



October 1, 2014

Andrew Hippisley
Chair, University of Kentucky Senate Council

Dear Dr. Hippisley,

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The Senate Academic Organization and Structure Committee (SAOSC) met Wednesday, October 1, 2014 from 1PM to 2PM in room 118 MH Gluck Equine Research Center. The following committee members were present and constituted a quorum for the committee: Ernie Bailey, Richard Sutphen, Sam Jasper, Todd Porter, Melinda Wilson, Michael Kilgore and Devanathan Sudharshan.

The main purpose for the meeting was to discuss the proposal prepared by Dr. Mary Vore Iwamoto to change the Graduate Center of Toxicology into the Department of Toxicology and Cancer Biology in the College of Medicine. Dr. Vore Iwamoto presented the reasons for the proposal and largely followed the points made in the proposal. Based on votes recorded at a meeting December 17, 2013, including joint faculty as well as faculty in the program, there was unanimous support. From the attendance list, 14 of 20 program faculty were in attendance. The faculty council in Medicine and the Dean strongly supported the change. Some of the reasons advanced for the change included 1) a desire to teach undergraduate students, an activity which falls outside that of a Graduate Center, 2) improved recruitment of students and faculty based on perception that a department is a better academic home than a center, 3) a department has more flexibility for the development of faculty careers than does a Center and 4) since the program now has 20 faculty lines, it has outgrown the status of a center.

Committee members noted that the Graduate Center for Toxicology relies strongly on joint faculty participation and questioned whether the loss of joint faculty would adversely affect the program. Dr. Vore Iwamoto responded that 1) many of the current joint faculty had already indicated an interest in becoming joint faculty in the new department and 2) the department would be viable even in the unlikely event that many of the current joint faculty did not participate. She indicated that there was enthusiasm for the creation of this department among faculty in diverse departments in the College of Medicine.

The committee voted unanimously to send the proposal to the University of Kentucky Senate Council with a recommendation for approval.

Respectfully and on behalf of the SAOSC,

Ernest Bailey, PhD
Professor
Chair of SAOC

**Proposal to Establish the
Department of Toxicology and Cancer Biology**



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(Note: Approved by Graduate Council Sept. 25, 2014)

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**Senate-Approved Routing Form
For
Changes to Academic Organization or Structure of an Educational Unit**

To be completed by Proposal Initiator:

I. Proposal Initiator:

Contact Person: Mary Vore Email: maryv@uky.edu Phone: 257-3760
Position/Relationship to Proposal (Dean, Chair, Director, etc.): Director

Proposal Initiator Signature:  Date: 01-24-2014

II. Educational Unit(s) Principally Impacted by Proposed Change(s) (check all that apply and identify specific unit(s)):

<i>Educational Unit</i>	<i>Name (e.g., College of, Department of)</i>
<input type="checkbox"/> Department	_____
<input type="checkbox"/> School	_____
<input type="checkbox"/> College	_____
<input checked="" type="checkbox"/> Graduate Center	<u>Graduate Center for Toxicology</u>
<input type="checkbox"/> Interdisciplinary Instructional Program	_____
<input type="checkbox"/> Multidisciplinary Research Center/Institute	_____

III. Change Nature (check all that apply):

A.

Change of Name of Educational Unit
 Change of Type of Educational Unit (e.g., from department to school)
Change from Graduate Center to a Department

B.

Creation of a new Educational Unit
 Consolidation of Educational Units
 Transfer of Academic Program to a different Educational Unit
 Transfer of Educational Unit to a different reporting unit
 Significant Reduction of Educational Unit
 Discontinuation/Suspension/Closure of Educational Unit
 Other (Please provide explanation below or in the proposal)

Due Diligence Review Steps to be addressed by: Senate Academic Organization and Structure Committee (SAOSC)/Senate Council/University Senate

SAOSC Review (SAOSC Chair to check all appropriate steps in review process):

For III.A. Changes:

- ___ SAOSC Review of Proposal
- ___ Recommendation of SAOSC Committee for Additional/Joint Review by/with other University Senate Committee(s) (e.g., Academic Program Committee)

For III.B. Changes:

- ___ Recommendation of SAOSC Committee for Additional/Joint Review by/with other University Senate Committee(s) (e.g., Academic Program Committee)
- ___ SAOSC Review of Proposal for Creation, Consolidation, Transfer, Closure, Discontinuation, or Significant Reduction of Educational Unit, or Transfer of Academic Program to a Different Educational Unit including Academic Considerations and other factors (attach record and documentation)
- ___ Program Review in Past 3 years (attach documentation)
- ___ Request to Provost for new Program Review (attach documentation)
- ___ Open Hearing (attach documentation)
 - ___ SAOSC information shared with unit 10 days prior to Hearing
 - ___ Open Hearing Procedures

Timeline of Proposal Review

Date/Initial

- _____ Received by Senate Council Office
- _____ Received by SAOSC
- _____ Request made by SAOSC for Proposal Clarification and/or Additional Documentation
- _____ Receipt of SAOSC requested materials

Senate Academic Organization and Structure Committee Vote

Decision on Academic Status or Content of Academic Program (MDRC Review only):

Proposal Recommendation: **Accept / Reject / Accept with Modification(s)**

Vote Tally: Yes _____ No _____ Abstain _____

Provide modification explanation/documentation in this package

Recommendation/Advise on Organization/Reporting/Infrastructure (All Changes):

Proposal Recommendation: **Accept / Reject / Accept with Modification(s)**

Vote Tally: Yes _____ No _____ Abstain _____

Provide modification explanation/documentation in this package

University Senate Council Vote

Decision on Academic Status or Content of Academic Program (MDRC Review only):

Proposal Recommendation: **Accept / Reject / Accept with Modification(s)**

Vote Tally: Yes _____ No _____ Abstain _____

Provide modification explanation/documentation in this package

Recommendation/Advise on Organization/Reporting/Infrastructure (All Changes):

*Proposal Recommendation: **Accept / Reject / Accept with Modification(s)***

Vote Tally: Yes _____ No _____ Abstain _____

Provide modification explanation/documentation in this package

University Senate Vote

Decision on Academic Status or Content of Academic Program (MDRC Review only):

*Proposal Recommendation: **Accept / Reject / Accept with Modification(s)***

Provide modification explanation/documentation in this package

Recommendation/Advise on Organization/Reporting/Infrastructure (All Changes):

*Proposal Recommendation: **Accept / Reject / Accept with Modification(s)***

Provide modification explanation/documentation in this package

Evidence of Compliance with Existing Unit/College/University Procedures for Faculty Advise on Proposed Changes to Academic Organization and Structure of Educational Unit

(S.R. 3.4.2.A.5. available at http://www.uky.edu/Faculty/Senate/rules_regulations/index.htm)

Include in the proposal a statement and documentation by the initiator of the proposal that provides a full accounting of the following items (if applicable):

- Disposition of faculty, staff and resources (financial and physical);
- Willingness of the donating units to release faculty lines for transfer to a different educational unit;
- Consultation with the faculty of the unit to which the faculty lines are proposed to be transferred;
- Consultation with the faculty of educational unit that will be significantly reduced;
- Summary of votes and viewpoints (including dissents) of unit faculty and department/college committees.
- Ballots, votes expressing support for or against the proposal by unit faculty and staff and committees.
- Letters of support or opposition from appropriate faculty and/or administrators
- Letters of support from outside the University.
- Detailed responses to SAOSC Guidelines for Changes to Academic Organization and Structure for Educational Units (<http://www.uky.edu/Faculty/Senate/forms.htm>)

**Proposal Responses to Senate SAOSC Cover Form and SAOSC Guidelines
(Per forms and guidelines posted on Senate web site January 2014)**

Responses to Items Enumerated on the [SAOSC Cover Form](#):

Note: Except where otherwise stated, all “Sections” of the proposal noted below are referring to “Part I” of the proposal (“Part II,” for the Graduate Council, is for informal reference an appendix item)

a. Disposition of faculty, staff and resources (financial and physical);

See Sections 2 and 3.B1 of the proposal

b. Willingness of the donating units to release faculty lines for transfer to a different educational unit;

Not Applicable

c. Consultation with the faculty of the unit to which the faculty lines are proposed to be transferred;

Not Applicable

d. Consultation with the faculty of educational unit that will be significantly reduced;

Not Applicable

e. Summary of votes and viewpoints (including dissents) of unit faculty and department/college committees.

Unanimous positive ‘core’ faculty vote is shown in appended minutes of ‘core’ faculty meeting
Unanimous positive ‘total unit’ faculty vote is shown in appended minutes of unit faculty meeting

f. Ballots, votes expressing support for or against the proposal by unit faculty and staff and committees.

See item e above.

g. Letters of support or opposition from appropriate faculty and/or administrators

Letter of support from Dean is appended (was included in proposal as proposal was forwarded from unit up to College-level review).

h. Letters of support from outside the University.

Not Applicable

**Responses to SAOSC Guidelines for Changes to
Academic Organization and Structure for Educational Units:**

i-1 What is the impetus for the proposed change?

See Section 1 Executive Summary, Goals, and Significance

i-2 What are the benefits and weaknesses of the proposed unit with specific emphasis on attainment of educational objectives?

See Section 1, Goals and Objectives, especially second goal, and Section 6

i-3 Describe the organization of the current structure and how the proposed structure will be different and better. Current and proposed organizational charts are often helpful in illustrating reporting lines.

See Section 3 of proposal "3. Current and Proposed Academic Organization of the New Educational Unit"; See also Fig. 1

i-4 How does the change fit with department, college, and/or university objectives and priorities?

See Section 1 of proposal, Executive Summary, Goals and Significance

i-5 How does this change better position the proposers relative to state and national peers, as well as University Benchmark Institutions? How does the change help UK meet the Top 20 Goal?

See Sections 1, 2 and 6 of the proposal.

i-6 Who are the key personnel associated with the proposed unit? Provide qualifications of these personnel in a brief form. A complete curriculum vitae for each person is not needed, although pertinent information in tabular format is helpful.

See Part I Appendix A and Part I Appendix B of the proposal.

i-7 Discuss leadership and selection process for appointing a chair, a director, or interim leader and search process, etc.

See Section 3C of the proposal

i-8 What is the function of the faculty/staff associated with the proposed change and how is that relationship defined? Discuss DOE, adjunct, full-time, voting rights, etc.

See Sections 2, 3B and 7 of the proposal

i-9 Will the proposed change involve multiple schools or colleges?

See Section 5 of the proposal

i-10 If the proposed change will involve transferring personnel from one unit to another, provide evidence that the donor unit is willing and able to release the personnel.

Not applicable

i-11 Describe the level of faculty input in the policy-making process including voting rights and advisory.

See Section 3B1 and 3B2 of the proposal.

i-12 Discuss any implications of the proposal for accreditation by SACS and/or other organizations.

N/A

i-13 What is the timeline for key events in the proposed change? Student enrollments, graduates, moved programs, closed courses, new faculty and staff hires, etc.

See Sections 2, 3C4, and 6 of the proposal.

i-14 Proposals involving degree changes and students:

i-15(a) How will proposed structure enhance students' education and make them more competitive?

See Section 6 (Part I) and Part II

i-16(b) Discuss impact on current and future students. State assumptions underlying student enrollment growth.

See Section 6 (Part I) and Part II

i-17(b) Note that new programs and courses will need to be vetted through appropriate channels beyond this committee.

The program changes and new courses are proceeding through review channels established by the University Senate.

i-18(b) What are the plans for student recruitment?

See Sections 3C4, 6B (of Part I), and Part II of the proposal

i-19 The committee will likely want to see evidence of adequate financial viability for the proposed unit to be successful. A general description of the new costs and funding should be provided. A letter from the Provost, Dean, and other relevant administrators may affirm commitment to provide financial resources as appropriate. An exhaustive budget is not expected.

See Section 8

i-20 The proposal should document any faculty votes and departmental or school committee votes as appropriate leading up to this point in the process. A Chair or Dean may appropriately summarize supporting and opposing viewpoints expressed during faculty discussions. The committee will want to

see evidence of academic merit and support from key parties. Letters of support (or opposition) are encouraged from the relevant senior faculty and administrators. Relevant faculty and administrators include those in units directly involved in the proposed change (including existing units from which a new unit may be formed.)

i-21 Indication of how the new structure will be evaluated as to how it is or not meeting the objectives for forming the new structure. Timing of key events is helpful.

See Section 4

i-22 Letters of support from outside the University may be helpful in understanding why this change helps people beyond the University.

Not Applicable

i-23 When submitting a proposal that may be reviewed by multiple Senate committees, anticipate that they will focus on different criteria. The SAOSC, for example, devotes much attention to issues such as the rationale for a unit's existence and structure, staffing sources, leadership selection processes, and evidence of sustained financial viability.

Part I of this proposal was written with attention to these considerations.




UNIVERSITY OF KENTUCKY

January 21, 2014

MEMORANDUM

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TO: Dr. Fred de Beer, Dean
College of Medicine

FROM: Dr. Mary Vore 
Professor and Chair
Graduate Center for Toxicology

RE: Proposal to establish the Department of Toxicology and Cancer Biology

Enclosed is the proposal to establish the Department of Toxicology and Cancer Biology, which is an expansion of the Graduate Center for Toxicology to include the discipline of cancer biology, within the College of Medicine, University of Kentucky (Part I of this document). Also enclosed, in Part II, is the proposed revised curriculum for the PhD in Toxicology and Cancer Biology.

The expansion of the Graduate Center for Toxicology to become a Department is an administrative matter of academic organization. The expansion of the doctoral program to include Cancer Biology involves changes in the curriculum and thus entails educational policy.

This document describes the rationale and justification for the proposed changes. The Core and Joint Faculty of the Graduate Center for Toxicology have extensively discussed these changes, and both Part I and Part II were unanimously supported at the general Faculty meeting called for all members.

Please let me know if any additional information is needed for moving forward with the expansion of the Graduate Center for Toxicology to the Department of Toxicology and Cancer Biology.

Final: 1-21-14

Establishment of a New Educational Unit to House an Expanded Academic Program

Part I. Proposal to establish the Department of Toxicology and Cancer Biology

1. Executive Summary

This is a proposal to broaden the current Graduate Center for Toxicology (GCT) into a new Department of Toxicology and Cancer Biology (henceforth termed Department). It is based on the desire and need to take advantage of the unique education and research strengths of the faculty in the GCT that has recently expanded into two areas: (1) cancer research, together with the remarkable increased research and educational strengths of the Markey Cancer Center (MCC) that has occurred over the last three years and (2) mechanisms underlying disease caused by environmental toxicants that is the focus of a recently created Center for Research on Environmental Disease (CRED). Discussion of such an academically broadened Department began about three years ago among members of the GCT Core Faculty (faculty with a primary appointment in the GCT), as well as discussions with Joint Faculty in the GCT, Dr. Mark Evers, Director of the MCC, Dr. Fred de Beer, Dean of the College of Medicine (COM) and Dr. Mike Karpf, Executive Vice President for Health Affairs. An overarching goal of the Department is the integration of these indicated strengths of the GCT faculty, the MCC, and the CRED, thus synergizing the research, education and training opportunities of all three units. A key academic goal is to provide a single Department with a strong research environment for homing new faculty recruitments with research foci in cancer and environmental disease. A second key goal is the development of an integrated and strong educational program in toxicology and cancer biology that can serve as a platform for education of undergraduate, professional, and graduate students, together with training of postdoctoral fellows/scholars and clinicians.

Goals and Significance

An **overarching** academic goal is to develop a Department that builds on the broad mechanistic research base that has been a significant strength in the GCT. The long-standing research strengths in DNA damage and repair, oxidative stress and disposition of xenobiotics among GCT faculty are readily applicable to problems related to cancer, but also address toxicity induced in normal tissues by xenobiotics that include both cancer chemotherapeutic drugs and environmental chemicals and metals. Similarly, the well-established multidisciplinary educational strengths of the Toxicology doctoral program will provide a strong foundation for the expanding training needs in cancer biology.

Thus, as **one goal**, the Department will provide a supportive environment for GCT faculty and others in the COM who are working in cancer research, enabling them to work together more effectively and thereby increase extramural funding in cancer-related research. The strong cancer research funding that facilitated designation of the University of Kentucky as an NCI Designated Cancer Center provides strong evidence of the exciting research environment. The important role that environmental chemicals and metabolic processes play in carcinogenesis provides a natural common focus for the new Department in toxicology and cancer biology.

A **second goal** is the development of a strong education and training program in the area of Cancer Biology that would serve to educate a broad range of students, including professional students,

residents/fellows, doctoral students, postdoctoral fellows/scholars, and undergraduate students. Development of such a strong basic research training program is imperative for the competitive renewal of the NCI Cancer Center Grant, which has a very strong emphasis on the importance of education and training in cancer. The opportunity to develop a strong undergraduate educational program in cancer biology and the role that environmental agents play in the development of cancer would serve to develop a stream of graduate and medical student applicants who have both a strong interest and knowledge base in these areas. Such a program would provide a foundation for the long-standing T32 in Molecular Mechanisms in Toxicology funded in 1990, and the two newly funded T32 awards to train surgeon scientists in oncology research and doctoral and postdoctoral fellows in cancer biology. This outstanding foundation for training bodes well for future scientists, both basic scientists and physician scientists in the areas of toxicology and cancer biology.

2. Background

The concept of a broadened Department began with the recruitment of Dr. Mark Evers as the Director of the Markey Cancer Center (MCC) and a number of new faculty with research strengths in cancer biology. Because of the strengths of the GCT faculty in the mechanistic basis of toxicity that are highly relevant and applicable to cancer, there was no need for the de novo development of a department of cancer biology. Rather, the GCT, as a multidisciplinary graduate center, has provided the initial academic locus for a number of both Core and Joint faculty associated with the MCC, a research center. The relatively small size of the GCT in 2011, consisting of 11 tenured/tenure-eligible faculty, together with concerns over the financial stability and long-term growth of the unit led to inception of the idea of a broadened Department. The faculty in the GCT were supportive of the plan to develop into this broader department for a number of additional reasons. Ten of these 11 faculty have major research programs that readily apply to cancer – although several, e.g., oxidative stress in tissue injury, or DNA damage and repair, similarly apply to cardiovascular or neurodegenerative diseases. In 2011-12, two new faculty with strong research programs in cancer were recruited with the strong support of the MCC and Dr. Mark Evers, thus further strengthening the goal of development of a strong research program in cancer. Similarly, the development of the Center for Research in Environmental Disease in 2013, under the leadership of Dr. Xianglin Shi, led to the recruitment of a new faculty member with expertise applicable to toxicology and cancer. Additional ongoing recruitments in CRED will increase the expertise applicable to these two closely-related disciplines. The very recent recruitment of three Professors (Richard Higashi, Andrew Lane and Teresa Fan) and one Associate Professor (Hunter Mosely as a likely Joint Appointee) with expertise in Systems Biochemistry, metabolomics and bioinformatics and their relevance as research approaches applicable to problems in both environmental exposures and cancer provide further support for a broadened Department. Thus, expansion of the GCT to become a Department of Toxicology and Cancer Biology is a natural and highly desirable progression that will benefit not only the faculty involved, but will also strengthen the MCC and the visibility of cancer research at the University of Kentucky. The members of Core Faculty of the Graduate Center for Toxicology are provided in **Appendix A**.

Initial discussions with Joint Faculty in Toxicology revealed a strong desire for retention of the nationally recognized strengths of the toxicology training program and utilization of these strengths to build a strong training program in cancer biology. The proposed Department will maintain the participation of

current Joint Faculty (**Appendix B**), thus continuing the multidisciplinary and strengthening both the toxicology training program and the training in cancer biology.

At a Faculty Meeting in which both Core and Joint Faculty attended, and called for the specific purpose of discussion and a vote on the proposed Department, faculty present voted unanimously to approve the proposed Department (Part I) and the Proposal to Revise the Curriculum and Graduate Ph.D. in Toxicology (Part II). The minutes of the meeting are attached (**Appendix C**).

A letter from Dr. Fred de Beer, Dean, College of Medicine, was also provided, indicating his support for the proposed Department (**Appendix D**).

3. Current and Proposed Academic Organization of the New Educational Unit

3A. Unit Reporting Relationships. The administrative organization of the current GCT is provided in **Figure 1A**, while that of the proposed Department is shown in **Figure 1B**. There are critical similarities, so that major administrative changes are not required.

The new Department will be administratively located in the COM and report directly to the Dean of the COM in the same manner as do the other Basic Science Departments. The Dean will report to the Provost, who reports to the President. The Department will be led by a Chair who will have overall administrative responsibility, and will be advised by a Vice-Chair and an Executive Committee. The broadening of the GCT academic program to include Cancer Biology will require these new/restructured administrative entities to ensure effective leadership and representation within the Department.

3B. Governance

3B1. Department Faculty Membership

Primary academic appointments. Faculty whose primary academic appointment is now in the GCT will remain as faculty in the Department (see **Appendix A** for list of current faculty). Other UK faculty with interests and expertise in Toxicology and/or Cancer Biology who wish to join the broadened Department may apply for a primary appointment. Criteria for a primary appointment in the new unit include an active, extramurally funded research program in a relevant research area. Potential future transfer of primary faculty appointment from another unit to the new department would follow the protocol outlined by the Provost (**Appendix E**). (Note: no such transfers are proposed at this time).

Joint academic appointments. The highly multidisciplinary nature of the discipline of Toxicology (ranging from molecular to ecological, from organismal to populations, from basic mechanisms to practical application) necessitates a significant dedicated participation in the instructional and research programs by faculty with joint academic appointments. The strong participation by faculty from across the college and University is reflected in the fact that, according to the Graduate School, the proportion of advisory committees of graduate students that are chaired by a joint appointee is much greater for the GCT than for any other basic science department in the college. The Department anticipates continued active participation by the Joint Faculty. While current Joint

Faculty must approve the proposal for the Department, the establishment of the Department will sever their Joint Faculty status. These and additional faculty from across the University with interests and expertise in Toxicology and Cancer Biology who wish to participate in the broadened academic program of the Department will be invited to apply for a Joint academic appointment. Faculty to be appointed as Joint Faculty in the Department of Toxicology and Cancer Biology are expected to contribute to the Department in one or more of the following ways:

1. Give a lecture in area of expertise in Departmental courses
2. Mentor and support doctoral students
3. Serve on doctoral student committees as needed
4. Give a research seminar periodically
5. Mentor summer/undergraduate students

The inclusion of Joint Faculty has been an essential and highly effective component of the Toxicology doctoral training program in the GCT and is envisioned to be similarly important for doctoral training in the expanded program of toxicology and cancer biology.

Graduate Faculty Appointments. In some instances, the interests of collaborating faculty are highly focused on graduate research training in addition to expertise appropriate for curricular instruction. In such cases, these faculty can also be provided an appointment to the graduate faculty of our graduate degree program. In some cases, these faculty already have graduate faculty appointments in their home department, and are thus provided a secondary graduate faculty appointment. In other cases, such as with COM clinical faculty, the home department does not have a graduate program so that our graduate faculty serves as their primary graduate faculty appointment. Faculty who apply for Joint academic appointments will be provided an appointment to the graduate faculty as appropriate.

3B2. Voting and Consultation

In accordance with GR VII.A.6, as a Department, all tenured or tenure-eligible faculty with full-time appointments in the Department will have automatic voting rights (the 'core' faculty). As has been the case for the GCT, the Department will encourage extensive participation of jointly appointed faculty for curricular instruction and graduate training. Therefore, the core faculty have conferred full voting privileges on programmatic and educational matters to all jointly appointed faculty as well as to Research Title Series faculty with primary appointment in the unit.

3C. Administrative Organization

3C1. Chair. The Chair has primary responsibility for administrative oversight of the Department activities and finances. The Chair will recommend to the Dean on new appointments to the faculty, with appropriate consultation with the faculty and the Directors of the MCC and the CRED. The Chair will report to the Dean of the COM, and represent the Department in external affairs.

The Chair of the new Department will be the Chair of the GCT, Dr. Mary Vore (Appendix C)

3C2. Vice-Chair. (New Administrative Position)

In view of the broadened scope of the Department, together with the increased number of faculty, the Chair and the Department will benefit from the help of a Vice-Chair. This individual will serve as a Vice-Chair of Research, with a particular focus on ensuring the health and growth of the research focus of the Department, particularly in cancer biology, recruitment of new faculty, and mentoring of young faculty. The Vice-Chair will serve administratively as Chair in the absence of the Chair, and will assume some of the administrative functions as needed over time with expansion of the Department.

The Vice-Chair of the new Department will be Dr. Daret St. Clair (Appendix D), pending approval by the Dean of the COM. The Vice-Chair will be determined by the Chair in consultation with the Dean of the COM.

3C3. Executive Committee

The current Executive Committee of the GCT consists of the Professors in the Core Faculty, an Associate Professor nominated by the Core Faculty, and several senior leaders among the Joint Faculty and serves to advise the Director of the GCT on issues related to the graduate training program.

The Executive Committee will continue to serve this role in the Department, representing the Primary and Joint Faculty in the graduate training in both Toxicology and Cancer Biology. Membership of the Executive Committee will include the Chair of the Education Committee, the Director of Graduate Studies in Toxicology and in Cancer Biology, the Department Chair, and Vice-Chair, and 2 Joint Faculty with research and training programs in Toxicology and Cancer Biology. The Department Chair will appoint the members of the Executive Committee and will seek nominations from both the Primary and Joint Faculty. Joint Faculty appointed to serve on the Executive Committee will serve 3-year terms, and may be reappointed for 2 additional terms. Significant leadership experience and service in graduate education, both in the classroom and as a mentor, will be the primary criteria for appointment to the Executive Committee. The Department Chair will chair the Executive Committee.

3C4. Education Committee

The broadened academic training program will require significant coordination of a PhD program that will be expanded to include two areas of emphasis, 1) Toxicology and 2) Cancer Biology. The proposed curriculum (see Section II) continues to include the IBS courses in the first year during which students rotate amongst faculty whose expertise is in toxicology, cancer biology or both. The student will determine whether they want to pursue further course-work in Toxicology or Cancer Biology. The Education Committee will include members of the Curriculum Committee, the Admissions Committee, and the Director of Graduate Studies (DGS). An Assistant Director of Graduate Studies will be appointed and will assist in the administration of the expanded graduate training program. It is anticipated that the Assistant DGS will subsequently advance to become the DGS, thus establishing a continuum in the leadership of the graduate training program. Undergraduate education and the MS in Toxicology will similarly be represented on this committee as these programs expand. The Education Committee will monitor the number of students in the program, refine and expand/contract the

curriculum as needed, and work with the Admissions Committee and the Chair to determine the number of students that can be supported financially and trained by faculty in the Department.

4. Institutional Review for Accomplishment of Objectives of Change to Department.

The Department will be subject to an internal self-study followed by an external review by the University at six-year intervals for the purpose of assessing its effectiveness with respect to administration, education and research programs, as detailed in the Administrative Regulations. An external review panel will be organized and given its charge by the Dean of the College of Medicine.

5. Relationship of New Unit to Existing Educational Units

In continuing our unit's strong history in multidisciplinary activities, the new Department will maintain its interactions with several academic program areas that use various organizational mechanisms to coordinate the collaboration of colleagues across departments and colleges.

One mechanism is a synergistic relationship with, in particular, two multidisciplinary research centers, the Markey Cancer Center and the Center for Research on Environmental Disease. Each center has a specialized academic research theme, the former in cancer (including cancers caused by chemicals, e.g., environmental carcinogens) and the latter in mechanisms underlying a variety of diseases caused by environmental toxicants. Each being a type of educational unit, i.e., a 'multidisciplinary research center,' they can serve as the academic home of postdoctoral students, and faculty-led research programs, but they cannot house either faculty academic appointments or certificates/degrees (GR VII.A.1). Hence, the Department will serve as the primary academic home of faculty whose salary and program resources are supported at least in part by one of these two centers. These faculty are full members of the faculty body of the Department and will continue as full members of the proposed new Department structure.

A second academic relationship to other units that reflects the proposed highly multidisciplinary program are the many faculty who currently have secondary appointments in the GCT (see Appendix B for Joint Faculty). These faculty contribute indispensably to both curricular instruction, as mentors for doctoral students, and as collaborators in various multidisciplinary research programs. These jointly appointed faculty are granted full voting rights on educational policy matters in the GCT, and this status will continue within the structure of the Department.

6. Expanded Academic Program

The expansion of faculty and extramural funding resources in the GCT in areas of cancer and mechanisms of environmental toxicants to cause disease enables the new Department to offer academic programs at the level of undergraduate courses, graduate certificates, a two-track doctoral degree, postdoctoral scholar training, and new research experiences for clinical residents/fellows.

6A. Undergraduate Courses

At present, University regulations restrict Graduate Centers to graduate education, and hence the GCT has not developed undergraduate courses in Toxicology, although there is interest among the faculty as well as indications of undergraduate interest in such courses. With the increase in number and areas of expertise of faculty in the GCT, we are now developing our first undergraduate course, which is allowed in the '400G' series format. The change from a graduate center (GCT) to a Department, will enable development of interest manifest in this initial '400G' course to other undergraduate courses in Toxicology and Cancer Biology specialties, e.g., offering a 'Tox 395' special mentored research projects in Toxicology and Cancer Biology that are reachable by undergraduate juniors.

6B. Graduate Degrees

Up to the present, the GCT graduate program has focused on award of a graduate degree in 'Toxicology' without indicating areas of specialty training. The proposed program expansion occurring together with change to a Department enables teaching of courses that address both toxicology and cancer biology areas of emphasis, with a few electives offered in the more specialized areas of toxicology or cancer biology. Despite being the worst ranked (50th) state in the US in overall cancer deaths, there is no dedicated Cancer Biology training program for pre- and postdoctoral trainees at the University of Kentucky or in the state of Kentucky. The proposed doctoral program will build on the first-year Integrated Biomedical Sciences (IBS) courses currently used by all doctoral programs in the COM. In the second year, the proposed curriculum provides strong basic training in both toxicology and cancer biology, that can be complemented by elective courses that focus on various aspects of these disciplines. The newly recruited faculty in metabolomics, systems biochemistry and informatics (Center for Environmental Systems Biology; CESB) also has a functional course new to the University of Kentucky on these topics that will be critical in the training of doctoral and postdoctoral trainees. This course will be initially taught as a part of a Special Topics course, pending its approval as a formal course.

See **Part II** of this proposal for details on these curricula.

6C. Postdoctoral Training

There are strong opportunities for Postdoctoral Training supported by an existing T32 Training Grant in Toxicology (NIEHS T32). A training grant in cancer biology (NCI T32) has recently been funded; the proposed Department of Toxicology and Cancer Biology will thus have an increased focus on the training of postdoctoral fellows. Having two such training programs will nucleate recruitment of additional postdoctoral scholars and foster development of additional resources for these trainees in the form of career guidance, opportunities to meet with visiting speakers with expertise in toxicology and cancer biology. The focus on postdoctoral training in cancer research required by the NCI Cancer Center designation provides a very strong impetus for such training. As the undergraduate education and coursework expands, these can provide an opportunity for training of postdoctoral fellows/scholars in teaching.

CESB members will also train postdoctoral fellows/scholars in various aspects of metabolomics, especially those using stable isotope tracing methods. CESB is now funded by a regional U24 grant (Resource Center for Stable Isotope-Resolved Metabolomics) in which fellows are also expected to participate in annual workshops as well as collaborate with both internal and external users of the Center.

6D. Research Experience for Medical Students and Clinical Residents/Fellows

Although academic programs for training of medical students, clinical residents and fellows are homed in clinical departments, the University regulations allow and encourage these students to obtain experience bringing research to their clinical careers. The GCT has a number of jointly appointed faculty whose home unit is a clinical department and who are engaged in close collaborative clinical research with faculty homed in the GCT. The COM MD program encourages incoming first and second year MD students to spend a summer in a host research laboratory gaining exposure to medically-related research. Under the University regulations (AR 5:4), basic science departments such as the proposed Department are allowed to host and sponsor more intensive research training of clinical residents and fellows. The proposed expanded academic activities within the framework of a Department will provide new opportunities for our faculty to contribute to, and for residents/fellows to gain research experience as conducted toward clinical translational goals.

7. Staff and Facilities.

Current administrative support for the GCT will be utilized for the new Department, and will be expanded to a small degree. Beth Yost, MBA, is the current Assistant Director of Finance in the Markey Cancer Center, the GCT, and the CRED will continue as the Business Administrator for the Department. Staff supporting the research grants in the Department will be supported either by the Integrated Business Units (IBU) currently under development, together with staff in the GCT and the MCC. These staff will be responsible for support of an expanded doctoral program. Any additional staff for the doctoral training program will be supported by Training Grants as permitted by University regulations. No further additional staff or facilities are requested at the present time.

Laboratory and office space is anticipated to remain as currently used by the faculty in the GCT and those anticipated to join the Department. Space is available for newly recruited faculty under the control of the Markey Cancer Center and the Dean of the COM. Any future increases in personnel will derive and be financed from new initiatives, e.g. funding of Program Project Grants (P01s) or Center grants, etc. These will be overseen by the Chair in consultation with the Vice-Chair, Department Faculty, the Director of the MCC, the Director of CRED, and the Dean of Medicine.

8. Projected Budget.

This proposal describes the proposed change to a Department occurring in relation to an increase in the number of faculty with expertise in cancer and environmental disease training areas. The corresponding salary support for these faculty positions has already been committed by the Dean of the COM, as have provisions for space and startup expenses.

A key component of the broadened academic goals of the Department is the expansion of the graduate doctoral training program from the current ~ 25 doctoral students, to approximately 35 students by 2020. Critical to the current success of the current training program has been the support provided by the University to the GCT in the form of Research Challenge Trust Fund fellowships. Additional funds have been committed to the Director of the GCT as supplemental support to the NIH-supported Training Grant, and are provided by the Vice President for Research for all funded T32 Training Grants. This strong institutional support has been highly instrumental to the repeated funding of the NIEHS Training Grant, and has resulted in a significant return of investment of over 2 dollars in new

external money brought to the University for each one dollar provided by the University. We anticipate that the proposed department structure, which can engage in a broader range of teaching opportunities, together with the new budget model under development by the University, will generate sufficient tuition revenue to support a broadened doctoral training program. Further, the synergistic opportunities for research will undoubtedly enhance the training opportunities that will build an even more robust doctoral program.

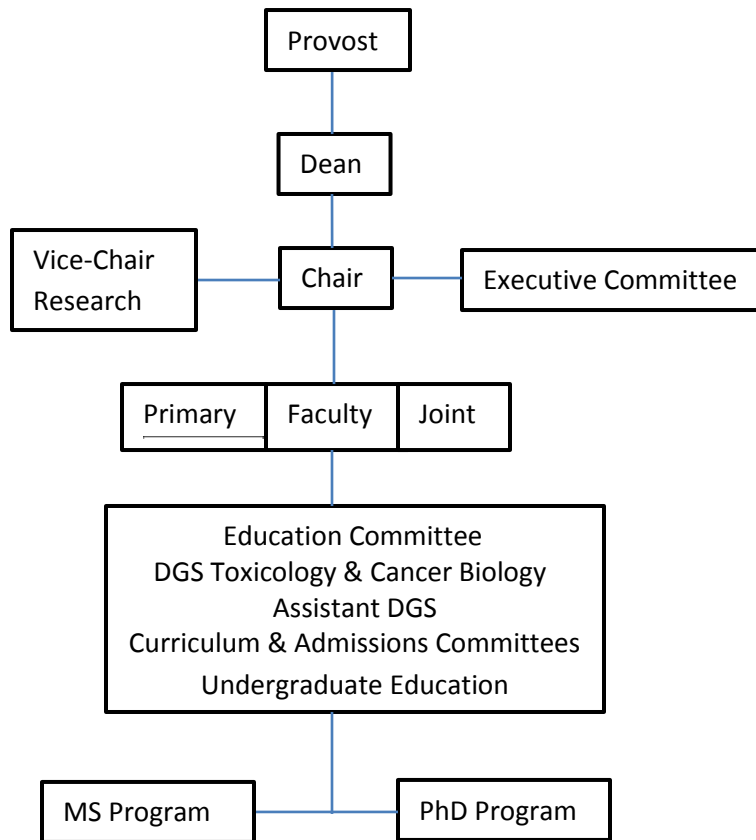
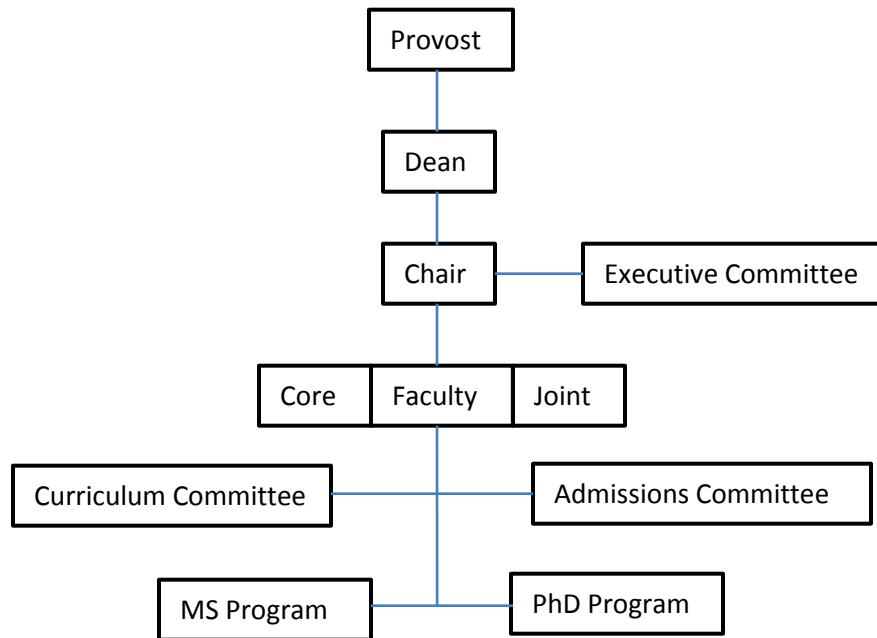


Figure 1. Administrative structures of the Graduate Center for Toxicology (Top) and the proposed Department of Toxicology and Cancer Biology (Bottom)

Part I Appendix A

Primary Academic Appointments in the Graduate Center for Toxicology

These faculty will be retained in the Department of Toxicology and Cancer Biology

1. Teresa Fan, Professor, Regular Title Series (TBA)
2. Davy Jones, Professor, Regular Title Series
3. Rick Higashi, Professor, Regular Title Series
4. Andrew Lane, Professor, Regular Title Series
5. Guo-Min Li, Professor, Regular Title Series
6. Xianglin Shi, Professor, Regular Title Series (Director of CRED)
7. Daret St. Clair, Professor, Regular Title Series
8. Mary Vore, Professor and Chair, Regular Title Series
9. Zhigang Wang, Professor, Regular Title Series
10. Jian Fu, Associate Professor, Regular Title Series (CRED)
11. Liya Gu, Associate Professor, Regular Title Series
12. Tadahide Izumi, Associate Professor, Regular Title Series
13. Isabel Mellon, Associate Professor, Regular Title Series
14. David Orren, Associate Professor, Regular Title Series
15. Hsin-Sheng Yang, Associate Professor, Regular Title Series
16. Christian Paumi, Assistant Professor, Regular Title Series
17. Qiou Wei, Assistant Professor, Regular Title Series
18. Zhuo Zhang, Assistant Professor, Regular Title Series
19. Amrita Machwe, Assistant Professor, Research Title Series
20. Min Chen, Assistant Professor, Research Title Series

Part I Appendix B
Joint Academic Appointments in the Graduate Center for Toxicology

Name	Rank	Department	College
1. Bondada, Subbarao	Prof	Microbiology	Medicine
2. Bryson, Scott	Assoc	Hematology/Oncology	Medicine
3. Cassis, Lisa	Prof	Pharmacology/Nutrition	Medicine
4. Chen, Gang	Asst	Pharmacology	Medicine
5. Chow, Ching	Prof	Dietetics/Human Nutrition	Ag
6. Cohen, Donald	Prof	Microbiology Immunology	Medicine
7. Daugherty, Alan	Prof	Cardiovascular Medicine	Medicine
8. Davis, Greg	Prof	Pathology & Lab Medicine	Medicine
9. D'Orazio, John	Assoc	Pediatrics	Medicine
10. Dvoskin, Linda	Prof	Pharmaceutical Sci	Pharmacy
11. Gash, Don	Prof	Anatomy & Neurobiol	Medicine
12. Glauert, Howard	Prof	Nutritional Sci	Medicine
13. Hennig, Bernhard	Prof	Animal Sciences	Agriculture
14. Hunsaker, John	Prof	Pathology & Lab Med	Medicine
15. Jennings, C. Darrell	Prof	Pathology & Lab Med	Medicine
16. Kaplan, Alan	Prof	Microbiology & Immunology	Medicine
17. Kasarskis, Ed	Prof	Neurology	Medicine
18. Kyprianou, Natasha	Prof	Urology	Medicine
19. Lee, Eun	Prof	Pathology & Lab Med	Medicine
20. Loftin, Charles	Assoc	Pharmaceutical Sci	Pharmacy
21. Luo, Jia	Prof	Molecular Biomedical Pharmacology	Medicine

Name	Rank	Department	College
22. Lynn, Bert	Prof	Chemistry	Arts & Sciences
23. McGillis, Joseph	Assoc	Microbiology & Immunology	Medicine
24. McNamara, Patrick	Prof	Pharmaceutical Sciences	Pharmacy
25. Noonan, Dan	Prof	Biochemistry	Medicine
26. Palli, Subba Reddy	Prof	Entomology	Agriculture
27. Peterson, Martha	Prof	Microbiology & Immunology	Medicine
28. Pettigrew, Creed	Prof	Neurology	Medicine
29. Porter, Todd	Assoc	Pharmaceutical Sci	Pharmacy
30. Rangnekar, Vivek	Prof	Radiation Medicine	Medicine
31. Sarge, Kevin	Prof	Biochemistry	Medicine
32. Shedlofsky, Steven	Prof	Gastroenterology	Medicine
33. Slevin, John	Prof	Neurology	Medicine
34. Spear, Brett	Prof	Microbiology & Immunology	Medicine
35. Spielmann, Peter	Assoc	Biochemistry	Medicine
36. Swanson, Hollie	Prof	Pharmacology	Medicine
37. Tobin, Tom	Prof	Veterinary Sciences	Agriculture
38. Unrine, Jason	Asst	Plant & Soil Sciences	Agriculture
39. Wang, Qingjun	Asst	Biochemistry	Medicine
40. Yokel, Robert	Prof	Pharmaceutical Sciences	Pharmacy
41. Zhao, Hong-Bo	Prof	Otolaryngology	Medicine
42. Zhu, Haining	Prof	Biochemistry	Medicine

APPENDIX C



UNIVERSITY OF KENTUCKY

College of Medicine
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Minutes

Joint and Core Faculty Meeting
Graduate Center for Toxicology

December 17, 2013

Present: Drs. John D’Orazio, Christian Paumi, Scott Bryson, Howard Glauert, Gang Chen, Creed Pettigrew, Steve Shedlofsky, Isabel Mellon, Joy Zhang, Martha Peterson, David Orren, Robert Yokel, Vivek Rangnekar, Brett Spear, Tom Tobin, Davy Jones, Hsin-Sheng Yang, Jian Fu, Guo-min Li, Qiou Wei, Xianglin Shi, Natasha Kyprianou, Liya Gu, Subbarao Bondada, Min Chen, Tadahide Izumi and Mary Vore. Dr. Vore presided.

1. Dr. Vore outlined the purpose of the meeting, which was to discuss the Proposal to establish the Department of Toxicology and Cancer Biology, and the related Proposal to Revise the Curriculum and Graduate PhD in Toxicology. Following discussion, the Faculty will need to vote as to whether to approve each of these Proposals; approval by majority vote will send them forward. The Proposal to establish the Department of Toxicology and Cancer Biology will be forwarded to the Dean of the College of Medicine (COM), while the Proposal to Revise the Curriculum and Graduate PhD in Toxicology will be forwarded to the Graduate School, following advisory input by the COM Curriculum Committee/Faculty Council.
2. Dr. Vore briefly reviewed the history of the Proposal to establish the Department of Toxicology and Cancer Biology as reviewed in the minutes of the October 10, 2012 meeting. Initially, the name of the Department was suggested as the Department of Cancer Biology and Toxicology. However, a strong case was made by the Joint Faculty that this implied ‘Cancer Toxicology’, and would minimize the strong history and reputation of the Graduate Center for Toxicology (GCT) in training of doctoral students in the broad discipline of Toxicology. This provided the rationale for the currently proposed name ‘Department of Toxicology and Cancer Biology’.

An Equal Opportunity University

The initial plan was to develop a doctoral program with two distinct specializations, each with separate course requirements for a single PhD degree. However, in the intervening year, it became apparent that there could likely be unhealthy competition for students between the two specializations, and faculty uncertain as to which specialization they belonged to. Therefore, the proposed curriculum has a significant degree of joint requirements, with an effort to ensure that all students receive a solid grounding in both 'cancer biology' and 'toxicology', with time allowed for electives suitable to each student's specialty interests. Discussion followed regarding details of the proposed department, and the implications for the disappearance of the GCT moniker. In response to a question, Dr. Vore replied that the new Department would continue to recruit doctoral students independently of IBS, as the Joint Faculty not in the COM would still need to train doctoral students not recruited through the IBS program. Because the COM subsidizes the IBS program, only COM faculty are eligible to accept IBS students.

3. The University regulations are such that formation of the new Department will sever the appointments of the current Joint Faculty in the GCT. However, Joint Faculty are encouraged to apply for Joint Faculty status in the new Department. We will send an email detailing the process for application for Joint Faculty status to the current Joint Faculty at the time that the new Department is formally accepted and in place so that this transition will occur 'seamlessly'.
4. The faculty then voted on the following motions:
 - a. Dr. David Orren moved to approve the changes to the academic content of the degree program as outlined in the attached document. Dr. Xianglin Shi seconded the motion. All faculty voted unanimously in support of the motion.
 - b. Dr. Davy Jones moved to approve the creation of a new department, the Department of Toxicology and Cancer Biology. Dr. Scott Bryson seconded the motion. All faculty voted unanimously in support of the motion.
5. With the unanimous support of the Joint and Core Faculty for the creation of the Department of Toxicology and Cancer Biology and the proposed changes in the academic content of the degree program, Dr. Vore will forward these to office of the Dean of the College of Medicine. Dr. Vore will keep the faculty informed of its progress through the various steps.
6. Dr. Vore thanked the faculty for their attendance at the meeting, their thoughtful questions and most of all, their continuing participation in the Graduate Center for Toxicology, which has been an essential and significant contributor to its success, particularly in the strong training of doctoral students.
7. The meeting adjourned.

APPENDIX D

Supporting letter from Dr. Fred de Beer, Dean, College of Medicine



Dean, College of Medicine
Vice President for Clinical
Academic Affairs
138 Leader Avenue, Room 241
Lexington, KY 40506-9983
859 323-6582
fax 859 323-2039
www.uky.edu

December 16, 2013

Mary Vore, Ph.D.
Graduate Center for Toxicology
306 Bosomworth HSRB
CAMPUS 0305

Dear Dr. Vore:

As you know from our discussions over the previous months, I am very supportive of your efforts to develop a department that combines the strengths of the toxicology faculty, and those in cancer biology, such as the Department of Toxicology and Cancer Biology. I look forward to reviewing your proposal as it moves through the normal administrative channels. This Department will remain in the College of Medicine.

Sincerely,

A handwritten signature in blue ink, appearing to read "F. de Beer". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Frederick C. de Beer, M.D.
Dean, College of Medicine
Vice President for Clinical Academic Affairs

Brothers, Sheila C

From: Dutch, Rebecca
Sent: Tuesday, October 14, 2014 4:03 PM
To: Jones, Davy
Cc: Brothers, Sheila C; Vore Iwamoto, Mary
Subject: Department of Toxicology and Cancer Biology Proposal

Sheila,

I met with Dean Kornbluh to go over the Department of Toxicology and Cancer Biology proposal, and he verified that he is fine with this proposal and with the use of the word Biology in the name. He spoke with Dr. Cassone and Dr. Beattie in Biology, and Dr. Beattie confirmed that they were fine with this also. If you need more information than this, just let me know.

Becky Dutch

Rebecca Dutch
Professor, Molecular and Cellular Biochemistry
Associate Dean for Biomedical Education
University of Kentucky College of Medicine
171 BBSRB
741 S. Limestone St.
Lexington, KY 40536-0509

Appendix E
**University of Kentucky Office of
the Provost**

Protocol

Transferring a Faculty Appointment to Another Unit

Original Unit:

1. A faculty member indicates an interest in transferring the individual's faculty appointment to another educational unit by discussing the possibility with the individual's chair or director (educational unit administrator).
2. The educational unit administrator sends a letter to the dean of the college explaining the situation and advising an appropriate educational fit.
3. The dean shall informally vet the transfer proposal with the Provost.
4. If the dean, educational administrator and the Provost agree on the terms, including any financial arrangements, the educational unit administrator will engage the receiving educational unit in a discussion about the proposed transfer.

Receiving Unit (and receiving dean, if the transfer involves an educational unit in another college):

1. The educational unit administrator of the receiving unit shall discuss the proposed transfer with his or her unit faculty, framing that discussion with the concern that the move is mutually advantageous only if the faculty member's scholarly profile is a 'good fit' in the receiving unit. In this regard, the unit's 'Evidence Statements' on promotion and tenure should guide those discussions, especially in those instances involving faculty persons who have not yet been tenured and promoted to the rank of 'Professor'.
2. In circumstances involving faculty persons in the Special Title Series, whose faculty appointments are tied to specific job descriptions, the educational unit administrator must ensure that the original job description, without revision, will be appropriate in the faculty person's new department. Any revisions to the original job description will require the approval of the dean in the receiving college and the Provost.
3. Once the educational unit administrator, the unit faculty and the faculty person have agreed that the proposed transfer is in the best interests of all parties, the unit administrator shall request that the full-time unit faculty in the tenure-eligible series submit written judgments expressing support or opposition to the proposed transfer.
4. After considering the written judgments of the consulted unit faculty, the educational unit administrator shall submit a letter of recommendation to the dean of the college, along with letters from the unit faculty, the candidate's CV and, as appropriate, the approved job description.

5. After considering the materials submitted by the educational unit administrator, the dean shall write to the faculty person under consideration, indicating the dean's support for the proposed transfer or intention to end the discussion about the matter. If support is warranted, the dean shall request a letter of intent from the faculty person, in which the individual acknowledges and agrees to the terms of the receiving unit's 'Evidence Statements' or job description and reaffirms a willingness to proceed with the transfer proposal.
6. After receiving the faculty person's letter of intent, the dean shall write to the Provost in support of the proposed transfer and include with the dean's letter of recommendation copies of all materials submitted by the unit administrator along with a copy of the faculty person's letter of intent.
7. After considering the materials submitted by the dean of the college, the Provost shall approve the proposed transfer and ask the dean to submit a *Notice of Academic Appointment* signed by all required parties, or write to the dean, indicating that the proposal cannot be supported.

Part I Appendix F

Chair: Mary Vore, PhD, (40% effort in years 1 and 2 to oversee the development of the Department; 20% in subsequent years) is Professor and Director/Chair of the GCT. She became the Director of the Graduate Center for Toxicology in 1994, and at that time, took over the leadership (PI) of the National Institute of Environmental Health Sciences (NIEHS)-funded T32 in Molecular Mechanisms of Toxicity, first funded in 1990 and recently renewed for the years 2010 – 2015. Dr. Vore has served on the National Advisory Council of NIEHS, as a member of the Board of Scientific Counselors and Technical Reports Review of the National Toxicology Program, on the National Research Council, Committee on Toxicology of the National Academy of Sciences, as an ad hoc and regular member of several NIH review panels, including the Alcohol and Toxicology 4 study section, and then as Chair when this study section became the Xenobiotic and Nutrient Disposition and Action (XNDA) study section (2000-2005). She currently serves on the External Advisory Board of several NIEHS Training Grants and Superfund Basic Research Grants. Dr. Vore has been a leader in the field of environmental toxicology and mechanisms of toxicity for over 30 years. She has had a long-standing research program that has been continuously funded by NIH since 1976, initially in characterizing the metabolic activation of carcinogenic polycyclic aromatic hydrocarbons (PAHs) and aromatic nitro compounds, and subsequently focusing on the toxic effects of environmental carcinogens on hepatic metabolism and transport processes. Dr. Vore was one of the first investigators to define hepatic uptake and efflux transporters, and is widely recognized for her research on the mechanisms of regulation of expression of many of the ATP-Binding Cassette (ABC) efflux transporters. Her research is focused on the regulation of translation of the ABC transporter multidrug resistant protein 2 (ABCC2; MRP2) by the oncofetal protein, IGF2BP1 in normal tissue and cancers, and how Single Nucleotide Polymorphisms (SNPs) impact its expression and function. MRP2 plays a key role in the intestinal absorption and hepatic and renal elimination of many carcinogens and chemotherapeutic drugs. A second research program is focused on defining the role of ABCC1 (MRP1) in protecting tissues particularly the heart, against oxidative stress induced by cancer chemotherapeutic agents and the impact of SNPs on effluxing products of oxidative stress and lipid peroxidation. Dr. Vore's broad experience in environmental health and toxicology, coupled to her strong leadership skills, make her an ideal person to lead the new Department and to be responsible for development of education and research activities related to Toxicology.

Part I Appendix G

Vice-Chair: Daret St.Clair, PhD is Professor in the GCT and Associate Director for Basic Research in the Markey Cancer Center. Dr. St. Clair is a leader in the field of free radical biology in cancer. Her research focuses on investigating the fundamental mechanisms by which reactive oxygen species (ROS) and reactive nitrogen species (RNS) contribute to normal tissue injury and cancer development. Her laboratory is the first to clone the human gene for the primary superoxide removal enzyme in the mitochondria, manganese superoxide dismutase (MnSOD), and this initial study has been expanded into several separate but related projects. These projects involve evaluating genetic abnormalities of antioxidant enzymes, the mechanisms regulating gene expression, and the impact these alterations have on the ability of humans to cope with oxidative stress. She has made the seminal observation that expression of MnSOD suppresses neoplastic transformation and promotes differentiation of cancer cells, but protects normal tissues from cancer therapeutics-induced injury. These original findings, which now have been confirmed by many other laboratories, have led to approaches to cancer therapy, formerly considered radical, that use antioxidant defense methods for selective enhancement of cancer therapy efficacy with reduced normal tissue injury. Dr. St. Clair has been continuously funded with multiple grants from NIH for the past twenty years. Currently, she is the principal investigator of four R01 grants and is the leader for the work ongoing in her laboratory. She has been very instrumental in mentoring junior faculty and physician scientists leading to their successes in securing NCI funding. She also has established extensive collaboration with members of the MCC including studies to address the redox-mediated issues injury in a bench to bedside and back manner that serve as the basis for the development of a program project focusing on the side effects of cancer therapy to noncancerous tissues in order to support a high quality of life after cancer treatment. Dr. St. Clair is also very active in leading and participating in service to the scientific community and has served or currently serves as a chartered reviewer for three different study sections reviewing committees that include: Chemical Pathology (1999-2003); Basic Mechanism of Cancer Therapy (2005-2009); and Radiation Therapy and Biology (2011-2015). Dr. St. Clair's strong research programs and established leadership in research, together with her broad vision and experience in redox biology and cancer therapy makes her an ideal leader to serve as Vice-Chair for Research in the proposed Department of Toxicology and Cancer Biology and to oversee the research programs.