td>
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<tr>
<td>ACB 675    Special Topics</td>
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</tr>
<tr>
<td>ACB 676    Special Topics</td>
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<tr>
<td>ACB 677    Special Topics</td>
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### Biochemistry

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<tr>
<td>BIC 620</td>
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<td>BIC 628</td>
<td>Molecular Mechanisms in Growth and Differentiation</td>
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<tr>
<td>BIC 634</td>
<td>Lipid Biochemistry</td>
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<tr>
<td>BIC 636</td>
<td>Enzymes and Proteins</td>
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<td>BIC 638</td>
<td>Nucleic Acids and Protein Synthesis</td>
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<td>BIC 643</td>
<td>Molecular Signal Transduction</td>
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### Microbiology

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<tr>
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<td>Principles of Medical Microbiology</td>
<td>5 hrs</td>
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<td>MCB 631</td>
<td>Medical Microbiology I</td>
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<td>MCB 632</td>
<td>Medical Microbiology II</td>
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<td>MCB 642</td>
<td>Graduate Microbiology</td>
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<td>MCB 643</td>
<td>Principles of Immunology</td>
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<td>MCB 648</td>
<td>Molecular Aspects of Pathogenesis</td>
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<td>MCB 660</td>
<td>Diagnostic Virology</td>
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<td>MCB 675</td>
<td>Special Topics</td>
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### Pharmacology

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<tr>
<td>PMC 610</td>
<td>Introduction to Pharmacology</td>
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<tr>
<td>PMC 615</td>
<td>Pharmacology Reviews</td>
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<td>PMC 620</td>
<td>Medical Pharmacology</td>
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<td>PMC 621</td>
<td>Medical Pharmacology I</td>
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<td>PMC 625</td>
<td>Drug Metabolism</td>
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<td>PMC 630</td>
<td>Chemical Aspects of Pharmacology</td>
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<td>PMC 633</td>
<td>Vistas in Pharmacology</td>
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<td>PMC 635</td>
<td>Neuropharmacology</td>
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<td>PMC 640</td>
<td>Behavioral Pharmacology</td>
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<td>PMC 643</td>
<td>Intro to Cardiopulmonary Pharmacology</td>
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<td>Advanced Cardiopulmonary Pharmacology</td>
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<td>PMC 650</td>
<td>General Toxicology</td>
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<td>Toxicology Reviews</td>
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<td>PMC 677</td>
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<td>Hours</td>
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<tr>
<td>PHS 628</td>
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<td>PHS 630</td>
<td>Experimental Physiology</td>
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<td>PHS 631</td>
<td>Physiology Practicum</td>
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<td>PHS 632</td>
<td>Physiology of Sleep</td>
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<td>PHS 634</td>
<td>Advanced Neurophysiology</td>
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<td>PHS 638</td>
<td>Advanced Cardiovascular Physiology</td>
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<td>PHS 661</td>
<td>Endocrinology</td>
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<td>PHS 666</td>
<td>Physiology of the Cell</td>
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<tr>
<td>PHS 677</td>
<td>Special Topics</td>
<td>1-4 hrs</td>
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</table>
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: Mitchell L. Berk. Rank: Professor

Status (Check one): Full-time X Part-time __ Adjunct __ Current MU Faculty: Yes

Highest Degree Earned: Ph.D. Date Degree Received: August, 1978

Conferred by: The George Washington University

Area of Specialization: Anatomy

Registration/Licensure Agency: __________________________

Years non-teaching experience ___

Years of employment other than Marshall ___

Years of employment at Marshall ___

Years of employment in higher education ___

Years in service at Marshall during this period of review ___

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<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008 and 2009</td>
<td>ACB 720 (620)</td>
<td>Gross Anatomy and Embryology (team taught-3/8)</td>
<td>80</td>
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<tr>
<td>2008 and 2009</td>
<td>ACB 724 (624)</td>
<td>Microscopic Anatomy and Ultrastructure (team taught-1/2)</td>
<td>80</td>
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<tr>
<td>2008 and 2009</td>
<td>IDM 777 (ACB 630)</td>
<td>Neuroscience (team taught-114)</td>
<td>80</td>
</tr>
</tbody>
</table>

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research.

3) Discipline-related books/papers published (provide a full citation).

4) Papers presented at state, regional, national, or international conferences.

5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations:

Attended the Annual Meeting of the American Association of
Clinical Anatomists, July 2009

6) Externally funded research grants and contracts you received. 7) Awards/honors (including invitations to speak in your area of expertise) or special recognition:

1. Best Professor of the Spring Semester of 2008 from Class of 2011
2. Outstanding Pre-clinical Professor, 2008 from Class of 2008

8) Community service as defined in the Greenbook
Member of Curriculum Subcommittee of the First Year Medical Courses (2009)
Director of Human Gift Registry of Marshall University (2009)
Course director, Microscopic Anatomy (2008, 2009)
Course director, gross anatomy and Embryology (2009)
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: **Eric Blough**  
Rank: **Adjunct**

Status (Check one): Full-time___ Part-time___ Adjunct X___ Current MU Faculty: Yes X No ___

Highest Degree Earned: **PhD** Date Degree Received: **1997**

Conferred by: **Ohio State University**

Area of Specialization: **Exercise Physiology**

Professional Registration/Licensure: n/a Agency: n/a

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<th>Years non-teaching experience</th>
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<td>Years of employment at Marshall</td>
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<td>Years of employment in higher education</td>
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<tr>
<td>Years in service at Marshall during this period of review</td>
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</table>

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. *(Expand the table as necessary)*

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<thead>
<tr>
<th>Year/Semester</th>
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<th>Enrollment</th>
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</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research.
3) Discipline-related books/papers published (provide a full citation).
4) Papers presented at state, regional, national, or international conferences.
5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended.
List any panels on which you chaired or participated. List any offices you hold in professional organizations.

6) Externally funded research grants and contracts you received.

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

8) Community service as defined in the *Greenbook*. 
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: ___Pier Paolo Claudio_________   Rank: _____Associate Professor__________

Status (Check one):  Full-time_x__   Part-time___   Adjunct __
Current MU Faculty:  Yes _x_   No ___

Highest Degree Earned: _____M.D._____   Date Degree Received: _____June, 1989_____
Conferred by: __University of Naples “Federico II”, Italy__

Area of Specialization: ________

Professional Registration/Licensure _________________     Agency: _______________________________

Years non-teaching experience __0_____
Years of employment other than Marshall __20_____
Years of employment at Marshall __3_____
Years of employment in higher education __13_____
Years in service at Marshall during this period of review __3_____

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment.  (Expand the table as necessary)

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<thead>
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<th>Enrollment</th>
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<td>2009/Fall</td>
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<td>Cancer Colloquium</td>
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<td>Spring/2009</td>
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<td>Cancer Biology Cluster Course (2 Hours)</td>
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<td>Spring/2009</td>
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<td>Cancer Ground Rounds lecture: “Cancer gene therapy”</td>
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<td>Lecture to MU Medical Residents: “Novel Cancer Therapeutics from the Bench to the Bedside”</td>
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<td>BMS 652</td>
<td>Cancer Colloquium</td>
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NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain. (For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research. 
Agreements of Research Scholarship Exchange with: 1) the University of Naples, “Federico II”, Italy, 2) C.E.I.N.G.E. Biotechnology Institute, Naples, Italy, 3) University of l’Aquila, Italy, 4) Research Center C.R.O.B- IRCCS in Rionero in Vulture, Italy, 5) CNR Roma, Italy, 6) CNR Siena, Italy.

3) Discipline-related books/papers published (provide a full citation).
Most representative list out of 21 scientific articles published since I joined MU:


Book Chapters:

4) Papers presented at state, regional, national, or international conferences.

5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.
1999 – present Expert-Evaluator of the European Commission for the V Framework Program (Science, Research and Development)
2000- present Expert-Evaluator of the INTAS Program (Science, Research and Development)
2000-present Grant evaluator for the Department of Veteran Affairs. Livermore, CA.
2004-present Grant evaluator NIH, Bethesda, MD

6) Externally funded research grants and contracts you received.
- NIH 1R21CA131395-01 (Claudio PP., PI). 04/01/2009 – 03/31/2011 “Ultrasound guided site-specific gene delivery in prostate cancer”. The major goals of this project are to characterize in vitro and in vivo the response of prostate cancer to gamma-rayionizing following ultrasound guided site-specific p130 gene transduction.
- NIH R-03 CA140024 (Claudio PP., PI). 08/14/2009 – 07/31/2011. Ultrasound guided gene delivery in pancreatic cancer”. The major goals of this project are to characterize in vitro and in vivo the response of pancreatic cancer to gamma-rayionizing following ultrasound guided site-specific mda-7/IL-24 gene transduction.

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
2007 International Award “Sebelia-Ter” for Biomedical Sciences, Naples, Italy
2008 Lion’s Club Fondi Award for Stem Cell Research, Fondi (LT), Italy.

8) Community service as defined in the Greenbook.
Journal Reviewer of 19 journals since 2005.

Journal Editorial service
Since 2005 Molecular Biology Section Editor of International Journal of Biomedical Science
Since 2005 Drugs News and Perspectives (Editor-USA)
Since 2005 Drugs of Today (Editor USA)
Since 2005 Drugs of the Future (Editor USA)
Since 2006 Journal Experimental & Clinical Cancer Research (Editor-USA)
Since 2008 Current Signal Transduction Therapy (Editor-USA)
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: ____Simon Collier____________________________   Rank: ___Associate Professor_____

Status (Check one): Full-time__X__ Part-time_____ Adjunct _____   Current MU Faculty: Yes _X__ No ___

Highest Degree Earned: ___PhD___________________   Date Degree Received: ___1991________

Conferred by: ___University of Manchester, UK______________________________

Area of Specialization: ___Medical Genetics_______________________________

Professional Registration/Licensure___________________   Agency: ______________________

Years non-teaching experience   ____9____
Years of employment other than Marshall   ____12____
Years of employment at Marshall   ____6____
Years of employment in higher education   ____18____
Years in service at Marshall during this period of review   ____5____

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

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<th>Year/Semester</th>
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<th>Title</th>
<th>Enrollment</th>
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<td>2007 Fall</td>
<td>BSC324</td>
<td>Principles of Genetics</td>
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<tr>
<td>2008 Spring</td>
<td>BSC456/556</td>
<td>Genes and Development</td>
<td>16</td>
</tr>
<tr>
<td>2008 Fall</td>
<td>BSC324</td>
<td>Principles of Genetics</td>
<td>70</td>
</tr>
<tr>
<td>2009 Spring</td>
<td>BSC456/556</td>
<td>Genes and Development</td>
<td>15</td>
</tr>
</tbody>
</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)
2) Activities that have enhanced your teaching and or research.

- Attended 'National Science Foundation Day in West Virginia' Morgantown, December 4th 2007.

3) Discipline-related books/papers published (provide a full citation).


4) Papers presented at state, regional, national, or international conferences.

**National:**


**Regional:**


5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

**Member of:**

- Genetics Society of America (GSA)
- Society for Developmental Biology (SDB)

**Attended:**

- Annual Drosophila Research Conference 49. San Diego, April 2008

6) Externally funded research grants and contracts you received.

- NSF: Developmental Systems, RUI: Collier (PI) 04/09-03/12 Polarizing a cell layer along two axes: The genetic control of *Drosophila* wing topography ($418,000)

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

8) Community service as defined in the *Greenbook*.
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: Piyali Dasgupta  
Rank: Asst Professor

Status (Check one): Full-time*  Part-time  
Adjunct  
Current MU Faculty: Yes *  
No

Highest Degree Earned: Ph.D.  
Date Degree Received: January 2000

Conferred by: National Institute of Immunology, J.N. University, India

Area of Specialization: Cancer Biology

Professional Registration/Licensure  
Agency:

Years non-teaching experience

Years of employment other than Marshall

Years of employment at Marshall  
2yrs

Years of employment in higher education

Years in service at Marshall during this period of review  
2yrs

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
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<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
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<td>08-09/Fall</td>
<td>BMS600</td>
<td>Angiogenesis and Metastasis</td>
<td>65</td>
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<tr>
<td>08-09/Spring</td>
<td>PHS701</td>
<td>Pulmonary Physiology</td>
<td>120</td>
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NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research: Attending the annual meeting of World Conference on Lung Cancer 2009 and Experimental Biology Conference 2009

3) Discipline-related books/papers published (provide a full citation).

A. Chapters In Scholarly Books


B. Journal Articles


2. Dasgupta, P., Rizwani, W., Pillai, S., Kinkade,R., Rastogi,S., Banerjee, S., Kovacs, M., Carless, M., E., Kim,


5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Member, American Society of Pharmacology and Experimental Therapeutics (ASPET), American Association of Cancer Research (AACR) and New York Academy of Sciences (NYAS)

6) Externally funded research grants and contracts you received.

Young Clinical Scientist Award Program from Flight Attendant Medical Research Institute (2009-2012)

**Nicotine/Acetylcholine Signaling in Lung Cancer**. Budget: $100,000/year (Dasgupta PI)

American Retina Foundation (2009-2010) **Nicotine/Acetylcholine Signaling in ARMD**. Budget: $12,000/year (Dasgupta PI).

ASPET-Astellas award Program from American Society of Pharmacology and Experimental Therapeutics: **α7-nicotinic receptor inhibitors in small cell lung cancer therapy**. Budget: $30,000 (Dasgupta PI).

Research Starter Grant from the Pharmaceutical Manufacturer’s Association of America. (2007-2009): “**α7-Nicotinic Receptor Signaling in Non-small cell Lung Cancer**”. Budget: $30,000 a year (Dasgupta PI).

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

- Awarded the ASPET-Astellas award for Translational Pharmacology the year 2009, from the American Society of Pharmacology and Experimental Therapeutics.
- Selected for The Marshall University Distinguished Artists and Scientists Award (MU-DASA) for the year 2009
- Invited for a delivering a research seminar in West Virginia University.
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: ______Beverly C. Delidow__________   Rank: ____Assoc. Prof._________

Status (Check one): Full-time__X__ Part-time_____ Adjunct _____
Current MU Faculty: Yes _x_ No ____

Highest Degree Earned: _____Ph.D._____ Date Degree Received: __1988_____
Conferred by: _University of California, Berkeley______________________

Area of Specialization: ____Physiology______________________________

Professional Registration/Licensure_______ Agency: ______________________

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<th>Years non-teaching experience</th>
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<td>Years of employment other than Marshall</td>
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<tr>
<td>Years of employment at Marshall</td>
<td>__<strong><strong>16</strong></strong></td>
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<tr>
<td>Years of employment in higher education</td>
<td>__<strong><strong>22</strong></strong></td>
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<tr>
<td>Years in service at Marshall during this period of review</td>
<td>__<strong><strong>5</strong></strong></td>
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List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
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<th>Title</th>
<th>Enrollment</th>
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<tr>
<td>Fall 07</td>
<td>BMS 660</td>
<td>Presentation Skills</td>
<td>8</td>
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<tr>
<td>Fall 07</td>
<td>IDM 720</td>
<td>Medical Cell Biology – team taught, 2 lec hours</td>
<td></td>
</tr>
<tr>
<td>Fall 07</td>
<td>BIC 720</td>
<td>Medical Biochemistry – team taught, 9 lec hrs, 6 h discussion</td>
<td></td>
</tr>
<tr>
<td>Fall 07</td>
<td>BMS 600</td>
<td>Foundations of Biomedical Science – team taught, 2 lec hours</td>
<td></td>
</tr>
<tr>
<td>Spring 08</td>
<td>BMS 661</td>
<td>Presentation Skills – 50%</td>
<td>8</td>
</tr>
<tr>
<td>Spring 08</td>
<td>BIC 643</td>
<td>Molecular Signal Transduction – team taught, 85%</td>
<td>3</td>
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<tr>
<td>Fall 08</td>
<td>BMS 660</td>
<td>Presentation Skills</td>
<td>6</td>
</tr>
<tr>
<td>Fall 08</td>
<td>BMS 600</td>
<td>Foundations of Biomedical Science – team taught, 2 lec hours</td>
<td></td>
</tr>
<tr>
<td>Fall 08</td>
<td>BIC 720</td>
<td>Medical Biochemistry – team taught, 9 lec hrs, 3 h discussion</td>
<td></td>
</tr>
<tr>
<td>Fall 08</td>
<td>IDM 720</td>
<td>Medical Cell Biology – team taught, 2 lec hours</td>
<td></td>
</tr>
<tr>
<td>Spring 09</td>
<td>BMS 661</td>
<td>Presentation Skills – 50%</td>
<td>5</td>
</tr>
<tr>
<td>Spring 09</td>
<td>BMS 651</td>
<td>Cancer Biology – team taught, 30%</td>
<td>5</td>
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</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.
My postdoctoral training was in Molecular Biology, which is more closely related to Biochemistry than Physiology. My research is in cell and molecular biology, which is also related to modern biochemistry.
(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research. 
Participated in external workshops on communication, writing effectively, and productivity. 
Attended AAMC Workshop for MidCareer Women Faculty (December 2007)

3) Discipline-related books/papers published (provide a full citation).

4) Papers presented at state, regional, national, or international conferences.
Platform talks:
Retinoic Acid Induces The Inhibitor Sfrp1 In Human Melanoma. Deon Uffort, Johnathan Gunno, Ashley D. Daniels and Beverly C. Delidow. Platform talk, PASPCR, Memphis TN, Sept. 4-7 2009.

Retinoic acid induces coordinate expression of Wnt inhibitory genes in melanoma Ashley D. Dills and Beverly Delidow, PASPCR annual meeting, Chicago, Sept 13-16, 2007

Posters:
RETINOIC ACID INDUCES THE INHIBITOR SFRP1 IN HUMAN MELANOMA Johnathan Gunno, Deon Uffort, Ashley Dills and Beverly C. Delidow Marshall University Sigma Xi Research Day, Apr 30-May 1, 2009.

Retinoic acid induces expression of Wnt inhibitory genes in melanoma

The Regulation of Inhibitor Proteins of the Wnt/Beta Catenin Signaling Pathway by Retinoic Acid. Clifton Umstead, Lisa Davenport, Ashley Dills, Dr. Beverly Delidow

Retinoic acid induces coordinate expression of Wnt inhibitory genes in melanoma
Ashley D. Dills, Clifton Ulmstead, Lisa Davenport and Beverly Delidow.
WV COBRE-INBRE meeting, Charleston, Nov 1-2, 2007

5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.
American Association for the Advancement of Science
American Society for Biochemistry and Molecular Biology
American Society for Cell Biology
Endocrine Society
PanAmerican Society for Pigment Cell Research
Society for Melanoma Research
Sigma Xi (Treasurer of the local chapter)

6) Externally funded research grants and contracts you received.
1. COBRE, Project 1: "β-catenin function and retinoic acid in melanoma" National Institutes of Health (R. Niles, COBRE director), $1,003,394, 09/23/04 – 07/31/09

2. NSF Advance, M. Harrison, PI; appx $1,200,00; 8/06 – 7/09, and appx $450,000 8/09-7/11; BDelidow, coPI for Faculty Development

3. ADVANCE minigrant: $1000, For travel to the AAMC MidCareer Faculty Women Conference, December 13-16, 2007, Scottsdal AZ

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
2008 Graduate Faculty Achievement Award 2008 – presented by the Biomedical Sciences Graduate Student Organization

8) Community service as defined in the Greenbook. – Cabell County Library events, Literature groups, Consulting Rosarian of the American Rose Society, Officer in the Huntington Rose Society
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: Richard Egleton Rank: Assistant Professor

Status (Check one): Full-time ___ Part-time ____ Adjunct ______
Current MU Faculty: Yes * ___ No ___

Highest Degree Earned: Ph.D. Date Degree Received: 1994

Conferred by: United Medical and Dental School of Guys and St. Thomas', University of London

Area of Specialization: Cerebrovascular Biology

Professional Registration/Licensure Agency: ___________

Years non-teaching experience 8
Years of employment other than Marshall 12
Years of employment at Marshall 2.5
Years of employment in higher education 14
Years in service at Marshall during this period of review 2

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment.
(Expand the table as necessary)

<table>
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<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
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<tr>
<td>07-09/Fall-spring</td>
<td>PMC620/720</td>
<td>Medical Pharmacology</td>
<td>65</td>
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<tr>
<td>07-09/Fall-Spring</td>
<td>BMS665</td>
<td>CODRC Colloquium</td>
<td>5</td>
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<tr>
<td>08-09</td>
<td>PMC 650</td>
<td>Toxicology</td>
<td>3</td>
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</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain. N/A

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research:
   Attended the following conferences:
   Keystone Conference “Metabolism and Cardiovascular Disease” Beaver Run, CO, September 2008.

3) Discipline-related books/papers published (provide a full citation).
   Published the following articles:


4) Papers presented at state, regional, national, or international conferences.

Following presentations:


5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Member of:

Society for Neuroscience
Controlled Release Society
International Brain Barriers Society
International Society for Cerebral Blood Flow and Metabolism

6) Externally funded research grants and contracts you received.

• Diabetes and Stroke: A Role for the Blood-CNS Barriers (RO1 DK65003)
  PI on this grant, $800,000
  RO1 funded by NIDDK, with a project period of April 2004 – January 2010.
  My role on this grant is to investigate the modulation of blood-CNS barriers during diabetes, and how this can influence stroke outcome.

• Angiogenesis in the diabetic brain
  PI on grant, $20,000
  An internal grant from Marshall University Nov 2008-Nov 2009
  My role in this grant is to investigate changes in markers of angiogenesis in Diabetic animals

• A Mechanistic Study of Methamphetamine Neurotoxicity: Involvement of HO-1 & MnSOD (1F30DA025445)
  Mentor of Ruth L. Kirchstein F31 MD/PhD Fellowship for Mindy Asbury, $70,618
  August 2009-July 2011

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

• Invited Speaker UT-Houston Medical School Dept. of Integrative Biology & Pharmacology, March, 2009. “Modulation of Brain Microvasculature in Diabetes”
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: Philippe Georgel

Rank: Associate Professor

Status (Check one): Full-time Part-time________________ Adjunct X

Current MU Faculty: Yes X No

Highest Degree Earned: PhD________________ Date Degree Received: June 1993

Conferred by: Oregon State University

Area of Specialization: Biochemistry and Biophysics

Professional Registration/Licensure

Agency: ________________________________

Years non-teaching experience 16

Years of employment other than Marshall 16

Years of employment at Marshall 7

Years of employment in higher education 11

Years in service at Marshall during this period of review 5

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<td>2007 Spring</td>
<td>BSC662</td>
<td>Seminar Team-taught (50%)</td>
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<td>2007 Spring</td>
<td>BMS651</td>
<td>Oncology Team-taught (5%)</td>
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<td>BIC638</td>
<td>Nucl. Ac. Prot. Syn Team-taught (5%)</td>
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<td>2007 Fall</td>
<td>BSC450/550</td>
<td>Molecular Biology</td>
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<td>BSC662</td>
<td>Seminar Team-taught (50%)</td>
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<td>2008 Fall</td>
<td>BSC450/550</td>
<td>Molecular Biology</td>
<td>25</td>
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<td>2009 Spring</td>
<td>BSC451/BMS670</td>
<td>DNA cloning Team-taught (50%)</td>
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<tr>
<td>2009 Fall</td>
<td>BSC450/550</td>
<td>Molecular Biology</td>
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<td>2009 Fall</td>
<td>BSC660</td>
<td>Communication Bio Sci. Team-taught (50%)</td>
<td>20</td>
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NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.

2) Activities that have enhanced your teaching and or research.
   - Director and coordinator of the Seminar series for the Cell Differentiation and Development Center (Fall 2007-present).
   - Capstone advisor for 3 students
   - Awarded MU Faculty Senate Summer Research Award (May 2008)
   - Advisor for two Ms and 2 PhD students

3) Discipline-related books/papers published (provide a full citation).


4) Papers presented at state, regional, national, or international conferences.
Nine presentations at scientific conferences from 2007-2009.

5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended.
List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Member of the “Sigma Xi” Research Society; Nominated Expert of International Standing by the Australian Research Council; Member of the Biophysical Society; DOD Breast Cancer Panel 2007-present (participant); NSF reviewer; Reviewer for: Biochimica and Biophysica Acta, Biochemistry and Cell Biology, FEBS Letters, Biophysical Journal, Development, Journal of Proteome Research, Experimental Cell Research; Associate Editor for Biochemistry and Cell Biology.

6) Externally funded research grants and contracts you received.
Towards an integrated and multidisciplinary analysis of epigenetic variation in complex diseases: development of the Cell Differentiation and Development Center (CDDC) at Marshall University (WV EPSCoR, PI Georgel, P.T., Blough E. Awarded in June 2007, $2,350,000)
Energy Requirements for Nucleosome Sliding (WV EPSCoR PI: Georgel, P.T., URSP.2008.WV.01, Awarded on August 20, 2007, $5,000)
Epigenetic Regulation of p21CIP1 Expression by Sulfuraphane in Prostate Cancer (Internal COBRE grant, PI: Georgel, P.T, Awarded May 2008, $12,000)
Marshall University SURE program “Prostate Cancer and Epigenetics” PI: William Patterson 3rd, Sponsor: Dr. Georgel, Philippe (Budget $4,000)
NIH F31 Pre-Doctoral fellowship Ruth Kirstein “CHD1, Chromatin Dynamics and Salivary Gland Differentiation” PI: J. Adam Hall. Sponsor/Advisor: Dr. Philippe Georgel (Budget: ~$ 35,000).

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
Chair of the Budget and Academic Policy Committee at Marshall University.
Nominated Expert of International Standing by the Australian Research Council.
Invited speaker at Kuwait University, School of Medicine, Kuwait, January 19, 2009 (see above, section 4)
Invited speaker at the StaR symposium (Morgantown, September 18, 2007)
Invited participant to the Systems Biology of Steroid Receptors in Human Disease (NIH, NCI, September 21-22, 2009)
Outside PhD committee member and invited speaker at the University of Winnipeg, Canada (September 2009)

8) Community service as defined in the Greenbook.
Assisting during COS open House (Spring 2007)
Jury member for the WV Science Fair 2007
Consulting for preparation of grant proposal with NIH and Kuwait University (December, 18, 2008)
Assisting during MUSOM open House (Spring 2008)
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: Todd L. Green
Rank: Associate Professor

Status (Check one): Full-time X Part-time_____ Adjunct _____ Current MU Faculty: Yes X No ____

Highest Degree Earned: Ph.D. Date Degree Received: 1986

Conferred by: University of Virginia

Area of Specialization: Microbiology

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
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<th>Alpha Des. &amp; No.</th>
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<th>Enrollment</th>
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<tbody>
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<td>PHS 666</td>
<td>Physiology of the Cell (co-course director; 16.7%)</td>
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<td>2009/Fall</td>
<td>BMS 600</td>
<td>Foundations of Biomedical Science (course director; 20%)</td>
<td>25</td>
</tr>
<tr>
<td>2009/Fall</td>
<td>FSC 624</td>
<td>Forensic Biochemistry (course director; 13%)</td>
<td>22</td>
</tr>
<tr>
<td>2009/Fall</td>
<td>IDM 725</td>
<td>Molecular Basis of Medicine (3%)</td>
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<td>2009/Spring</td>
<td>PHS 701</td>
<td>Physiology (18%)</td>
<td>70</td>
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<tr>
<td>2009/Spring</td>
<td>PHS 629</td>
<td>Mammalian Physiology (18%)</td>
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<td>2009/Spring</td>
<td>IDM 777</td>
<td>Neuroscience (3%)</td>
<td>70</td>
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<td>2009/Spring</td>
<td>PHS 628</td>
<td>Mammalian Neurophysiology (7%)</td>
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<tr>
<td>2009/Spring</td>
<td>BMS 630</td>
<td>Neuroscience (3%)</td>
<td>6</td>
</tr>
<tr>
<td>2009/Spring</td>
<td>BMS 670</td>
<td>Molecular Cloning (course director; 57%)</td>
<td>3</td>
</tr>
<tr>
<td>2009/Spring</td>
<td>BSC 481</td>
<td>Special Topics – Molecular Cloning (course director; 57%)</td>
<td>3</td>
</tr>
<tr>
<td>2008/Fall</td>
<td>BMS 600</td>
<td>Foundations of Biomedical Science (course director; 20%)</td>
<td>23</td>
</tr>
<tr>
<td>2008/Fall</td>
<td>FSC 624</td>
<td>Forensic Biochemistry (course director; 13%)</td>
<td>15</td>
</tr>
<tr>
<td>2008/Fall</td>
<td>FSC 600</td>
<td>Forensic Cell Biology (course director; 22%)</td>
<td>17</td>
</tr>
<tr>
<td>2008/Fall</td>
<td>IDM 720</td>
<td>Medical Cell Biology (11%)</td>
<td>73</td>
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<tr>
<td>2008/Spring</td>
<td>PHS 701</td>
<td>Physiology (16%)</td>
<td>70</td>
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<tr>
<td>2008/Spring</td>
<td>PHS 629</td>
<td>Mammalian Physiology (16%)</td>
<td>20</td>
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<tr>
<td>2008/Spring</td>
<td>IDM 777</td>
<td>Neuroscience (3%)</td>
<td>70</td>
</tr>
<tr>
<td>2008/Spring</td>
<td>PHS 628</td>
<td>Mammalian Neurophysiology (7%)</td>
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</tr>
<tr>
<td>2008/Spring</td>
<td>BMS 630</td>
<td>Neuroscience (3%)</td>
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</table>
### 2008/Spring

<table>
<thead>
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<th>Grade</th>
<th>Description</th>
<th>Credits</th>
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</thead>
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<tr>
<td>BMS 670</td>
<td></td>
<td>Molecular Cloning (course director; 43%)</td>
<td>6</td>
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<tr>
<td>BSC 481</td>
<td></td>
<td>Special Topics – Molecular Cloning (course director; 43%)</td>
<td>4</td>
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</table>

1. If your degree is not in your area of current assignment, please explain. N/A

2. Activities that have enhanced your teaching and or research.
   - I have participated in the Academy of Medical Educators in 2005-06 and in faculty development workshops and seminars put on by the Associate Dean for Professional Development in Medical Education at the Medical School.

3. Discipline-related books/papers published (provide a full citation).


5. Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

   - American Association for the Advancement of Science
   - American Society for Cell Biology
   - American Society for Matrix Biology
   - American Society for Microbiology
   - International Association of Medical Science Educators
   - Sigma Xi
   - Society for Neuroscience

   The Fifth Graylyn Conference on Technology Innovation in Medical Education, 2007
   Team-Based Learning Conference, 2007
   International Association of Medical Science Educators, 2005-06
   Association of American Medical Colleges, 2005

6. Externally funded research grants and contracts you received.

   - Ohio Valley Affiliate, American Heart Association, Undergraduate Student Summer Research Fellowship for Amy Wolfe, 2005, $3000 direct costs

7. Awards/honors (including invitations to speak in your area of expertise) or special recognition.

   Best Professor, Spring 2009 – JCESOM Class of 2012
   Graduate Faculty Achievement Award, 2007 – Marshall University BMS Graduate Student Organization
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: __Lawrence M. Grover________________________   Rank: ___Professor_______________

Status (Check one):  Full-time X___   Part-time_____   Adjunct _____   Current MU Faculty: Yes X___
No ___

Highest Degree Earned: ___Ph.D.___________________   Date Degree Received: __May 1986_______

Conferred by: ___Princeton University_______________________

Area of Specialization: ___Psychology and Neuroscience___________________________________

Professional Registration/Licensure__N/A__________     Agency: _______________________________

Years non-teaching experience  __9____
Years of employment other than Marshall
Years of employment at Marshall
Years of employment in higher education
Years in service at Marshall during this period of review  __5____

List courses you taught during the final two years of this review. If you participated in a team-taught
course, indicate each of them and what percentage of the course you taught. For each course include
the year and semester taught (summer through spring), course number, course title and enrollment.
(Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007 - 2009; Fall and Spring</td>
<td>BMS 631</td>
<td>Neuroscience and Developmental Biology Literature Review</td>
<td>3 - 6</td>
</tr>
<tr>
<td>2007 - 2009; Spring</td>
<td>PHS 628</td>
<td>Mammalian Neurophysiology</td>
<td>11 - 21</td>
</tr>
<tr>
<td>2007 Spring</td>
<td>BMS 680</td>
<td>Seminar</td>
<td>32</td>
</tr>
<tr>
<td>2007 - 2009; Spring</td>
<td>IDM 777</td>
<td>Neuroscience</td>
<td>70 - 76</td>
</tr>
</tbody>
</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this
document.

1) If your degree is not in your area of current assignment, please explain.

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research.


3) Discipline-related books/papers published (provide a full citation).


6. Grover, L.M., Kim, E., Cooke, J.D. & Holmes, W.R. LTP in hippocampal area CA1 is induced by burst stimulation over a broad frequency range centered around delta. Learning and Memory 20, 69-81, 2009.


4) Papers presented at state, regional, national, or international conferences.


5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.


6) Externally funded research grants and contracts you received.

1. National Aeronautics and Space Administration, Impact of REM Sleep Loss on Memory Functions, NCC5-570, 2001-2007, $1,034,647 total direct costs (principal investigator).


3. Wyeth Pharmaceuticals, Effects of venlafaxine administration on central and peripheral brain-derived neurotrophic factor in rats, 0600B-102368, 2007-2008, $17,518 total direct costs (principal investigator).

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

Invited seminar, “Acute effects of growth hormone on excitatory synaptic transmission in the hippocampus”, Texas A&M University, College Station, TX, 2005.

8) Community service as defined in the Greenbook.

I could not find a definition of “Community Service” in the August 2009 Greenbook, so here is a list of service activities that meet my definition of community service:


2. Faculty mentor, WV-INBRE undergraduate summer student program, 2005-2009.

Appendix II

Faculty Data Sheet

(Information for the period of this review)

Name: Carl A. Gruetter  
Rank: Professor  

Status (Check one): Full-time X  Part-time  Adjunct  
Current MU Faculty: Yes X No  

Highest Degree Earned: PhD  
Date Degree Received: 1978  

Conferred by: Tulane University  

Area of Specialization: Pharmacology  

Professional Registration/Licensure: N/A  
Agency: N/A  

Years non-teaching experience: 2  
Years of employment other than Marshall: 1  
Years of employment at Marshall: 28  
Years of employment in higher education: 29  
Years in service at Marshall during this period of review: 5  

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
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<tbody>
<tr>
<td>2009/Spring</td>
<td></td>
<td>CODRC Colloquium (20%)</td>
<td>5</td>
</tr>
<tr>
<td>2009/Spring</td>
<td>IDM 777</td>
<td>Neuroscience (2%)</td>
<td>65</td>
</tr>
<tr>
<td>2009/Spring</td>
<td>PHS 628</td>
<td>Mammalian Neurophysiology (3%)</td>
<td>19</td>
</tr>
<tr>
<td>2009/Spring</td>
<td>BMS 630</td>
<td>Neuroscience (2%)</td>
<td>2</td>
</tr>
<tr>
<td>2009/Spring</td>
<td>BMS 680</td>
<td>Seminar (3%)</td>
<td>30</td>
</tr>
<tr>
<td>2009/Spring</td>
<td>PHS 729</td>
<td>Mammalian Physiology (5%)</td>
<td>65</td>
</tr>
<tr>
<td>2009/Spring</td>
<td>PHS 629</td>
<td>Mammalian Physiology (5%)</td>
<td>19</td>
</tr>
<tr>
<td>2008/Fall</td>
<td>BMS 665</td>
<td>CODRC Colloquium (20%)</td>
<td>5</td>
</tr>
<tr>
<td>2008/Fall</td>
<td>PMC 610</td>
<td>Introduction to Pharmacology (30%)</td>
<td>19</td>
</tr>
<tr>
<td>2008/Fall</td>
<td>PMC 720</td>
<td>Medical Pharmacology (20%)</td>
<td>96</td>
</tr>
<tr>
<td>2008/Fall</td>
<td>PMC 621</td>
<td>Medical Pharmacology I (30%)</td>
<td>8</td>
</tr>
<tr>
<td>2008/Fall</td>
<td>BMS 680</td>
<td>Seminar (3%)</td>
<td>30</td>
</tr>
<tr>
<td>2008/Spring</td>
<td>PMC 720</td>
<td>Medical Pharmacology (25%)</td>
<td>60</td>
</tr>
<tr>
<td>2008/Spring</td>
<td>PMC 620</td>
<td>Medical Pharmacology (25%)</td>
<td>5</td>
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<td>2008/Spring</td>
<td>IDM 777</td>
<td>Neuroscience (2%)</td>
<td>60</td>
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<td>2008/Spring</td>
<td>PHS 628</td>
<td>Mammalian Neurophysiology (3%)</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Course Code</td>
<td>Course Title</td>
<td>%</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------</td>
<td>--------------------------------------------------</td>
<td>-----</td>
</tr>
<tr>
<td>2008/Spring</td>
<td>BMS 630</td>
<td>Neuroscience (2%)</td>
<td>2</td>
</tr>
<tr>
<td>2008/Spring</td>
<td>BMS 680</td>
<td>Seminar (3%)</td>
<td>30</td>
</tr>
<tr>
<td>2008/Spring</td>
<td>PHS 641</td>
<td>Recent Advances in Physiology (20%)</td>
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<tr>
<td>2007Fall</td>
<td>BMS 680</td>
<td>Seminar (3%)</td>
<td>30</td>
</tr>
<tr>
<td>2007Fall</td>
<td>PMC 610</td>
<td>Introduction to Pharmacology (30%)</td>
<td>27</td>
</tr>
<tr>
<td>2007Fall</td>
<td>BMS 600</td>
<td>Biochem, Cell, Mol ec Basis of Biomed Sci (1%)</td>
<td>27</td>
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</tbody>
</table>

**NOTE:** Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain. N/A

2) Activities that have enhanced your teaching and or research.

3) Discipline-related books/papers published (provide a full citation).

4) Papers presented at state, regional, national, or international conferences.

5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.
   Member: American Society for Pharmacology and Experimental Therapeutics
   Meetings Attended:
   - Experimental Biology 2004, San Diego CA, April, 2004
   - Experimental Biology 2009, New Orleans, LA, April 4, 2009

6) Externally funded research grants and contracts you received.

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
   Marshall University School of Medicine Teacher of the Year, Spring 2005.

8) Community service as defined in the Greenbook.
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: Wanda Elaine Hardman
Rank: Associate Professor

Status (Check one): Full-time XX Part-time__ Adjunct ___ Current MU Faculty: Yes XX No ___

Highest Degree Earned: Ph.D. Date Degree Received: Conferred May 1993

Conferred by: Univ. of Texas Health Science Center, San Antonio

Area of Specialization: Cell Biology

Professional Registration/Licensure Agency:__

Years non-teaching experience 12
Years of employment other than Marshall 12
Years of employment at Marshall 4
Years of employment in higher education 16
Years in service at Marshall during this period of review 4

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>08,09 Fall</td>
<td>BIC 720</td>
<td>Biochemistry, Medical students, 19 lecture hours</td>
<td>70</td>
</tr>
<tr>
<td>08,09, Fall</td>
<td>BMS 600</td>
<td>Biochemical, Cellular and Molecular Foundations of biomedical science, Graduate Students, 8 lecture hours</td>
<td>40</td>
</tr>
<tr>
<td>Fall 07, to Spring 09</td>
<td>BMS 680</td>
<td>Seminar, 17 class hours/semester</td>
<td>45</td>
</tr>
<tr>
<td>Spr. 07, Spr 09</td>
<td>BMS 651</td>
<td>Cancer Cell Biology, Graduate, 4 lecture hours</td>
<td>5</td>
</tr>
</tbody>
</table>

Graduate and undergraduate students
Graduate students – Juliana Akinsete – PhD Biomedical Sciences, primary mentor
Capstone project for Ted Witte, Environmental Sciences Master’s student
Graduate committees for 4 students: Amy Nash; Yue Huang, Anne Olshanski, Nick Adkins
Mentor for undergraduate students: Bianca Lycans, capstone project
Ronald Reyes – Chemistry, Capstone project

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research.

Professional development activities:
Lecture from Dr. Larry Greenberg, George Town school of medicine, Thursday August 31 at noon in MEB 116B, “Stimulating our students to think in higher cognitive levels” 2007
Half day seminar on test question writing and use of question statistics. 2007
Cancer in Nutrition* 2 day seminar, Univ. of North Carolina. 2007
ABC of Teaching and learning in medicine
“Learner centered” teaching to provide “patient centered” care. August 6, 2007
Teri Turner MD and Nancy S. Searle, EdD from Baylor School of Medicine

3) Discipline-related books/papers published (provide a full citation).

Peer reviewed
Cameron, IL, Sun, LZ, Hardman, WE and Williams, CD. Therapeutic Electromagnetic Field (TEMF) and gamma irradiation on human breast cancer xenograft growth, angiogenesis and metastasis. Cancer Cell Int. 2005 Jul 26;5:23.


Varney, ME, Hardman, WE and Sollars, VE. Omega 3 fatty acids reduce myeloid progenitor cell frequency in the bone marrow of mice and promote progenitor cell differentiation. Lipids in Health and Disease. 2009, 8:9.


**Book Chapters**


4) **Papers presented at state, regional, national, or international conferences.**

Five presentations at national scientific meetings from 2004-2009.

5) **Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended.** List any panels on which you were a chair or participant. List any offices you hold in professional organizations.


Member, American Association for Cancer Research
International Federation for Cell Biology, Treasurer, 2000 to 2009
American Institute for Cancer Research, Annual Meeting Program Committee, Symposium organizer, 2004 meeting
American Institute for Cancer Research, Study Section 2, 2003 to present
Scientific Advisory Board, California Walnut Council, 2004 to present

6) **Externally funded research grants and contracts you received.**

**Title:** A dietary strategy to delay or prevent mammary cancer BC024128 Dates: Aug 1, 2003 to July 31, 2005
Total Budget: $110,250 Agency: DOD – Breast Cancer Research Program

**Title:** Omega 3 fat to prevent or slow breast cancers BC032032 Dates: Apr 1, 2005 to Apr 30, 2008

**Title:** Walnut consumption to reduce cancer risk Dates: Dec. 1, 2005 to Nov 30, 2006
Total Budget: about $60,000 Agency: Matching grants, Am. Institute for Cancer Research and the Calif. Walnut Council

**Title:** Post-doctoral fellowship for Gabriela Ion Attenuation of preadipocytes/breast cancer cells communication in vitro in cancer prevention Dates: Jan 15, 2007 – Jan 14, 2010
Total Budget: $80,000 Agency: Cancer Research and Prevention Foundation

**Title:** Walnut consumption for benefit against prostate and breast cancer Dates: July 1, 2007 – June 30, 2010
Total Budget: $120,000 Agency: Am. Inst for Cancer Research / Calif Walnut Commission

**Title:** Omega-3 fat to reduce risk for breast cancer 1R01CA114018-01A2 Dates: Sept. 14, 2007 to Aug. 31, 2010 Total Budget: $40,886/year, $122,658 total Agency: NCI/NIH

7) **Awards/honors (including invitations to speak in your area of expertise) or special recognition.**


Hardman, WE Omega 3 fatty acids and cancer. Invited speaker to Arkansas Cancer Research Center, Director’s Symposium, Nov. 8, 2004.


Hardman, WE Walnuts consumption to reduce cancer growth, Invited speaker to California Walnut Council Scientific meeting, Aug 2006.

Hardman, WE Walnuts consumption to reduce cancer growth and prevent cancer, Invited speaker to California Walnut Council Scientific meeting, Aug 2008. Multiple citations in newspaper, magazines, radio and TV for work on canola oil or walnuts and cancer.
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: Susan H. Jackman

Rank: Professor

Status (Check one): Full-time x  Part-time  Adjunct  Current MU Faculty:
Yes  x  No

Highest Degree Earned: Ph.D. Date Degree Received: 1984

Conferred by: Iowa State University

Area of Specialization: Immunology

Professional Registration/Licensure Agency:

Years non-teaching experience

Years of employment other than Marshall
Years of employment at Marshall  19

Years of employment in higher education

Years of employment at Marshall during this period of review  5

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment.
(Expand the table as necessary)

<table>
<thead>
<tr>
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<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
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<td>07-08/Fall</td>
<td>MCB 743</td>
<td>Immunology</td>
<td>64</td>
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<tr>
<td>07-08/Fall</td>
<td>MCB 643</td>
<td>Immunology</td>
<td>3</td>
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<tr>
<td>08-09/Fall</td>
<td>MCB 743</td>
<td>Immunology</td>
<td>67</td>
</tr>
<tr>
<td>08/-09/Fall</td>
<td>MCB 643</td>
<td>Immunology</td>
<td>1</td>
</tr>
<tr>
<td>08-09/Spring</td>
<td>BMS 679</td>
<td>Special Topics - Immunology</td>
<td>1</td>
</tr>
<tr>
<td>08-09/Spring</td>
<td>MCB 848</td>
<td>Molecular Aspects of Pathogenesis</td>
<td>1</td>
</tr>
</tbody>
</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.
(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research.
   • Attendance at in-house seminars (08-09):
     Providing Effective Feedback: Proof is in the Pudding
     Power-Pointing in the Right Direction
     Assessing Your Learners
     Scholarly Writing: Publishing Medical Education Research
   • Webcast seminars (08-09):
     MedEdPortal On-line Training Workshop
     Longitudinal Evaluation of Student Progress: McMaster University Model
     Assessment That Matters: Beyond the Knowledge of Recall and Factual Information
     Principles That Drive Innovation in Assessment and Evaluation
Evaluating Learning in the Classroom
Applying Principles of Continuous Quality Improvement in the Course Evaluation Process
Students' Perspective of Assessment

- Attendance at seminars (07-08):
  - ABC’s of Teaching and Learning in Medicine – full day workshop
  - Autism Spectrum Disorders: Basic Information to Promote Successful Interactions
  - Preparing Effective Presentations
  - Tips for Writing Learning Objectives
  - Team-Based Learning 101
- Participated in webcast seminars (07-08):
  - Generational Differences: Implications for Teachers and Learners
  - New Tools for Teaching the Next Generation
  - Creative Application of Technology in Medical Education
  - Fostering Professionalism and Ethics in the New Generation
  - Learning Societies for Collaboration
  - Faculty Development and Preparing Faculty for the Next Generation
- Attendance at seminars (06-07):
  - Using the NBME Format in How to Write and Analyze Test Items
  - Using Small Group Strategies to Enhance Teaching and Learning
  - Stimulating Our Students to Think in Higher Cognitive Levels
- Participated in webcast seminars (06-07):
  - Classroom Assessment: Finding Out How Well They Are Learning What We Are Teaching
  - Learning Styles and Teaching Approaches in the Physical and Virtual Lecture Hall
  - Say No to Boring Lectures Whether Live or On-line

3) Discipline-related books/papers published (provide a full citation).
  - Staton, PJ, Carpenter AB, and Jackman, SJ., IL-7 is a critical factor in modulating lesion development in Skn-directed autoimmunity, J. Immunol. 176:3978-3986, 2006.

4) Papers presented at state, regional, national, or international conferences.

5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any offices you hold in professional organizations.
  - Member of The American Association of Immunologists, The Society of Investigative Dermatology, Society of Leukocyte Biology, Sigma Xi, International Association of Medical Science Educators, The Team-Based Learning Collaborative
  - Team-Based Learning Collaborative conference, 2009
  - International Association of Medical Science Education Annual Meeting, 2008

6) Externally funded research grants and contracts you received.
  - Research Supplies Stipend Grant: NIH/NIDDK/Drew University National High School Student Summer Research Apprentice Program
  - Research Supplies Stipend Grant: NIH/NIDDK/Drew Expended Pipeline Program

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
  - Certificate of Teaching Excellence by JCESOM, 2009
  - Invited seminar: "Team Based Learning: TBL - The New Buzzword in Medical Education" for the JCESOM Professional and Institutional Enhancement Seminar (PIES) series
  - MSII student award for Fall Semester Course, 2006
  - MSII student award for "Teacher of the Year, Fall 2004"

8) Community service as defined in the Greenbook.
  - Mentor for the NIH/NIDDK/Drew University National High School Student Summer Research Apprentice Program (June-August, 2007; June-August, 2006)
  - Mentor the NIH/NIDDK/Drew Expended Pipeline Program (October-May, 06-07)
  - Demonstrated blood group typing to the Huntington High School Science Club
Appendix II

Faculty Data Sheet
(Information for the period of this review)

Name: Jung Han Kim
Rank: Associate Professor

Status (Check one): Full-time _X_ Part-time__ Adjunct _____

Highest Degree Earned: _PhD_____________________ Date Degree Received: _Aug, 1996________

Conferred by: _The University of Tennessee-Knoxville___________________________________

Area of Specialization: _Nutrition_________________________________________________________

Years non-teaching experience 1996-2001
Years of employment other than Marshall 2001-2009 (UT)
Years of employment at Marshall 2009-present___
Years of employment in higher education 2001-present
Years in service at Marshall during this period of review 0.4 yrs___

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007/Spring (UT)</td>
<td>Nutrition 313</td>
<td>Vitamins and Minerals (3) (Undergraduate)</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Nutrition 512</td>
<td>Advances in Vitamin and Mineral Metabolism (3) (Graduate)</td>
<td>16</td>
</tr>
<tr>
<td>2008/Spring (UT)</td>
<td>Nutrition 313</td>
<td>Vitamins and Minerals (3) (Undergraduate)</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>Nutrition 512</td>
<td>Advances in Vitamin and Mineral Metabolism (3) (Graduate)</td>
<td>16</td>
</tr>
<tr>
<td>2008/Fall (UT)</td>
<td>Life Science 520</td>
<td>Genome Science and Technology 1 (4) (Graduate)</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>(3.6%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009/Spring (UT)</td>
<td>Nutrition 313</td>
<td>Vitamins and Minerals (3) (Undergraduate)</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>Nutrition 512</td>
<td>Advances in Vitamin and Mineral Metabolism (3) (Graduate)</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Nutrition 621</td>
<td>Physiological Basis for Diet and Disease (3) (Graduate)</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>(20%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research.

3) Discipline-related books/papers published (provide a full citation).


4) Papers presented at state, national, or international conferences.

5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.
2006-2008 Steering Committee for the Energy and Macronutrient Metabolism Research Interest Section of the American Society for Nutrition (Member)
2005 Experimental Biology, San Diego, CA
"Functional genomic study of dietary obesity in congenic mice."
2005 American Heart Association Research Symposium, Dallas, TX
"The type 2 diabetes mouse model TallyHo carries an obesity gene on chromosome 6 that exaggerates dietary obesity."
2006 Experimental Biology, San Francisco, CA
"Lipid-lowering effect on glucose metabolism in the type 2 diabetes mouse model of TALLYHO/Jng."
2007 Keystone Symposia; Nuclear Receptor Pathways to Metabolic Regulation, Steamboat Springs, CO
"Genetic characterization of hypertriglyceridemia in diabetic TALLYHO/Jng mice."
2008 Experimental Biology, San Diego, CA
"Integrative genetics and genomics study of the hypertriglyceridemia in a new polygenic mouse model for type 2 diabetes."
2009 Keystone Symposia; Type 2 diabetes and Insulin resistance, Fairmont Banff Springs, Banff, Alberta
"Proteomic analysis of pancreas, liver, and adipose tissue in a polygenic mouse model of type 2 diabetes."

6) Externally funded research grants and contracts you received.
2008-2013 1R01DK077202-01A2
National Institutes of Health/ National Institute of Diabetes and Digestive and Kidney Diseases
"Genetics of diet-induced obesity in a new mouse model."
Principal Investigator, Total Award: $1,000,000 (Direct)
2008-2010 0855300E
Grant-in-Aid, American Heart Association, the Greater Southeast Affiliate
"Diet-Wnt signaling interactions in a novel congenic mouse model of obesity."
Principal Investigator, Total Award: $165,000
2004-2007 7-04-RA-52
Research Award, American Diabetes Association
"Metabolic and Genomic Characterization of Early-Onset Hypertriglyceridemia in a New Mouse Model of NiDDM, TallyHo."
Principal Investigator, Total Award: $300,000

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
8) Community service as defined in the Greenbook.
2004 The local board meeting of the American Heart Association (AHA) in Knoxville
Invited participant as a University of Tennessee researcher funded by AHA
2005 The Knoxville Chapter of the American Diabetes Association.
Invited speaker, "Genetic Studies of Type 2 Diabetes and Blood Triglyceride Levels in TallyHo Mice."
2005 The local board meeting of the American Heart Association in Knoxville
Invited participant as a UT researcher funded by American Heart Association
Appendix II

Faculty Data Sheet
(Information for the period of this review)

Name: ___Elsa I. Mangiarua___________________________   Rank: __Professor________________

Status (Check one):  Full-time__X_   Part-time___   Adjunct __  Current MU Faculty:  Yes _x__    No ___

Highest Degree Earned: __Ph.D.__________________   Date Degree Received: ___1983_________

Conferred by: __Universidad de Buenos Aires_______________________________________________

Area of Specialization: __Biochemistry_____________________________________________________

Professional Registration/Licensure_______________________     Agency: _______________________________

Years non-teaching experience __________  16
Years of employment other than Marshall __________  12
Years of employment at Marshall __________  22
Years of employment in higher education __________  26
Years in service at Marshall during this period of review __________  5

List courses you taught during the final two years of this review.  If you participated in a team-taught course, indicate each of them and what percentage of the course you taught.  For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007/Fall</td>
<td>BMS600</td>
<td>Cellular and Molecular Biology (4%)</td>
<td>45</td>
</tr>
<tr>
<td>2008/Fall</td>
<td>BMS600</td>
<td>Cellular and Molecular Biology (4%)</td>
<td>47</td>
</tr>
<tr>
<td>2008/Spring</td>
<td>PHS701/629</td>
<td>Mammalian Physiology (20%)</td>
<td>95</td>
</tr>
<tr>
<td>2009/Spring</td>
<td>PHS701/629</td>
<td>Mammalian Physiology (20%)</td>
<td>95</td>
</tr>
</tbody>
</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research.

3) Discipline-related books/papers published (provide a full citation).


4) Papers presented at state, regional, national, or international conferences.

- Mangiarua EI, Morrison RG, Green T, Blough E, Wehner PS, McCumbee WD. Role of 12-lipoxygenase in obesity-associated hypertension. Sixteenth Scientific Meeting of the Interamerican Society of Hypertension, Cancun, Mexico, April 16 – 21, 2005.

5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

6) Externally funded research grants and contracts you received.

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

INVITED SPEAKER:
- Marshall University, Joan C. Edwards School of Medicine, Cardiology Seminars, “Natriuretic Peptides”, October 2005.

8) Community service as defined in the Greenbook.
Appendix II

Faculty Data Sheet
(Information for the period of this review)

Name: William D. McCumbee  Rank: Professor

Status (Check one): Full-time X  Part-time  Adjunct  Current MU Faculty: Yes X  No ___

Highest Degree Earned: Ph.D.  Date Degree Received: 1977

Area of Specialization: Physiology

Professional Registration/Licensure  Agency: ________________________________

Years non-teaching experience  33
Years of employment other than Marshall  5
Years of employment at Marshall  28
Years of employment in higher education  33
Years in service at Marshall during this period of review 

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007/Spring</td>
<td>PHS 629/701</td>
<td>Mammalian Physiology (25%)</td>
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</tr>
<tr>
<td>2008/Spring</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007/Fall</td>
<td>IDM 720</td>
<td>Medical Cell and Molecular Biology (7%)</td>
<td></td>
</tr>
<tr>
<td>2008/Fall</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007/Fall</td>
<td>BMS 600</td>
<td>Cell and Molecular Biology (4%)</td>
<td></td>
</tr>
<tr>
<td>2008/Fall</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007/Spring &amp; Fall</td>
<td>PHS 641</td>
<td>Recent Advances in Physiology (10%)</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research.
   - Attended lectures in other medical schools
   - Attended Obesity Society meeting in 2008

3) Discipline-related books/papers published (provide a full citation).


4) Papers presented at state, regional, national, or international conferences.


5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

- Obesity Society
- Endocrine Society

6) Externally funded research grants and contracts you received.

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

- BMS Advisor Award 2006
- Spring 2004 Teacher of the Year, presented by the class of 2007

8) Community service as defined in the Greenbook.
Appendix II

Faculty Data Sheet
(Information for the period of this review)

Name: ___Michael R. Moore____________   Rank: Professor________________________________

Status (Check one): Full-time__X__ Part-time_____ Adjunct _____

Current MU Faculty: Yes __X_ No ___

Highest Degree Earned: ___Ph.D.______   Date Degree Received: December, 1975__________

Conferred by: __University of Georgia___________________________________________

Area of Specialization: _____Biochemistry___________________________________________

Professional Registration/Licensure____N/A___________     Agency: _______________________

Years non-teaching experience  _______3_____

Years of employment other than Marshall  _______5_____

Years of employment at Marshall  _______31_____

Years of employment in higher education  _______31_____

Years in service at Marshall during this period of review  _______5_____

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007/fall-team-20%</td>
<td>BIC 720</td>
<td>Human Biochemistry</td>
<td>~85</td>
</tr>
<tr>
<td>2007/fall-team-4%</td>
<td>BIC 643</td>
<td>Molecular Signal Transduction</td>
<td>5</td>
</tr>
<tr>
<td>2007/fall-team-11%</td>
<td>BMS 600</td>
<td>Biochemical, Cellular and Molecular Foundations of Biomedical Science</td>
<td>51</td>
</tr>
<tr>
<td>2008/fall-team-20% (course director)</td>
<td>BIC 720</td>
<td>Human Biochemistry</td>
<td>83</td>
</tr>
<tr>
<td>2008/spring-11%</td>
<td>BMS 651</td>
<td>Cancer Biology</td>
<td>7</td>
</tr>
</tbody>
</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain. Not applicable

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research.
   - Attended 4 presentations/workshops on teaching methods/effectiveness put on by the School of Medicine's Office of Professional Development in Medical Education
   - Spent a 6 month sabbatical leave, January through June, 2005, doing research on progesterone and breast cancer in the Department of Pathology at the University of Colorado School of Med.

3) Discipline-related books/papers published (provide a full citation).


Papers presented at state, regional, national, or international conferences.


Teter MA, Holley AK and Moore MR (2007) Progestin Stimulation of Migration of T47D Human Breast Cancer Cells, poster presentation at the West Virginia STAR Symposium, West Virginia University, September, 2007, prize winning presentation


5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Member of the American Society for Biochemistry and Molecular Biology

Member of The Endocrine Society

Attended all of the conferences listed above in part (4) except for the West Virginia STAR Symposium in 2007

6) Externally funded research grants and contracts you received.

Co-investigator of grant from WV INBRE program of NIH, “Progestin/glucocorticoid inhibition of breast cancer cell death”, funding $2,000 from June 8, ’04 to August 8, ’04. In addition, the salary of the undergraduate student working on this project in my lab was paid by INBRE.

Co-investigator on grant from Center of Biomedical Research Excellence (PI RM Niles) program of NIH, P20 RR020180, Title of my project “Progestin Inhibition of Breast Cancer Cell Death”; $20,000, August 1, 2005–July 31, 2006; pilot grant to MR Moore from COBRE

Co-investigator on 5P20RR016477-07 Rankin (PI), West Virginia INBRE program of NIH, pilot grant to Moore from this grant to fund an undergraduate’s salary and supplies for 2 months’ summer research, 06/04/07-08/04/07; Goal: To determine the role of progestins in breast cancer migration and invasion.

Co-investigator on 5P20RR016477-08 Rankin (PI), West Virginia INBRE program of NIH, 06/02/08 – 07/31/08, pilot grant to Moore from this grant to fund an undergraduate’s salary and supplies for 2 months’ summer research; Goal: To determine the role of progestins in breast cancer migration and invasion.

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.


8) Community service as defined in the Greenbook.
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: __Richard M. Niles__________   Rank: Professor___________________________

Status (Check one):  Full-time _X___  Part-time_______  Adjunct ______
Current MU Faculty:  Yes _X__    No ___

Highest Degree Earned: ___Ph.D._____   Date Degree Received: __1972_______________
Conferred by: _____University of Massachusetts - Amherst_________________________

Area of Specialization: ______Pathology____________________________________

Professional Registration/Licensure_______________     Agency: ______________________

Years non-teaching experience 34
Years of employment other than Marshall 17
Years of employment at Marshall 17
Years of employment in higher education 34
Years in service at Marshall during this period of review 5

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2007</td>
<td>BMS600</td>
<td>Cell and Molecular Biology</td>
<td>50</td>
</tr>
<tr>
<td>Fall 2008</td>
<td>BMS 600</td>
<td>Cell and Molecular Biology</td>
<td>50</td>
</tr>
<tr>
<td>Fall 2007</td>
<td>BIC720/620</td>
<td>Human Biochemistry</td>
<td>68</td>
</tr>
<tr>
<td>Fall 2008</td>
<td>BIC 720/620</td>
<td>Human Biochemistry</td>
<td>72</td>
</tr>
</tbody>
</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research.
   None

3) Discipline-related books/papers published (provide a full citation).

Eight peer-reviewed publications from 2004-2008.


4) Papers presented at state, regional, national, or international conferences.
   Three presentations at national scientific meetings.

5) Professional development activities, including professional organizations to which you belong and state, regional, national,
   and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in
   professional organizations.
   Member of American Association for Cancer Research
   Member of Society for Melanoma Research
   Member of American Society for Nutrition
   Member of American Association for the Advancement of Science
   Member of American Society of Biochemistry and Molecular Biology
   Organized and Chaired Session on Vitamins and Treatment/Prevention of Cancer.

   Organized and Chaired Session on Animal Models for the Study of Nutrition and Cancer

   Chair
   Program Committee
   DC, Nov. 2008, Nov. 2009
   Charter Member NIH Chemo and Dietary Prevention of Cancer Study Section
   2003-2004

   Chair, Cell Biology I Grant Review Panel US
   Army Prostate Cancer Research Program, April, 2003

   Panel Member NCI Special Emphasis Panel
   To review RFA grants on Molecular Targets of Nutrients in Prostate Cancer. Nov, 2003

   Chair, Cell Biology I Grant Review Panel, US Army Prostate Cancer Research Program, April, 2005

   Ad hoc member US Army Breast Cancer Programatic Review Panel, April, 2005


   Natl Acad Sci

   Ad hoc member of the US Army Breast Cancer Integration Panel, Nov., 2006-2008

6) Externally funded research grants and contracts you received.
   Principal Investigator
   Resveratrol and Human Melanoma
   NIH
   $146,000 – 5/1/03 – 3/31/05

   Principal Investigator
   Center of Biomedical Research Excellence – “Transcription Factors in Cancer”
   NIH, NCRR
   $9.3 million – 9/23/04 – 7/31/09

   Principal Investigator
   Use of Phytochemicals to activate expression of silenced genes in melanoma cells, RO3 NIH, NCI
   $140,000 – 11/1/06 – 10/30/08

   Principal Investigator
   STEM Fellows grant
   West Virginia Research Challenge Fund
   $800,000 – 1/1/09 – 12/31/13

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

   Six invitations to speak at other universities.
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: ______Michael Norton________________________ Rank: ______Professor________________________

Status (Check one): Full-time_____ Part-time_____ Adjunct __X___ Current MU Faculty: Yes _X__ No ___

Highest Degree Earned: ______PhD___________ Date Degree Received: ____1982________

Conferred by: __Arizona State U_________________________________________

Area of Specialization: ____Chemistry______________________________________________

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008/Spring</td>
<td>CHM 483, BSC 482,Gly 483</td>
<td>Applied Microscopy in Research (Undergraduate)</td>
<td>8</td>
</tr>
<tr>
<td>2008/Fall</td>
<td>CHM 448</td>
<td></td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>CHM 548</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>2009/Spring</td>
<td>CHM 483, BSC 482,Gly 483</td>
<td>Applied Microscopy in Research (Undergraduate)</td>
<td>4</td>
</tr>
<tr>
<td>2009/Fall</td>
<td>CHM 448</td>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research.

3) Discipline-related books/papers published (provide a full citation).

Publications


3. Bobadilla, Alfredo D; Bellido, Edson P.; Rangel, Norma L.; Zhong, Hong; Norton, Michael; Sinitskii, Alexander and Seminario, Jorge M.; DNA origami impedance measurement at room temperature; J. Chem. Phys., 130


6. Norton, Michael; Day, B. Scott; Cao, Huan; Rahman, Mashiur; and Gin, Aaron; Arrays of Nanoarrays: Elements of Binding, IEEE Sensors Journal, 8(6), 874-879, 2008.

4) Papers presented at state, regional, national, or international conferences.
5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.
6) Externally funded research grants and contracts you received.

1. Title: Directed Sequential Assembly Via DNA Nanostructures Based Nanostructures

U.S. Army Research Office - DEPSCoR
$ 508,133 Period 05/31/05 - 05/31/09
Location: Marshall University
Commitment academic 2.5 months

2. Title: Sensing Biological, Chemical, and Radiation Hazards in Harsh Environments

U.S. Army Research Office – Subaward with the University of South Carolina
$ 74,977 Period 07/15/08 - 06/14/09
Location: Marshall University
Commitment 0 months

3. Title: Integrated Sensing Using DNA Nanoarchitectures

U.S. Army Research Office
Estimated Budget $ 854,363 Period 05/1/08 - 12/31/12
Location: Marshall University
Commitment 3 months
PI: Michael Norton

4. Title: Transcription as Sequencing (TAS)

U.S. Army Research Office
$ 445,521 Period 01/01/09 – 12/31/2011
Location: Marshall University
Commitment summer 1.4 months
PI: Michael Norton

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
8) Community service as defined in the Greenbook.
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: _______ Maiyon Park ________  Rank: ______ Assistant Professor ________

Status (Check one): Full-time____ X__ Part-time____ Adjunct _____ Current MU Faculty: Yes ___
No ___

Highest Degree Earned: ___Ph.D ______ Date Degree Received: ___May 1998 ______

Conferred by: ___University of Michigan____

Area of Specialization: __Cancer Biology, Cell and Molecular biology, Biochemistry, Genetics____

Professional Registration/Licensure________________ Agency: _______________________________

Years non-teaching experience ___________ 11.8 years
Years of employment other than Marshall ___________ 5 years
Years of employment at Marshall ___________ 5.5 years
Years of employment in higher education ___________ 11.8 years
Years in service at Marshall during this period of review ___________ 5.5 years

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009/Fall</td>
<td>BMS 652</td>
<td>Cancer Colloquium, Course Organizer, 100%</td>
<td></td>
</tr>
<tr>
<td>2008/Spring</td>
<td>BMS 651</td>
<td>Cancer Biology, ~10%</td>
<td></td>
</tr>
<tr>
<td>2008/Fall</td>
<td>BMS 650</td>
<td>Cellular and Molecular Biology, ~10%</td>
<td></td>
</tr>
<tr>
<td>2007/Fall</td>
<td>BMS 650</td>
<td>Cellular and Molecular Biology, ~10%</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research.
   • Attending conferences, lab meeting, reading papers, reading books, writing papers, grant writing, and guiding students in the lab

3) Discipline-related books/papers published (provide a full citation).
   1. Paper Published:
      (1) Jing Li, Brandon Orr, Kayla White, Natalia Belogortseva, Richard Niles, Goran Boskovic, Hanh Nguyen, Ava Dykes3and Maiyon Park, Chmp1A is a mediator of the anti-proliferative effects of All-trans Retinoic Acid in pancreatic cancer cells, Molecular Cancer 2009, 8:7
doi:10.1186/1476-4598-8-7

      (2) Jing Li, Natalia Belogortseva, David Porter and Maiyon Park, Chmp1A functions as
a novel tumor suppressor gene in human embryonic kidney and ductal pancreatic tumor cells.
Cell Cycle, Sep/18, 2008 15; 7(18)

2. Paper Submitted:
(1) Analysis of human Chmp1A protein binding partners: submitted to Proteomics, 9-2009
(2) Chmp1A interacts with Strabismus physically and genetically to regulate cell movement and proliferation, submitted to MCB Molecular Biology, August/2009

Papers presented at state, regional, national, or international conferences.
3. Natalia Belogortseva, Jing Li, Steven Wolfe and Maiyon Park, “Chmp1A is a candidate for ubiquitin mediated protein sorting”, IDEA (Institutional Developmental Award), August 6-8, 2008: Washington, DC
5. Jing Li, Brandon Orr, Kayla White, Natalia Belogortseva, Richard Niles, Goran Boskovic, Ava Dykes, Maiyon Park, “Chmp1A is a mediator of the anti-proliferative effects of All-trans Retinoic Acid in pancreatic cancer cells”, IDEA (Institutional Developmental Award), August 6-8, 2008: Washington, DC (PP-080)
6. Christopher Wolf, Jing Li, Natalia Belogortseva, David Porter, Maiyon Park, “Chmp1A Expression and function in colon tumors” Oral and a poster presentation at West Virginia IdeA Network of Biomedical Research Excellence summer research symposium, July 31, 2008: Morgantown, WV

Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.
• Active member of AACR (American Association for Cancer Research)

Externally funded research grants and contracts you received.
(1) COBRE Grant (Project 3, PI: Dr. Richard Niles)
1 P20 RR021080-01 (Project 3, Park, PI), 7/1/04-6/30/09 (5 yrs), 50% Effort
NIH/NCRR, Title: Transcription Factors in Cancer Period of Support: 10/01/04 – 07/30/09
(2) Grant Pending
RO1 grant was submitted to NIH NIGMS: Grant Title “Nuclear mediated function of Chmp1A in the regulation of cell cycle progression”, June/05/2009

Awards/honors (including invitations to speak in your area of expertise) or special recognition.
• Oral Presentation, at the 4th Annual WV COBRE/INBRE conference, October 26-27, 2008, WVU Morgantown, WV. Chmp1A functions as a novel tumor suppressor gene in human embryonic kidney and pancreatic ductal tumor cells,
• Ad hoc: The Wellcome Trust/DBT India Alliance grant review

Community service as defined in the Greenbook.
• Committee member of Faculty Senate University Functions
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: __Donald A. Primerano_______________________   Rank: ___Professor_________________

Status (Check one):  Full-time _X__  Part-time____  Adjunct ____  Current MU Faculty:  Yes _X    No ___

Highest Degree Earned: _______PhD________________   Date Degree Received: _____1982________

Conferred by: __Duke University Department of Microbiology and Immunology_____________________

Area of Specialization: _Human Genetics, Genetic Basis of Complex Diseases, Cardiovascular Disease_  

Professional Registration/Licensure______NA______     Agency: _________NA______________

Years non-teaching experience___6____

Years of employment other than Marshall___6____

Years of employment at Marshall___20.75__

Years of employment in higher education___20.75__

Years in service at Marshall during this period of review___20.75__

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment.  
(Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
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<tbody>
<tr>
<td>2007 Fall</td>
<td>MCB 630/MCB 730</td>
<td>Medical Microbiology (Team taught, my %age = 20)</td>
<td>69 in 2007</td>
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<tr>
<td>2008-09Fall Spring</td>
<td>MCB 631/632/732</td>
<td>Medical Microbiology (Team taught, my %age = 20)</td>
<td>76 in 2008-09</td>
</tr>
<tr>
<td>2009-10Fall Spring</td>
<td>MCB 631/632/732</td>
<td>Medical Microbiology (Team taught, my %age = 20)</td>
<td>93 in 2008-09</td>
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<tr>
<td>2007 Fall</td>
<td>BMS 600</td>
<td>Cell and Molecular Biology (team taught, my %age = 4)</td>
<td>~40 in 2007</td>
</tr>
<tr>
<td>2008 Fall</td>
<td>BMS 600</td>
<td>Cell and Molecular Biology (team taught, my %age = 4)</td>
<td>~45 in 2008</td>
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<tr>
<td>2009 Fall</td>
<td>BMS 600</td>
<td>Cell and Molecular Biology (team taught, my %age = 4)</td>
<td>~50 in 2009</td>
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<tr>
<td>2007 Spring</td>
<td>IDM724/BMS614</td>
<td>Human Genetics (team taught my %age = 32)</td>
<td>71 in 2007</td>
</tr>
<tr>
<td>2008-09Fall Spring</td>
<td>MED 725</td>
<td>APC- Human Genetics (team taught, my % age = 2%)</td>
<td>76 in 2008-09</td>
</tr>
<tr>
<td>2009-10Fall Spring</td>
<td>MED 725</td>
<td>APC- Human Genetics (team taught, my % age = 2%)</td>
<td>93 in 2009-10</td>
</tr>
<tr>
<td>2007 Spring</td>
<td>BIC638</td>
<td>Nucleic Acids and Protein Synthesis (team taught, 40%)</td>
<td>5 in 2007</td>
</tr>
</tbody>
</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document. 
1) If your degree is not in your area of current assignment, please explain. 
(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)
2) Activities that have enhanced your teaching and or research. 
(a) Participation in team grant writing with COBRE and INBRE especially mock study sections 
(b) regular lab meetings with the Genomics Core Facility 
(c) attending biomedical science seminars 
3) Discipline-related books/papers published (provide a full citation).

4) Papers presented at state, regional, national, or international conferences.
5. Gene Fingerprinting of Human Heart in Obesity. Heather L Ratliff DO, Mohammed Yousufuddin MD, Jeremy Stapleton DO, Firasat Malik MD, Sulaiman Hasan MD, Zafrullah Khan MD, Gregory Rosencrance MD, Gregory Clarke MD, Goran Boskovic PhD, Jim Denvir PhD, Donald Primerano PhD. Presented as a poster at the WV Chapter of the American College of Physicians in October 2006.

5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

PANELS:
(1) WV-INBRE Steering Committee Member.
(2) University of Kentucky COBRE External Advisory Committee

GRANT REVIEWS:
Mary Babb Randolph Cancer Pilot Grant Reviewer

CONFERENCES ATTENDED:

6) Externally funded research grants and contracts you received.

Ongoing:
Title: West Virginia IDEA Networks of Biomedical Research Excellence (WV-INBRE) Phase II
Period: 5/1/09 - 4/30/14
Amount: approx $3.0M/year
Agency: NIH/NCRR
Role: Co-P.I. (G. Rankin, P.I.)

Title: COBRE Administrative Supplement: WV Cancer Genetics Networks
Period: 10/1/09 -
Amount: approx $3.0M/year
Agency: NIH/NCRR
Role: Co-P.I. (R. Niles, P.I.)

RESEARCH SUPPORT (completed)
Title: West Virginia Biomedical Research Infrastructure Network (WV-BRIN) ACoRN Director
Period: 10/1/01 - 6/30/04
Amount: approx $1,000,000/year
Agency: NIH/NCRR, Role: Co-P.I. (30% Effort)

Title: WV-IdeA Network of Biomedical Research Excellence (WV-INBRE)
Agency: NIH/NCRR
Period: 7/01/04 to 6/30/09
Amount: approx $2.5 million/year
Role: Co-P.I. and Director of Appalachian Cardiovascular Research Network
Title: Transcription Factors in Cancer (COBRE)
Agency: NIH/NCRR
Period: 10/01/04 to 7/31/09
Amount: approx $1.6 million/year
Role: Co-I./Director of Genomics Core Facility (R. Niles, P.I.)

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
2009 Certificate of Teaching Excellence awarded by JCESOM

8) Community service as defined in the Greenbook.
Clerk of Session at Spring Valley Presbyterian Church
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: Gary O. Rankin  Rank: Professor and Chair

Status (Check one): Full-time X Part-time _____ Adjunct _____
Current MU Faculty: Yes X No ____

Highest Degree Earned: Ph.D.  Date Degree Received: 1976
Conferred by: University of Mississippi

Area of Specialization: Pharmacology/Toxicology
Professional Registration/Licensure: NA  Agency: _______________________________

Years non-teaching experience _____0____
Years of employment other than Marshall _____0____
Years of employment at Marshall _____31____
Years of employment in higher education _____31____
Years in service at Marshall during this period of review _____26 to 31____

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007/Fall</td>
<td>FSC680</td>
<td>Toxicology/Drug Analysis (15%)</td>
<td>12</td>
</tr>
<tr>
<td>2007/Fall</td>
<td>PMC655</td>
<td>Toxicology Reviews (20%)</td>
<td>3</td>
</tr>
<tr>
<td>2007/Fall</td>
<td>PMC610</td>
<td>Introduction to Pharmacology (20%)</td>
<td>28</td>
</tr>
<tr>
<td>2008/Spring</td>
<td>PMC620</td>
<td>Medical Pharmacology (15%)</td>
<td>1</td>
</tr>
<tr>
<td>2008/Fall</td>
<td>PMC621</td>
<td>Medical Pharmacology (15%)</td>
<td>9</td>
</tr>
<tr>
<td>2008/Fall</td>
<td>PMC 620</td>
<td>Introduction to Pharmacology (20%)</td>
<td>20</td>
</tr>
<tr>
<td>2008/Fall</td>
<td>FSC680</td>
<td>Toxicology/Drug Analysis (15%)</td>
<td>12</td>
</tr>
<tr>
<td>2008/Summer</td>
<td>PMC655</td>
<td>Toxicology Reviews (20%)</td>
<td>3</td>
</tr>
<tr>
<td>2008/Fall</td>
<td>PMC650</td>
<td>General Toxicology (30%)</td>
<td>3</td>
</tr>
<tr>
<td>2009/Spring</td>
<td>PMC622</td>
<td>Medical Pharmacology (15%)</td>
<td>8</td>
</tr>
</tbody>
</table>

I also give a two hour lecture each year as part of the University of Kentucky Advanced Toxicology (TOX 680) course.

1) If your degree is not in your area of current assignment, please explain.

My PhD degree is in Medicinal Chemistry (drug design), a field directly related to pharmacology/toxicology. However, my two years of postdoctoral training were in pharmacology/toxicology, which has been my area of teaching/research for the last 25 years.

2) Activities that have enhanced your teaching and or research.

Yearly attendance at professional organizations such as the Association of Medical School Pharmacology Chairs, Association of Chairs of Physiology, Society of Toxicology, Experimental Biology; participation in NIH-sponsored meetings (e.g. INBRE PI’s meetings); review of research grants (e.g. 3-5 study sections/year for NIH), review of research manuscripts (15-30/yr), visits to other research programs to present research findings and interact with other scientists.

3) Discipline-related books/papers published (provide a full citation).

1. D. Cui, G.O. Rankin and P.J. Harvison. 2005. Metabolism of the nephrotoxicant N-(3,5-dichlorophenyl) succinimide in rats:

In addition to these journal publications, 14 drug reviews were prepared for X-Pharm, an electronic data base, and 4 book chapters were published.

4) Papers presented at state, regional, national, or international conferences.

A total of 21 papers were presented at State, national and international conferences.

5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Regular Ad hoc NIH PBKD Study Section in 2004 - 2006; ad hoc reviewer for four different NIH reviews (NIEHS, NIDDK, CMBK and RCMI-IDEA) in 2007; Special Emphasis Panel Reviewer (NIDDK) and for RCMI-IDEA Study Section in 2008; ad hoc reviewer for three different NIH reviews (Chair for one) in 2009; President, Association of Medical School Pharmacology Chairs, 2004-2007. President, Mechanisms Specialty Section (Society of Toxicology, 2008- 2009. I attended yearly WV IDEA (COBRE/INBRE) conferences, Member Association of Chairs of Departments of Physiology; Manuscript reviewer for numerous journals; grant reviewer for Kidney Research United Kingdom; external reviewer for East Carolina University (pharmacology graduate programs and a biomedical science M.S. proposal), Council of Academic Societies representative for American Society for Pharmacology and Experimental therapeutics (2006 –Present).

6) Externally funded research grants and contracts you received.

C. NIH. Four supplements to the WV-INBRE Award (S1-S4) were made in 2009 totaling $751,506, $529,094, $590,453 and $651,385, respectively.

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

A. Who’s Who in Medical Education, 2005;
B. Invited research presentations at Tulane University, Marshall University, Medical University of South Carolina, Alderson-Broaddus College, University of Iowa, and East Carolina University.

8) Community service as defined in the Greenbook.

A. Regular lecturer on chemical spray safety for the American Rose Society.
B. Serve on the Board of Directors for the Huntington Museum of Art and on three committees including Trails, Education and Landscaping (Co-Chair).
C. Served as a reference for toxicology related matters to the community at large.
Appendix II
Faculty Data Sheet
(for the period of this review)

Name: ___Vernon E. Reichenbecher, Ph.D._____________   Rank: ___Professor______________

Status (Check one): Full-time  X  Part-time      Adjunct      
Current MU Faculty:  Yes  X  No      

Highest Degree Earned: ____Ph.D.______________   Date Degree Received: __September, 1976__

Conferred by: ____Duke University________________________________________

Area of Specialization: ____Biochemistry/Genetics_______________________________________

Professional Registration/Licensure___N/A_________     Agency: ____________________________

Years non-teaching experience       ___N/A__
Years of employment other than Marshall    ___5____
Years of employment at Marshall         ___28___
Years of employment in higher education___28___
Years in service at Marshall during this period of review ___5___

List courses you taught during the final two years of this review. If you participated in a team-taught
course, indicate each of them and what percentage of the course you taught. For each course include
the year and semester taught (summer through spring), course number, course title and enrollment.
(Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
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<tbody>
<tr>
<td>2007, fall</td>
<td>BIC 720</td>
<td>Human Biochemistry (23%)</td>
<td>75</td>
</tr>
<tr>
<td>2008, spring</td>
<td>FSC 618</td>
<td>Comparative Sciences (8%, Firearms Lectures)</td>
<td>15</td>
</tr>
<tr>
<td>2008, spring</td>
<td>BMS 685</td>
<td>Introduction to Research (75%)</td>
<td>15</td>
</tr>
<tr>
<td>2008, fall</td>
<td>BIC 720</td>
<td>Human Biochemistry (23%)</td>
<td>80</td>
</tr>
<tr>
<td>2008, fall</td>
<td>BMS 600</td>
<td>Foundations of Biomedical Science (5%)</td>
<td>50</td>
</tr>
<tr>
<td>2009, spring</td>
<td>FSC 618</td>
<td>Comparative Sciences (8%, Firearms Lectures)</td>
<td>15</td>
</tr>
<tr>
<td>2009, spring</td>
<td>BMS 685</td>
<td>Introduction to Research (75%)</td>
<td>15</td>
</tr>
</tbody>
</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.   N/A

(For each of the following sections, list only events during the period of this review and begin with
the most recent activities.)

2) Activities that have enhanced your teaching and or research.

I have attended at least one faculty teaching development workshop each year. I attended “Small Arms
Firing School” two times.

3) Discipline-related books/papers published (provide a full citation).

*Medical Genetics On-line Lectures, 2nd ed.*, Kaplan Educational Centers. My seven-hour review of Medical Genetics has been updated and revised and made available by DVD and on-line by Kaplan Medical (2006); 3rd ed. (2009).

Coauthor: *Biochemistry and Medical Genetics USMLE Step I Lecture Notes*, Kaplan Medical (updated, 2009).

4) Papers presented at state, regional, national, or international conferences.


5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Member of:
- American Society for Cell Biology
- Genetics Society of America
- American Association for the Advancement of Science
- West Virginia Academy of Science
- Association of Biochemistry Course Directors
- International Association of Medical Science Educators
- Sigma Xi
- Charter Member, Marshall University School of Medicine Academy of Medical Educators

I attended the national “Medical Biochemistry Education Strategies Workshop” in April, 2008 and April, 2009

6) Externally funded research grants and contracts you received. N/A

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

Invited talk: “Teaching Medical Biochemistry at Marshall University” at the national “Medical Biochemistry Education Strategies Workshop” in April, 2008

Award: Best Professor for Fall 2008 (awarded by medical school class of 2012)

8) Community service as defined in the *Greenbook*.

Member: First United Methodist Church
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: __Laura L. Richardson______________   Rank: Associate Professor________________

Status (Check one): Full-time__X__ Part-time_____ Adjunct _____ Current MU Faculty: Yes _X__ No ___

Highest Degree Earned: _Ph.D.________   Date Degree Received: _1993________________

Conferred by: _Georgetown University____________________________________________

Area of Specialization: _Cell Biology_________________________________________________

Professional Registration/Licensure___N/A_____     Agency: _______________________________

Years non-teaching experience  ___37____
Years of employment other than Marshall __28___
Years of employment at Marshall ___9___
Years of employment in higher education __9___
Years in service at Marshall during this period of review ___5 _____

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment.  (Expand the table as necessary)

<table>
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<th>Year/Semester</th>
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<th>Title</th>
<th>Enrollment</th>
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<tr>
<td>2009/Fall</td>
<td>IDM 725</td>
<td>Molecular Basis of Medicine</td>
<td>81</td>
</tr>
<tr>
<td>2009/Fall</td>
<td>BMS 600</td>
<td>Foundations of Biomedical Science</td>
<td>25</td>
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<tr>
<td>2009/Spring</td>
<td>ACB 724</td>
<td>Microscopic Anatomy</td>
<td>81</td>
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<td>2008/Fall</td>
<td>IDM 720</td>
<td>Medical Cell and Molecular Biology</td>
<td>81</td>
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<td>2008/Fall</td>
<td>BMS 600</td>
<td>Foundations of Biomedical Science</td>
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<td>2008/Spring</td>
<td>ACB 724</td>
<td>Microscopic Anatomy</td>
<td>73</td>
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NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research.
Professional Development workshops (listed below), Research Boot Camp, Cancer Biology Seminar Series, meetings attended (listed below)

3) Discipline-related books/papers published (provide a full citation).


4) Papers presented at state, regional, national, or international conferences.


Jordan Nash, Chris Barry and Laura L. Richardson, Expression of Ski and Sno Proto-oncogenes in Male Germ Cells and Testicular Tumors. 14th European Testis Workshop, Bad Aibling, Bavaria, Germany, April 22-26, 2006
Amy N. Nash and Laura L. Richardson, Expression of Ski and Sno Oncogenes in Testicular Tumors. 47th Annual Short Course on Medical and Experimental Mammalian Genetics, Bar Harbor, ME, July 2006.

Amy N. Nash and Laura L. Richardson, Ski Target Genes Revealed by siRNA Knockdown in NCCIT cells. COBRE/INBRE Annual Meeting, Charleston, WV, Nov. 2007.


5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Professional Organizations:
American Society for Cell Biology
Society for the Study of Reproduction
American Society of Andrology
American Association of Anatomists
Association of Anatomy, Cell Biology and Neurobiology Chairpersons

Meetings Attended:

International:
14th European Testis Workshop, Bad Aibling, Bavaria, Germany, April 22-26, 2006

National:
38th Annual Meeting of the Society for the Study of Reproduction, Quebec City, Quebec, July 27-24, 2005
33rd Annual Meeting of the Society for the Study of Reproduction, Omaha, Nebraska, July 23-August 1, 2006
XIX North American Testis Workshop, Tampa, FL, April 18-21, 2007
32nd Annual Conference of the American Society of Andrology, Tampa, FL, April 21-24, 2007
2009 Annual Winter Conference of the Association of Anatomy, Cell Biology and Neurobiology Chairpersons, Quito, Ecuador, January 13-20, 2009
XX North American Testis Workshop, Philadelphia, PA, April 1-4, 2009
26th Meeting of the American Association of Clinical Anatomists, Cleveland, OH, July 14-17, 2009

EPSCoR Building Diversity in Higher Education: Strategies for Broadening Participation in the Sciences and Engineering, Charleston, WV, October 21-22, 2009

Regional:

24th Annual UK Symposium in Reproductive Science and Women's Health, Lexington, KY, May 19-20, 2005

Local:
17th Annual School of Medicine Research Day, Joan C. Edwards School of Medicine, Marshall University, 2004
21st Annual School of Medicine Research Day, Joan C. Edwards School of Medicine, Marshall University, 2008
2004 Annual Sigma Xi Research Day, Marshall University
2005 Annual Sigma Xi Research Day, Marshall University

Workshops
“Effective Question Writing”, Faculty Development Program, Joan C. Edwards School of Medicine, Marshall University, March 2007
“Using Small Group Strategies to Enhance Teaching and Learning”, Faculty Development Program, Joan C. Edwards School of Medicine, Marshall University, December, 2006
AAMC Mid-Career Women Faculty Professional Development Seminar, Lansdowne, VA, July, 2005
“Becoming an Effective Course Director”, Faculty Development Program, Joan C. Edwards School of Medicine, Marshall University, June 2004
“Creating Your Style: What is Your Teaching Perspective/Learning Perspective” Faculty Development Program, Joan C. Edwards School of Medicine, Marshall University, September 2004

6) Externally funded research grants and contracts you received.

Principal Investigator, “The Role of SKI in Testicular Cancer Metastasis”, NASA Space Grant Consortium Graduate Fellowship for Amy Nash, $12,000, 2008-2009
Principal Investigator, “Role of SKI and SNO in Testicular Cancer”, MU EPSCoR Seed Grant, $20,000, 8/2003-7/2004

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

8) Community service as defined in the Greenbook.
Appendix II

Faculty Data Sheet

(Information for the period of this review)

Name: Travis Salisbury Rank: Assistant Professor

Status (Check one): Full-time X  Part-time  Adjunct  Current MU Faculty: Yes X  No

Highest Degree Earned: Ph. D. Date Degree Received: Spring, 2003

Conferred by: Kent State University

Area of Specialization: Physiology, Reproductive Endocrinology

Professional Registration/Licensure Agency:

Years non-teaching experience  6
Years of employment other than Marshall  6
Years of employment at Marshall  2 months
Years of employment in higher education  6
Years in service at Marshall during this period of review  2 months

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

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</tbody>
</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.

Physiology is strongly linked to Pharmacology. Pharmacology is based on Physiological principles.

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research.

3) Discipline-related books/papers published (provide a full citation).


4) Papers presented at state, regional, national, or international conferences.

5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.
   Member of the Endocrine Society

6) Externally funded research grants and contracts you received.
   The Lalor Foundation Postdoctoral Fellowship, 2005-2007

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

8) Community service as defined in the Greenbook.
Appendix II Faculty Data Sheet  
(Information for the period of this review)

Name: __Nalini Santanam___________________________

Rank:  Professor __________________ Status (Check one):  Full-time _X_ Part-time _____  Adjunct ______
Current MJU Faculty:  Yes _X_  No ______
Highest Degree Earned:  _______ PhD  Date Degree Received:  ___Dec 1992__________
Conferred by:  __Madras University, Madras, TN, India___________________________
Area of Specialization:  __Biochemistry_________________________
Professional Registration/Licensure  N/A __________ Agency: _______________________

Years non-teaching experience ______42_____
Years of employment other than Marshall  __16_____
Years of employment at Marshall ______3_____
Years in service at Marshall during this period of review  ___<3_____
List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring).

<table>
<thead>
<tr>
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<th>Title</th>
<th>Hours Taught</th>
<th>Enrollment</th>
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<tbody>
<tr>
<td>2007-2009 (Spring/Fall)</td>
<td>PMC 620/720</td>
<td>Medical Pharmacology</td>
<td>9</td>
<td>72-75</td>
</tr>
<tr>
<td>2007-2009 (Spring/Fall)</td>
<td>PMC 610</td>
<td>Introduction to Pharmacology</td>
<td>10</td>
<td>20-30</td>
</tr>
<tr>
<td>2008-2009 (Fall)</td>
<td>PMC 650</td>
<td>General Toxicology</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>2007-2009 (Fall and Spring)</td>
<td>BMS 665</td>
<td>Cardiovascular Disease, Obesity, Diabetes Research Colloquium (seminar series)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>2007-2009 (Fall/summer)</td>
<td>PMC 655</td>
<td>Toxicology Reviews (seminar series)</td>
<td>4</td>
<td></td>
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<tr>
<td>2009 (Fall)</td>
<td>PHS 666</td>
<td>Physiology of Cell</td>
<td>5</td>
<td>3</td>
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</tbody>
</table>

course number, course title and enrollment.  (Expand the table as necessary)

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.  1) If your degree is not in your area of current assignment, please explain.  (For each of the following sections, list only events during the period of this review and begin with the most recent activities.)  2) Activities that have enhanced your teaching and or research.  Attended Scientific conferences such as American Heart Association Scientific sessions, Arteriosclerosis, Thrombosis, Vascular Biology annual meeting and Metabolic Syndrome, Diabetes International meeting  3) Discipline-related books/papers published (provide a full citation).


4) Papers presented at state, regional, national, or international conferences.

xiii. K. Fullen*, J. Fei, C. Cook, N. Santanam. Linoleic acid and its oxidized form induce Peroxisome proliferator-activated receptors in a time-dependent manner in vascular smooth muscle cells. WV-INBRE symposium, Marshall University, Huntington, WV.

5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations. MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS:

• Member, Society For Free Radical in Biology and Medicine, USA
• Member and Fellow, American Heart Association, USA
• Member, Federation for American Societies for Experimental Biology, USA
• Member, American Association for the Advancement of Science, USA
• Member, South Asian Public Health Association, USA
• Member, American Association for Cancer Research, USA
• Member, South Asian Society for Atherosclerosis and Thrombosis, USA

Professional society committees
• Co-Chair-Leadership committee, Women in Science, Society for Free Radical Biology and Medicine, 2007-present
• Co-Chair, Mentoring Program, Society for Free Radical Biology and Medicine, 2007-present

6) Externally funded research grants and contracts you received.

• HL074239-05 R01, Period 6/01/2004 – 5/31/2010  o NIH
  o “Oxidized Lipids in Cardiovascular Disease”
  o Role: PI

• P20 RR016477 Period 07/01/09-06/30/13  o NIH/NCCR, Gary Rankin (PI),
  o WV-IDeA Networks of Biomedical Research Excellence (WV INBRE)
  o Role: Evaluation Coordinator and Mentor

• WV-INBRE supplement grant (P20 RR016477- 09S2), Period 9/16-9/16/11  o NIH/NCCR, (Gary Rankin –PI)
  o Epicardial Fat Biomarkers in Patients with Coronary Artery Disease in the Appalachian Region
  o Role: Project Leader- Translational Grant

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

• MU-ADVANCE MERIT Award, Marshall University, 2009

8) Community service as defined in the Greenbook.

a. Graduate advisory committee for BMS students:
• Ms. Arne Oshanski  Ms. Juliana Akinsete  Mr. Michael Brown  Ms. Jackie Decker  Mr. Sunil Kakarla  Ms. Rabaa Majed Al-Rousan
b. Mentoring Activities: i. Clinical residents/fellows – Dr. Andrea Acuna (Ob-Gyn), Dr. Yared Gebregiorgis (Endocrin) and Dr. Chris Adams (Int. Med)
ii. Medical Students – Kevin Johnson (MS1)
iii. INBRE Faculty: Dr. Robert Kreisberg and Sarah Dodson
iv. COBRE faculty: Dr. Piyali Dasgupta
v. Post doctoral fellow – Dr. Jia Fei
vi. CAPSTONE Students – Ms. Erica Charlene Rice and Ms. Holly King
vii. Marshall University Minority Summer Student Program – Khyra Fullen
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: Vincent E. Sollars

Rank: Asst. Professor

Status (Check one): Full-time X Part-time_ Adjunct ___ Current MU Faculty: Yes X No ___

Highest Degree Earned: Ph.D. Date Degree Received: May 2000

Conferred by: University of Kansas

Area of Specialization: Genetics

Professional Registration/Licensure: N/A Agency: N/A

Years non-teaching experience: 0

Years of employment other than Marshall: 0

Years of employment at Marshall: 5

Years of employment in higher education: 5

Years in service at Marshall during this period of review: 5

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007/Fall</td>
<td>IDM 720</td>
<td>Medical Cell Biology (5%)</td>
<td>75</td>
</tr>
<tr>
<td>2008/Spring</td>
<td>BMS 670/BSC 480</td>
<td>Molecular Cloning Laboratory (10%)</td>
<td>10</td>
</tr>
<tr>
<td>2008/Spring</td>
<td>IDM 724/BMS 614</td>
<td>Human Genetics (65%)</td>
<td>90</td>
</tr>
<tr>
<td>2008/Fall</td>
<td>MED 725</td>
<td>Approach to Patient Care (10%)</td>
<td>90</td>
</tr>
<tr>
<td>2008/Fall</td>
<td>IDM 720</td>
<td>Medical Cell Biology (5%)</td>
<td>80</td>
</tr>
<tr>
<td>2009/Spring</td>
<td>BMS 651</td>
<td>Cancer Cell Biology (10%)</td>
<td>10</td>
</tr>
<tr>
<td>2009/Spring</td>
<td>BMS 670/BSC 480</td>
<td>Molecular Cloning Laboratory (10%)</td>
<td>10</td>
</tr>
</tbody>
</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.

2) Activities that have enhanced your teaching and or research.
   • 2007-2008: Accepted as a candidate into the Academy of Medical Educators at Marshall University School of Medicine in the summer of 2007. Designated a Master Educator and a member of the Academy of Medical Educators upon completion
   • 2006: Six session workshop provided to the medical school faculty by Dr. Steven Fish for improvement of medical teaching
   • Four training courses to enhance research.
   • Six other workshops designed to increase the effectiveness of teaching.

3) Discipline-related books/papers published (provide a full citation).
- Omega 3 fatty acids reduce myeloid progenitor cell frequency in the bone marrow of mice and promote progenitor cell differentiation (2009). Melinda E. Varney, W. Elaine Hardman, and Vincent E. Sollars. Lipids in Health and Disease 8(9).
4) Papers presented at state, regional, national, or international conferences.
- Thirteen poster presentations at various meeting at all levels relating to my research projects.
- Two invited talks at state meetings relating to my research projects.
- Poster presentation at the 2008 Annual International Association of Medical Science Educators.
- Two cover art illustration for scientific journals.
5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.
- Member of the following organizations: International Association of Medical Science Educators (IAMSE), Reuters Insight, a research consultancy, American Association for Cancer Research, The American Society of Hematology, Marshall University, Joan C. Edwards School of Medicine Alumni Association, American Association for the Advancement of Science, Genetics Society of America, and University of Kansas Alumni Association
6) Externally funded research grants and contracts you received.
- R03 CA129790-01A1 (PI – Sollars, VE; 04/01/08-03/31/10): “Nostalgia in the Wnt signaling pathway; fatty acids, epigenetics, and leukemia” was awarded by the NIH in the amount of $140,000.
- (PI – Sollars, VE; 6/01/09-5/31/10): “Survivin as a mediator of dietary omega-3 fatty effects on hematopoiesis” was awarded by the NASA West Virginia Space Grant Consortium through the Graduate Research Fellowship Program in the amount of $12,000 direct costs.
- (PI – Sollars, VE; 5/15/09): “Comparing the myeloid progenitor cell compartment among inbred strains of mice to identify possible leukemia susceptibility genes” was awarded by the NASA West Virginia Space Grant Consortium through the Graduate Research Fellowship Program in the amount of $24,000 direct costs.
- (PI – Sollars, VE; 5/16-07-5/15/09): “Epigenetic gene regulation by Hsp90 in myeloid cell differentiation” was awarded by the NASA West Virginia Space Grant Consortium through the Graduate Research Fellowship Program in the amount of $24,000 direct costs.
- R03CA124637-01 (PI – Niles, RM; 10/01/06-9/30/08): “RARbeta in Melanoma: Epigenetic Regulation by Nutrients” is an NIH grant for $100,000 direct costs through the R03 mechanism. Role: Co-Investigator.
- A Pilot grant from Centers of Biomedical Research Excellence (COBRE - P20 RR020180; Niles, PI) (8/01/05 – 7/31/06) for $20,000 sponsored by NIH/NCRR. Role: Co-Investigator.
- West Virginia Research Challenge Award (7/01/2004 – 6/30/2007) from the State of West Virginia for $250,000. Role: Co-Investigator.
7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
- 2008: Designated a Master Educator by Marshall University School of Medicine
- 2004: Work from my Ph.D. dissertation was presented at the Nobel Symposium entitled “Epigenetic Reprogramming in Development and Disease” on June 19-21 in Stockholm by my Ph.D. mentor Dr. Douglas Ruden
- Community service as defined in the Greenbook.
8) Reviewed manuscripts for Current Signal Transduction Therapy, Current Genomics, and Frontiers in Bioscience
- Reviewed Book proposal by The Company of Biologists Ltd
- Served on 9 grant review panels
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: Monica Valentovic
Rank: Professor

Status (Check one): Full-time___x__ Part-time_ Adjunct ___ Current MU Faculty: Yes x___ No ___

Highest Degree Earned: _PhD_ Date Degree Received: _1983_
University of Kentucky

Area of Specialization: Pharmacology and Toxicology

Professional Registration/Licensure_________________________ Agency: _______________________________

Years non-teaching experience ___31___
Years of employment other than Marshall ___6___
Years of employment at Marshall ___25___
Years of employment in higher education ___31___
Years in service at Marshall during this period of review ___25___

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009 Fall</td>
<td>PMC 610</td>
<td>Introduction to Pharmacology (20%)</td>
<td>17</td>
</tr>
<tr>
<td>2009 Fall</td>
<td>FSC608</td>
<td>Drug Toxicology (15%)</td>
<td>8</td>
</tr>
<tr>
<td>2009 Fall</td>
<td>PMC 620/720</td>
<td>Medical Pharmacology (15%)</td>
<td>83</td>
</tr>
<tr>
<td>2009 Summer</td>
<td>PMC 655</td>
<td>Toxicology Reviews</td>
<td>1</td>
</tr>
<tr>
<td>2008 Summer</td>
<td>PMC 655</td>
<td>Toxicology Reviews</td>
<td>2</td>
</tr>
<tr>
<td>2008 Fall and Spring</td>
<td>PMC 620/720</td>
<td>Medical Pharmacology (15%)</td>
<td>75</td>
</tr>
<tr>
<td>2008 Fall</td>
<td>PMC 610</td>
<td>Introduction to Pharmacology (20%)</td>
<td>23</td>
</tr>
<tr>
<td>2008 Fall</td>
<td>PMC 650</td>
<td>Toxicology (35%)</td>
<td>3</td>
</tr>
<tr>
<td>2008 Fall</td>
<td>FSC608</td>
<td>Drug Toxicology (15%)</td>
<td>12</td>
</tr>
</tbody>
</table>

1) If your degree is not in your area of current assignment, please explain.

2) Activities that have enhanced your teaching and or research.
   Attended Society of Toxicology Meetings 2007, 2008 and 2009

3) Discipline-related books/papers published (provide a full citation).

M.V. Terneus, A.B. Carpenter and M.A. Valentovic. Comparison of S-Adenosyl-L-methionine and N-acetylcysteine protective effects on hepatic damage when administered after acetaminophen exposure. Toxicology. 2Feb 3;244(1):25-34, 2008.


J. Mike Brown, John G. Ball, Amy Hogsett, Tierra Williams and M.A. Valentovic. Temporal Study of Acetaminophen (APAP) and S-Adenosyl-L-methionine (SAMe) Effects on Subcellular Hepatic SAMe Levels and Methionine Adenosyltransferase (MAT) Expression. Toxicologist 101 (S1): Abstract #1128; Society of Toxicology Baltimore, MD March 15-19, 2009


Tierra Williams, J. Mike Brown, John G. Ball, Amy Hogsett, Monica Valentovic. S-Adenosylmethionine (SAMe) Reversal of Acetaminophen (APAP) Effects on Hepatic Glutathione Peroxidase and Hepatic SAMe Levels. Toxicologist 101 (S1): Abstract #1127 Society of Toxicology Baltimore, MD March 15-19, 2009

5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Membership
Society of Toxicology
American Society of Nephrology
American Society of Pharmacology and Experimental Toxicology

NIH STUDY SECTION
NIH ZRG1 DIG March 2007
NIH ZDK1 GRB-N M1 RFA DK-06-004 Biomarkers Development for Diabetes Complications April 11-12, 2007
NIH ZRG1 DIG-E (10)B July 11, 2007
NIH ZRG1 DIG-E March 24, 2009

6) Externally funded research grants and contracts you received.
Resveratrol protection of cisplatin nephrotoxicity. NIH COBRE pilot project
Role: PI Amount $20,000 October 1, 2007 – July 31, 2007


WV NASA Space Consortium $12,000 (stipend and supplies for J. Mike Brown)

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
Michigan Technological University – Presidential Council of Alumane -GRRAND, Golden Retriever Rescue
-Huntington Rose Society
-American Rose Society
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: Ruu-Tong Wang____________________________   Rank: Associate Professor   _________

Status (Check one): Full-time_X   Part-time_____   Adjunct _____   Current MU Faculty: Yes _X_ No ____

Highest Degree Earned: Ph.D._____________   Date Degree Received: May, 1976_______
Conferred by: Southern Illinois University, Carbondale, IL ________________________________

Area of Specialization: Physiology_______________________________________________________

Professional Registration/Licensure__N/A_________   Agency: ________________________________

Years non-teaching experience 2_______
Years of employment other than Marshall 5_______
Years of employment at Marshall 28_______
Years of employment in higher education 33_______
Years in service at Marshall during this period of review 28_______

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008 Fall</td>
<td>FSC-612</td>
<td>Forensic Microscopy (Scanning Electron Microscopy in Forensic Investigations) 20% Course Share</td>
<td>18</td>
</tr>
<tr>
<td>2008 Spring-I</td>
<td>IDM-777</td>
<td>Neuroscience (Course Director) 35% Course Share</td>
<td>74</td>
</tr>
<tr>
<td>2008 Spring-I</td>
<td>ACB-628</td>
<td>Anatomy of Nervous System (Course Director) 56% Course Share</td>
<td>2</td>
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<tr>
<td>2008 Spring-II</td>
<td>ACB-724</td>
<td>Microanatomy and Ultrastructures 20% Lecture and Lab combined share</td>
<td>74</td>
</tr>
<tr>
<td>2009 Fall</td>
<td>FSC-612</td>
<td>Forensic Microscopy (Scanning Electron Microscopy in Forensic Investigations) 20% Course Share</td>
<td>9</td>
</tr>
<tr>
<td>2009 Spring-I</td>
<td>IDM-777</td>
<td>Neuroscience 35% Course Share</td>
<td>75</td>
</tr>
<tr>
<td>2009 Spring-II</td>
<td>ACB-724</td>
<td>Microanatomy and Ultrastructures 20% Lecture and Lab combined share</td>
<td>76</td>
</tr>
</tbody>
</table>
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: John Wilkinson IV                            Rank: Assistant Professor

Status (Check one): Full-time X Part-time  Adjunct  Current MU Faculty: Yes X No

Highest Degree Earned: Ph.D.                    Date Degree Received: May, 1996

Conferred by: Boston University School of Medicine

Area of Specialization: Microbiology

Professional Registration/Licensure Agency:

Years non-teaching experience

Years of employment other than Marshall

Years of employment at Marshall

Years of employment in higher education

Years in service at Marshall during this period of review

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
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<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009 / Winter</td>
<td>BMS ?</td>
<td>Cancer Biology, 2 lectures/~20 = 10%</td>
<td>~10</td>
</tr>
<tr>
<td>2008 / Fall</td>
<td>IDM 720, BMS 600</td>
<td>Medical Cell and Molecular Biology, 6 lectures/31 = 19.4%</td>
<td>73, 24</td>
</tr>
<tr>
<td>2007 / Fall</td>
<td>IDM 720, BMS 600</td>
<td>Medical Cell and Molecular Biology, 9.7%</td>
<td>~73, 27</td>
</tr>
</tbody>
</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.

   My degree is in microbiology. My dissertation work was in the area of biochemistry, my post-doctoral work has involved toxicology, biochemistry, murine models and extensive tissue culture work, all focused on Cancer Biology. The topics I teach involve cell biology, cancer biology, and biochemistry.

   (For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research.

   2008 Member, IACUC, Marshall University School of Medicine. Term: Jan, 2008 – present.


2007  **Judge** (poster presentations), Sigma Xi Event, 2007, Marshall University School of Medicine.

2005  **Chair**, "Iron and Disease" Session, East Coast Iron Club, University of Pennsylvania.

2004  **Member**, Committee for Mentoring Evaluation (K. Drotschmann, Chair). We evaluated mentoring roles and responsibilities in the department. We produced mentoring guidelines and established the process of mentor evaluation by trainees within the department.

2004  **Member**, Barrier Committee, Animal Resources Program, Wake Forest University School of Medicine. Principal architect of new room entry procedures designed to maintain the integrity of the specific pathogen free barrier facility. Term: 2004-2006.

3)  **Discipline-related books/papers published** (provide a full citation).


4)  **Papers presented at state, regional, national, or international conferences.**


5)  **Professional development activities**, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

2008  **Member**, Educators Academy, Marshall University School of Medicine

2008  Attended “AACR Epigenetics and Cancer” conference, Boston MA.

2005  **Active Member** of the American Association for Cancer Research, 2005-present.

2004  **Member**, International Bio-Iron Society, 2004- present

2001  **Member**, East Coast Iron Club, 2001- present  (*Chair, panel on Iron and Disease, 2005*)

6)  **Externally funded research grants and contracts you received.**

2005  Co-Investigator, 1 **RO1 CA101829-01A2**, PI Karin Drotschmann/Scarpinato “Repair Proteins: Interface between Cell death & Survival”. Administrator: NIH/NCI, Term: 1/1/2005 –12/31/2009. My role (10% effort) was to assist in the use of the tetracycline based model system. This role was completed in Dec, 2006.


7)  **Awards/honors** (including invitations to speak in your area of expertise) or special recognition.

Cellular Differentiation and Development Center  3/1/2008 -2/28/2009  (Internal Grant)  $20,000 total

Hepatic Labile Iron and Oxidant Stress: In Vivo Response to Ferritin

The goal of this project is to determine the impact of transgenic ferritin expression in the liver.

8)  **Community service as defined in the Greenbook.**

I volunteer as Assistant Editor for the Unitarian Universalist Fellowship of Huntington Newsletter
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: _______ Hongwei Yu ___________ Rank: _______ Professor _________

Status (Check one): Full-time * __ Part-time _____ Adjunct _______ Current MU Faculty: Yes * ______ No _____

Highest Degree Earned: _______ Ph.D. ___________ Date Degree Received: _______ June 1994 _______
Conferred by: __________________________ University of Calgary __________________________

Area of Specialization: ___________ Molecular Pathogenicity __________________________

Professional Registration/License ___________ Agency: __________________________

Years non-teaching experience ___________ 6 _______
Years of employment other than Marshall ___________ 6 _______
Years of employment at Marshall ___________ 10 _______
Years of employment in higher education ___________ 16 _______
Years in service at Marshall during this period of review ___________ 10 _______

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>07-09/Fall</td>
<td>MCB620/720</td>
<td>Medical Microbiology</td>
<td>65</td>
</tr>
<tr>
<td>07-09/Spring</td>
<td>MCB622</td>
<td>Current Topics in Molecular Biology</td>
<td>3</td>
</tr>
</tbody>
</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

1) Activities that have enhanced your teaching and or research.
2) Activities that have enhanced your teaching and or research: Attending the annual meeting of
microbiology conference.
3) Discipline-related books/papers published (provide a full citation).


4) Papers presented at state, regional, national, or international conferences.
5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

2003- Member, International Membership Committee (IMC), ASM, Washington, DC
1989- Member, American Society for Microbiology (ASM), Washington, DC.

6) Externally funded research grants and contracts you received.
   1. NASA NNG04GN56H (Mentor), Genetic Regulation of P. aeruginosa Biofilms in Space (Stipend for Nathan Head), 08/01/04-07/30/07, $72,000 Direct Cost, (Yu, PI).
   2. NASA WV Space Grant Consortium, Genetic Analysis of Biofilms in Space (Augmentation Grant), 08/01/04-07/31/07, $20,000 Direct Cost, (Yu, PI).
   3. Cystic Fibrosis Foundation YU0410, Protection against P. aeruginosa Lung Colonizations in Mice, 04/01/04-03/31/06, $166,400 Direct Cost, (Yu, PI).
   4. NIH/NIDDK R15 DK58128-03, Genetic Basis of P. aeruginosa Lung Infection in Mice, 04/01/04-03/31/06, $166,400 Direct Cost, (Yu, PI).
   5. NASA WV Space Grant Consortium, Imaging Analysis of Biofilm Structure, 07/01/04-06/30/05, $20,000 Direct Cost, (Yu, PI).
   6. NASA NNG04GA01H, Control of Space Biofilms (Stipend for Denise Bouvrette), 09/01/03-08/30/04, $24,000 Direct Cost, (Yu, PI).
   7. NIH/NIGRI-CIDR, Mapping a Single Locus Conferring Susceptibility to P. aeruginosa Lung Infection, 04/01/04-03/31/05, $8,976 Direct Cost, (Yu, PI).
   8. NIH/NIDDK R15 DK58128, Aerosol Infection Mouse Model for Cystic Fibrosis, 04/01/02-03/31/04, $165,186 Direct Cost, (Yu, PI).
Appendix II
Faculty Data Sheet
(Information for the period of this review)

Name: __Guo-Zhang Zhu____________________  Rank: __Associate Professor__________________

Status (Check one):  Full-time X  Part-time___  Adjunct ___  Current MU Faculty: Yes X  No ___

Highest Degree Earned: __Ph.D._____________  Date Degree Received: ____June 1997______

Conferred by: __Shanghai Institute of Biochemistry, Chinese Academy of Sciences_________

Area of Specialization: __Molecular Biology________________________

Professional Registration/Licensure____________________  Agency: _______________________________

Years non-teaching experience       ___6____  Years of employment other than Marshall ___6____
Years of employment at Marshall         ___6____
Years of employment in higher education ___6____
Years in service at Marshall during this period of review ___5____

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007/fall</td>
<td>BSC 661</td>
<td>Graduate Seminar I</td>
<td>21</td>
</tr>
<tr>
<td>2008/spring</td>
<td>BSC 481/BMS 670</td>
<td>Molecular Cloning Lab</td>
<td>10</td>
</tr>
<tr>
<td>2008/fall</td>
<td>BSC 322</td>
<td>Principles of Cell Biology</td>
<td>60</td>
</tr>
<tr>
<td>2009/spring</td>
<td>BSC 301</td>
<td>Vertebrate Embryology</td>
<td>28</td>
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</tbody>
</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research.

3) Discipline-related books/papers published (provide a full citation).


4) Papers presented at state, regional, national, or international conferences.


2. Yue Huang, Guo-Zhang Zhu. PITX2 is overexpressed in human thyroid cancer and functions in cell proliferation. 99th Annual Meeting of American Association for Cancer Research, 12-16 April 2008, San Diego, California.


5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.


6) Externally funded research grants and contracts you received.


7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.


8) Community service as defined in the Greenbook.
## Appendix III
### Students’ Entrance Abilities (Graduate Programs)

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>Mean Undergraduate GPA</th>
<th>Mean GRE Verbal</th>
<th>Mean GRE Quantitative</th>
<th>Mean GRE Analytical Writing</th>
<th>MCAT Mean</th>
<th>Miller Analogies Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-2005</td>
<td>4</td>
<td>2.96</td>
<td>430</td>
<td>605</td>
<td></td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>2005-2006</td>
<td>7</td>
<td>3.27</td>
<td>495</td>
<td>663</td>
<td></td>
<td>21.5</td>
<td></td>
</tr>
<tr>
<td>2006-2007</td>
<td>10</td>
<td>3.32</td>
<td>502</td>
<td>560</td>
<td></td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>2007-2008</td>
<td>16</td>
<td>3.34</td>
<td>451</td>
<td>659</td>
<td></td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>2008-2009</td>
<td>15</td>
<td>3.23</td>
<td>510</td>
<td>682</td>
<td></td>
<td>26.2</td>
<td></td>
</tr>
</tbody>
</table>

*Expand table as needed.*
### Appendix IV
**Students’ Exit Abilities (Graduate Programs)**

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>Mean GPA</th>
<th>Licensure Exam Results</th>
<th>Certification Test Results</th>
<th>Other Standardized Exam Results</th>
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</thead>
<tbody>
<tr>
<td>2004-2005</td>
<td>2</td>
<td>3.35</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>2005-2006</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2006-2007</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2007-2008</td>
<td>1</td>
<td>3.27</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>2008-2009</td>
<td>1</td>
<td>3.4</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
## Component Area/Program/Discipline: Biomedical Sciences M.S.

<table>
<thead>
<tr>
<th>Program’s Student Learning Outcomes</th>
<th>Assessment Measures (Tools)</th>
<th>Standards/Benchmark</th>
<th>Results/Analysis</th>
<th>Action Taken to improve the program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mastery of basic knowledge about biochemistry, cellular and molecular biology</td>
<td>Examinations in BMS 600 (Foundations of Biomedical Science)</td>
<td>80% average on examinations; letter grade of B or better</td>
<td>11 to 20 students per year (92%) successfully met the benchmark</td>
<td>Course was expanded from 3 to 6 credit hours to allow integration of biochemistry and cell biology material; Lectures were updated; several new instructors in course</td>
</tr>
<tr>
<td>Ability to make oral presentations of scientific material</td>
<td>Seminar evaluation form</td>
<td>Satisfactory rating by the faculty evaluation committee</td>
<td>22 to 40 students per year (100%) successfully met the benchmark</td>
<td>Addition of scientific writing component of communications course; Addition of mini-symposium for Medical Science Students</td>
</tr>
<tr>
<td>Basic aptitude for laboratory research (Research MS and Ph.D. students only)</td>
<td>Laboratory rotation evaluation form</td>
<td>Satisfactory evaluation in 3 lab rotations</td>
<td>7 to 11 students per year (100%) successfully met the benchmark</td>
<td>Laboratory rotations were implemented in 2005-2006; Each student was assigned a faculty mentor beginning in 2006-2007</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Mastery of comprehensive knowledge of biomedical sciences (Medical Sciences MS only)</td>
<td>Medical Sciences comprehensive objective exam</td>
<td>70% score on exam</td>
<td>6 of 8 students (75%) successfully met the benchmark</td>
<td>Exam was updated to reflect new material and changes in courses</td>
</tr>
<tr>
<td>Mastery of comprehensive knowledge of biomedical sciences (Research MS and Ph.D. students)</td>
<td>Written and oral comprehensive exams (subjective evaluation by committee)</td>
<td>Benchmarks determined by each committee</td>
<td>3 to 6 students per year (92%) successfully met the benchmark</td>
<td>Unified style of exam for all students.</td>
</tr>
<tr>
<td>Ability to design and conduct original biomedical research</td>
<td>Defense of written thesis (subjective evaluation by committee members)</td>
<td>Benchmarks determined by each committee</td>
<td>No Master’s students completed a thesis in this time period</td>
<td>Areas of emphasis were changed in 2005-2006 to reflect research areas, rather than discipline-based areas</td>
</tr>
</tbody>
</table>
Dr. Vernon Reichenbecher, Director of the Graduate Program
Biomedical Sciences
SOM

Dear Vernon:

The Graduate Council and I have completed our evaluation of the PhD/MS in Biomedical Science’s assessment of student learning. This letter will provide my general comments and suggestions for improvement. Although the scoring rubric we used to evaluate assessment reports is attached, I will not include numerical ratings in this letter. The reason for this is that we used the attached rubric for the first time this year and, as you will see, it has changed considerably from the ones used in previous years. It raises the bar for what is considered excellent assessment considerably and, since it was not shared with programs before this assessment cycle, I’m not comfortable using it to give programs a formal rating this year. However, I ask that you use it for formative purposes to help improve your assessment plan. We also would appreciate your comments concerning this new rubric.

Your program’s student learning outcomes are appropriate and, as is desirable for an advanced degree program, are designed to challenge students to engage in critical thinking. However, most are not stated in measurable terms. When writing learning outcomes, we encourage programs to state what students will be able to do upon completion of the program. So, how will students show you that they have mastered basic knowledge about cellular biology? Will they explain specific concepts? What competencies do they show via laboratory research? Are they able to identify problems or questions, test hypotheses, and solve problems? For the second outcome, do students communicate effectively, both orally and in writing, in the discourse of the discipline? The last outcome, “students will design and conduct original biomedical research” is written in measurable terms.

Each learning outcome should be assessed using more than one type of assessment. We also encourage programs to develop analytic assessment rubrics. Then, rather than your benchmark being that students must obtain satisfactory ratings, it might be that they must obtain a specified rating on each area of the rubric. For example, laboratory reports might be scored for content, analysis, conclusions based on evidence, etc. This type of analysis will help you to more clearly see specific strengths and weaknesses.

Although I suggest that you conduct assessment more analytically, it is obvious that you are collecting and analyzing data and using the results for program improvement. Please see the attached rubric and letter to Deans, Chairs, and Faculty detailing general suggestions for an effective assessment program. If you have questions or concerns, please let me know.
Sincerely,

Mary E. Reynolds

Mary E. Reynolds
Director of Academic Assessment

C: Dr. Charles McKown, Dean, Joan C. Edwards School of Medicine
Office of Assessment & Program Review

April 8, 2008

Dr. Vernon Reichenbecher, Director of Graduate Studies
Biomedical Sciences Program
SOM

Dear Vernon,

This letter will document that the Office of Assessment did not receive an annual assessment report for the MS or PhD programs in Biomedical Sciences for the academic year 2006 – 2007. I realize, however, that this is largely due to a breakdown in communication between the Office of Assessment and the Joan C. Edwards School of Medicine. We will do a better job communicating with you next year. In the meantime, please feel free to call on me for any assistance you might need in preparing your report for the 2007 – 2008 academic year. This report will be due on December 1, 2008. I can be reached at 62987 or at reynoldm@marshall.edu.

Sincerely,

Mary E. Reynolds
Interim Director of Assessment

C: Dr. Charles McKown, Dean, SOM
September 4, 2007

Dr. Vernon Reichenbecher, Professor and Director of Graduate Studies
Biomedical Sciences Program
School of Medicine
Campus

Dear Vernon,

The Subcommittee on Assessment Reports completed its review of your annual assessment report for the MS/PhD in Biomedical Sciences (BMS) and I concur with their analysis.

The MS/PhD in BMS is performing at Level 3 (the highest level) in the area of Learning Objectives and at Level 2 in the areas of Assessment Measures and the Feedback Loop.

In the area of Learning Objectives, Level 3 suggests that learning objectives are comprehensive, measurable, support Marshall’s educational goals, and span multiple learning domains.

In the area of Assessment Measures, Level 2 suggests that there are multiple measures and that they are integrated into the curriculum. I noticed, though, that you tend to have one measure for each outcome. You might want to investigate using multiple measures for each outcome. Conversely, the same measure can sometimes be used for more than one outcome.

In the area of the Feedback Loop, Level 2 suggests that data are being used in reviews of the academic program. It was not always clear, however, exactly how the data collected suggested the changes that were being made.

Overall, however, you are to be commended on your assessment efforts. If the Office of Assessment and Program Review can be of any assistance, please don't hesitate to call the new Director, Dr. Mary Beth Reynolds.

Sincerely,

Frances S. Hensley

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A State University of West Virginia • An Affirmative Action/Equal Opportunity Employer
Associate Vice President for Academic Affairs

C: Dr. Charles H. McKown, Jr., Dean, SOM
Vice President for Health Sciences
To: Vern Reichenbecher, Richard Niles, Biomedical Sciences Program  
From: Bob Edmunds, Coordinator for Program Review and Assessment  
Date: July 6, 2006

Yearly Assessment Report for: MS Biomedical Sciences; PhD Biomedical Sciences

Thank you for submitting the Yearly Assessment Report for the program. Please use the information in this report to guide your assessment activities during AY 2006-2007

The Yearly Assessment Report for documenting AY 2005-2006 assessment activities is due by October 3, 2006. If the program is scheduled for a program review during the 2006-7 academic year, the Program Review will suffice as the documentation of assessment activities and no separate report will be due.

Reviewer summary of yearly assessment report:
What follows is a brief critique of the report you submitted for the academic year 2004-2005. In most cases the report has been reviewed by members of the University Assessment Committee.

<table>
<thead>
<tr>
<th>Yearly Assessment Report Critique</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.a. Program goals:</td>
</tr>
<tr>
<td>b. Learning outcomes and data collection:</td>
</tr>
<tr>
<td>c. Results:</td>
</tr>
</tbody>
</table>

II. BOT Initiative #3: Not applicable to grad programs.  
III. Plans for current year: The unit will continue collection of data for the various areas.  
IV. Assistance needed: Unit will contact the UAC for assistance as needed.  
V. Lessons learned: The program is developing new assessment tools and continuing work on program goals.

Review of the Assessment Summary Chart “Marshall University: Assessment of Student Outcomes.”

This chart will help the program and the University Assessment Committee monitor a program's patterns of evidence. Please remember that a program does not have to assess every outcome every year; however, within a 3-4 year period of time all program objectives must be evaluated, results analyzed, and actions taken (feedback loop) documented.

The assessment summary chart was presented. The MS/PhD program has prepared a comprehensive report outlining the assessment program and reporting data. Additionally, the program has presented evidence and evidence of actions proposed or taken. Good Job!

Efficacy of Assessment:
Programs are evaluated in terms of the development of measurable learning outcomes, the use of viable assessment measures, and the implementation of an effective feedback loop. The current report has been evaluated based on these categories. This year the report shows program scores from 2000-2001 to the present.

<table>
<thead>
<tr>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Learning Outcomes</td>
</tr>
<tr>
<td>II. Assessment Measures</td>
</tr>
<tr>
<td>III. Feedback Loop</td>
</tr>
<tr>
<td>Total Overall Score:</td>
</tr>
<tr>
<td>Level of Implementation (efficacy of assessment)</td>
</tr>
</tbody>
</table>

**Score Ranges**

Score Ranges 0-3 in each of the three categories

- A score of 0 indicates minimum activity in the category
- A score of 1 indicates that a program is in the beginning stages of assessment
- A score of 2 indicates that a program is making progress toward implementing a viable assessment program
- A score of 3 indicates that a program is in the maturing stages of its assessment program

**Levels of Implementation**

**Efficacy of Assessment**

- A total overall score between 0 and 3 indicates Level 1: the program is in the beginning stages of its assessment of student academic achievement
- A total overall score between 4 and 6 indicates Level 2: the program is making progress toward implementing a viable assessment program
- A total overall score between 7 and 9 indicates Level 3: the program is in the maturing stages of continuous improvement of student academic achievement

**Interpretation:**

The unit has revised the learning outcomes for the program. It is in the process of developing direct measures of assessment, but has not administered at least one of them. The program recognizes the importance of assessing student academic achievement.

**Recommendations:**

Continue with the work begun during the 2004-2005 academic year. Collect evidence on both direct and indirect measures and use that data as a basis for setting benchmarks and standards for the program. Continue with revision of the learning outcomes so that the data collected will produce usable information for the program.

**General Comments:**

Thanks so much for continuing to aid Marshall in its ongoing assessment efforts.

**Enclosures**
Office of Program Review & Assessment

To: Richard Niles, Chair, Biomedical Sciences
From: Bob Edmunds, Coordinator for Program Review and Assessment
Date: October 21, 2005

Yearly Assessment Report for: MS PhD Biomedical Sciences.

Thank you for submitting the Program Review Assessment Report. Please use the information in this report to guide your assessment activities during AY 2005-2006.

The Yearly Assessment Report for documenting AY 2004-2005 assessment activities is due by October 5, 2005. If the program is scheduled for a program review during the 2005-6 academic year, the Program Review will suffice as the documentation of assessment activities and no separate report will be due.

Reviewer summary of yearly assessment report:
What follows is a brief critique of the report you submitted for the academic year 2003-2004. In most cases the report has been reviewed by 3 members of the University Assessment Committee.

<table>
<thead>
<tr>
<th>Program Review Assessment Report Critique</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Summarize the principal elements of the departmental assessment plan</td>
</tr>
<tr>
<td>II. Provide summary information on the following elements: Student Outcomes: Assessment Tools or approaches/Standards/Benchmarks (BOT Initiative #3 if applicable)</td>
</tr>
<tr>
<td>Results/Analysis Action Taken</td>
</tr>
<tr>
<td>IV. Provide information on how assessment data is used to improve program quality. Include at least 3 specific examples drawn from the past 5 years.</td>
</tr>
<tr>
<td>V. Is there a chart which identifies the program objectives/appropriate assessment tools/Standards/results/action taken</td>
</tr>
</tbody>
</table>

Efficacy of Assessment:

As Marshall approaches its ten year self-study by the North Central Association’s Higher Learning Commission, programs will be measured in terms of their efficacy of assessment. Programs are evaluated in terms of the development of measurable learning outcomes, the use of viable assessment measures, and the implementation of an effective feedback loop. The current report has been evaluated based on these categories. This year the report shows program scores from 2000-2001 to the present.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Learning Outcomes</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>II. Assessment Measures</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>III. Feedback Loop</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Total Overall Score:</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>5.33</td>
<td></td>
</tr>
<tr>
<td>Level of Implementation</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**Scores:**

**Score Ranges**

<table>
<thead>
<tr>
<th>Score Ranges 0-3 in each of the three categories</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 indicates minimum activity in the category</td>
<td>Level 1: the program is in the beginning stages of its assessment program</td>
</tr>
<tr>
<td>1 indicates that a program is in the beginning stages of assessment</td>
<td>Level 2: the program is making progress toward implementing a viable assessment program</td>
</tr>
<tr>
<td>2 indicates that a program is making progress toward implementing a viable assessment program</td>
<td>Level 3: the program is in the maturing stages of continuous improvement of student academic achievement</td>
</tr>
</tbody>
</table>

**Levels of Implementation**

**Efficacy of Assessment**

The goal is to have the majority of our programs in level 3 by May 2006.

**Interpretation:**

The program rates at a level 2 in its efficacy of assessment. The program outcomes are primarily student expectations of output and not measures of student competencies. The program should revise its outcomes to relate more to student academic achievement rather than relying solely on student production of publications and presentations. Both are important, but student academic competency does need to be evaluated. Assessment measures need to be revised in light of revisions of a revision of outcomes. The only competency measure currently is the report of the comprehensive examinations. Other performance indicators should be put in place. The feedback loop in terms of improving student competency was not described specifically.

**Recommendations:**

The program should begin to revise its student learning outcomes so that they are measurable indications of student competency. The program should institute measures to determine student competencies at points along the way to the granting of the degree.

**General Comments:**

It is imperative that programs maintain a record of their assessment activities and have this information available for the NCA/ILC site committee if requested.

Thanks so much for continuing to aid Marshall in its ongoing assessment efforts.

**Enclosures**
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## Appendix VI
### Program Course Enrollment

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BMS600</td>
<td>Cell and Molec. Biology</td>
<td>R</td>
<td>Td</td>
<td>Hgtn</td>
<td>22</td>
<td>23</td>
<td>18</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>BMS614</td>
<td>Basic Human Genetics</td>
<td>E</td>
<td>Td</td>
<td>Hgtn</td>
<td>5</td>
<td>23</td>
<td>1</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>BMS630</td>
<td>Neuroscience</td>
<td>E</td>
<td>Td</td>
<td>Hgtn</td>
<td>1</td>
<td></td>
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<tr>
<td>BMS631</td>
<td>Neuroscience Lit. Review</td>
<td>E</td>
<td>Td</td>
<td>Hgtn</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>2</td>
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<tr>
<td>BMS641</td>
<td>Molecular Development</td>
<td>E</td>
<td>Td</td>
<td>Hgtn</td>
<td>3</td>
<td></td>
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<tr>
<td>BMS651</td>
<td>Cancer Biology</td>
<td>E</td>
<td>Td</td>
<td>Hgtn</td>
<td>8</td>
<td></td>
<td></td>
<td>1</td>
<td>7</td>
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<tr>
<td>BMS660</td>
<td>Communication Skills I</td>
<td>R</td>
<td>Td</td>
<td>Hgtn</td>
<td>8</td>
<td>10</td>
<td>6</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>BMS661</td>
<td>Communication Skills II</td>
<td>R</td>
<td>Td</td>
<td>Hgtn</td>
<td>8</td>
<td>10</td>
<td>7</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>BMS665</td>
<td>CODRC Colloquium</td>
<td>E</td>
<td>Td</td>
<td>Hgtn</td>
<td></td>
<td>6</td>
<td>3</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>BMS670</td>
<td>Basic Methods Molec. Cloning</td>
<td>E</td>
<td>Td</td>
<td>Hgtn</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>BMS679</td>
<td>Special Problems</td>
<td>E</td>
<td>Td</td>
<td>Hgtn</td>
<td>3</td>
<td>5</td>
<td>11</td>
<td>1</td>
<td>1</td>
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<tr>
<td>BMS680</td>
<td>Seminar</td>
<td>R</td>
<td>Td</td>
<td>Hgtn</td>
<td>28</td>
<td>24</td>
<td>29</td>
<td>39</td>
<td>3</td>
</tr>
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</table>

Note: Su = Summer, Fa = Fall, Sp = Spring
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Type</th>
<th>Time</th>
<th>Grading</th>
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<td>Introduction to Research</td>
<td>R</td>
<td>Td</td>
<td>Hgt</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td>1</td>
<td>5</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>BMS882</td>
<td>Doctoral Research</td>
<td>R</td>
<td>Td</td>
<td>Hgt</td>
<td>2</td>
<td>6</td>
<td>17</td>
<td>14</td>
<td>32</td>
<td>16</td>
<td>22</td>
<td>51</td>
<td>23</td>
<td>2</td>
<td>2</td>
<td>49</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>ACB620</td>
<td>Gross Anatomy/ Embryology</td>
<td>E</td>
<td>Td</td>
<td>Hgt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACB624</td>
<td>Microscope Anat. &amp; Ultrastructure</td>
<td>E</td>
<td>Td</td>
<td>Hgt</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>1</td>
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- **R**: Required
- **E**: Elective
- **Td**: Time Devoted
- **Hgt**: Hours Gradeable
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Indicate all program and service courses. Please include all special topics courses offered as well as independent studies. When listing Independent studies, please list the number of independent study students enrolled, but DO NOT include individual names or the titles of the independent studies. Please use the following codes:

Required/Elective: Required = R; Elective = E (Please indicate all that apply; e.g. E + S, if the course is both an elective and a service course).
Delivery Method: Traditional = Td, On-line = O, Hybrid = H
Location: Huntington, South Charleston, Point Pleasant, etc.
## Appendix VII
### Program Enrollment

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*If known. This information is not completely accurate at this time, as students often do not declare a second major until the junior evaluation or the student has her/his primary major in another college.

**On occasion you may have a student enrolled in your program who is declaring your program as a 3rd major.

***If known. This information is not completely accurate at this time, as students often do not declare minors until the junior evaluation or senior application for graduation.
Figure 1. Trend Line for Total Enrollment and Program Graduates
Appendix VIII
Job and Graduate School Placement Rates

<table>
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<tr>
<th>Year</th>
<th># of graduates employed in major field</th>
<th># of graduates employed in related fields</th>
<th># of graduates employed outside field</th>
<th># of graduates accepted to further graduate study</th>
<th># of graduates not accounted for</th>
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