UNIVERSITY OF
Miami
FACULTY SENATE

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FACULTY SENATE OFFICE

MEMORANDUM

To: Donna E. Shalala, President

From: Mary Coomos
Chair, Faculty Senate

Date: December 6, 2005

Subject: Faculty Senate Legislation #2005-03(B) – Establishment of Cancer Biology Ph.D. Program

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The Faculty Senate, at its November 30, 2005 meeting, voted unanimously to approve a proposal from the Miller School of Medicine to create a Cancer Biology Ph.D. Program. The proposal is enclosed for your reference.

This legislation is now forwarded to you for your action. If approved, this legislation would become effective immediately.

MC/kl

cc: Thomas LeBlanc, Executive Vice President and Provost
John Clarkson, Dean, Miller School of Medicine
Richard Bookman, Associate Dean of Graduate Studies

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CAPSULE: Faculty Senate Legislation #2005-03(B) – Establishment of Cancer Biology Program

PRESIDENT'S RESPONSE

APPROVED: _____ DATE: 12/13/05
(President's Signature)

OFFICE OR INDIVIDUAL TO IMPLEMENT: Deans, School of Medicine

EFFECTIVE DATE OF LEGISLATION: _____
(if other than June 1 next following)

NOT APPROVED AND REFERRED TO: _____

REMARKS (IF NOT APPROVED): _____

PROPOSAL FOR UNIVERSITY-WIDE CANCER BIOLOGY PhD PROGRAM – October 2005

1. RATIONALE

a. Title of Degree: PhD in Cancer Biology

b. Purpose and Goals

The proposed Cancer Biology PhD Program is a University-wide interdisciplinary, training program that will involve faculty from multiple departments and multiple schools and colleges of the University of Miami. The objective of this program is to provide a unique multidisciplinary training environment for highly qualified individuals that will prepare them for independent research and teaching careers. The overall philosophy of the Program is to integrate basic research (research that seeks to extend the frontiers of understanding) with clinical research (research that seeks to apply basic science to solve clinical problems). The scientific focus is in cancer research with an emphasis on the biology of cancer and the development of novel diagnostic and therapeutic approaches. The program will emphasize a multidisciplinary approach which encompasses concepts and state-of-the–art techniques of molecular biology, biochemistry, genetics, genomics, proteomics, structural biology, cell biology, and biostatistics and will integrate students into the extensive and rapidly expanding translational research programs at the Sylvester Comprehensive Cancer Center and other basic science research programs around UM. Importantly, students will interface with both basic scientists and clinical oncologists/researchers to develop their ability to design multidisciplinary interdependent research programs in which science problems are driven by unmet clinical needs. Program graduates will be exposed to ongoing efforts in clinical research programs including the development and implementation of diagnostic, prognostic and therapeutic applications.

The proposed interdisciplinary Cancer Biology PhD Program is built on an innovative Ph.D. curriculum to train future scientific leaders in cancer biology. In designing the curriculum, the Program has set out a number of goals including (1) to provide a multidisciplinary foundation in cancer biology that demonstrates the interrelationship of biological discovery and clinical application; (2) to provide students with two-tier mentoring by having each doctoral student assigned to a clinical oncologist as a physician mentor, and (3) by emphasizing explicit training in scientific reasoning. The students will receive guidance from both a research mentor and a physician mentor: the research mentor is the dissertation advisor, while the physician mentor is an interested, and impartial faculty member, who will provide the student with a clinical perspective in cancer biology (for details see page 8).

The pieces are in place for the development of an outstanding university-wide Cancer Biology PhD Program. There is already a large number of faculty carrying out research in cancer-related programs at UM, who are experienced in training graduate students and postdoctoral fellows (see Appendices I & IV). The proposed program with its new course offerings and integration of basic and clinical sciences will bring new students, faculty, and research programs, into a single community that will provide a unique educational perspective for doctoral students interested in cancer biology. In addition, it is anticipated that the Cancer Biology Program will further galvanize and synergize cancer-related research at the University. Such a program will expand the opportunities in graduate and postdoctoral training at the UM. It will also facilitate the recruitment of outstanding students, enhance the reputation of the Cancer Center training programs, and foster scientific interaction and collaboration among basic science faculty, clinicians, and students at the University.

c. Demand and Job Market

The pace of science, particularly biology, is still accelerating as we enter the 21st century. We now have in hand the sequence of the human genome, and with it the complete genetic code for human existence. This result, together with other rapid advances in biology, has greatly changed our ability and potential to ameliorate the human condition. Thus, in this new century, biology will have an increasingly profound influence on society. As this influence increases, the community of highly trained biologists will need to increase to fill the ever-expanding roles in academia and industry, as well as business, law, government, journalism, education and ethics. Although there will be many opportunities for our graduates, it is likely that there will be keen competition for them to secure positions in the academic or private sector. To prepare scholars (our students) to meet the challenges of the future it is essential that we imbue them with the expertise to be successful. To meet this challenge and to take advantage of this new era of opportunities, the Cancer Biology Program is proposed to prepare highly trained cancer biologists to lead us in the century ahead. Scientists with multidisciplinary training, such as that proposed here, will be in greater demand than those who are trained more narrowly. The graduate Program in Cancer Biology will provide training in many disciplines including cell biology, biochemistry, molecular biology, immunology, pathology, genetics, pharmacology, physiology, psychobiology and epidemiology. Particular emphasis will be placed on integration of basic science with translational research in order to provide students with a foundation for making future advances in cancer biology. Cancer biology, like neuroscience involves the examination of a process from a variety of perspectives including cell biology, biochemistry and molecular biology, genetics, immunology, pathology, pharmacology, physiology, psychobiology, and epidemiology. Furthermore, disciplines such as Hematology-Oncology, Surgery, and Radiation Oncology, have explored the pathophysiology of and therapeutic strategies for cancer. Graduates of the program will have the knowledge and the expertise to be competitive in the job market and secure funding. It is also important to appreciate the national context in which this program is proposed. The integration of basic science and clinical medicine is at the heart of numerous national initiatives (i.e., the NIH Roadmap and Howard Hughes Medical Institute's "Med into Grad" initiatives). Thus the UM will be among the first to respond to these challenges by offering a formal PhD level curriculum.

d. Relationship to Other Fields and Interactions with Departments

The proposed Cancer Biology Program is an interdisciplinary program with participating faculty from the departments of Cell Biology & Anatomy, Molecular & Cellular Pharmacology, Biochemistry & Molecular Biology, Microbiology & Immunology, Medicine, Surgery, and Epidemiology & Public Health at the medical campus, the Department of Psychology at the Gables campus, and Division of Marine Biology and Fisheries at the Rosenstiel School of Marine and Atmospheric Science. An important aspect of the program will be its interactions and collaborations among faculty and students from different disciplines. This is built into both the proposed governance structure and the curriculum of the program. For example, the steering committee is composed of faculty from different constituencies representing the full range of participating faculty. Faculty from various departments are currently team-teaching in some of the core courses and electives, and faculty and students will be encouraged to attend seminars and journal clubs jointly sponsored by participating departments. Many of the proposed cancer biology program faculties currently participate in interdepartmental collaborative research projects. In addition, it is a particular strength of the proposed program that it will facilitate scientific collaborations among basic science faculty and clinicians at UM. Such collaborations are key to not only greater research excellence overall, but also to the strengthening and nurturing of the academic efforts of our colleagues in the clinical departments. Perhaps most importantly, this program will complement and enhance the current Ph.D. training programs by providing new courses, seminars and serve as an example for future interactions between basic and clinical sciences.

e. Relationship to Undergraduate and Professional Programs

The proposed graduate program will enhance existing undergraduate, graduate and professional programs. The Ph.D. in Cancer Biology will offer an attractive next step for many undergraduates interested in a career in biomedical research including Biology, Microbiology, and Chemistry majors. In terms of graduate programs, the Cancer Biology Program will provide an attractive Ph.D. training option for M.D./Ph.D. students. The Cancer Biology Program will provide a resource for undergraduate and professional programs and serve to enhance their reputation. Finally, the training environment for medical residents and clinical fellows will be academically enhanced as oncology residents participate in the Tumor Biology Course. It is anticipated that training fellows in oncology and other postdoctoral fellows will be required to enroll in the new course ***"Scientific Reasoning and Logic in Clinical Cancer Biology,"*** which will be part of the required curriculum for pre-doctoral students enrolled in the Cancer Biology Program.

2. PHYSICAL RESOURCES

a. Library Holdings

The school's medical library receives more than 1,800 periodicals and holds more than 200,000 volumes; additional resources are available in the University libraries on the Coral Gables campus. Most of the scientific journals are now available as full-text online and these are important resources to which our PhD students will have open access.

b. Laboratory Resources and Equipment

The University of Miami and the Miller School of Medicine

The University of Miami is the largest research university in the southeast, offering extraordinary opportunities for graduate study. The University of Miami Miller School of Medicine is one of the jewels in the UM crown, having established itself among the best academic medical centers in the United States. With over $190 million in annual funding for nearly 1,200 research projects, the School of Medicine offers an exciting base and challenging opportunities for students seeking rigorous training in graduate programs in biomedical science. This is complemented by strong research programs carried out by faculty from Psychology and RSMAS.

UM/Sylvester Facilities

The School of Medicine is the nucleus of a 76-acre academic medical center that includes Jackson Memorial Hospital and the Miami Veterans Affairs Medical Center. The school's modern facilities feature more than 1.5 million square feet of research space, including the recently opened Lois Pope LIFE Center and the Batchelor Children's Research Institute, which have added 268,000 square feet of research and clinic space for The Miami Project to Cure Paralysis, the Department of Pediatrics, and other important research programs. Construction is well underway on a 15 story 300,000 square foot Clinical Research Institute and we expect to break ground soon on a new wet lab research building with over 150,000 square feet of lab space. Faculty laboratories are well-equipped for state-of-the-art research and include sophisticated electrophysiological setups, laser confocal and digital image analysis systems, and advanced molecular biology, genomics and biochemistry equipment.

Additional shared facilities include those for DNA and peptide synthesis, DNA and protein sequencing, amino acid analysis, monoclonal antibody production and screening, fluorescence-activated cell sorting, scanning and transmission electron microscopy, microarray analysis, computers for the analysis of protein structure, and a transgenic mouse facility. Research opportunities are also readily available at nationally recognized research centers on campus, including: the William L. McKnight Vision Research Center of the Bascom Palmer Eye Institute, the

Miami Project to Cure Paralysis, The National Parkinson's Research Center, the Diabetes Research Institute, Mailman Center for Child Development, the Batchelor Children's Research Institute, and the VA Medical Center.

Cancer Center Facilities

The clinical facilities are in two adjoining buildings that make up the UM/Sylvester/UMHC complex (~350,000 sq. ft). These include inpatient, outpatient, radiation therapy, and infusion center (CTU). Research laboratories under the assignment authority of the SCCC director are located in three buildings located in the Schoninger research quadrangle. They include the Papanicolaou Cancer Research building, the Louis Fox cancer research building, and the 4th floor of the Batchelor building. Space in these three buildings account for over 100,000 sq ft of laboratory and non-laboratory research space. Approximately 30% of all cancer research is conducted within these three buildings, with the remainder carried out in several buildings on the medical and Coral Gables campuses.

Shared Research Resources

The Sylvester Comprehensive Cancer Center operates 11 shared research resources that facilitate cancer research and advanced research training on the medical campus. In combination with other resources at RSMAS (e.g., Marine Genomics) and the Gables campus (Chemistry and Biology), our trainees will have an outstanding research infrastructure for advanced training in Cancer Biology.

1. **Clinical Research Services – Joseph Lucci M.D., Director**

This resource provides broad-based support for the clinical research activities at the cancer center. Current services include the following: a protocol office which handles all aspects of clinical protocol design and development, regulatory clearances, study activation and monitoring; a Protocol Review Committee that exercises quality control; data collection and coordination of research protocols; and a pharmacy responsible for investigational drug accountability and inventory. A Data and Safety Monitoring Committee is set up for patient safety and adverse event management.

2. **Flow Cytometry - Richard Riley Ph.D., Manager**

This resource provides laser-excited flow cytometry for quantitation of DNA content, DNA synthesis, intracellular drug content, intracellular calcium content and other cellular and surface markers; laser excited cell sorting for isolation of selected populations from a heterogeneous cell mix; and immunophenotyping of neoplastic and normal cells from clinical and laboratory research studies.

3. **Gene Knockout and Transgene Facility - Tom Malek Ph.D., Manager**

The primary objective of the facility is to efficiently produce transgenic mice, to train investigators in this technology for application to their research, and to produce chimeric mice necessary for the production of gene "knockout" mice.

4. **Imaging and Molecular Core – Alberto Pugliese M.D., Manager**

This resource makes available state-of-the-art imaging and molecular histology techniques requiring the use of complex and costly equipment not practical for the individual investigator to acquire and maintain.

5. **Molecular Analysis Core – Roland Jurecic, Ph.D., Manager**

The main purpose of this facility is to provide to Cancer Center members (a) capillary-based DNA sequencing of plasmids and PCR fragments, (b) shotgun sequencing of large cDNA and genomic DNA inserts (transgenic and knockout/targeting vectors), (c) basic DNA fragment analysis, and (d) real time quantitative PCR and RT-PCR using LightCycler technology.

6. **Cell Purification & Tissue Banking – Kelvin Lee, M.D., Manager**

This facility processes cancer patients' bone marrow and stem cells to purge them of any cancer and fortify them prior to giving them back to the patients as part of a bone marrow or stem cell transplant. In addition the facility collects stem cell samples from normal donors and are provided to investigators for experimentation. Additionally, this facility provides hematologic specimens to cancer center investigators for translational pilot projects and subsequent grants received. This currently includes both malignant and normal hematologic specimens.

7. Histology Research Lab Core – Carol K. Petito, M.D., Manager
The SCCC Histology Research Lab Core provides histology services to UM/Sylvester researchers in support of their peer-reviewed funded research and of their preliminary studies done to prepare for grant submission.

8. Biostatistics – Gail Walker, Ph.D., Acting Manager.
The Biostatistics shared resource provides biostatistical support for Cancer Center researchers. Services provided: Database development and management, experimental design clinical trials, epidemiological studies, statistical techniques, research related hardware and software, budget planning in relevant areas.

9. Informatics - Dido Franceschi, M.D., Manager
Informatics at UM/Sylvester facilitates information integration for clinical trials, patient care, research, education, and administration. The division is composed of two subdivisions: Systems Development and Support and Network Management and Personal Computing.

10. Population Research Core – Erin Kobetz, Ph.D., Manager
The purpose of the Population Research Core will be to provide services to support population-based cancer prevention and control research at SCCC, and to help increase the diversity of study participants to represent the racial, ethnic and socioeconomic composition of South Florida's diverse and unique community.

11. Pharmacokinetics Facility – M. Abdul Mian, Ph.D., Manager
The Pharmacokinetics Core Laboratory provides pharmacology research facilities.

Extramural Funding

In 2004, the University of Miami was ranked in the top 20 percent in the amount of extramural funding when compared to all colleges and universities in the United States. The UM/Sylvester Cancer Center and its associated research faculty were awarded a total of $48,247,585 in FY 2004 in peer-reviewed total direct costs.

3. CURRICULUM

Overview: An important goal of the Cancer Biology Program is to provide graduate students with a strong background in basic biomedical research and its application to clinical aspects of cancer. This is an essential component for our objective to expose and train students in translational/clinical cancer research. In order to achieve this goal we will include a special 'two-tier mentoring' program (please see pages 8-9) as part of our PhD program and develop four new courses by the time we launch the program. These four are: ***"Scientific Reasoning and Logic in Clinical Cancer Biology", "Colloquia in Clinical Cancer Research", "Research Methods in Cancer",*** and **"Student Seminar"** (outlined on pages 8-9). These will provide the students with a unique experience and also enhance interactions among the basic cancer researchers and clinical members of the Sylvester Comprehensive Cancer Center. Additional courses will be developed and submitted for review and approval as the program matures. Below is a detailed description of the overall curriculum for the proposed Cancer Biology Program.

a. Divisions and the Discipline

The Cancer Biology Program will not be divided into divisions. Each student will be required to enroll in the IBS 601/602 Core course, Tumor Biology, Scientific Reasoning and Logic, Research Methods in Cancer, Colloquia in Clinical Cancer Research and Student Seminar. Students will also be able to enroll in electives in Cancer Epidemiology, Cellular and Molecular Biology, Molecular and Cellular Immunology, Molecular and Cellular Pharmacology, and Microbiology and Immunology.

b. Course Descriptions

At the time we launch the program, we will take advantage of some courses already offered by various participating graduate programs. Descriptions of these existing courses are presented in **Appendix III.** As mentioned above and described in detail below, four new courses "Scientific Reasoning and Logic in Clinical Cancer Biology", "Research Methods in Cancer", "Colloquia in Clinical Cancer Research" and "Student Seminar" will be included in the curriculum and are outlined in detail below (page 8). With these four new courses under development, this should be adequate for our inaugural year.

c. Proposed Schedule of Course Offerings

Included in the proposed program are courses in cell biology, biochemistry, pharmacology, immunology, genetics and cancer biology. A key component of this curriculum will be a core of introductory (survey) courses required of all students together with advanced modules and special elective courses. In addition, students will be required to rotate through several laboratories of faculty in order to obtain hands-on experience with research areas presented in the program. It is anticipated that the laboratory rotations, in combination with the didactic training, will provide the background necessary to select a research mentor and an area of dissertation research.

Proposed Core Curriculum of the Cancer Biology (CAB) Program

Semester	Credit	Course description	Department and #
Year I, Fall	5	Interdisciplinary Biomedical Studies I	IBS 601
	2	Research Methods in Cancer	CAB
	3	Tumor Biology	MDB665
	1	Seminar	CAB
	1	Lab Rotations	CAB
	1	Research Topics	CAB
	0	Research Ethics	IBS 680
Total	**13**		
Year I, spring			
	4	Interdisciplinary Biomedical Studies II	IBS 602
	3	Reasoning/Logic Cancer Biology	CAB
	2	Lab rotations	CAB
	1	Seminar	CAB
	1	Professional Skills and Ethics I (AKA - Survival Skills)	IBS 683
Total	**11**		
Year I, Summer	3	Dissertation Research/Lab rotation *Written Qualifying Exam (Part I)*	CAB
Year I, Summer II	3	Dissertation Research/Lab rotation *Grant Proposal - Qualifying Exam (Part II)*	CAB
Year II, fall	2	Colloquia in Clinical Cancer Research	CAB
	3	Elective, (e.g., Signal transduction)	
	5	Dissertation research	CAB730
	1	Seminars	CAB
Total	**11**		
Year II, Spring	3	Elective (e.g., Molecular Cell Biology/Epidemiology)	
	5	Dissertation research	CAB730
	1	Seminars	CAB
Total	**9**		

Student should form a 4 member dissertation committee by March and write and defend proposal by June of their second year in the program.

Other semesters	**9**	Dissertation research	CAB730

Totals: Required course credits, 36 [600 level courses (required or elective)]
Dissertation research, 24 credits
Total all years: 62

POSSIBLE ELECTIVE COURSES: See page 24 for description

EPH 501	Biostatistics
EPH 611	Cancer Epidemiology
PSY 613	Psychoneuroimmunology
BMB 614	Molecular Genetics
MIC 628	Advanced Molecular & Cellular Immunology
MIC 651	Advanced Topics in Immunology
MIC 661	Retroviruses and Viral Oncology
MCP 604	Mechanisms of Drug Action
MCP 652	Cell Signaling
MCP 668	Neuropharmacology
MDB651	Molecular Cell Biology
MDB652	Developmental Biology

NEW COURSE DESCRIPTIONS

"Scientific Reasoning and Logic in Clinical Cancer Biology"

One aspect of the Cancer Biology PhD Program is to train students in the application of basic research to clinical problems i.e., translational research. The goal of this course is to expose students to the scientific reasoning and logic behind solving problems in clinical cancer research. This course is being developed with the overall philosophy of teaching students how knowledge obtained from basic research laboratories is applied to clinical problems including prevention, diagnosis, prognosis and therapeutic treatment of cancer. This course will instill in students the ability to integrate information and develop the thought processes necessary to critically evaluate information in the literature and experimental approaches, conceptualize problems in the field and identify areas for scientific exploration. Specific examples of translational research, i.e., laboratory to clinic will be emphasized. This course has 11 weekly segments, each of which has a different theme, plus student presentations at the end. Twice weekly students attend lectures to the week's topic that include concepts and fundamental information as well as experimental methods. Each weekly module will include specific examples that highlight the application of basic research to the clinic. For instance, the development of herceptin to treat breast cancer was first based on knowledge of cell surface receptors and signaling events and the subsequent development of blocking antibodies used in the clinic today. Weekly modules will be team taught by both basic research scientists and clinicians and papers will be chosen to be discussed at the end of each week. The students will participate in round-table discussions each week with faculty based on assigned readings and theoretical problems in the field. In addition to core instructors, faculty from science and clinical departments with specialization of a given topic will participate.

Week 1	Bench to Bedside-Clinical Trials (overview)
Week 2	Cancer Genetics-screening, susceptibility
Week 3	Diagnosis-Molecular markers
Week 4	Therapeutic Intervention-Pharmacology
Week 5	Therapeutic Intervention-Immunotherapy, antibodies as drugs
Week 6	Therapeutic intervention-Viral vectors, gene therapy
Week 6	Prevention-Diet, fat, fiber
Week 7	Prevention- Hormone therapy, antioxidants, aspirin
Week 8	Metastasis-Angiogenesis
Week 9	Metastasis-cell motility, integrins, growth factors
Week 10	Molecular Analysis-microarrays, genomics, tailoring patient therapy

Week 11 Radiation Oncology-diagnosis, therapeutics
Week 12 Student Presentations
Week 13 Student Presentations

"Colloquia in Clinical Cancer Research"

As an in-depth introduction to the fields of clinical research students will attend Colloquia at which faculty members present seminars on their current clinical research topics and methods of investigation. Here students will learn the rationale and methodologies that researchers are using to approach a problem in clinical cancer research. Lecturers will be selected from among the many faculty members at the University, both clinical researchers and faculty from the basic science departments who are actively engaged in a translational research project. Topics will cover the areas of prevention, control, diagnosis (molecular and microscopic pathology), prognosis and therapeutics.

"Research Methods in Cancer"

This interactive lecture course will teach students specific methodologies used to solve problems in cancer research. By using specific examples of basic and clinical avenues of research students will be taught the use of various approaches to address problems in cancer biology, i.e., reasoning and logic. The overall goal is to expose students to how different approaches are used and integrated to solve specific research questions and the critically interpret experimental design and data. The use and advantages of various approaches, e.g., biochemical, molecular, genetic, immunological, epidemiology, and the use of model systems e.g., cell and animal models will be discussed. Methods used in clinical trials will be presented. Emphasis will be placed on research strategy and design, limitations and strengths of various techniques.

"Student Seminar"

This course offers instruction about the fundamental elements of scientific speaking. The ability to communicate effectively is essential for scientists. Using a series of sample-based lectures and discussion groups students will be exposed to various oral presentations. In addition, during the first year, all students will be asked to present a 20 minute seminar following each of their rotation projects. Once students enter a research laboratory, students will be required to present their research each year as a one hour seminar.

Two-Tier Mentoring

An important goal of the Cancer Biology Program is to provide graduate students with a strong background in basic biomedical research coupled with exposure to clinical aspects of cancer. This latter aspect is an essential component of our objective to train students in translational cancer research. In order to achieve this goal we will include a special 'two-tier mentoring' program as part of our PhD program. This will provide the students with a unique experience and also stimulate interactions among the basic cancer researchers and clinical members of the Sylvester Comprehensive Cancer Center. The mentoring program will be co-directed by Dr. Sean Scully with Dr. Larry Boise. Below is a brief outline of this novel aspect of the program.

Year 1: During the first year students will have a series of lectures by the physician mentors in our program discussing clinical aspects of cancer treatment for specific patients with an emphasis of continuity of care of newly diagnosed patients between disciplines. The students will attend existing Sylvester Cancer Center tumor boards on a rotating monthly basis to understand how the treatment of cancers varies depending on histology. This will introduce students to clinical aspects of cancer and allow them to interact with potential physician mentors they would select.

After year one students will pick their individual mentor with whom they will spend half day per month in a clinical setting. This experience will include inpatient, outpatient, and surgical interaction. The students will obtain first hand knowledge regarding the diversity of cancer as a disease spectrum and the modalities used in the treatment of these. Through their physician mentor the students will have the opportunity to experience a narrow field of cancer treatment in greater depth. During this time the student can explore the fundamental clinical problems with the mentor and how scientific investigation may serve to improve clinical care.

The physician mentor and their role: The physician mentor is not the thesis advisor. The physician mentor is an interested, and impartial, clinically active faculty member, who will provide the student with a clinical perspective in cancer biology. Unlike most students trained in traditional PhD programs, students in this program will obtain a unique perspective from a cancer clinician. The role of the physician mentor is twofold:

1. To provide our graduate students with the unique experience of having close contact with a clinical oncologist. Traditional PhD programs, even those based in medical schools, typically offer their students limited exposure to clinical aspects of cancer such as epidemiology, diagnostics, therapeutics, and prognostic tools. One role for the physician mentor is to offer students advice, perspective, and the benefits of their personal experience in the clinical management of cancer.

2. Assist in career decisions, advise, and provide opportunities for networking and letters of reference. Our students will benefit from the close contact with both their physician and research mentors, who will be able to provide letters of support on their behalf.

To satisfy these requirements, the following criteria have been established for the mentoring program:

(a) Clinical oncologists will be asked to nominate themselves as candidates for physician mentors.
(b) Students will be given a list of potential mentors and they will meet with during the first year of the program. Both students and mentors will be involved in the selection process to insure successful pairing. Students will select their mentor during the summer of year 1.
(c) Until the number of students in the program places restrictions on faculty, each physician mentor will be assigned only one student.
(d) Mentors and students are expected to meet on a monthly basis.
(e) Mentors will be part of the PhD committee, but cannot be chair of that committee.

Below is a list of clinical oncologists that have been identified to serve as physician mentors to our pre-doctoral students:

Peter Cassileth, M.D.
Hugo Fernandez, M.D.
Lynn Feun, M.D.
Stefan Gluck, M.D.
Mark Goodman, M.D.
W.Jarrard Goodwin, M.D.
William Harrington, M.D.
Izidore Lossos, M.D.
Joseph Lucci, M.D.
Caio Rocha-Lima, M.D.

Joseph D. Rosenblatt, M.D.
Niramol Savaraj, M.D.
Sean P. Scully, M.D., Ph.D.
Joyce Slingerland, M.D., Ph.D.

New Student Orientation - During the first week of the semester, there will be a student orientation to discuss these degree requirements and the qualifying exam. This will be followed by a reception.

Faculty/Student Research Meetings - During the Fall semester, each faculty member will present a brief summary of their research as well as rotation projects available in their lab. Each week, the first year students will have lunch with two-three of the faculty members. During this meeting, each faculty will discuss briefly (20 minutes) their research and research possibilities in the lab. Participating faculty will also provide a brief write-up of their research programs and a list of recent publications, which will be available on the training program web site.

Lab Rotations

During the first year students will be required to carry out 3 research rotations. The students will then select their PhD advisor in June of their first year.

The grading of the research rotations will be pass/fail. The evaluation will be based on an oral presentation (20 min. and 10 min. for questions) by the student to a committee consisting of 3 faculty members, other than the rotation advisor. The rotation mentor will submit a confidential written evaluation of the student in a standard format to be designed by the Curriculum committee. It will include a statement regarding the willingness of the mentor to accept the student into the lab for their thesis research.

Seminar courses

First year students must attend the departmental seminars and will be graded pass/fail based on their attendance.

Graduate Student seminar: Beginning in their second year, students will be expected to give a seminar which together with their attendance will be part of their grade.

Admission to Candidacy

In order to be admitted to candidacy, students must maintain a 3.0 grade point average in their requisite courses. In addition, pass both parts of a two-part qualifying exam during the Spring of year 2. During the Spring of the second year, each student must write a research proposal on a their research. The student will submit a 12-15 page research proposal, similar to the format of a standard NIH grant proposal (part A), and orally present and defend the proposal to their committee within 2 weeks (part B). (For dates please follow the Calendar of Events)

1. To be admitted to candidacy the student must have completed all of the following:
2. Maintain a grade point average of 3.0 or better in courses.
3. Pass Part A of the qualifying exam, written research proposal.
a. Pass Part B of the qualifying exam, oral presentation of proposal.
4. Be accepted by a faculty member as a dissertation student.

The second and subsequent years

Research Proposition Exam:

The student should form a 5 member dissertation committee by March and write and defend his/her dissertation proposal by June. The committee will be comprised of the research mentor, physician mentor and three faculty members. Two of the three faculty members must be in the Cancer Biology Program

Students will take Seminar, research, and 610 courses to complete the number of course units required for Ph.D. degree.

Graduation Requirements, thesis Preparation and Defense:

The requirements for graduation include completion of the requisite number of credits of course work with a 3.0 average. With the approval of the thesis advisory committee, each student prepares a written thesis on their original research and presents a public seminar and subsequently examined by the thesis committee and an external examiner. The thesis work must be approved by the committee and outside examiner and constitute a body of research deemed worthy of publication by the Ph.D. committee.

4. FACULTY

a. Curriculum Vitarum

Appended (Appendix IV) are complete copies of the *vitae* of all full members of the Cancer Biology Faculty. The faculty are members of various departments at the Medical School, College of Arts and Sciences and Rosenstiel School of Marine and Atmospheric Science.

UM/Sylvester Faculty	Primary Department	Secondary Department
Antoni, Michael H.	Professor, Psychology and Psychiatry	
Barber, Glen	Associate Professor of Microbiology and Immunology	
Boise, Larry	Associate Professor of Microbiology and Immunology	
Briegel, Karoline	Assistant Professor of Biochemistry and Molecular Biology	
Burnstein, Kerry	Professor of Molecular and Cellular Pharmacology	
Carraway, Kermit	Professor of Cell Biology and Anatomy	
D'Urso, Gennaro	Assistant Professor of Molecular and Cellular Pharmacology	
Farooq, Ahmjad	Assistant Professor of Biochemistry and Molecular Biology	

UM/Sylvester Faculty	Primary Department	Secondary Department
Harhaj, Edward	Assistant Professor of Microbiology and Immunology	
Harris, T.K.	Assistant Professor of Biochemistry and Molecular Biology	Assistant Professor of Chemistry
Helfman, David	Professor of Cell Biology and Anatomy	
Jurecic, Roland	Associate Professor of microbiology and Immunology	
Lampidis, Ted	Professor of Cell Biology and Anatomy	
Koniaris, Leonidas	Surgical Oncology	Cell Biology and Anatomy
Lee, Kelvin	Professor of Microbiology and Immunology	Professor of Medicine, Division of Hematology/Oncology
Levy, Robert	Professor of Microbiology and Immunology	
Lokeshwar, Vinata	Associate Professor of Urology	Associate Professor of Cell Biology and Anatomy
Lopez, Diana	Professor of Microbiology and Immunology	
Lossos, Izidore	Associate Professor of Clinical Medicine, Division of Hematology/Oncology	Department of Molecular and Cellular Pharmacology
Malek, Thomas	Vice Chair of Microbiology and Immunology	
Moraes, Carlos	Professor of Neurology	Department of Cell Biology & Anatomy
Nawaz, Zafar	Associate Professor of Biochemistry and Molecular Medicine	
Podack, Eckhard R.	Professor and Chair, Microbiology and Immunology	
Rosenblatt, Joseph	Professor of Medicine, Division of Hematology-Oncology	
Schmale, Michael	Professor, Division of Marine Biology and Fisheries	

UM/Sylvester Faculty	Primary Department	Secondary Department
Scully, Sean	Professor of Orthopedics and Rehabilitation	Professor of Cell Biology & Anatomy Professor of Cellular & Molecular Pharmacology
Singal, Rakesh	Associate Professor of Medicine, Division of Hematology-Oncology	
Slingerland, Joyce	Professor of Medicine, Division of Hematology-Oncology	Professor of Biochemistry and Molecular Biology
Webster, Keith	Associate Professor of Molecular and Cellular Pharmacology	

The criteria for full faculty membership in the Cancer Biology Graduate Program will be monitored by the Steering Committee and is modeled after the approved criteria of other PhD programs based at the medical school, are:

(1) To have established an ongoing independent research program in some area of Cancer Biology.
(2) To have a genuine interest in training and teaching at the graduate level as evidenced by participating in Cancer Biology-related courses, seminars and journal clubs.
(3) To have trained graduate or postgraduate students in Cancer Biology and published in peer-reviewed journals in some area of Cancer Biology.
(4) To have maintained independent funding at the national level for his/her independent research projects. Acceptable sources of funding do not include postdoctoral funding fellowship awards or sources of funding that are outside the usual peer review process. The member must be able to fund Cancer Biology Program graduate students who have decided to perform their dissertation research in the member's laboratory. This support would begin after the students have finished their rotations and the required coursework and have passed their qualifying examinations.
(5) Some of the requirements will be waived for new junior faculty and recruits because they may not yet have been able to secure funding and they are only just organizing their research programs.

Procedures for Granting Graduate Faculty Membership and Renewal

Application of membership of renewal will consist of submission the Cancer Biology Program Steering Committee, a CV (standard University of Miami format used for promotions and tenure) and a brief letter stating the reasons for the application. Membership in the CAB program will require a positive vote by 2/3 of the Steering Committee. Faculty membership will be reviewed every 4 years.

b. Additional Faculty

At present, no additional faculty need to hired to launch this program. However, we know that additional faculty will be recruited by individual departments in the University and new and existing Departmental faculty will be added to the Cancer Biology Program if they meet criteria for inclusion. We therefore expect that the program faculty will grow over time.

c. Interactions

Because of the Interdisciplinary nature of the Cancer Biology program, students will interact with faculty and students in a variety of departments. Members of the Departments of Cell Biology and Anatomy, Biochemistry, Cellular and Molecular Pharmacology, Medicine, Surgery, Pathology, Psychology, and Marine Biology, have agreed to participate in this program.

The Cancer Biology Steering Committee will be responsible for coordinating course offerings, seminars, journal clubs, and colloquia with pertinent departments. In addition, individuals from the participating departments will be expected to serve on Cancer Biology student committees.

5. GRADUATE STUDENTS

a. Students

This is a new program and there are no students currently enrolled. We expect to matriculate 5 students per year within 3 years of program initiation.

b. Requirements for Admission and Retention

To be considered for admission, applicants must have a bachelor's degree in one of the biological or physical sciences. Applicants should have a strong quantitative background, should place in the 80th percentile or higher on the General Test of the GRE, and have a GPA of 3.0 or above (4-point scale). Applicants are considered for the doctoral degree only.

At the present time, the Steering Committee will also serve as the admissions committee.

c. Teaching Assistants

There will be no need for teaching assistants.

6. ADMINISTRATION

a. Administration Increments Needed

(i) At the present time it is anticipated that the Cancer Biology Program will use one-half Secretary's time. Additional funds will be budgeted for design, implementation and maintenance of a program web site.

(ii) Assurances are given that study space for graduate students will be provided by the Miller School of Medicine. Such space will be outfitted with appropriate desks, phones, mailboxes, photocopying machines and computers. We plan to

submit an application to NIH for training grant support after 2 years of program operation.

(iii) The Sylvester Comprehensive Cancer Center will provide five full-time stipends ($21,000 x 5 = $105,000 + tuition waivers), which will allow the Cancer Biology program to admit five full-time students per year to cover these positions for two years. Confirmation of this support is indicated in the accompanying support letter from Dr. Goodwin, Director of the Cancer Center. Student stipends in subsequent years will be covered by individual preceptor's research grants. Money for travel and publication costs will also be supplied by individual preceptor's research grants.

b. Administration and Academic Direction

(i) The program will be administered by a Steering Committee and initially directed and chaired by David Helfman. Members of the founding Steering Committee who developed this proposal include: Mike Antoni, Larry Boise, Karoline Briegel, Kerry Burnstein, Erin Kobetz, Michael Schmale, and Joyce Slingerland. They will meet monthly to discuss academic programs, students issues etc. Decisions will be voted on by all members and will require a majority vote.

(ii) The Steering Committee will be responsible for academic policy and making decisions. It will be responsible for determining criteria for faculty membership in the program.

(iii) Members of the Steering Committee will serve for three years, although terms will be staggered during the first four years of program operation.

7. COMPARISON WITH OTHER ESTABLISHED PROGRAMS

There are currently only 12 graduate programs in Cancer Biology in the United States (http://programs.gradschools.com/usa/cancer_biology.html). A survey of some of the Cancer Biology Programs shows a wide range of faculty and student participation and training opportunities (see also Appendix 2). All of these programs consist of faculty from diverse University departments, including both Clinical and Basic Science Departments. All offer tuition remission and stipends as well as postdoctoral training.

8. Program Summary

The proposed Cancer Biology PhD Program is a University-wide interdisciplinary, training program that will involve faculty from multiple departments and multiple schools and colleges of the University of Miami. The overall philosophy of the Program is to integrate basic research with clinical research. The program will emphasize a multidisciplinary approach which encompasses concepts and state-of-the–art techniques of molecular biology, biochemistry, genetics, genomics, proteomics, structural biology, cell biology, and biostatistics and will integrate students into the extensive and rapidly expanding translational research programs at the Sylvester Comprehensive Cancer Center and other basic science research programs around UM. Importantly, students will interface with both basic scientists and clinical oncologists/researchers to develop their ability to design multidisciplinary interdependent research programs in which science problems are driven by unmet clinical needs. Program graduates will be exposed to ongoing efforts in clinical research programs including the development and implementation of diagnostic, prognostic and therapeutic applications. The

proposed program with its new course offerings and integration of basic and clinical sciences will bring new students, faculty, and research programs, into a single community that will provide a unique educational perspective for doctoral students interested in cancer biology. The program will expand the opportunities in graduate and postdoctoral training at the UM. It will also facilitate the recruitment of outstanding students, enhance the reputation of the Cancer Center training programs, and foster scientific interaction and collaboration among basic science faculty, clinicians, and students at the University.

APPENDIX I

List of mentors who have training experience in cancer biology related fields and their current graduate students.

Mentors	Department	Student Name (Undergrad)	Year
Briegel, Karoline	Biochemistry and Molecular Biology	**Carmen Rios** (Johns Hopkins University) BS	1
Carraway, Kermit	Biochemistry and Molecular Biology	**Vanessa Pino**, UM **George Theodore**, UM **Fei Tang**, Beijing Univ	3 3 2
Deustcher, Murray	Biochemistry and Molecular Biology	**Helen Vincent** (Oxford University) MS **Michael Zundel** (Brigham Young Univ) BS **Chenglu Chen** (Chinese Univ) BS **Sophia Kyriacou** (Old Dominion Univ) MS **Georgeta Basturea** Univ of Bucharest) MS	3 2 3 2 4
D'Urso, Gennaro	Biochemistry and Molecular Biology	**Alexandra Locovei** (MD, Carol Davila Univ. of Medicine and Pharmacy University, Bucharest, Romania) **Ling Yin** (MA, Dalian Medical University, China)	3 2
Harris, T. K.	Biochemistry and Molecular Biology	**Timothy J. Ragan** (Univ. of South Florida) **Andrew Keith** (University of Colorado) **Xinxin Gao** (Beijing Institute of Technology) **Duncan Ross** (University of Miami)	4 4 4 1
Slingerland, Joyce	Biochemistry and Molecular Biology	**Goldi Koslozki** (Eckerd College) BS **Michelle Larrea** (Florida State University) BS	2 3
Werner, Rudolph	Biochemistry and Molecular Biology	**Curtis Anderson** (Harvard University) BA	5
Salas, Pedro	Cell Biology and Anatomy	**Andrea Orlolo** (Buenos Aires)	4
Farook, Ahmjad	Cell Biology and Anatomy, Molecular Cell and Developmental Biology	**Ceren Ornek** (Middle East Technical University) BS	3

Mentors	Department	Student Name (Undergrad)	Year
Helfman, David	Cell Biology and Anatomy, Molecular Cell and Developmental Biology	**Patrick Flynn** (Manhattan College) **Protiti Kahn** (Mississippi)	**2** **1**
Lampidis, Theodore	Cell Biology and Anatomy, Molecular Cell and Developmental Biology	**Johnathon Maher** **Metin Kurtoglu** **Medhi Wangpitchit**	
Lokeshwar, Vinata B.	Cell Biology and Anatomy, Molecular Cell and Developmental Biology	**Roozbeh Golshani** (Purdue University) BS	**3**
Harrington, William	Hematology Oncology	**Jennifer Rahn** (University of Tennessee) BS	
Schmale, Michael	Marine Biology (RSMAS)	**NONE**	
Shonukan, Oluwatoyin	Medicine/Hematology Oncology	**NONE**	
Nawaz Laboratory	Medicine/Hematology/ Oncology	**Sarath Dhananjayan** **Sivapriya Ramamoorthy** **Srinivasan Sathishkumar**	
Rosenblatt, Joseph	Medicine/Hematology/ Oncology	**Kyung Yi**	
Barber, Glen	Microbiology & Immunology	**Rachel Elsby** (Univ of Miami)BS	**3**
Boise, Lawrence	Microbiology & Immunology	**Esther Obeng** (Univ of Miami) BS	**5**
Harjaj, Edward	Microbiology & Immunology	**NONE**	
Jurecic, Roland	Microbiology & Immunology	**Jie Yang** (Tianjin Medical University) BS, MS	**2**
Lee, Kelvin	Microbiology & Immunology	**Inna Lindner**(University of Miami) BS	**6**
Levy, Robert	Microbiology & Immunology	**Zachary Zimmerman** (Wake Forrest) **Melinda Roskos** (Univ. of Colorado)	**4** **2**
Lopez, Diana	Microbiology & Immunology	**NONE**	
Malek, Thomas	Microbiology & Immunology	**Olakunle Adeegbe** (Florida A& M University) BS **Cleo Rolle** (Macalaster College) BA **Dapeng Gong** (Peking University) PR China, BS	**3** **4** **3**
Podack, Eckhard	Microbiology & Immunology	**Yanping Xiao** (Southeast University, PR China, BS; Fudan University, PR China, MS)	**2**
Fontoura, Beatriz	Molecular and Cellular Pharmacology	**Neal Satterly** (Louisiana State University) **Papia Chakraborty** (BIRLA Institute of Technology, Mesra, Ranchi,	**2** **4**

Mentors	Department	Student Name (Undergrad)	Year
		Bihar, INDIA) **Carlos Arana** (University of Miami College of Engineering) **Paula Waziry** (City College of New York)	3 5
Burnstein, Kerry	Molecular and Cellular Pharmacology	**Leah Lyons** (FAU) **Zhengying Wang** (West China Univ. of Medical Sci) **Joanne Faysal** (Suffolk Univ) **Yassin Flores** (Univ. Miami)	6 3 3 1
Lossos, Izidore	Department of Medicine, Division of Hematology and Oncology	**NONE**	
Singal, Rakesh	Molecular and Cellular Pharmacology	**NONE**	
Scully, Sean	Orthopaedics & Rehabilitation	**NONE**	
Franzmann, Elizabeth	Otolaryngology	**NONE**	
Antoni, Michael	Psychology (Gables Campus)	**Ilona Buscher** (U. Miami) **Adam Carrico** (U. Chicago) **Aisha Kazi** (U. Florida) **Rachel Rose** **Alyse Kileen** (UCLA) **Kristen Phillips** (USF) **Kate Weaver** **Michelle Peake** **Scott Siegel** (Rutgers)	2 4 3 4 1 1 4 5 3
Ganju-Krishan, Awtar	Radiation Oncology	**NONE**	
Koniaris, Leonidas	Surgical Oncology	**NONE**	

Appendix II Cancer Biology Training Programs

School	# of Students	# of Faculty	Description of Cancer Biology Programs at Other Institutions
Stanford University	56	60	Established in 1978, the Cancer Biology Program at Stanford University includes an interdisciplinary program leading to the Ph.D. degree. During the past 25 years, our understanding of cancer has increased dramatically with the discovery of oncogenes, tumor suppressor genes, pathways of DNA damage and repair, cell cycle regulation, angiogenesis and responses to hypoxia, and recent glimpses into the molecular basis of metastasis. In addition, methods of parallel analysis including gene expression arrays, protein arrays, and tissue arrays have begun to refine and redefine the taxonomy of cancer diagnosis. This explosion of basic and clinical science has in turn resulted in the first successful cancer chemotherapies and immunotherapies based on a knowledge of specific molecular targets. **Website:** **http://www.stanford.edu/group/cancerbio/index.htm**
University of Wisconsin Madison	40	36	This program in Cancer Biology is designed to introduce students to research related to the induction, properties, and therapy of cancer and to assure that the students have the necessary background in one or more areas of related fundamental science to enable them to do original research. **Website** **http://www.cancerbiology.wisc.edu/overview.html**
University of Texas at Houston	32	35	The Program in Cancer Biology leads to a Ph.D. degree in the biomedical sciences with specialization in broad areas related to cancer biology. More than 50 leading faculty members are drawn from the University of Texas M.D. Anderson Cancer Center at Houston and its Science Park-Research Division, the Dental School, NASA, Texas A and M University and the University of Texas Medical School at Houston. **Website: http://gsbs.gs.uth.tmc.edu/**
University of Arizona	24	57	The Cancer Biology graduate program leads to a Ph.D. degree in Cancer Biology. The Program allows students to focus their training in several related disciplines which have in common research faculty studying various aspects of cancer biology. **Website: http://www.azcc.arizona.edu/cbio/**
Wake Forest University	22	13	Cancer is one of the major health problems in our nation. In order to understand the complex processes involved in the pathogenesis, course, and treatment of this group of diseases, we need investigators whose primary focus is cancer research. We have an obligation to train investigators who understand cancer biology, pathology, and clinical ramifications. The graduate program in cancer biology at Wake Forest University School of Medicine is designed specifically to train a new generation of scientists whose focus is on the translation of basic science into the clinic in the areas of screening, risk assessment, prevention,

			and therapeutics. **Website: http://www1.wfubmc.edu/canbio/**
Barbara Ann Karmanos Cancer Institute Wayne State University	28	53	This graduate program in cancer provides training in many disciplines including biochemistry, pathology, molecular biology, therapeutics, immunology, pharmacology and chemistry. The goal of the program is to develop within each student the approach to scientific thought and pursuit needed for original research as an independent investigator in cancer biology. The Ph.D. program consists of formal course work which provides a comprehensive education in the principles and research of cancer biology, as well as solid training in the core disciplines which serve modern-day cancer research. Of particular emphasis will be training in the research techniques which presently comprise a sophisticated underpinning for future advances in cancer biology. Active participation in research seminars and original research are two basic elements of this program. Students will complete a publishable research project under a faculty preceptor and present the research as a thesis. **Website: http://www.med.wayne.edu/cancer/doctoral.html**
University Of South Florida	19	50	This is an interdisciplinary Ph.D. program which enables students to receive cancer-oriented training in multiple areas including molecular biology, immunology, functional genomics, bioinformatics, drug discovery and development, cancer prevention and control, cancer therapeutics, cell biology, biochemistry, proteomics, and chemistry. **Website: www.hsc.usf.edu/cmiop/cancer/**
University of Minnesota	11	30	Despite recent advances in the diagnosis and treatment of cancer, tumor cell progression and metastasis constitute a major cause of morbidity and mortality in cancer patients. Understanding the molecular and cellular mechanisms that contribute to tumor formation, progression and metastasis is a major challenge in cancer research. Members of the Cancer Biology Track of MICaB graduate program utilize a multidisciplinary approach to study cancer. Research opportunities in many of the faculty laboratories address the genetics and biology of tumor formation, progression, invasion and metastasis. Faculty laboratories also focus on the development of new cancer therapies; including developing new inhibitors of angiogenesis, improving immune-based therapies, and studying novel compounds that can inhibit the growth and/or survival of malignant tumors. A major area of research emphasis in the Cancer Biology Track is the relationship between genetic changes and biochemical signaling pathways in the development of cancer. Recent years have witnessed an explosion of information regarding how external signals (e.g., growth factors) bind to cell surface receptors and subsequently transduce biochemical signals that ultimately lead to changes in cell survival, proliferation, differentiation, resistance/sensitivity to apoptosis, migration and invasion. Understanding how genetic changes in cancer alter the

balance and flow of information through these signaling pathways is at the foundation of understanding how cancer cells survive and proliferate. A thorough understanding of the differences between altered signaling pathways in cancer cells and the homeostatic signaling pathways in normal cells will lead to the design of new therapeutic strategies for suppressing the tumorigenic and invasive potential of malignant tumors. What follows are examples of research opportunities in these broad areas.

Website: http://www.micab.umn.edu/index.html

Appendix III

Course Names and Course Numbers (Credits)

Curriculum: Pre-doctoral students will be required to complete coursework normally assigned by their degree granting program (see Appendix). In addition trainees will specifically be asked to complete the following coursework or equivalent prior to or during the formally supported training period. Coursework will be optional for postdoctoral trainees depending upon prior training.

New Courses: ***Scientific Reasoning and Login in Clinical Cancer Biology***
D. Helfman, J. Rosenblatt, J. Slingerland Course Coordinators

Colloquia in Clinical Cancer Research

Methods In Cancer Research

Student Seminar: scientific exposition

(These new courses are described above on pages 7-8)

IBS 601, 602: This is an intensive interdisciplinary survey of cell and molecular biology given to all first year graduate students and taught by the best qualified faculty from several basic science departments and includes three lectures and one discussion per week .Fall topics include protein structure and function, RNA and protein sythesis, genetics, gene transfer, molecular anatomy of genes and chromosomes, DNA replication and repair, RNA processing and posttranslational control, In the Spring additional topics include cell organization and membrane structure,signal transduction, protein synthesis and sorting , cell to cell and cell matrix interactions ,cell cycle and immune functions. Although not directly focused on cancer the interdisciplinary and interactive aspects make this course especially valuable in the predoctoral context. We will also encourage attendance of this course by postdoctoral trainees from clinical departments who do not have similar training in biological sciences to postdoctoral fellows from basic science departments.

IBS 620 Scientific Writing: This course will help students to strengthen their scientific writing skills. We will review the standards and expectations of scientific discourse, focusing on the scientific paper as a refined tool for conveying research findings in a clear, objective fashion and positioning the author/s within a specific research community. Sequenced writing assignments will address the functions and conventions of the various forms of scientific communication, from short correspondences to full research reports to review articles. The proper use and presentation of graphs and illustrations will also be covered.

IBS 680 Research Ethics: The NIH Guide for Grants and Contracts stipulates that Institutions receiving support for National Research Service Award Training Grants are required to develop a program in the principles of Scientific Integrity. This program should be an integral part of the proposed training effort. The University of Miami School of Medicine has chosen to respond to this requirement with this course. This course must be taken during the first semester in the department or program. This is a six-hour course and will be given in two sessions of three hours each. Prerequisite: Permission of the Graduate Advisor.

IBS 683 Professional Skills and Ethics I (AKA Survival Skills): Two-day intensive workshop involves a combination of lectures, discussions, readings and writing exercises to enhance the professional development of beginning graduate students. Topics include strategies for selecting mentors, professional writing, giving oral presentations and research ethics.

MDB 665 Tumor Biology: D. Helfman and T. Lampidis ***Course Coordinators***

This course is intended to provide a broad based overview of modern molecular and cellular aspects of cancer biology, basic and traditional research. The course highlights multiple areas including cell cycle, apoptosis, epidemiology, angiogenesis, and meets two times weekly in the fall semester. Several training grant mentors are lecturers with the course. The course meets twice weekly (Tues, Thursday 4-5:15pm) over a semester.

SCCC Program Meetings: Depending on their choice of research advisor, pre-doctoral trainees will be assigned to one of 4 SCCC interdisciplinary programs (e.g., Tumor Cell Biology, Tumor Immunology, Viral Oncology, or Clinical Oncology Research Program as above). These programs meet on a monthly basis and trainees will be required to attend all program meetings. Attendance and participation are routinely documented and monitored as is customary for SCCC Program meetings.

Journal Clubs, Lectures and Symposia: Trainees will also be ***required*** to attend the ***Distinguished Lecture Series*** in which outstanding investigators both guest and local lecture to all SCCC members on a biweekly basis on cancer related research. Trainees will also be asked to attend the annual **SCCC Zubrod Memorial Symposium.** This symposium is an annual daylong event in which SCCC investigators and pre- and postdoctoral as well as clinical trainees present results of their research in poster fashion The Zubrod Symposium is attended by most SCCC investigators and trainees. Outstanding posters presented by students and postdoctoral fellows are ranked for scientific merit and cited by an independent panel and acknowledged at the Symposium. Second year pre-doctoral and postdoctoral trainees will be encouraged to present posters related to ongoing or completed research at the annual poster session.

Landon-AACR Prize Lectures: This day-long program includes special sessions that allow graduate and post doctoral students to interact with prestigious internationally recognized basic and translational researchers. Pre-and postdoctoral trainees will also be required to attend the noon lecture given by the Landon-AACR Prize recipients. The 2004 awardees were Tony Hunter, Ph.D., Raymond DuBois, M.D., and Ph.D.

Signal Transduction Symposium: A new series of seminars has been organized at the University of Miami with the hope of promoting discussion on various topics in signal transduction. Rather than discussing an individual journal paper, the point of this seminar series is consolidate and review entire fields of information, in the same vein as what has been done with both the Alliance for Cellular Signaling (AfCS; http://www.signaling-gateway.org) and the Signal Transduction Knowledge Environment (STKE; http://stke.sciencemag.org).

The sessions will occur every other Thursday at 5-6pm and are open to all students and post docs in the biomedical community. Useful references will be posted online prior to the seminar and will consist of a short review of a specific signaling pathway or cross-talk between pathways. Talks will last 45 minutes and will be of an informal nature– the main purpose here is to inform the audience on the current state of affairs in a given field. This will also serve as an opportunity for the presenter to review his or her knowledge on the topic, making this a particularly useful exercise for graduating students! Speakers will also be encouraged to include their own findings in the presentation as much as possible.

Meeting Attendance: Predoctoral students will be encouraged to attend the annual AACR or another cancer related meeting (e.g., AACR Workshops, ASH, ASCO etc.) during the first year of their training and/or the year thereafter if they are presenting data (at least one meeting will be attended in any two year period). In addition SCCC predoctoral trainees will be asked to prepare presentations for and participate in the Annual Eastern Student Research Forum held at the University of Miami, which is staffed and organized by graduate students from the UM Basic Science departments.

DESCRIPTION OF POSSIBLE ELECTIVE COURSES:

BMB 614 Molecular Genetics (3 credits)
Description: This course deals with mechanisms of inheritance with particular emphasis on fundamental genetic processes in bacteria, bacteriophage, fungi, and animal viruses. Topics will include: the nature of mutations and mechanisms of mutagenesis; genetic complementation, recombination and transposition; transcriptional and post-transcriptional regulation; yeast and other fungi as tools of eukaryotic molecular biology, human genetic analysis, and genetic mechanisms in bacterial and mammalian viruses.

EPH611 – Cancer Epidemiology (3 credits) This course covers the basic epidemiology of cancer. Major sites and exposures will be stressed, highlighting descriptive, etiologic and preventive aspects. There will be a major course project, and one final exam.

EPH501 – Biostatistics (3 credits) Introduction to probability and statistics including descriptive statistics, tests of hypothesis, regression analysis, contingency tables, non-parametric tests and life tables. Students will gain hands on experience in the analysis of medical data using several computer systems and at least one of the statistical packages.

MIC 651 Advanced Topics in Immunology - (3 credits)
Description: Each year, selected topics in immunobiology will be discussed addressing the contemporary issues and questions regarding development, regulation, and function in the immune system. This year's course is entitled, "Lymphocyte Differentiation." Please contact the Graduate Program Office at 305-243-5682 for information concerning the annual topic. Prerequisite: MIC 628.

MIC 661 Retroviruses and Viral Oncology* (2 credits)
Description: The nature of retroviruses, cellular regulation of viral genes, pathogenesis of viral infections, and mechanisms of retroviral oncogenesis. Lectures and discussions of assigned readings. Prerequisite: MIC 523. *This course is only offered in even numbered years.

PSY 613 Psychoneuroimmunology (3 credits)
Structural and functional aspects of the immune system that are sensitive to neural and psychological processes. Interactions between the nervous and immune systems are examined in relation to empirical associations between psychological factors (i.e., stress) and immune-mediated processes in diseases such as cancer and AIDS.

MIC 628 Advanced Molecular & Cellular Immunology (3 credits)
Examination of the cellular and molecular components of the immune system, how its normal function eliminates microorganisms, and how its abnormal function leads to human disease. Topics to be address include: hematopoiesis, antigen-specific receptors, the major histocompatibility complex, antigen-processing and presentation, lymphocyte development and activation, regulation of the immune response, effector mechanisms of immunity, innate immunity, immune responses to infectious organisms, autoimmunity, tumor immunity, and transplantation immunology. Students meet three hours per week in lectures on these topics and two hours per week discussing current and classic research papers in immunology.

MCP 601 Seminar Class in Molecular and Cellular Pharmacology
Students learn to understand seminars and learn to present their data, absorb the actual science. Student A presents the upcoming Seminar - the topic, the glossary, etc. (first 1/2 of the class). This prepares us to understanding the seminar better. Students discuss the previous seminar. In the second semester, also do practice talks for the students making their presentation.

MCP 604 Mechanisms of Drug Action (3 credits)
Medical drugs have played as important a role in 20th century society as any other aspect of human endeavor. At the beginning of the century few diseases could be treated and remedies were often

anecdotal. In contrast it is now possible to relieve most diseases and we have a growing understanding of the molecular basis of drug function. In addition drugs have been employed as critical tools of research into physiological processes and have revealed pathways which were previously unsuspected. The first part of this course covers the scientific rationale of drug action and describes the factors, which control the flow of drugs through the body. The second part is an evaluation of the molecular mechanisms of action of representative classes of drugs and a description of the role of these drugs in revealing physiological function. Prerequisites: Organic chemistry; physical chemistry; biochemistry

MCP 652 Cell Signaling (3 credits)
This course provides an in-depth study of the processes through which cellular function is regulated by extrinsic signals. The signal transduction mechanisms utilized by hormones and growth factors are discussed with regard to the regulation of receptor function, GTP-binding proteins, gene transcription, ion channels and intracellular second messengers (ras, kinases and phosphatases, etc.).

MDB651 Molecular Cell Biology (3 credits)
This course presents an in-depth study of cell structure and the cytoskeleton, protein trafficking, organelle identity and function, extracellular matrix, cell adhesion, cell-cell interactions, cell cycle, cell growth, cell death and stem cell biology.

MDB652 Developmental Biology (3 credits)
This course presents an in-depth study of developmental processes including general principles, model systems, body plan, neuronal, myogenic, mammary, stem cells, eye, and pancreatic development.

APPENDIX IV

CV's for Cancer Biology Faculty

Please see attached binder and PDF file.

H.LEE MOFFITT Cancer Center & Research Institute
The End Of Cancer Begins Here.
A National Cancer Institute Comprehensive Cancer Center
At the University of South Florida

October 4, 2005

Dr. Steven Ullmann
Dean of the Graduate School
University of Miami
1541 Brescia Avenue
Coral Gables, Florida 33124-3220

RE: External review of new Cancer Biology PhD program

Dear Dr. Ullmann,

The External Review Committee has completed its evaluation of the proposal to create a new Ph.D. program in Cancer Biology at the University of Miami. After reviewing the written proposal and conducting a site visit on September 11 – 13, 2005, the committee was very impressed with the graduate school as a whole and enthusiastic about the new Ph.D. proposal. Doctoral programs specifically focused on Cancer Biology are still relatively rare and there remains a high demand for these types of training programs. Thus, the committee encourages the University of Miami to strongly support this new program. A detailed report emphasizing the strengths, weaknesses and recommendations is enclosed.

Sincerely,

Kenneth L. Wright, Ph.D.
H. Lee Moffitt Cancer Center
Department of Interdisciplinary Oncology
University of South Florida

Jim R. Woodgett, Ph.D.
Ontario Cancer Institute
Department of Medical Biophysics
University of Toronto

External Site Review Committee Report
On

Proposal to Create a University-Wide
Cancer Biology Ph.D. Program at the University of Miami

Review conducted on September 11- 13, 2005

External Review Committee members:

Jim R. Woodgett, Ph.D.
Ontario Cancer Institute and the Department of Medical Biophysics,
University of Toronto

Kenneth L. Wright, Ph.D.
H. Lee Moffitt Cancer Center and the Department of Interdisciplinary
Oncology, University of South Florida

1. Executive summary

The external reviewers were highly impressed and supportive of the proposed program. Overall the program proposal was considered outstanding with a high level of enthusiasm to implement the program as soon as possible. There is a clear demand from postgraduate students for entry into cancer biology focused research programs as demonstrated by the small number but highly successful cancer biology Ph.D. training programs at other universities. The most innovative aspect of the program is a "two-tiered mentoring" requirement where, in addition to the thesis advisor/laboratory supervisor, a second mentor is assigned from the clinical faculty. The role of this person is to introduce and educate the student to clinical realities of cancer etiology, treatment and clinical study. The reviewers recognized the value and challenges of this approach and are highly supportive, as it will promote translational thinking and awareness of clinical issues. This is a key component of successful cancer research and will provide graduates of this program an academic and practical advantage as they establish their careers. There were no major concerns with the academic content or quality of the program or the faculty.

2. Primary Recommendations

2.1. There is a high level of need for Cancer Biology Ph.D. training programs, thus this program should be implemented as soon as possible with a goal of admitting the first students in Fall 2006.

2.2. The program should develop of a means by which to recognize the contributions of the clinical faculty to ensure active and continuous participation.

2.3. The qualifying examination and laboratory rotation requirements should be remodeled to remove redundancy and minimize the delay in students initiating their thesis work.

2.4. Refine criteria for faculty mentorship in the Cancer Biology Ph.D. program.

2.5. Establish an external review process to facilitate and guide the growth of the program.

2.6. Strongly consider providing health insurance support for graduate students.

3. Background and Current Status

The University of Miami (UM), School of Medicine has a series of life science Ph.D. programs that largely fall into traditional categories following departmental themes (e.g. Biochemistry & Molecular Biology, Microbiology & Immunology, etc). In addition, UM benefits from Ph.D. programs that are cross-disciplinary. For example, the Neuroscience Ph.D. Program has successfully integrated faculty from multiple departments for over a decade. Each of the Ph.D. programs within the School of Medicine is represented on a program directors committee, chaired by the Associate Dean of Graduate Studies (Dr. Richard Bookman).

The Sylvester Comprehensive Cancer Center (SCCC) is located on the Jackson Memorial Hospital/VA medical center campus. Aside from its role in delivering cancer services to the city and surrounding region, the Center's primary buildings host approximately one third of the cancer research activities at UM with the remainder being split between other facilities on the Jackson medical center campus and the Coral Gables campus.

The external committee comprised Dr. Kenneth Wright from the University of South Florida who is Director of the USF Cancer Biology Ph.D. program at the H. Lee Moffitt Cancer Center and Dr. Jim Woodgett from the Department of Medical Biophysics, University of Toronto and the Ontario Cancer Institute. Over the period September 11-13th, the external committee met with faculty and steering committee members of the proposed program, the Associate Dean of Graduate Studies, the Dean of the Graduate School, the Director of the SCCC, Associate Director of Translational Research of the SCCC, the UM Provost, and members of the sub-committee examining the proposed program. The site visitors were afforded a tour of the facilities and provided with copies of the proposal, background information of the school of graduate studies and university guidelines pertaining to creation of Ph.D. programs.

4. Brief description of the proposed program in cancer biology

The program conforms to the established Ph.D. programs in general aspects but has several distinguishing elements. The rationale for the creation of a Ph.D. in cancer biology is to attract students into postgraduate education who have a specific interest in cancer, to provide them with knowledge of cancer etiology, mechanisms, interventional strategies, current clinical practices and cancer-specific considerations. The program will draw upon existing faculty from the basic science departments and the medical school who have a demonstrated interest in cancer research. In addition, the program will benefit from clinical oncology faculty acting as co-mentors. The program curriculum provides two new courses as well as cancer-specific seminar and colloquium courses and will evaluate students via typical qualifying exam requirements. Similar to the basic science departments, a rotation system will be employed to provide students with up to three independent laboratory experiences in the first year. As per UM current practice, tuition

waivers will be provided for the students. The first year student stipend will be paid by the SCCC through an already secured $1,600,000 endowment. A half time FTE is proposed to coordinate the program and office space and facilities will be provided by the SCCC. The program expects to recruit five new students each year.

5. Detailed Strengths

5.1. Uniqueness of the clinical/basic two tier mentoring system

A novel and innovative feature of the program is the direct involvement of a clinical mentor along side the primary research mentor. This mentor will be a practicing oncologist from the SCCC and faculty member at UM, who will meet with the student at regular (monthly) intervals and participate in the academic development of the student.

5.2. Meets a significant need in the field

Education of students in practical aspects of cancer biology will better equip them to compete for postdoctoral and healthcare sector employment. Currently, PhD students studying cancer biology at most universities receive little to no exposure to the clinical realities of cancer. Thus students from this program will have a unique and valuable education.

5.3. Key mentors and strong and enthusiastic steering committee

The driving force behind the program's development is Dr. David Helfman who moved to UM approximately 18 months ago and who had previously played a major role in the creation and operation of the Cold Spring Harbor graduate student program. In addition to Dr. Helfman, there are three other key protagonists who developed the proposal and are committed to ensuring it's success. Importantly, the members of the steering committee represent four different departments emphasizing the interdisciplinary nature of this program and its ability to offer a unique and rich training environment for the students. Thirteen clinical oncologists have been identified to form an initial pool of clinical mentors.

5.4. Capture of students with a primary interest in cancer biology at an early stage.

There is a potential loss of students to the UM postgraduate program through the omission of a cancer biology program. Based on the experience of other cancer biology Ph.D. programs, it is expected that the new program will cause a net increase in high quality applications to UM and have a positive result on each of the Ph.D. programs in the School of Medicine. Advertisement of the program will act as an additional draw to UM.

5.5. Opportunity to better integrate the clinical and basic science assets of the Sylvester Cancer Center in a university wide manner

A significant amount of cancer research is performed at the Coral Gables campus and at the marine biology campus, in addition to that performed at the SCCC and the Jackson Memorial Hospital. Formalization of a program that combines clinicians and scientists with common research interests will increase interaction between the campuses and expose more students to the clinical sphere.

Furthermore, this Ph.D. program has the potential to enhance the general atmosphere of cancer research at UM and the SCCC.

5.6. Two new courses tailored to the practicalities of cancer biology and usefulness to other students

The "Scientific Reasoning and Logic in Cancer Clinical Biology" draws together the key elements of modern cancer research, care and practice and should appeal to students who wish to relate basic research to clinical application. "Research Methods in Cancer" is likely to appeal to students interested in tumor models and technological approaches.

5.7. Identified funding for the program of $1.6 million from the cancer centre

A donor to the SCCC has provided funding to support the program should it be approved by the University. This funding represents material commitment of the SCCC to research training that synergizes well with the UM mandate to attract and train excellent students.

6. Detailed Concerns

While the overall proposal is judged outstanding, there are several concerns which if addressed would strengthen and clarify the program.

6.1. Need clear mechanism for recognition of clinical mentors.

The clinician mentor is a key aspect of the proposed Cancer Biology Ph.D. program. As such it is vital that the clinician scientist receive support, encouragement, and recognition for their efforts in this program. The current program application does not address these aspects. The program would be strengthened by letters of commitment from both the Dean of the Medical School and the Director of the Sylvester Cancer Center. These letters should emphasize their enthusiasm to recognize and support the clinicians' efforts as mentors. Providing limited release time from clinical duties for their mentoring activities should be considered.

6.2. Clarify likely activities of the clinician mentor.

The clinician mentors have an opportunity to play an important role in the training of the Cancer Biology Ph.D. students, however, the duties of the clinician mentors is vague in the current written proposal. While it is understood by the external reviewers that the precise role will depend on the student and the research project, an outline of expectations would greatly facilitate the development of the program. One component of the clinician mentors role should be to provide direct exposure of the student to the ongoing clinical practice related to their cancer research project.

6.3. Excessive time from admission to graduate school to entry into primary research lab.

The current proposal mandates that incoming students complete three laboratory rotations, each of a full semester. This results in the students not entering their primary research laboratory until the beginning of the second year. The external reviewers consider this unnecessarily long. We recommend that all students complete 2 or 3 rotations within the Fall and Spring semesters of their first year and select their mentor laboratory by the beginning of the Summer semester. This should greatly accelerate the students' progress as they will be able to focus on developing their research project during the first summer when didactic classes are limited.

6.4. Excessive requirements for the qualifying exam.

The current design of the qualifying exam involves a written exam, a 15 page NIH style research proposal on a topic not related to their own research project, and finally an oral defense of the proposal. This is set to occur during the first Summer and second Fall semesters. Successful completion of the qualifying exam is then followed by another written research proposal and oral defense, this time on their own proposed thesis project. The external reviewers have two concerns with this design. First the students will not have completed their elective didactic

courses prior to the written exam. This limits the usefulness of the written portion of the exam. Secondly, requiring the students to complete two NIH-style proposals and orally defend them in addition to the written exam will significantly inhibit the students' ability to conduct research during their second year. The program would be strengthened if the qualifying exam design was significantly shortened to allow it to be completed during the later half of the second Spring semester and during the beginning of the second Summer semester. One idea that may be considered is to allow the student to write the qualifying exam proposal on the their own proposed thesis work.

6.5. Insufficient detail in the content of the new course, "Scientific Reasoning and Logic in Cancer Clinical Biology".

The "Scientific Reasoning and Logic in Cancer Clinical Biology" course has the potential to be a unique and outstanding course. Given the unique nature of this course, it would be beneficial to provide a more detailed outline of the course with specific examples from one of the topics.

6.6. Clarify source and duration of tuition support and stipend.

The Sylvester Cancer Center has in place an endowment specifically to support a new Cancer Biology Ph.D. program. During the site visit it was also made clear that the University is willing to support the program with tuition waivers. These commitments need to be clearly defined in the proposal, along with letters of commitment from the University and the Cancer Center. Currently the proposal does not mention the University provided tuition waivers. Secondly, the Cancer Center commitment is listed as 5 students per year for two years. This requires the Cancer Center to support 10 students per year but only funds for 5 students are indicated.

6.7. No mention of health insurance support for the graduate students.

Providing health insurance coverage for graduate students is becoming more common in the life science Ph.D. programs. Including health insurance as part this program would enhance it's competitiveness in recruiting the best students nationally.

6.8. No mention of graduation requirements.

It would strengthen the proposal to define the minimum requirements for graduation and make such requirements clear to the students upon application to the program. For example, one or more first author manuscripts accepted for publication in a peer-reviewed journal. This will ensure uniformity and a high level of quality in all of the graduates from the program. Under exceptional circumstances, a Masters degree might be considered for students who do not meet these requirements. Guidelines for this path should be taken from existing Ph.D. programs.

6.9. Annual student re-appointment procedure.

A requirement for re-appointment of students to the program on an annual basis would ensure an onus on the students to maintain academic good standing in the program and provide means for exit of students who, for whatever reason, fail to complete their obligations.

6.10. Refine criteria for faculty membership in the Cancer Biology Ph.D. program.

The basic criteria for faculty membership are outlined in the current proposal. However, the terms and expectations of faculty membership to the program should be clarified. Due to the novel clinical mentorship, an Associate Membership should be developed for faculty who contribute to the teaching and mentorship but who do not directly supervise the laboratory activities of the students. Such membership would represent a form of recognition of such faculty. Associate Membership would also be a mechanism to engage faculty who want to participate in the program but do not have sufficient funding to support a student. Both Primary and Associate memberships should be reviewed by the steering committee after a fixed period (3-5 years) and take into consideration faculty participation and student feedback on satisfaction of teaching and supervision.

Secondly, the external reviewers recommend that all members of the program also have membership in the Sylvester Cancer Center. The physical and organizational infrastructure of the Cancer Center should be used as a unifying point. This will enhance the program, the University, the Cancer Center and their interrelationships.

Third, all members should be tenured or in a clearly documented tenure-track position.

6.11. External reviews and training grant applications.

Although the proposal describes an expectation for application for an NIH training grant after two years of operation, such applications are unlikely to be successful until students have successfully graduated from the nascent program. A regular (annual or bi-annual) report to an external advisory committee should be implemented to track progress of the program and provide feedback and benchmarking information to maximize the competitive position of the program for future external funding.

Subcommittee report on Proposal for a Ph.D. program in Cancer Biology
October 14, 2005

On Oct. 12, 2005, Drs. F. Ahmed, J. Bethea, T. Malek, and D. Wilson met with Drs. Helfman and Bookman to review the external reviewer's report on the Cancer Biology Ph.D. proposal. The external evaluation is quite positive, and especially recognized the innovative use of a clinical mentor in addition to the normal research mentor for students in the program. They viewed the program as meeting a significant need, especially as there are a limited number of such programs nationwide.

There were several concerns raised by the external reviewers about particular aspects of the program. These were discussed by the subcommittee and agreement was reached that Dr. Helfman would prepare a detailed item-by-item response and also adjust the proposal to take account of the recommendations/concerns.

Among the changes to be made in the proposal are the following:

1. Better define the roles and responsibilities of the clinical mentors
2. Require that students be directly exposed to cancer patients, through clinical experiences such as rounds or shadowing.
3. Consider reducing the requirements for the gaining of candidacy (the combination of written qualifying exam, a 15-page NIH-style research proposal not on the subject of the dissertation, and an oral defense of the dissertation proposal seems to be more than should be necessary).
4. Have an external examiner present at the time of the dissertation defense, as an additional member of the dissertation committee for the final defense.
5. Consider an adjustment of the timing of lab rotations so as to reduce the time before initiation of a dissertation research project.
6. Add clarification and details concerning graduate student support, graduation requirements, and student reappointments.

All of the subcommittee members were quite enthusiastic about the proposal and recommend approval by the Graduate Council.

October 17, 2005

Re: Review of Proposed Cancer Biology Ph.D. Program

Dear Colleagues,

On behalf of the Steering Committee I would like to thank the members of the Graduate School Council for their time and consideration in evaluating the proposed Cancer Biology PhD Program. We were delighted that that the proposed program was met with thoughtful consideration and enthusiasm. We thank the reviewers for their time and effort in this matter and their insightful review. Their comments and suggestions have already helped to strengthen the proposal and program as we move forward. The Steering Committee has met and discussed the internal and external reviews. We have incorporated and addressed the concerns and suggestions of the reviewers in a revised proposal. Attached is a point-by-point description of the reviewers concerns (bold letters) and the response to each point.

Sincerely yours,

David M. Helfman, Ph.D.
Chair, Cancer Biology Program Steering Committee
Department of Cell Biology and Anatomy
Sylvester Comprehensive Cancer Center
Miller School of Medicine
University of Miami
1550 N.W. 10th Avenue M-877
Papanicolaou Bldg. Room 317
Miami FL 33136

Office Phone: 305-243-2597
FAX: 305-243-5555
e-mail: dhelfman@med.miami.edu

Summary of External Reviewers Concerns

1. **Need clear mechanism for recognition of clinical mentors.** *We obtained a letter from the Director of the Sylvester Comprehensive Cancer Center which recognizes their support for this program and involvement of clinicians' efforts as mentors. In addition, the Program Director, on an annual basis, will provide a letter to all department chairs of clinical mentors providing an evaluation of the contribution of each clinical mentor so that this information may be part of the faculty member's annual evaluation.*

2. **Physician Mentor Program needs to be formalized including definition/structure. Inclusion of clinical exposure strongly encouraged.** *Since the submission of the original CAB proposal, we have recruited Dr. Sean Scully to act co-leader of the Physician Mentor Program with Dr. Larry Boise. Dr. Scully is an MD/PhD-trained physician/scientist (orthopedic surgeon and research scientist who works on integrin signaling). In addition, during their first year, students will have a series of lectures by the clinical mentors in our program discussing various clinical areas of cancer. This will introduce students to clinical aspects of cancer and allow them to interact with potential physician mentors they would select. After year one students will pick their individual mentor. We have now included a more detailed description of the role of the clinical mentors, including a mechanism for direct exposure of the student to the ongoing clinical process related to their cancer research project.*

3. **Excessive requirement for the qualifying exam.** *For the qualifying exam, the students will be required to write a research proposal on their actual research during the spring of year 2 and orally defend the proposal in front of a small faculty committee, appointed by the chair of the Steering Committee.*

4. **Scientific Reasoning and Logic need to be explained in greater detail.** *A detailed description of this course has now been included in the revised proposal.*

5. **Insufficient detail in the content of the new course, "Scientific Reasoning and Logic in Cancer Clinical Biology".** *A more detailed description of this course has now been included in the revised proposal including an example of a typical weekly module, as suggested by the reviewers'.*

6. **Clarify the source and duration of tuition support and stipend.** *The Cancer Center has raised funds for an endowment and will provide funds to cover the stipends of 5 students/year for 2 years. The School will provide tuition support, as needed, for these students as it does for all other PhD students in programs based at the Miller School of Medicine.*

7. **No mention of health insurance support for graduate students.** *We will follow the current guidelines established for graduate students in all the basic sciences. The Graduate Program Directors and relevant departments chairs are nearing agreemenet that health insurance will be provided for all biomedical PhD students. The CAB Program will conform to any new school policy.*

8. **No mention of graduation requirements.** *As outlined in the revised proposal, the requirements for graduation include completion of the requisite number of credits of course work with a 3.0 average, passing of the qualifying exam, oral defense of thesis work, acceptance of written thesis and demonstration of a body of research deemed worthy of publication by the Ph.D. committee.*

9. **Annual student re-appointment procedure.** *Student remains in good standing each year as evidence with a 3.0 average in courses, passing qualifying exam.*

10. **Refine criteria for faculty membership in the Cancer Biology program?** *We outline this in the current version In general, full membership will include investigators with a clear interest in cancer research and active research programs. Due to the novel clinical mentorship we envision in the program, physicians who are not actively pursuing scientist research, but serve as Clinical mentors to students in the CAB will have the title of "Clinical Mentors".*

11. **External reviews and training grant applications?** *It was suggested that the program have an annual review by an external advisory committee. We agree this useful for the success of program and future submissions of an NIH training grant. We are in discussion about possible candidates (including the original external reviewers).*

Summary of Internal Reviewers Concerns

1. **Indicate why have a cancer biology program and make a compelling case.** *Cancer is an interdisciplinary problem requiring integration of many areas of the basic biomedical and clinical sciences. Training will not be compromised and students will still obtain a broad knowledge base. The program fills an empty niche at the university and will build upon community of cancer biologists at UM.*

2. **Students should enter labs early, i.e., first term.** The revised curriculum now has the students *start rotations the first term for 6-8 weeks and finish 2-3 rotations by the spring of year 1. With this timetable, the students should pick a PhD advisor during summer of year 1.*

3. **Qualifying exam is too extensive, suggested take end of 2nd year. Thought taking exam at the end of first year too soon. Also how will it be constructed (i.e., oral/written)?** *See response to #3 above, in response to external review.*

4. **Physician Mentor Program needs to be formalized including definition/structure. Inclusion of clinical exposure strongly encouraged.** See response to #2 above, in response to external review.

5. **Scientific Reasoning and Logic need to be explained in greater detail.** *A detailed description of this course has now been included in the revised proposal.*

6. **What are the criteria for being a faculty member in the program?** *See #10 above, in response to external review.*

7. **What are the requirements for graduation?** *See #8 above, in response to external review.*

8. **Suggest have outside examiners at PhD defense.** *This is a good idea and I believe other programs do this. This has now been incorporated in the program proposal.*

9.

UMSylvester
Comprehensive Cancer Center

Joseph D. Rosenblatt, M.D.
Professor of Medicine
William J. Harrington Chair in Hematology
Chief, Hematology/Oncology Division
Scientific Director

October 14, 2005

David Helfman, Ph.D.
Director, Office of Education & Training
UM/Sylvester Comprehensive Cancer Center
Professor Cell Biology and Anatomy
University of Miami Miller School of Medicine
Miami, Florida 33136

Dear Dr. Helfman:

As Associate Director for Clinical and Translational Research in the Sylvester Comprehensive Cancer Center I am pleased to write a letter of support for the Cancer Biology Graduate Program. This graduate program will compliment the "Sylvester Integrated Training Program in Cancer Research" T32 training grant that we are applying to the NCI for.

I am enthusiastic about this graduate program because it adds a new dimension to our training capabilities at the medical school and integrates basic science and clinical research efforts with the Sylvester Comprehensive Cancer Center. Your proposed multidisciplinary two-tier mentoring system will expose students to both the basic and clinical aspects of cancer research. I will encourage the clinical faculty to participate as mentors.

Because doctoral programs that focus specifically on cancer biology are uncommon, UM/Sylvester is in a unique position to attract high caliber graduate students especially those with a special interest in cancer biology. This program promotes translational research and hopefully will provide cancer biology graduates with an advantage as they launch their careers.

I look forward to working with you and am highly enthusiastic about the Cancer Biology Program.

Very truly yours,

Joseph D. Rosenblatt, M.D.
Chief, Division of Hematology-Oncology
Department of Medicine
Associate Director for Clinical and Translational Research
Sylvester Comprehensive Cancer Center
University of Miami Miller School of Medicine

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Leading the Search for a Cancer Cure

UMSylvester
Comprehensive Cancer Center

October 14, 2005

David Helfman, Ph.D.
Director, Office of Education & Training
UM/Sylvester Comprehensive Cancer Center
Professor Cell Biology and Anatomy
University of Miami Miller School of Medicine
Miami, Florida 33136

Dear Dr. Helfman:

It is a great pleasure write a letter of support for the Cancer Biology Graduate Program, which is a high priority for the UM/Sylvester Comprehensive Cancer Center. I believe that the development of this program is one of the most important initiatives in meeting the long-term goals of the Center, and I am very grateful for the time and effort that you have put into this.

I am especially enthusiastic about the two-tiered mentoring structure within the program and the other enhancements to training in translational research. This is responsive to the NIH roadmap and public expectations. Based on your scientific talent and expertise in training and mentoring, you are the ideal candidate to develop and lead the cancer biology graduate program at UM/Sylvester.

Miami is a true melting pot, with exceptional diversity at every level at our institutions. We currently train a large number of physicians and scientists and are enthusiastic about the possibility of offering an interdisciplinary graduate program in cancer biology. This program will provide an exceptional forum for students to thrive and develop meaningful careers in science.

We have worked hard in building teamwork in our cancer center over the past several years and this graduate program is a tangible result of that effort. We are now ready to make the most of this opportunity and will provide you with the resources necessary to sustain this program.

The success of this program will be among my highest personal priorities.

Sincerely yours,

W. Jarrard Goodwin, M.D., F.A.C.S.
Sylvester Professor of Otolaryngology
Director, UM Sylvester Comprehensive Cancer Center

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Leading the Search for a Cancer Cure

CURRICULUM VITAE

Name: Kenneth L. Wright

Birth date: March 12, 1962

Marital Status: Married, April 5, 1986, 3 children

Work Address: H. Lee Moffitt Cancer Center
Immunology Research Program
MRC 4072
12902 Magnolia Drive
Tampa, FL 33612
Phone: 813-979-3918
Fax: 813-979-7264
E-mail: WRIGHTKL@MOFFITT.USF.EDU

Education:

May 1984	Bachelor of Science in Chemistry, with Honors University of Florida, Gainesville, FL
Nov. 1990	Ph.D., Department of Cell Biology, Advisor: Dr. Gary Stein, University of Massachusetts Medical School, Worcester, MA Thesis title: Functional and Structural Characterization of a Human H4 Histone Gene Promoter.

Post-doctoral Training:

11/1990 – 11/1996	Post-doctoral Research Fellow in the laboratory of Dr. Jenny Ting, Lineberger Comprehensive Cancer Center, University of North Carolina, Chapel Hill, NC

Appointments:

12/1996 – 8/1997	Research Assistant Professor, Lineberger Comprehensive Cancer Center, Dept. of Immunology and Microbiology, University of North Carolina, Chapel Hill, NC
8/1997 – 7/2000	Assistant Professor, Department of Biochemistry and Molecular Biology, University of South Florida, Tampa, FL
10/1997 – present	Member of Immunology Research Program, H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL

7/2000 – present	Assistant Professor, Joint Appointment, Department of Biochemistry and Molecular Biology, University of South Florida, Tampa, FL
7/2000 – present	Assistant Professor, Department of Interdisciplinary Oncology, University of South Florida, Tampa, FL
4/2002 – present	Director, Summer Intern Undergraduate Research Program, H. Lee Moffitt Cancer Center
5/2002 – present	Director, Cancer Biology Ph.D. Program, University of South Florida

Curriculum Vitae sections:

TEACHING:

Teaching Awards:

Robert J. Grasso Award for Outstanding Dedication to Graduate Education, 2000-2001. Presented by the Association of Medical Science Graduate Students, College of Medicine, Univ. of South Florida.

Excellence in Teaching and Mentorship at the Doctoral Level as Major Professor for Nilanjan Ghosh, 2002 Outstanding Dissertation Prize recipient. Presented by the Graduate Council and Office of Graduate Studies, Univ of South Florida.

1998 Outstanding Presentation Award, Suncoast Biomolecular Conference received by mentored PhD candidate, Nilanjan Ghosh.

1999 Superior Presentation Award, Health Science Center Research Day received by mentored PhD candidate, Nilanjan Ghosh.

2000 Superior Presentation Award, Health Science Center Research Day received by mentored PhD candidate, Nilanjan Ghosh.

2001 Superior Presentation Award, Health Science Center Research Day received by mentored PhD candidate, Nilanjan Ghosh.

2003 Superior Presentation Award, Health Science Center Research Day received by mentored PhD candidate, Ildiko Gyory.

2003 Superior Presentation Award, Health Science Center Research Day received by mentored PhD candidate, Jian Wu.

Courses Taught at the University of North Carolina, Chapel Hill

UNC Biotechnology Workshop , lecturer	Fall 1993
Biochemistry - Experimental Approaches, lecturer	Fall 1995 and 1996

Courses Taught at the University of South Florida

BCH 6806, Biochemical Endocrinology
Lecturer, Summer 1998
Lecturer, Summer 2000

BCH 6876, Current Topics in Biochemistry and Molecular Biology,
Course Director, Fall 1999
Course Director, Spring 2000

BCH 6411, Molecular Biology
Lecturer, Spring 1999
Lecturer, Spring 2000
Lecturer, Spring 2001
Lecturer, Spring 2002
Lecturer, Spring 2003
Lecturer, Spring 2004
Lecturer, Spring 2005

BCH 6135, Methods in Molecular Biology,
Lecturer and laboratory practical instructor, Summer 1999
Lecturer and laboratory practical instructor, Summer 2000
Lecturer and laboratory practical instructor, Summer 2001

GMS 6054, Cancer Biology I, (Molecular Biology of Cancer)
Lecturer, Fall 2001
Lecturer, Fall 2002
Lecturer, Fall 2003
Lecturer, Fall 2004

GMS 6055, Cancer Biology II, (Immunology of Cancer)
Lecturer, Spring 2002
Lecturer, Spring 2003
Lecturer, Spring 2004
Lecturer, Spring 2005

Trainees:

Ph.D. candidates, past:

Susan Dovhey, Dept. of Medical Microbiology and Immunology
Graduated 7/2000,
Currently: Senior Grants Specialist, USF

Nilanjan Ghosh, Department of Biochem. and Molecular Biology
Graduated 5/2002,
Awards:
2002 Outstanding Dissertation Prize, USF
1999, 2000, and 2001 Superior Presentation Award, Health Science Center Research Day
1998 Outstanding Presentation, Suncoast Biomolecular Conference
Currently: Hematology Oncology Medical Residency, Long Island Jewish Medical Center

Ildiko Gyory, Institute for Biomolecular Sciences and the Dept. of Biochemistry and Molecular Biology
Graduated 5/2003
Awards:
2003 Superior Presentation Award, Health Science Center Research Day
Currently post-doctoral fellow with Dr. Rudolph Grosschedl, Max-Planck-Institut für Immunbiologie, Freiburg, Germany

Ph.D. candidates, current:

Jian Wu, Institute for Biomolecular Sciences and the Dept. of Biochemistry and Molc. Biology
Awards:
2003 Superior Presentation Award, Health Science Center Research Day

Sophie Bolick Dept. of Biochemistry and Molecular Biology

Undergraduate Moffitt and American Cancer Society Summer Interns:

Kevin Hassini, Harvard University (Work resulted in authorship on 1999 J. Biol. Chem. publication)	1998 and 1999
Pavana Beerelli, Whorton H. S., Tampa, FL currently attending George Washington Medical School	1999 and 2000
Justin Wood, Vanderbilt University (Work resulted in authorship on 2001 J. Biol. Chem. publication) currently attending Vanderbilt Law School	2000
Nasrin Abgoon, U. of South Florida currently attending Univ. of South Florida Medical School	2001
Matthew Wiley, U. of Florida	2002
Kevin Bynum, Emory University	2003
Timothy Allen, Summerville High School, SC	2004
Brittany Melton, Purdue University (Accepted early admission Purdue Pharmacy School)	2004
Adam King, Univ of South Florida	2005

Undergraduate USF Honors Students:

Scott Perin currently attending Univ. of South Florida Medical School	2000
Stephanie Acker Graduated 5/2005	2001 - 2004

Project LINK (Leaders In New Knowledge) – NCI supported mentorship program

Ronda Bostick, U. of South Florida	2002 -2004

Ph.D. Thesis committees:

Hongkang Xi	Dept. of Biochem. and Molecular Biology -graduated 2000
Aaron Osborne	IBS and Dept. of Biochem. and Molecular Biology -graduated 6/2001
Yiwen He	Dept. of Biochem. and Molecular Biology -graduated 5/2002
Yu Der	Dept. of Chemistry -graduated 10/2002
Melinda Miller	Dept. of Biochem. and Molecular Biology -graduated 2/2004
Yu Pan	Cancer Biology Ph.D. Program -graduated 3/2005
Roxane Engle	Dept. of Biochem. and Molecular Biology
Caroline Desponts	IBS and Dept. of Biochem. and Molecular Biology
Ildefonso Suarez	Cancer Biology Ph.D. Program
Rachel Radbourne	Cancer Biology Ph.D. Program
Scott Freeman	Cancer Biology Ph.D. Program
Jose Rodriguez	Cancer Biology Ph.D. Program
Cynthia LeBron	Cancer Biology Ph.D. Program
Daniele Gilkes	Cancer Biology Ph.D. Program
Alyson Fey	Cancer Biology Ph.D. Program

RESEARCH:

Research Awards:

2004 Outstanding Faculty Research Achievement Award, University of South Florida

Grants:

Support as Predoctoral Student:

8/1987 – 8/1989	Samuel Roberts Noble Foundation Pre-doctoral Fellowship, Samuel Roberts Noble Foundation, Inc., Ardmore, OK.

Support as Post-doctoral Fellow:

10/1990 – 9/1992	NIH Training Grant - Lineberger Comprehensive Cancer Center Postdoctoral Fellowship.
9/1992 – 8/1995	Arthritis Foundation Postdoctoral Fellowship, Arthritis Foundation, Atlanta, GA.

Support as Pricipal Investigator:

Completed:

11/1/1997 – 10/31/1998	American Cancer Society/Moffitt Cancer Center Institutional Research Grant Award. Title: CIITA gene regulation in B-lymphocytes and plasmacytoma. **Principal Investigator: Wright, KL** Direct Costs for Total Grant Period: $20,000
12/1/1997 – 4/30/1999	Contract Grant form University of North Carolina at Chapel Hill. Title: Coordinate Control of Human HLA-D region and Ii genes. **Principal Investigator: Wright, KL** Direct Costs for Total Grant Period: $43,700
5/1/1998 – 4/30/1999	USF Research and Creative Scholarship Award. Title: Regulation of TAP1 and LMP2 genes in normal cells and renal cell carcinoma. **Principal Investigator: Wright, KL** Direct Costs for Total Grant Period: $7,500

5/5/1999 – 2/28/2005 RO1-CA80990
Source: National Institute of Health – National Cancer Institute
Title: CIITA regulation in B lymphocytes and multiple myeloma.
Principal Investigator: Wright, KL
Direct Costs for Total Grant Period: $561,291

5/1/01/2000 – 4/30/2001 Contract Grant form University of North Carolina at Chapel Hill.
Title: Coordinate Control of Human HLA-D region and Ii genes.
Principal Investigator: Wright, KL
Direct Costs for Total Grant Period: $15,000

Active:

12/1/2002 – 11/31/2007 R01-CA090489
Source: National Institute of Health – National Cancer Institute
Title: Transcriptional Control of Mcl-1 and Bok/Mtd by E2F1
Co-Principal Investigator: Wright, KL
Principal Investigator: Dr. Douglas Cress
Direct Costs for Total Grant Period: $1,035,000

9/30/2004 – 9/29/2005 R03-NS050849
Source: National Institute of Health – National Institute Of Neurological Disorders And Stroke
Title: High Throughput H3-K9 Methyltransferase Inhibitor Screen.
Principal Investigator: Wright, KL
Direct Costs for Total Grant Period: $50,000

7/27/2005 – 5/31/2010 R01-CA114504
Source: National Institute of Health – National Cancer Institute
Title: PRDI-BF1 and histone methyltransferase in lymphoma
Principal Investigator: Wright, KL
Direct Costs for Total Grant Period: $752,500

PUBLICATIONS.

1. Green, L., Schlaffer, I., **Wright, K.**, Moreno, M.L., Berand, D., Hager, G., Stein, J., and Stein, G. (1986). Cell cycle-dependent expression of a stable episomal human histone gene in a mouse cell. *Proc Natl Acad Sci U S A. 83*:2315-2319.

2. Grimes, S., Weisz-Carrington, P., Daum III, H., Smith, J., Green, L., **Wright, K.**, Stein, G., and Stein, J. (1987). A histone gene closely associated with the testis-specific H1t gene. *Exp. Cell Res. 173*:534-545.

3. van Wijnen, A.J., **Wright, K.L.**, Massung, R.F., Gerretsen, M., Stein, J.L., and Stein, G.S. (1988). Two target sites for protein binding in the promoter region of a cell cycle regulated human H1 histone gene. *Nucleic Acids Res. 16*:571-592.

4. Collart, D.G., **Wright, K.L.**, van Wijnen, A.J., Ramsey, A.L., Lian, J., Stein, J.L., and Stein, G.S. (1988). The human H1 histone gene FNC16 is functionally expressed in proliferating HeLa S3 cells and is down-regulated during terminal differentiation in HL60 cells. *J Biol Chem. 263*:15860-15863.

5. Stein, G.S., Stein, J.L., Lian, J.B., van Wijnen, A.J., **Wright, K.L.**, and Pauli, U. (1989). Modifications in molecular mechanisms associated with control of cell cycle regulated human histone gene expression during differentiation. *Cell Biophys. 15*:201-223.

6. Stein, G., Lian, J., Stein, J., Briggs, R., Shalhoub, V., **Wright, K.**, Pauli, U., and van Wijnen, A. (1989). Altered binding of human histone gene transcription factors during the shutdown of proliferation and onset of differentiation in HL60 cells. *Proc Natl Acad Sci U S A. 86*:1865-1869.

7. van Wijnen, A.J., **Wright, K.L.**, Lian, J.B., Stein, J.L., and Stein, G.S. (1989). Human H4 histone gene transcription requires the proliferation-specific nuclear factor HiNF-D. Auxiliary roles for HiNF-C (Sp1-like) and HiNF-A (high mobility group-like). *J Biol Chem. 264*:15034-15042.

8. Owen, T.A., Bortell, R., Yocum, S.A., Smock, S.L., Zhang, M., Abate, C., Shalhoub, V., Aronin, N., **Wright, K.L.**, van Wijnen, A.J., Stein, J.L., Curran, T., Lian, J.B., and Stein, G.S. (1990). Coordinate occupancy of AP-1 sites in the vitamin D-responsive and CCAAT box elements by Fos-Jun in the osteocalcin gene: model for phenotype suppression of transcription. *Proc Natl Acad Sci U S A. 87*:9990-9994.

9. Holthuis, J., Owen, T.A., van Wijnen, A.J., **Wright, K.L.**, Ramsey Ewing, A., Kennedy, M.B., Carter, R., Cosenza, S.C., Soprano, K.J., Lian, J.B., Stein, J.L., and Stein, G.S. (1990). Tumor cells exhibit deregulation of the cell cycle histone gene promoter factor HiNF-D. *Science. 247*:1454-1457.

10. van Wijnen, A.J., Choi, T.K., Owen, T.A., **Wright, K.L.**, Lian, J.B., Jaenisch, R., Stein, J.L., and Stein, G.S. (1991). Involvement of the cell cycle-regulated nuclear factor HiNF-D in cell growth control of a human H4 histone gene during hepatic development in transgenic mice. *Proc Natl Acad Sci U S A. 88*:2573-2577.

11. Pauli, U., **Wright, K.**, van Wijnen, A., Stein, G., and Stein, J. (1991). DNA footprinting techniques. In *Methods in Nucleic Acids.* G.W. Warr, L. Chao, and J. Karam, eds. (Boca Raton, FL: CRC Press), pp. 227-249.

12. Dworetzky, S.I., **Wright, K.L.**, Fey, E.G., Penman, S., Lian, J.B., Stein, J.L., and Stein, G.S. (1992). Sequence-specific DNA-binding proteins are components of a nuclear matrix-attachment site. *Proc Natl Acad Sci U S A. 89*:4178-4182.

13. **Wright, K.L.**, DellOrco, R.T., van Wijnen, A.J., Stein, J.L., and Stein, G.S. (1992). Multiple mechanisms regulate the proliferation-specific histone gene transcription factor HiNF-D in normal human diploid fibroblasts. *Biochemistry. 31*:2812-2818.
13, 4042-4053.

14. **Wright, K.L.** and Ting, J.P. (1992). In vivo footprint analysis of the HLA-DRA gene promoter: cell-specific interaction at the octamer site and up-regulation of X box binding by interferon gamma. *Proc Natl Acad Sci USA. 89*:7601-7605.

15. Brown, A.M., **Wright, K.L.**, and Ting, J.P. (1993). Human major histocompatibility complex class II-associated invariant chain gene promoter. Functional analysis and in vivo protein/DNA interactions of constitutive and IFN-gamma-induced expression. *J Biol Chem. 268*:26328-26333.

16. Brown, A.M., Linhoff, M.W., Stein, B., **Wright, K.L.**, Baldwin, A.S.J., Basta, P.V., and Ting, J.P. (1994). Function of NF-kappa B/Rel binding sites in the major histocompatibility complex class II invariant chain promoter is dependent on cell-specific binding of different NF-kappa B/Rel subunits. *Mol. Cell Biol. 14*:2926-2935.

17. Chen, X., **Wright, K.L.**, Berkowitz, E.A., Azizkhan, J.C., Ting, J.P.-Y., and Lee, D.C. (1994). Protein interactions at Sp1-like sites in the TGFα promoter as visualized by in vivo genomic footprinting. *Oncogene*, *9*:3179-3187.

18. Chin, K.-C., Mao, C., Skinner, C., Riley, J.L., **Wright, K.L.**, Moreno, C.S., Stark, G.R., Boss, J.M., and Ting, J.P.-Y. (1994). Molecular analysis of G1B and G3A IFN-γ mutants reveals that defects in CIITA or RFX results in defective class II MHC and Ii gene induction. *Immunity*, *1*:679-689.

19. **Wright, K.L.**, Vilen, B.J., Itoh-Lindstrom, Y., Moore, T.L., Li, G., Criscitiello, M., Cogswell, P., Clark, J.B., and Ting, J.P.-Y. (1994). CCAAT box-binding protein, NF-Y, facilitates in vivo recruitment of upstream DNA-binding transcription factors. *EMBO J.*, *13*:4042-53.

20. Kroeger, P.E., van Wijnen, A.J., Pauli, U., **Wright, K.L.**, Stein, G.S., and Stein, J.L. (1995). In vivo occupancy of histone gene proximal promoter elements reflects gene copy number-dependent titratable transactivation factors and cross-species compatibility of regulatory sequences. *J. Cell. Biochem. 57*:191-207.

21. Birnbaum, M.J.*, **Wright, K.L.***, van Wijnen, A.J., Ramsey-Ewing, A.L., Bourke, M.T., Last, T.J., Aziz, F., Frenkel, B., Rao, B.R., Aronin, N., Stein, G.S., and Stein, J.L. (1995). Functional role for Sp1 in the transcriptional amplification of a cell cycle regulated histone H4 gene. *Biochemistry, 34*:7648-7658.
* *co-first authors*

22. **Wright, K.L.**, Birnbaum, M.J., van Wijnen, A.J., Stein, G.S., and Stein, J.L. (1995) Bipartite structure of the proximal promoter of a human H4 histone gene. *J. Cell. Biochem. 58*:372-379.

23. **Wright, K.L.**, Moore, T.L., Vilen, B.J., Brown, A.M., and Ting, J.P.-Y. (1995) Major histocompatibility complex class II-associated invariant chain gene expression is up-regulated by cooperative interaction of Sp1 and NF-Y. *J. Biol. Chem., 270*:20978-20986.

24. **Wright, K.L.**, White, L.C., Kelly, A., Beck, S., Trowsdale, J., and Ting, J.P.-Y. (1995) Coordinate transcriptional regulation of the TAP1 and LMP2 genes from a shared bi-directional promoter. *J. Exp. Med., 181*:1459-1471.

25. White, L.C.*, **Wright, K.L.***, Felix, N.J., Ruffner, H., Reis, L.F.L., Pine, R., and Ting, J.P.-Y. (1996). Regulation of LMP2 and TAP1 genes by IRF-1 explains the paucity of $CD8^+$ T cells in IRF-$1^{-/-}$ mice. *Immunity, 5*:365-376.
* *co-first authors*

26. Zimmermann, A.G., **Wright, K.L.**, Ting, J.P.-Y., and Mitchell, B.S. (1997) Regulation of inosine 5' monophosphate dehydrogenase type II gene expression in human T cells: Role for a novel 5' palindromic octamer sequence. *J. Biol. Chem. 272*:22913-22923

27. Katula, K.S., **Wright, K.L.**, Paul, H., Surman, D.R., Nuckolls, F.J., Smith J.W., Ting, J.P.-Y., Yates, J., and Cogswell, J.P. (1997). Cyclin-dependent kinase activation and S-phase induction of the Cyclin B1 gene are linked through the CCAAT. *Cell Growth & Differ., 8*:811-820.

28. Linhoff, M.L., **Wright, K.L.**, and Ting, J.P.-Y. (1997). CCAAT-binding factor NF-Y and RFX are required for in vivo assembly of a nucleoprotein complex that spans 250 base pairs: the Invariant chain promoter as a model. *Mol. Cell Biol., 17*:4589-4596.

29. Ting, J.P.-Y., **Wright, K.L.**, Chin, K.-C., and Li, G. (1997). The DMB promoter: Delineation, trans-activation and transdominant-suppression. *J. Immunology, 159*:5457-5462.

30. **Wright, K.L.**, Chin, K.-C., Linhoff, M., Skinner, C., Brown, J.A., Boss, J.M., Stark, G.R., and Ting, J.P.-Y. (1998). CIITA stimulation of transcription factor binding to major histocompatibility complex class II and associated promoters *in vivo*. *Proc Natl Acad Sci U S A.*, *95*:6267-6272.

31. Brickey, W.J., **Wright, K.L.**, Zhu, X.S., and Ting, J.P.-Y. (1999). Analysis of the defect in IFN-γ induction of MHC class II genes in G1B cells: Identification of a novel and functionally critical leucine-rich motif (62-LYLYLQL-68) in the regulatory factor X 5 transcription factor. *J. Immunology*, *163*:6622-6630.

32. Xi, H., Eason, D.D., Ghosh, D., Dovhey, S., **Wright, K.L.**, Blanck, G. (1999). Co-occupancy of the interferon regulatory element of the Class II transactivator (CIITA) type IV promoter by interferon regulatory factors 1 and 2. *Oncogene*, *18*:5889-5903.

33. Ghosh, N., Piskurich, J.F., Wright, G.M., Hassani, K., Ting, J.P.-Y., and **Wright, K.L.** (1999). A novel element and a TEF-2-like element activate the Major histocompatibility complex class II transactivator in B-lymphocytes. *J. Biol. Chem.*, *274*:32342-32350.

34. Jackson, R.J., Antonia S.J., **Wright, K.L.**, Moon, N.S., Nepvue A., and Muñoz-Antonia, T. (1999). Human cut-like repressor protein binds TGFbeta type II receptor gene promoter. *Arch Biochem Biophys. 371*:290-300.

35. Dovhey, S. E., Ghosh, N., and **Wright, K. L.** (2000). Loss of IFN-γ inducibility of TAP1 and LMP2 in a renal cell carcinoma cell line. *Cancer Research*, *60*:5789-5796.

36. Chatterjee-Kishore, M., **Wright, K.L.**, Ting, J.-Y., and Stark, G. (2000). How Stat1 mediates constitutive gene expression: A complex of unphosphorylated Stat1 and IRF1 supports transcription of the LMP2 gene. *EMBO Journal*, *19*:4111-4122.

37. Goodwin, B.L., Xi, H., Tejiram, R., Eason, DD., Ghosh, N., **Wright, K.L.**, Nagarajan, U., Boss, J. and Blank, G. (2001) Varying functions of specific major histocompatibility class II transactivator promoter III and IV elements in melanoma cell lines. *Cell Growth & Differ.*, *12*:327-335.

38. Ghosh, N., Gyory, I., Wright, G.M., Wood, J., and **Wright, K.L.** (2001) PRDI-BF1 silences CIITA expression in multiple myeloma cells. *J. Biol. Chem.*, 276:15264-15268.

39. Ghosh, N. and **Wright, K.L.** (2001) Loss of TAP and LMP expression in Renal Cell Carcinomas: a mechanism of tumor escape. *Cancer Research Alert*, *2:*109-113.

40. Jennings, R., Alsarrj, M., **Wright, K.L.** and Munoz-Antonia, T. (2001) Regulation of the human Transforming Growth Factor β Type II Receptor gene promoter by novel SP1 sites. *Oncogene*, *20*:6899-6909.

41. Niu, G., **Wright, K.L.**, Huang, M., Song, L., Huara, E., Turkson, J., Zhang, S., Wang, T., Sinibaldi, D., Coppola, D., Heller, R., Ellis, L.M., Karras, J., Bromberg, J., Pardoll, D., Jove, R. and Yu, H. (2002) Constitutive Stat3 activity up-regulates VEGF expression and tumor angiogenesis. *Oncogene*, *21*:2000-2008

42. Wong, A.W., Ghosh, N., McKinnon, K.P., Piskurich, J.F., **Wright, K.L.**, and Ting, J.P.-Y. (2002) Inducible ARE-2-binding to the CIITA promoter III activates transcription of class II MHC in human primary T lymphocytes. *Journal of Immunology*, *169*:3112-9.

43. Gyory, I., Fejer G, Ghosh N, Seto E, and **Wright, K.L.** (2003) Identification of a functionally impaired PRDI-BF1 transcriptional repressor in myeloma cells. *Journal of Immunology* 170:3125-3133.

44. Rezai-Zadeh, N., Zhang, X., Namour, F., Fejer, G., Wen, Y.-D., Yao, Y.-L., Gyory, I., **Wright, K.L.**, Seto, E. (2003) Targeted recruitment of a histone H4-specific methyltransferase by the transcription factor YY1. *Genes and Development*; 17:1019-1029.

45. Gyory, I., Wu, J., Fejer G, Seto E, and **Wright, K.L.** (2004) PRDI-BF1/Blimp-1 recruitment of G9a targets Histone H3 methylation and transcriptional silencing. *Nature Immunology*, 5:299-308.

46. Wang A.H., Gregoire S., Zika E., Xiao L., Li C.S., Li H., **Wright K.L.**, Ting J.P., Yang X.J.(2005) Identification of the ankyrin-repeat proteins ANKRA and RFXANK as novel partners of class IIA histone deacetylases. *J. Biol. Chem.* 280:29117-29127.

47. Piskurich, J.F., Gilbert, C.A., Ashley, B.D., Zhao, M., Wu, J., Bolick, S.C., and **Wright, K.L.** (2005) Expression of the MHC Class II transactivator (CIITA) type IV promoter in B lymphocytes and regulation by IFN-γ. *Molecular Immunology*, [Jun 9; electronic published ahead of print].

48. Niu, G., **Wright, K.L.**, Ma, Y., Wright, G.M., Huang, M., Irby, R., Briggs, J., Karras, J., Cress, W.D., Pardoll, D., Jove, R., Chen, J., and Yu, H. (2005) Role of Stat3 in regulating p53 expression and function. *Mol. Cell Biol.* , in press

49. Tan, LHC., Gomez, MF., Fan, S., Liu, Y., **Wright, K.L.**, Chadburn, A., Knowles, DM., and Tam, W. (2005) Lack of PRDM1α expression in Hodgkin/Reed-Sternberg cells is likely mediated by a translational or post-translational mechanism. *Blood*, submitted.

50. Rastogi, S., Joshi, B., Dasgupta, P., Morris, M., **Wright, K.L.**, and Chellappan, S. (2005) Prohibitin facilitates cellular senescence by recruiting specific co-repressors to inhibit E2F1 target genes. *Molecular and Cellular Biology*, submitted.

Invited seminars:

1. 9th International H-2/HLA Workshop, Garda, Italy. "Coordinate transcriptional regulation of the TAP1 and LMP2 genes from a shared bi-directional promoter." May 4-8, 1994.

2. Dept. of Medical Microbiology and Immunology, Univ. of South Florida, "Regulation of Antigen Presentation Gene Expression." 1997.

3. MHC Conference 2001 – Class II MHC Gene Control and Disease Relevance, Seabrook Island, South Carolina. "PRDI-BF1 silences CIITA in human myeloma cells." March 22-25, 2001.

4. NIH-NICHD – "Epigenetic mechanisms of silencing by PRDI-BF1 (Blimp-1) and its effects on MHC Class II expression." February, 13, 2003.

5. Molecular Medicine Seminar Series, Univ. of South Florida, "Control of Gene Silencing During B-lymphocyte Differentiation and in Multiple Myeloma." April 23, 2003

6. Mercer University Medical School "Epigenetic mechanisms of silencing by PRDI-BF1 (Blimp-1) and its effects on MHC Class II expression." January 22, 2004

7. Moffitt Cancer Center, DIO Grand Rounds "Transcriptional Silencing during Plasma Cell Differentiation and Myeloma Cells: Targeting of Histone Methyltransferases" March 5, 2004

8. Puerto Rico Cancer Center, San Juan, Puerto Rico "Transcriptional Silencing during Plasma Cell Differentiation and Myeloma Cells: Targeting of Histone Methyltransferases" April, 15, 2004

9. Karmanos Cancer Institute, Detroit, MI "Epigenetic mechanisms of silencing by PRDI-BF1 and its effects on MHC Class II expression." June 3, 2004

10. Roswell Park Cancer Institute, Buffalo, NY "Epigenetic mechanisms of silencing by PRDI-BF1 and its effects on MHC Class II expression." December 7, 2004

11. Moffitt Research Institute, 2005 Scientific Retreat " Targeted epigenetic silencing by PRDI-BF1 in B lymphocytes and dendritic cells." February, 19, 2005

Conferences with abstracts presented (since 1997):

1. Suncoast Biomolecular Science Conference, University of South Florida, October 9, 1998.

2. Health Science Center Annual Research Day, University of South Florida. February 25, 1999.

3. Experimental Biology 1999, American Association of Immunologists, Washington DC, April 17-22, 1999. (2 abstracts presented)

4. Health Science Center Annual Research Day, University of South Florida. February 10, 2000. (2 abstracts presented)

5. Immunology 2000, American Association of Immunologists and the Clinical Immunology Society, Seattle, WA, May 12-16, 2000. (2 abstracts presented)

6. New Molecular Targets for Cancer Therapy, St. Petersburg, FL, October 14-17, 2000.

7. Suncoast Biomolecular Science Conference, University of South Florida, October 20, 2000. (2 abstracts presented)

8. Health Science Center Annual Research Day, University of South Florida, February, 2001.

9. Molecular Targets for Cancer Therapy, St. Petersburg, FL, October 11-15, 2002.

10. American Association of Cancer Research 2003 Annual Meeting, Washington, DC. July 11-14, 2003.

11. Immunology 2003, American Association of Immunologists, Denver, CO. May 6-10, 2003. (2 abstracts presented).

12. 12th International Congress of Immunology, Montreal, Canada. July 18-23, 2004.

SERVICE:

Committee Service:

College of Medicine and the University of South Florida

Institute for Biomolecular Sciences Advisory Committee member
3/2000 – 8/2001

Health Science Center Annual Research Day, Research Presentation Judge
Spring 2000

Suncoast Biomolecular Science Conference, Research Presentation Judge
Fall 2000

Cancer Biology Ph.D. Program Education Committee, *founding member*
7/2000 to present

Graduate Student Advisor, Cancer Biology Ph.D. Program
8/2001 to 5/2002

Senator to the USF Faculty Senate representing the College of Medicine
8/2001 through 5/2004

Academic Affairs Taskforce, Department of Interdisciplinary Oncology
11/2004 – 5/2005

Director, Cancer Biology Ph.D. Program
5/2002 to present

Co-chair, Academic Affairs Committee, Department of Interdisciplinary Oncology
5/2005 – present

H. Lee Moffitt Cancer Center

Coordinator, Moffitt Immunology and Cell Biology Research in Progress seminar series, 8/1999 - 6/2001

Web Pages Research Subcommittee of the Moffitt Scientific Leadership Council, April 2003

Today's Tomorrows, community newsletter. Editorial Board member
11/2000 to present

Director, Moffitt Summer Intern Undergraduate Research Program
4/2002 to present

Continuing Education Committee, Moffitt Cancer Center 1/2004 to present

High Throughput Screening Facility Steering Committee, Moffitt Cancer Center
3/2005 to present

Moffitt Library Advisory Committee
6/2005 - present

Grant Review Committee Service:

College of Medicine, University of South Florida, and H. Lee Moffitt Cancer Center

1998	Research and Creative Scholarship Grant Program, Univ. of South Florida.
October 1999	Moffitt Advance Cancer Detection Center Pilot Grant Program.
Nov. 2002 – present	American Cancer Society – Institutional Research Grant Program, H. Lee Moffitt Cancer Center *Standing committee member.*
Fall 2003	Univ. of South Florida Research Council, Internal Awards Reviewer.
June 2005	Aging & Cancer Pilot Grant Program, NIH – Moffitt Cancer Center.

National committees:

National Institutes of Health

October 1999	NIH Study Section, Cell Development and Function 3
June 2001	NIH Study Section, Allergy and Immunology

April 2003	NIH Study Section Special Emphasis Panel for Experimental Immunology
August 2003	NIH Study Section Special Emphasis Panel for National Institute of Arthritis and Musculoskeletal and Skin Diseases
November 2003	NIH Study Section Special Emphasis Panel for Experimental Immunology
March 2004	NIH Study Section Special Emphasis Panel for Experimental Immunology
August 2004	NIH Study Section Special Emphasis Panel for Transplantation Cell Biology
October 2004	NIH Study Section, Cellular and Molecular Immunology
November 2004	NIH study section, Innovative Technologies for the Molecular Analysis of Cancer

Department of Veterans Affairs

December 2003	Dept. of Veterans Affairs, Merit Review Subcommittee for Oncology-A
June 2004	Dept. of Veterans Affairs, Merit Review Subcommittee for Oncology-A
December 2004	Dept. of Veterans Affairs, Merit Review Subcommittee for Oncology-A

National Science Foundation

April 2005	National Science Foundation, Signal Transduction and Cellular Regulation Program.

American Cancer Society

June 2005	American Cancer Society, Genetic Mechanisms of Cancer Peer Review Committee.

Editorial Review Service for Peer Reviewed Journals:

Ad hoc reviewer for:

- Journal of Immunology
- Molecular and Cellular Biology
- Cancer Research
- Journal of Cellular Biochemistry
- Gene
- Biochemistry and Cell Biology
- Molecular Medicine
- Journal of Cellular Physiology
- Blood
- Immunogenetics
- Molecular Biology of the Cell

Memberships:

American Association of Immunologists

Cancer Biology Ph.D. Program, Univ. of South Florida

Community Service:

Booker T. Washington Middle School Science class presentation. Tampa, FL, March 2002.

Hillsborough Science Professional Teacher's Day, Lecture and interactive forum. October 2003.

Revised September, 2005

Curriculum Vitae

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A. BIOGRAPHICAL INFORMATION:

1. Degrees:

B. Sc. (1981) (First Class Hons) Department of Biochemistry, University of York.
Supervisor: Dr G. L. Kellett.
Ph.D (1984) Department of Biochemistry, University of Dundee
Supervisor: Prof. P. Cohen. Ph.D. Thesis: Characterisation of protein kinases involved in regulation of glycogen metabolism and other cellular processes.

2. Employment:

Sept. 2000- present	Director, UHN Microarray Centre
June 1997 – Jan 2005	Division Head, Experimental Therapeutics, Ontario Cancer Institute, Toronto, Canada
June 1997 – present	Amgen Professor of Cancer Biology, Dept. Med. Biophysics, University of Toronto
Dec. 1992- May 1997	Senior Scientist, Division of Cell and Molecular Biology Ontario Cancer Institute, Toronto, Canada Associate Professor, Dept. Med. Biophysics, University of Toronto
Sept. 1987-Nov. 1992	Ludwig Institute for Cancer Research, Middlesex Hospital/University College London. Group leader, Assistant Member. Head: Growth Regulation laboratory.
Nov. 1986-Sept. 1987	Molecular Biology & Virology Lab., Salk Institute, San Diego American Cancer Society senior postdoctoral fellow in laboratory of Prof. T. Hunter.
Nov. 1984-Oct. 1986	Molecular Biology & Virology Lab., Salk Institute, San Diego SERC/NATO post-doctoral fellow in laboratory of Prof. T. Hunter.

Research and Teaching appointments:

1992-	University of Toronto, Department of Medical Biophysics
1996-	PCL481S, Dept. Paharmacology
1993-1998	MPB1022H Cell Biology for Physical Scientists
1995-1998	MPB 1001Y Advanced Cell Biology
1990-1992	University College London, Intercalated BSc. in Cell Pathology, University College and Middlesex School of Medicine. MSc. in Cancer Sciences.

3. Honours/Awards:

2003-2008	CIHR Senior Investigator
2003	Eijkman Lecture, Utrecht, NL
2002-2006	Howard Hughes Medical Institute International Research Scholarship
2000	Fellow of Royal Society, Canada

1998-2003	MRC Senior Scientist award: Molecular analysis of signal transduction pathways in development and disease
1998-	Amgen Chair of Cancer Biology
1997-2001	Howard Hughes Medical Institute International Research Scholarship
1993-1998	MRC Scientist award: Regulation of protein kinases by mitogens
1992	Recipient of Rosa Lowie Award, University of Leuven, Belgium
1986-1987	American Cancer Society (California Division) Senior Fellow
1984-1986	Science and Engineering Research Council/NATO postdoctoral fellow
1981-1984	Medical Research Council (London) postgraduate studentship

4. Committee responsibilities:

2005	Member CIHR MCC grant panel
2003-2005	Chair CBCRA IDEA grant panel
2003-	Member, Structural Genomics Consortium SAB
2002-	Member, Ontario Cancer Research Network SAB
2002-2005	Member, Ontario Genomics Institute SAB
2002-2003	Chair, Michael Smith Award in Health Research panel
2001-	Member, CIHR Institute of Cancer Research Advisory Board
2001-2002	Chair, CIHR Senior Investigator awards panel
1998-2002	Member, Ontario Genome Initiative Executive committee
1998-2000	Member, MRC (Canada) Scientists B panel
1997-2000	Member, NCIC "Panel F"
1997-	MRC (UK) Medical Advisory Board member
1995-1998	Member, MRC (Canada) "Cancer A" grants panel
1997-2002	Member, Student Affairs Committee, Dept. Medical Biophysics
1997-	Member, Student Admissions Committee
1997-	Chair, Scientific Advisory Board, Toronto Microarray Consortium
1995-2002	Chair, Amgen Awards Committee
1993-2003	Chair, Biosafety Committee, Ontario Cancer Institute

5. Professional Affiliations:

Editor:	Biochemical Journal (92-99)
Editorial board:	Trends in Cell Biology (97-), Current Biology (2002-)
Editor:	Biochimica et Biophysica Acta (92-97)
Member:	American Association for the Advancement of Science
Co-head (with David Vaux), Faculty of 1000 Apoptosis and Signalling section	
Advisor:	BioMed Central (2002-)

B. ACADEMIC HISTORY:

1. Research Endeavours:

Nuclear oncogene regulation:
Study of the Jun, Fos and Myc proto-oncogene posttranslational regulation.

Signal transduction via stress-activated pathways: purification, cloning and characterization of components of stress-activated protein kinase pathways; functional analysis of physiological functions and role in apoptosis
Wingless/Wnt signalling pathway in mammals and invertebrates: study of the roles of glycogen synthase kinase-3, ß-catenin, and dishevelled in mammals, *Drosophila* and yeast.
Role of PKB/Akt in phosphatidylinositol 3' kinase signalling: functional characterization of activated mutants in *Drosophila* and mammalian systems
Development of microarray technologies for tumour profiling and gene expression analysis.

2. Research Awards:

1993-1996	Principal investigator: MRC (Canada) operating grant " Functional role of glycogen synthase kinase-3 in cellular regulation." $138,168
1993-1996	Principal investigator: NCIC operating grant. "Regulation of nuclear onco-proteins by protein phosphorylation" $91,028
1993-1998	MRC Scientist award "Regulation of protein kinases by mitogens."
1993-1994	Principal investigator: Leukaemia Research Fund (Canada) "Mechanism of transformation of akt oncogene." $39,000
1995-1998	Principal investigator: MRC (Canada) "Physiological role of the stress-activated protein kinase pathway." $66,656 + MRC earmarked studentship
1995	Amgen research grant. " Sphingomyelinase-induced signalling." $125,465
1996-2001	Principal investigator: NCIC operating grant "Regulation of nuclear onco-proteins by protein phosphorylation" $103,000
1996	Amgen research grant. " Sphingomyelinase-induced signalling." $123,435
1996-1999	Principal investigator: MRC (Canada) operating grant. "Functional role of glycogen synthase kinase-3 in cellular regulation." $101,000
1996-1999	Co-applicant (with Dr. B. Zanke): NCIC operating grant. "Role of stress-activated protein kinase pathways in drug resistance" $64,050
1997-2001	Howard Hughes International Research Scholarship "Stress activated protein kinase cascades in development" $102,750
1998-2001	Co-applicant (P.I. Dr. A. Manoukian) NCIC operating grant. "Genetic analysis of the PKB/AKT survival pathway" $123,121
1998-2003	Principal investigator: MRC (Canada) "Physiological role of the stress-activated protein kinase pathway." $114,620
1998-2003	MRC Senior Scientist award "Molecular analysis of signal transduction pathways in development and disease."
1999-2001	Co-applicant (with Dr. Aled Edwards), NRC/NSERC/MRC research partnership program. "Development and application of gene chip technologies" $475,000 p.a
1999	Canadian Foundation for Innovation. Equipping a microarray facility. $800,000 (40% funded by CFI, 40% matched by ORDCF, remainder funded by PMH Foundation).
1999-2001	NCIC Program grant co-ordinator: "Molecular Genetics of Breast Cancer Development". Total budget: $681, 295 (year 1); $670, 267 (ea. years 2 and 3)

	Specific project: Role of Wnt and phosphatidylinositol 3' kinase signalling pathways in mouse and human mammary tumorigenesis" $74,776 + $118,928 core.
1999-2001	Co-applicant (with Dr. Brian Wilson), Ontario Research and Development Challenge Fund "Development, evaluation and applications of technologies for producing and reading gene microarrays" $300,000
1999-2003	Co-applicant (Kathy Siminovitch and Cheryl Arrowsmith): CFI Genes, Proteins, People program – clinical genomics centre. Microarray component: $4,400,000
1999-2004	Principal investigator: MRC (Canada) "Functional role of glycogen synthase kinase-3 in cellular regulation" $134,154
2000-2004	Principal investigator: Ontario Research and Development Challenge Fund: "Ontario microarray network" $5,500,000
2000-2003	Project leader CBCRI Streams of Excellence program: "Discovery and use of clinically relevant molecular changes in breast cancer." Whelan, T. and Andrulis, I, Program leaders).
2000-2004	Canvac NCE Microarray core $100,000
2002-2006	Howard Hughes International Research Scholarship. US$70,000
2002-2007	NCIC Program grant co-ordinator: "Molecular Genetics of Breast Cancer Development". Total budget: $962,514 (yr 1) – 1,037,209 (yr 5) Specific project: "Role of Wnt and phosphatidylinositol 3' kinase signaling pathways in mouse and human mammary tumorigenesis" $151,000 + $130,900 core.
2002-2005	Principal investigator: NCIC "Relationship of signalling and extracellular matrix to gene expression and cellular responses." $121,760.
2002-2005	Principal Investigator: Genome Canada "Development and applications of functional genomics technologies." $1,450,000 p.a.
2003-2008	Principal Investigator: CIHR: "Dealing with stress: signaling conflicts and cell fate determination." $141,326 p.a.
2003-2008	CIHR Senior Investigator award "Molecular analysis of signalling pathways in disease and development"
2005-2010	Principal investigator: CIHR "Functional Roles of GSK-3 in cellular regulation and disease" $134,726 p.a.
2005-2008	Principal investigator: NCIC "Protein kinase profiling – towards individualized therapeutic intervention" $131,329

C. PUBLICATIONS:

1. Refereed Publications:

a) Articles:

Woodgett, J. R., Tonks, N. K., and Cohen, P. (1982) Identification of a calmodulin-dependent glycogen synthase kinase in rabbit skeletal muscle distinct from phosphorylase kinase. *FEBS Lett.* **148,** 5-11.

Picton, C., Woodgett, J. R., Hemmings, B. A., and Cohen, P. (1982) Multisite phosphorylation of glycogen synthase from rabbit skeletal muscle. Phosphorylation of site-5 by glycogen synthase

kinase-5 (casein kinase II) is a prerequisite for phosphorylation of sites-3 by glycogen synthase kinase-3. *FEBS Lett.* **150,** 191-196.

Holland, R., Woodgett, J. R., and Hardie, D. G. (1983) Evidence that amiloride antagonizes insulin-stimulated protein phosphorylation by inhibiting protein kinase activity. *FEBS Lett.* **154,** 269-273.

Woodgett, J. R., Davison, M. T., and Cohen, P. (1983) The calmodulin-dependent glycogen synthase kinase from rabbit skeletal muscle. Purification, subunit structure and substrate specificity. *Eur. J. Biochem.* **136,** 481-487.

McGuinness, T. L., Lai, Y., Greengard, P., Woodgett, J. R., and Cohen, P. (1983) A multifunctional calmodulin-dependent protein kinase. Similarities between skeletal muscle glycogen synthase kinase and a brain synapsin-1 kinase. *FEBS Lett.* **163,** 329-334.

Woodgett, J. R., Cohen, P., Yamauchi, T., and Fujisawa, H. (1984) Comparison of a calmodulin-dependent glycogen synthase kinase from skeletal muscle and calmodulin-dependent protein kinase-II from rat brain. *FEBS Lett.* **170,** 49-54.

Woodgett, J. R. and Cohen, P. (1984) Multisite phosphorylation of glycogen synthase. Molecular basis for the substrate specificity of glycogen synthase kinase-3 and casein kinase-II (glycogen synthase kinase-5). *Biochim. Biophys. Acta.* **788,** 339-347.

Vulliet, P. R., Woodgett, J. R. and Cohen, P. (1984) Phosphorylation of tyrosine monooxygenase by calmodulin-dependent multi-protein kinase. *J. Biol. Chem.* **259,** 13680-13683.

Vulliet, P. R., Woodgett, J. R., Ferrari, S. and Hardie, D. G. (1985) Characterization of the sites phosphorylated on tyrosine hydroxylase by Ca^{2+} and phospholipid-dependent protein kinase, calmodulin-dependent multiprotein kinase and cyclic AMP-dependent protein kinase. *FEBS Lett.* **182,** 335-339.

Newton, D., Klee, C., Woodgett, J. R. and Cohen, P. (1985) Selective effects of $CAPP_1$-calmodulin on its target proteins. *Biochim. Biophys. Acta.* **845,** 533-539.

Pearson, R. B., Woodgett, J. R., Cohen, P. and Kemp, B. E. (1985) Substrate specificity of a multifunctional calmodulin-dependent protein kinase. *J. Biol. Chem.* **260,** 14471-14476.

Kuret, J., Woodgett, J. R., and Cohen, P. (1985) Multisite phosphorylation of glycogen synthase from rabbit skeletal muscle: identification of the sites phosphorylated by casein kinase-I. *Eur. J. Biochem.* **151,** 39-48.

Gould, K. L., Woodgett, J. R., Cooper, J. A., Buss, J. E., Shalloway, D., and Hunter, T. (1985) Protein kinase C phosphorylates $pp60^{src}$ at a novel site. *Cell* **42,** 849-857.

Gould, K. L., Woodgett, J. R., Isacke, C. M. and Hunter, T. (1986) The protein-tyrosine kinase substrate, p36, is also a substrate for protein kinase C *in vitro* and *in vivo*. *Mol. Cell. Biol.* **6,**

2738-2344.

Woodgett, J. R., Gould, K. L. and Hunter, T. (1986) Substrate specificity of protein kinase C. Use of synthetic peptides corresponding to physiological phosphorylation sites as probes for substrate recognition requirements. *Eur. J. Biochem.* **161,** 177-184.

Woodgett, J. R., and Hunter, T. (1987) Immunological evidence for two distinct forms of protein kinase C. *Mol. Cell. Biol.* **7,** 85-96.

Woodgett, J. R., and Hunter, T. (1987) Isolation and characterization of two distinct forms of protein kinase C. *J. Biol. Chem.* **262,** 4836-4843.

Bilezikjian, L., Woodgett, J. R., Hunter, T., and Vale, W. (1987) Phorbol ester-induced down-regulation of protein kinase C abolishes vasopressin-mediated responses in rat anterior pituitary cells. *Mol. Endocrinol.* **1,** 555-560.

Woodgett, J. R. (1989) Use of peptide substrates for the affinity purification of protein-serine kinases. *Anal. Biochem.* **180**, 237-241.

Woodgett, J. R. (1990) Molecular cloning and expression of glycogen synthase kinase-3/Factor A. *EMBO J.* **9**, 2431-2438.

Marais, R. M., Nguyen, O., Woodgett, J. R., and Parker, P. J. (1990) Studies on the primary sequence requirements for PKC-α, -ß$_1$ and -γ peptide substrates. *FEBS Letts* **277**, 151-155.

Boyle, W. B., Smeal, T., Defize, L. H. K., Angel, P., Woodgett, J. R., Karin, M., and Hunter, T. (1991) Activation of protein kinase C decreases phosphorylation of cJun at sites that negatively regulate its DNA binding activity. *Cell* **64**, 573-584.

Jang, K. L., Pulverer, B., Woodgett, J. R. and Latchman, D. S. (1991) Activation of the cellular transcription factor AP-1 in herpes simplex virus infected cells is dependent on the viral immediate-early protein ICP0. *Nucl. Acids Res.* **19**,4879-4883.

Pulverer, B., Kyriakis, J., Avruch, J., Nikolakaki, H. and Woodgett, J. R. (1991) Phosphorylation of c-*jun* by MAP kinases. *Nature* **353**, 670-674.

Coffer, P. J. and Woodgett, J. R. (1991) Molecular cloning and characterisation of *pkb*: a novel putative protein-serine kinase related to protein kinases A and C. *Eur. J. Biochem.* **201**, 475-481.

Grove, J. R., Banerjee, P., Coffer, P. J., Balasubramanyam, A., Price, D. J., Avruch, J. and Woodgett, J. R. (1991) Cloning and expression of two human p70 S6 kinase polypeptides differing only at their amino termini. *Mol. Cell. Biol.* **11**, 5541-5550.

Hughes, K, Pulverer, B., Theocharous, P. and Woodgett, J. R. (1992) Baculovirus-mediated expression and characterisation of glycogen synthase kinase-3ß, the mammalian homologue of the *Drosophila melanogaster zeste-white3^{sgg}* homeotic gene product. *Eur. J. Biochem.* **203**,

305-311.

Saksela, K., Makela, T. P., Hughes, K., Woodgett, J. R. and Alitalo, K. (1992) Activation of PKC increases phosphorylation of the L-*myc* trans-activator domain at a GSK-3 target site. *Oncogene* **7**, 347-353.

Prigent, C., Lasko, D. D., Kodama, K., Woodgett, J. R. and Lindahl, T. (1992) Activation of mammalian DNA ligase I through phosphorylation by casein kinase II. *EMBO J.* **11**, 2925-2933.

Franklin, C. C., Sanchez, V., Wagner, F., Woodgett, J. R. and Kraft, A. S. (1992) Phorbol ester-induced amino terminal phosphorylation of c-Jun but not JunB regulates transcriptional activation. *Proc. Natl. Acad. Sci. USA* **89**, 7247-7251.

Goode, N., Hughes, K., Woodgett, J. R. and Parker, P. J. (1992) Differential regulation of glycogen synthase kinase-3ß by protein kinase C isotypes. *J. Biol. Chem.* **267**, 16878-16882.

Hughes, K., Ramakrishna, S., Benjamin, W. B. and Woodgett, J. R. (1992) Multifunctional ATP-citrate lyase kinase is a member of the glycogen synthase kinase-3 sub-family. *Biochem. J.* **288**, 309-314.

Hanger, D. P., Hughes, K., Woodgett, J. R., Brion, J.-P. and Anderton, B. H. (1992) Glycogen synthase kinase-3 induces Alzheimer's disease-like phosphorylation of tau: generation of paired helical filament epitopes and neuronal localisation of the kinase. *Neurosci. Letts.* **147**, 58-62.

Pulverer, B., Hughes, K., Franklin, C.C., Kraft, A.S., Leevers, S.A. and Woodgett, J.R. (1993) Co-purification of mitogen activated protein kinases with phorbol ester-induced cJun kinase in U937 leukaemic cells. *Oncogene* **8**, 407-415.

Hughes, K., Nikolakaki, E., Plyte, S E., Totty, N.F. and Woodgett, J.R. (1993) Modulation of the glycogen synthase kinase-3 family by tyrosine phosphorylation. *EMBO J.* **12**, 803-808.

Nikolakaki, E., Coffer, P., Hemelsoet, R., Woodgett, J. R. and Defize, L.H.K. (1993) Glycogen synthase kinase-3 phosphorylates Jun-family members *in vitro* and negatively regulates their transactivating potential in intact cells. *Oncogene* **8**, 833-840.

Bianchi, M.W., Plyte, S.E., Kreis, M. and Woodgett, J.R. (1993) A *Saccharomyces cerevisiae* protein-serine kinase related to mammalian glycogen synthase kinase-3 and *Drosophila melanogaster shaggy* genes. *Gene* **134**, 51-56.

Pulverer, B. J., Fisher, C., Vousden, K., Littlewood, T., Evan, G. and Woodgett, J.R. (1994) Site-specific modulation of cMyc cotransformation by residues phosphorylated *in vivo*. *Oncogene* **9**, 59-70.

Bianchi, M.W., Guivarc'h, D., Thomas, M., Woodgett, J.R. and Kreis, M. (1994) *Arabidopsis* homologs of the shaggy and GSK-3 protein kinases: molecular cloning and functional expression in *Escherichia coli*. *Mol. Gen. Genet.* **242**, 337-345.

Coffer, P.J. and Woodgett, J.R. (1994) Differential subcellular localisation of two isoforms of p70 ribosomal S6 kinase. *Biochem. Biophys. Res. Commun.* **198**, 780-786.

Benjamin, W.B., Pentyala, S.N., Woodgett, J. R., Hod, Y. and Marshak, D. (1994) ATP-citrate lyase and glycogen synthase kinase 3ß in 3T3-L1 cells during differentiation into adipocytes. *Biochem. J.* **300**, 477-482.

Kyriakis, J.M., Banerjee, P., Nikolakaki, E., Dai, T., Rubie, E.A., Ahmad, M.F., Avruch, J. and Woodgett, J.R. (1994) The stress-activated protein kinase subfamily of c-Jun kinases. *Nature* **369**, 156-160.

Black, E.J., Catling, A.D., Woodgett, J. R., Kilbey, A. and Gillespie, D.A.F. (1994) Transcriptional activation by the v-Jun oncoprotein is independent of positive regulatory phosphorylation. *Oncogene* **9**, 2363-2368.

Stambolic, V. and Woodgett, J.R. (1994) Negative regulation of glycogen synthase kinase 3 in intact cells. *Biochem. J.***303**, 701-704.

Pombo, C.M., Bonventre, J. V., Woodgett, J.R., Kyriakis, J.M. and Force, T. (1994) The stress-activated protein kinases (SAPKs) are major c-Jun amino terminal kinases activated by ischemia and reperfusion. *J. Biol. Chem.* **269**, 26546-26550.

Mulot, S.F.C., Hughes, K., Woodgett, J. R., Anderton, B. H. and Hanger, D. P. (1994) PHF-tau from Alzheimer's brain comprises four species on SDS-PAGE which can be mimicked by *in vitro* phosphorylation of human brain tau by glycogen synthase kinase-3ß. *FEBS Lett.* **349**, 359-364.

Sanchez, I., Hughes, R., Mayer, B., Yee, K., Woodgett, J., Avruch, J., Kyriakis, J. and Zon, L. (1994) SAP/ERK kinase-1 (SEK1) defines the SAPK pathway regulating c-Jun N-terminal phosphorylation. *Nature* **372**, 794-798.

Yan, M., Dai, T., Deak, J., Kyriakis, J., Zon, L., Woodgett, J. and Templeton, D. (1994) MEKK1 activates the stress activated protein kinase (SAPK) *in vivo*, not MAP kinase, via direct phosphorylation of the SAPK activator SEK1. *Nature* **372**, 798-800.

Lovestone, S., Latimer, D., Anderton, B. H., Hanger, D., Gallo, J.-M., Marquardt, B., Mulot, S., Reynolds, H., Stabel, S., Woodgett, J. R. and Miller, C.J.C. (1994) Alzheimer's disease-like phosphorylation of tau is regulated by glycogen synthase kinase-3 activity in cultured mammalian cells. *Current Biology* **4**, 1077-1086.

Coso O.A., Chiariello, M., Kalinec, G., Kyriakis, J.M., Woodgett, J. and Gutkind J.S. (1995) Transforming G protein-coupled receptors potently activate JNK (SAPK). Evidence for a divergence from the tyrosine kinase signaling pathway. *J. Biol. Chem.*, **270**, 5620-5624.

Harwood, A.J., Plyte, S. E., Woodgett, J., Strutt, H. and Kay, R.R. (1995) Glycogen synthase

kinase 3 (GSK-3) regulates cell fate in *Dictyostelium. Cell*, **80**, 139-148.

Dai, T., Rubie, E.A., Franklin, C.C., Kraft, A., Gillespie, D.A.F., Avruch, J., Kyriakis, J.A. and Woodgett, J.R. (1995) SAP kinases bind directly to the δ domain of c-Jun in resting cells: implications for repression of c-Jun function. *Oncogene*, **10**, 849-855.

He, X., Saint-Jeannet, J.-P., Woodgett, J.R., Varmus, H.E. and Dawid, I.B. (1995) Glycogen synthase kinase 3 and dorsoventral patterning in *Xenopus* embryos. *Nature*, **374**, 617-622.

Latimer, D.A., Gallo, J. -M., Lovestone, S., Miller, C.C.J., Reynolds, C.H., Marquardt, B., Stabel, S., Woodgett, J. R. and Anderton, B. H. (1995) Stimulation of MAP kinase by v-raf transformation of fibroblasts fails to induce hyperphosphorylation of transfected tau. *FEBS Lett.* **365**, 42-46.

Kharbanda, S., Saleem, A., Shafman, T., Emoto, Y., Taneja, N., Rubin, E., Weichselbaum, R., Woodgett, J., Avruch, J., Kyriakis, J. and Kufe, D. (1995) Ionizing radiation stimulates a Grb2-mediated association of the stress-activated protein kinase with phosphatidylinositol 3-kinase. *J. Biol. Chem.* **270**, 18871-18875.

Pombo, C. M., Kherl, J.H., Sanchez, I., Katz, P., Avruch, J., Zon, L.I., Woodgett, J.R., Force, T. and Kyriakis, J. M. (1995) Activation of the SAPK pathway by the human STE20 homologue germinal centre kinase. *Nature* **377**,750-754.

Baum, L., Seger, R., Woodgett, J. R., Kawabata, S., Maruyama, K., Koyama, M., Silver, J. and Saitoh, T. (1995) Overexpressed tau protein in cultured cells is phosphorylated without formation of PHF: implication of phosphoprotein phosphatase involvement. *Molecular Brain Research*, **34**, 1-17.

Berberich, I., Shu, G., Siebelt, F., Woodgett, J.R., Kyriakis, J.M. and Clarke, E.A. (1996) Crosslinking CD40 on B cells induces stress-activated protein kinases but not mitogen activated protein kinases. *EMBO J.* **15**, 92-101.

Plyte, S.E., Feokstiva, A., Burke, J.D., Woodgett, J.R. and Gould, K.L. (1996) *Schizosaccharomyces pombe* skp1+ encodes a protein kinase related to mammalian glycogen synthase kinase-3 and complements the *cdc14* cytokinesis mutant. *Mol. Cell. Biol.* **16**, 179-191.

Nunes, J.A., Battifora, M., Woodgett, J.R., Truneh, A., Olive, D. and Cantrell, D. A. (1996) CD28 signal transduction pathways. A comparison of B7-1 and B7-2 regulation of the MAP kinases: ERK2 and Jun kinases. *Molecular Immunology* **33**, 63-70.

Guidato, S., Tsai, L.-H., Woodgett, J., and Miller, C.C.J. (1996) Differential cellular phosphorylation of neurofilament heavy side-arms by glycogen synthase kinase-3 and CDK-5. *J. Neurochem.* **66**, 1698-1706.

Zanke, B., Boudreau, K., Rubie, E., Zon, L I., Kyriakis, J.M., Liu, F.F. and Woodgett, J.R. (1996) The stress-activated protein kinase pathway mediates cell death following thermal injury.

Current Biology **6**, 606-613.

Cook, D., Fry, M.J., Hughes, K., Sumathipala, R.,Woodgett, J.R. and Dale, T.C. (1996) Wingless inactivates glycogen synthase kinase-3 via an intracellular signalling pathway which involves a protein kinase C. *EMBO J.* **15**, 4526-4536.

Kiefer, F., Tibbles, L.A., Anafi, M., Janssen, A., Zanke, B.W., Lassam, N., Pawson, T., Woodgett, J. R. and Iscove, N. (1996) HPK1, a hematopoietic protein kinase activating the SAPK/JNK pathway. *EMBO J.* **15**, 7013-7025.

Tibbles, L. A., Ing, Y.L., Kiefer, F., Iscove, N., Woodgett, J.R. and Lassam, N. (1996) MLK-3 activates the SAPK/JNK and p38/RK pathways via SEK1 and MKK3/6. *EMBO J.***15**, 7026-7035.

Stambolic, V., Ruel, L. and Woodgett, J.R. (1996) Lithium inhibits glycogen synthase kinase-3 activity and mimics wingless signalling in intact cells. *Current Biology* **6**, 1664-1668.

Zanke, B.W., Rubie, E.A., Winnett, E., Chan, J., Parsons, M., Boudreau, K., McGinnis, M., Yan, M., Templeton, D. J. and Woodgett, J. R. (1996) Mammalian MAP kinase pathways are regulated through formation of specific kinase : activator complexes *J. Biol. Chem.* **271**, 29876-29881.

Natoli, G., Costanzo, A., Ianni, A., Templeton, D.J., Woodgett, J.R., Balsano, C. and Levrero, M. (1997) Activation of SAPK/JNK by TNF receptor 1 through a non-cytotoxic TRAF2-dependent pathway. *Science* **275**, 200-203.

Nishina, H., Fischer, K.D., Radvanyi, L., Shahinian, A., Hakem, R., Rubie, E.A., Bernstein, A., Mak, T.W., Woodgett, J.R. and Penninger, J.M. (1997) The stress signaling kinase SEK1 protects thymocytes from CD95- and CD3-mediated apoptosis. *Nature* **385**, 350-353.

Shrode, L.D., Rubie, E.A., Woodgett, J. R. and Grinstein, S. (1997) Cytosolic alkalinization increases SAPK (JNK) and p38 MAPK activity by a calcium-independent mechanism. *J. Biol. Chem.* **272**, 13653-13659.

Hansen, L., Viars, C.S., Rasmussen, S.B., Arden, K.C., Vestergaard, H., Hansen, T., Møller, A.M., Woodgett, J.R. and Pedersen, O. (1997) Chromosomal mapping and mutational analysis of the coding region of the glycogen synthase kinase-3α and β isoforms in patients with non-insulin dependent diabetes mellitus. *Diabetologia* **40**, 940-946.

Nishina, H., Bachmann, M., Oliveiras-dos-Santos, A. J., Kozieradzki, I., Fischer, K.D., Odermatt, B., Wakeham, A., Shahinian, A., Takimoto, H., Bernstein, A., Mak, T.W., Woodgett, J.R., Ohashi, P.S. and Penninger, J.M. (1997) Impaired CD28-mediated IL2 production and proliferation in stress kinase SEK1/MKK4 deficient T lymphocytes. *J. Exp. Med.* **186**, 941-953.

Gutstein, H.B., Rubie, E.A., Mansour, A., Akil, H. and Woodgett, J. R. (1997) Opioid effects on protein kinase signalling cascades. *Anesthesiology* **87**, 1118-1126.

Brownlees, J., Irving, N.G., Brion, J.P., Gibb. B.J., Wagner, U., Woodgett, J.R. and Miller, C.C. (1997) Tau phosphorylation in transgenic mice expressing glycogen synthase kinase-3β transgenes. *Neuroreport* **8**, 3251-3255.

Yao, Z., Diener, K., Wang, X.S., Zukowski,M., Matsumoto, G., Zhou, G., Mo, R., Tibbles, L.A., Sasaki, T., Nishina, H., Hui, C.C., Tan, T.-S., Woodgett, J.R. and Penninger, J. (1997) Activation of c-Jun N-terminal protein kinase by a novel mitogen-activated protein kinase kinase (MKK7). *J. Biol. Chem.***272**, 32378-32383.

May, G.H.W., Funk, M., Black, E.J., Clark, W., Hussain, S., Woodgett, J.R. and Gillespie. D.A.F. (1998) An oncogenic mutation uncouples the v-Jun oncoprotein from positive regulation by the SAPK/JNK pathway *in vivo*. *Curr.Biol.* **8**, 117-120.

Staveley, B.E., Ruel, L., Jin, J., Stambolic, V., Mastronardi, F.G., Heitzler, P., Woodgett, J.R. and Manoukian, A.S. (1998) Genetic analysis of the PKB/AKT cell survival pathway in *Drosophila*. *Current Biology* **8**, 599-602.

Delcommenne, M., Tan, C., Gray, V., Ruel, L., Woodgett, J.R. and Dedhar, S. (1998) Phosphoinositide-3-OH kinase-dependent regulation of GSK-3 and PKB/AKT by the integrin linked kinase (ILK). *Proc. Natl. Acad. Sci. USA* **95**, 11211-11216.

Plyte, S.E., O'Donovan, E., Woodgett, J.R and Harwood, A.J. (1999) Glycogen synthase kinase-3 (GSK-3) is regulated during *Dictyostelium* development via the serpentine receptor cAR3. *Development* **126**, 325-333.

Nishina, H., Vaz, C., Billia, P., Zhang, L., Nghiem, M., Sasaki, T., Furlonger, K., Paige, C., Hui, C., Fischer, K-D., Kishimoto, H., Iwatsubo, T., Katada, T., Woodgett, J.R. and Penninger, J.M. (1999) Defective liver formation and massive liver cell apoptosis in mice lacking the stress signalling kinase SEK1/MKK4. *Development* **126**, 505-516.

Nishimura, M., Yu, G., Levesque, G., Zhang, D.M., Ruel, L., Chen, F., Millman, P., Holmes, E., Liang, Y., Kawarai, T., Jo, E., Supala, E., Westaway, D., Mount, H.T.J., Woodgett, J.R., Fraser, P.E. and St. George-Hyslop, P. (1999) Presenilin mutations associated with Alzheimer disease cause defective intracellular trafficking of β-catenin - a component of the presenilin protein complex. *Nature Medicine* **5**,164-169.

Wang, Q., Somwar, R., Bilan, P.J., Liu, Z., Jin, J., Woodgett, J.R. and Klip, A. (1999). Protein kinase B/Akt participates in GLUT4 translocation by insulin in L6 myoblasts. *Mol. Cell. Biol.* **19**, 4008-4018.

Lee, S.T., Hoeflich, K.P., Wasfy, G.W., Woodgett, J.R., Leber, B., Andrews, D.W., Hedley, D.W. and Penn, L.Z. (1999) Bcl-2 targeted to the endoplasmic reticulum can inhibit apoptosis induced by Myn but not etoposide in Rat-1 fibroblasts. *Oncogene* **18**, 3520-3528.

Ruel, L., Stambolic, V., Ali, A., Manoukian, A. and Woodgett, J. R. (1999) Regulation of the

protein kinase activity of Shaggy/Zeste-white3 by components of the Wingless in *Drosophila* cells and embryos. *J. Biol. Chem.* **274**. 21790-21796.

Al-Murani, S.W.K., Woodgett, J.R. and Damuni, Z. (1999) Expression of I_2^{PP2A}, an inhibitor of protein phosphatase 2, induces c-Jun and AP-1 activity. *Biochem. J.* **341**, 293-298.

Cannon, J.L., Hoeflich, K.P., Woodgett, J. R. and Watts, T.H. (1999) Role of the stress kinase pathway in signaling via the T cell costimulatory receptor 4-1BB. *J. Immunol.* **163**, 2990-2998.

Hoeflich, K. P., Yeh, W-C., Yao, Z., Mak, T.W. and Woodgett, J.R. (1999) Mediation of TNF receptor-associated factor effector functions by apoptosis signal-regulating kinase-1 (ASK1). *Oncogene* **18**, 5814-5820.

Jones, R.G., Parsons, M., Bonnard M., Chan V.S., Yeh, W.C., Woodgett, J. R. and Ohashi, P.S. (2000) Protein kinase B regulates T lymphocyte survival, nuclear factor-κB activation, and Bcl-X(l) levels *in vivo*. *J. Exp. Med.* **191**, 1721-1734.

Ohteki, T., Parsons, M., Zakarian, A., Jones, R.G., Nguyen, L.T., Woodgett, J. R. and Ohashi, P.S. (2000) Negative regulation of T cell proliferation and interleukin-2 production by the serine threonine kinase, GSK-3. *J. Exp. Med.* **192**, 99-104.

Hoeflich, K.P., Luo, J., Rubie, E.A., Tsao, M.-S., Jin, O. and Woodgett, J.R. (2000) Requirement for glycogen synthase kinase-3β in cell survival and NF-κB activation. *Nature* **406**, 86-90.

Scanga, S.E., Ruel, L., Binari, R.C., Snow, B., Stambolic, V., Bouchard, D., Peters, M., Calvieri, B., Mak, T.W., Woodgett, J.R. and Manoukian, A.S. (2000) The conserved PI3'K/PTEN/Akt signaling pathway regulates both cell size and survival in *Drosophila*. *Oncogene* **19**, 3971-3977.

Haq, S., Choukroun, G., Kang, Z.B., Ranu, H., Matsui, T., Rosenzweig, A., Molkentin, J.D., Alessandrini, A., Woodgett, J., Hajjar, R., Michael, A. and Force, T. (2000) Glycogen synthase kinase-3β is a negative regulator of cardiomyocyte hypertrophy. *J. Cell. Biol.* **151**, 117-130.

Xavier, I.J., Mercier, P.A., McLoughlin, C.L., Ali, A., Woodgett, J.R. and Ovsenek, N. (2000) Glycogen synthase kinase-3β negatively regulates both DNA binding and transcriptional activities of heat shock factor 1. *J. Biol. Chem.* **275**, 29147-29152.

Lee, H.Y., Suh Y., Robinson, M.J., Clifford, J.L., Hong, W.K., Woodgett, J.R., Cobb, M.H., Mangelsdorf, D.J., and Kurie, J.M. (2000) Stress pathway activation induces phosphorylation of retinoid X receptor. *J. Biol. Chem.* **275**, 32193-32199.

Fang, X., Lu, Y., Yu, S.X., Lu, Y., Bast, R.C., Woodgett, J.R. and Mills, G.B. (2000) Phosphorylation and inactivation of glycogen synthase kinase-3 by both protein kinase A and protein kinase B. *Proc. Natl. Acad. Sci. USA* **97**, 11960-11965.

Ogimoto, M., Arimura, Y., Katagiri, T., Mitomo, K., Woodgett, J.R., Nebreda, A.R., Mizuno, K.

and Yakura, H. (2001) Opposing regulation of B cell receptor-induced activation of mitogen-activated protein kinases by CD45. *FEBS Lett.* **490**, 97-101.

Hutchinson, J., Jin, J., Cardiff, R.D., Woodgett, J.R. and Muller, W.J. (2001) Activation of Akt (protein kinase B) in mammary epithelium provides a critical cell survival signal required for tumor progression. *Mol. Cell. Biol.* **21**, 2203-2212.

Yarwood, S.J. and Woodgett, J.R. (2001) Extra-cellular matrix composition determines the transcriptional response to epidermal growth factor receptor activation. *Proc. Natl. Acad. Sci. USA* **98**, 4472-4477.

Diao, J., Khine, A.A., Sarangi, F., Hsu, E., Iorio, C., Tibbles, L.A., Woodgett, J.R., Penninger, J. and Richardson, C.D. (2001) X protein of Hepatitis B virus inhibits Fas-mediated apoptosis and is associated with upregulation of the SAPK/JNK pathway. *J. Biol. Chem.* **276**, 8328-8340.

Gillis, D., Shrode, L.D., Krump, E., Howard, C.M., Rubie, E.A., Tibbles, L.A., Woodgett, J. and Grinstein, S. (2001) Osmotic stimulation of the Na^+/H^+ exchanger NHE1: relationship to the activation of three MAPK pathways. *J. Membr. Biol.* **181**, 205-214.

Parsons, M.J., Jones, R.G., Tsao, M.-S., Odermatt, B., Ohashi, P. and Woodgett, J.R. (2001) Expression of active PKB in T cells perturbs both T and B cell homeostasis and promotes inflammation. *J. Immunol.* **167**, 42-48.

Ma, N., Jin, J., Lu, F., Woodgett, J., Liu, F. (2001) The role of protein kinase B (PKB) in modulating heat sensitivity in a human breast cancer cell line. *Int. J. Radiat. Oncol. Biol. Phys.* **50**, 1041-1050.

Jin, J., Anthopoulos, N., Wetsch, B., Binari, R.C., Isaac, D.D., Andrew, D.J., Woodgett, J.R, Manoukian, A.S. (2001) Regulation of *Drosophila* tracheal system development by protein kinase B. *Dev.Cell* **1**, 817-827.

Cheng, H-Y.M., Pitcher, G.M., Laviolette, S.R., Whishaw, I.Q., Tong, K.I. Kockeritz, L.K., Goncalves, J., Sarosi, I., Wada, T., Joza, N.A., Woodgett, J.R., Ikura, M., van der Kooy, D., Salter, M.W. and Penninger, J.M. (2002) Identification of DREAM as a critical transcription repressor for pain modulation. *Cell* **108**, 31-43.

Leroy, K., Boutajangout, A., Authelet, M., Woodgett, J.R., Anderton, B.H. and Brion, J.-P. (2002) The active form of glycogen synthase kinase-3β is associated with granulovacuolar degeneration in neurons in Alzheimer's disease. *Acta Neuropathologica* **103**, 91-99.

Fang, X., Yu, S., Tanyi, Y.L., Lu, Y., Kazlauskas, A., Woodgett, J.R., and Mills, G.B. (2002) Convergence of multiple signaling cascades at glycogen synthase kinase 3: Edg receptor-mediated phosphorylation and inactivation by lysophosphatidic acid through a protein kinase C-dependent intracellular pathway. *Mol. Cell. Biol.* **22**, 2099-2110.

Wigle, D.A., Jurisica, I., Radulovich, N., Rossant, J., Pintilie, M., Lu, N., Lu, C., Woodgett, J.,

Seiden, I., Johnston, M, Keshavjee, S., Darling, G., Winton, T., Breitkreutz, B.J., Jorgenson, P., Tyers, M., Shepard, F.A. and Tsao, M.S. (2002) Molecular profiling of disease-free survival in non-small cell lung cancer. *Cancer Research* **62**, 3005-3008.

Jones, R.G., Elford, A.R., Parsons, M.J., Wu, L., Krawczyk, C.M., Yeh, W.-C., Hakem, R., Rottapel, R., Woodgett, J.R. and Ohashi, P. (2002) CD28-dependent activation of protein kinase B/Akt blocks fas-mediated apoptosis by preventing death-inducing signaling complex assembly. *J. Exp. Med.* **196**, 335-348.

Scheid, M.P. Marignani, P.A. and Woodgett, J. R. (2002) Multiple phosphoinositide 3-kinase-dependent steps in the activation of protein kinase B. *Mol. Cell. Biol.* **22**, 6247-6260.

Claudio, J.O., Masih-Khan, M., Tang, H., Goncalves, J., Voralia, M., Li, Z.H., Nadeem, V., Cukerman, E., Francisco-Pabalan, O., Liew, C.C., Woodgett, J.R. and Stewart, A.K. (2002) A molecular compendium of genes expressed in multiple myeloma. B*lood* **100**, 2175-2186.

Wen, H. C., Huang, W.C., Ali, A., Woodgett, J.R. and Lin, W.W. (2002) Negative regulation of phosphatidylinositol 3-kinase and Akt signalling pathway by PKC. *Cell Signal* **15**, 37-45.

Preston, T.J., Woodgett, J.R. and Singh, G. (2003) JNK1 activity lowers the cellular production of H2O2 and modulates the growth arrest response to scavenging of H2O2 by catalase. *Exp. Cell Res.* **285**, 146-158.

Barthwal, M.K., Sathyanarayana, P., Kundu, C.N., Rana, B., Pradeep, A., Sharma, C., Woodgett, J.R. and Rana, A. (2003) Negative regulation of mixed lineage kinase 3 (MLK3) by protein kinase B (AKT) leads to cell survival. *J. Biol. Chem.* **278**, 3897-3902.

Haq, S., Michael, A., Andreucci, M., Dotto, P., Woodgett, J., Kilter, H. and Force, T. (2003) Novel regulation of β-catenin and its role in hypertrophic growth of cardiomyocytes. *Proc. Natl. Acad. Sci. USA* 100, 4610-4615.

Ma., N., Szmitko, P., Brade, A., Chu, I., Lo, A., Woodgett, J., Klamut, H. and Liu, F.F. (2004) Kinase-dead PKB gene therapy combined with hyperthermia for human breast cancer. *Int. J. Rad. Res.* **11**, 52-60.

Beaulieu, J.M., Sotnikova, T.D., Yao, W.D., Kockeritz, L., Woodgett, J.R., Gainetdinov, R.R. and Caron, M.G. (2004) Lithium antagonizes dopamine-dependent behaviors mediated by an AKT/glycogen synthase kinase-3 signaling cascade. *Proc. Natl. Acad. Sci. USA* **101**, 5099-5104.

Hutchinson, J.N., Jin, J. Cardiff, R.D., Woodgett, J.R. and Muller, W.J. (2004) Activation of Akt-1 (PKBα) can accelerate ErbB-2 mediated mammary tumorigenesis but suppresses tumor invasion. Cancer Research 64, 3171-3178.

O' Brien, W.T., DeAra Harper, A., Jové, F., Woodgett, J.R., Maretto, S., Piccolo, S., Fuchs, E. and Klein, P.S. (2004) Glycogen synthase kinase-3β haploinsufficiency mimics the behavioral and molecular effects of lithium. *J. Neurosci.* **24**, 6791-6798.

Jin, J., Smith, F.D., Stark, C., Wells, C.D., Fawcett, J.P., Kulkarni, S., Metalnikov, P., O'Donnell, P., Taylor, P., Taylor, L., Zougman, A., Woodgett, J.R., Langeberg, L.K., Scott, J.D. and Pawson, T. (2004) Proteomic, functional, and domain-based analysis of *in vivo* 14-3-3 binding proteins involved in cytoskeletal regulation and cellular organization. *Current Biology* **14**, 1436-1450.

Liu, S., Yu, S., Hasegawa, Y., LaPushin, R., Xu, H.J., Woodgett, J.R., Mills, G.B. and Fang, X. (2004) Glycogen synthase kinase 3β is a negative regulator of growth factor-induced activation of the c-Jun N-terminal kinase. *J. Biol. Chem.* **279**, 51075-51081.

Scheid, M.P., Parsons, M. and Woodgett, J.R. (2005) Phosphoinositide-dependent phosphorylation of PDK1 regulates nuclear translocation. *Mol. Cell. Biol.* **25**, 2347-2363.

Takahashi, M., Grant, D., Chang, A., Ritter, J., Goncalves, J., Woodgett, J.R. and Cole, J. (2005) Cardioprotective stress response in the human fetal heart. *J. Thoracic & Cardiovascular Surgery* **129**, 1128-1136.

Heisler, L.E., Torti, D., Boutros, P.C., Watson, J., Chan, C., Winegarden, N., Takahashi, M., Yau, P., Huang, T. H. -M., Farnham, P.J., Jurisica, I., Woodgett, J.R., Bremner, R., Penn, L.Z. and Der, S.D. (2005) CpG Island microarray probe sequences derived from a physical library are representative of CpG Islands annotated on the human genome. *Nucl. Acids Res.* **33**, 2952-2961.

Jin, J and Woodgett, J.R. (2005) Chronic activation of protein kinase Bβ/Akt2 leads to multinucleation and cell fusion: events associated with tumorigenesis. *Oncogene* **24**, 5459-5470.

Salahshor, S., Goncalves, J., Chetty, R., Gallinger, S. and Woodgett, J. R. (2005) Pregnancy specific β1 glycoprotein 9 deregulation in colorectal cancer occurs prior to β-catenin nuclear accumulation and is associated with tumour progression. *BMC Oncology* **5**, 66 (pre-PDF)

Jones, R.G., Saibil, S., Pun, J.M., Elford, A.R., Bonnard, M., Pelligrini, M., Arya, S., Parsons, M.J., Krwczyk, C.M., Gerondakis, S., Yeh, W.C., Woodgett, J.R., Boothby, M.R. and Ohashi, P.S. (2005) NF-κB couples protein kinase B/Akt signaling to distinct survival pathways and the regulation of lymphocyte homeostasis *in vivo*. *J. Immunology* (in press).

Zeng, X., Tamai, K., Doble, B., Li, S., Huang, H., Habas, R., Okamura, H., Rao, A., Woodgett, J. and He, X. A dual kinase mechanism for Wnt coreceptor phosphorylation and activation. *Nature* (in press).

Batt, J., Goncalves, J., Bain, J., Fahnestock, M. and Woodgett, J.R. Gene expression profiling of long term denervated muscle. *FASEB J.* (in press).

2. Other publications:
a) Articles:

Woodgett, J.R. and Hunter, T. (1987) Regulation of protein kinase C by Ca^{2+}, phorbol esters and phosphorylation. In *Progress in Clinical and Biological Research, Vol. 249. Mechanisms of signal transduction by hormones and growth factors.* Cabot, M. C. and McKeehan, W. L. (Eds.). pp237-247. Alan Liss, New York.

Woodgett, J.R. (1989) Telling the players without a scorecard. *New Biol.* **1**, 24-27.

Woodgett, J.R. (1990) *Fos* and *jun*,: two into one will go. In *Seminars in Cancer Biology,* Vol.4, pp389-397. G. Evan, Ed. Saunders, Philadelphia.

Woodgett, J.R. (1990) Path-ology: the cartography of life. *New Biol.* **2**, 244-248.

Ragsdale, C. and Woodgett, J. (1991) *trk*ing neurotrophic receptors. *Nature* **350**, 660-661.

Woodgett, J.R. (1991) A common denominator linking glycogen metabolism, nuclear oncogenes and development. *Trends Biochem. Sci.* **16**, 177-181.

Woodgett, J.R. (1991) Powering the cell cycle. *Current Biology* **1**, 106-107.

Woodgett, J.R. (1992) Flipping cell fates. *TIG* **8**, 256.

Woodgett, J. R. (1992) Finding the stepping stones downstream of ras. *Current Biology.* **2**,357-358.

Plyte, S., Hughes, K., Nikolakaki, E., Pulverer, B. and Woodgett, J. R. (1992) Glycogen synthase kinase-3: functions in oncogenesis and development. *Biochim. Biophys. Acta* **1114**, 147-162.

Woodgett, J.R. (1993) A kinase with Ku-dos. *Current Biology* **3**, 449-450.

Woodgett, J.R., Pulverer, B. J., Nikolakaki, E., Plyte, S., Hughes, K., Franklin, C. C., and Kraft, A. S. (1993) Regulation of jun/AP-1 oncoproteins by protein phosphorylation. *Adv. Second Messenger Prot. Phosph. Res.* **28**, 261-269.

Woodgett, J. R., Plyte, S. E., Pulverer, B. J., Mitchell, J. A. and Hughes, K. (1993) Roles of Glycogen Synthase Kinase-3 in Signal Transduction. *Biochem. Soc. Trans.* **21**, 905-907.

Woodgett, J.R., Pulverer, B.J., Plyte, S.E., Hughes, K. and Nikolakaki, E. (1994) Nuclear oncoprotein targets of signal transduction pathways. *Pigment Cell Research* **7**, 96-100.

Woodgett, J.R. (1994) Regulation and functions of the glycogen synthase kinase-3 subfamily. *Seminars in Cancer Biology* **5**, 269-275.

Woodgett, J.R., Avruch, J. and Kyriakis, J.M. (1995) Regulation of nuclear transcription factors by stress signals. *Clinical and Experimental Pharmacology and Physiology,* **22**, 281-283.

Anderton, B. H., Brion, J.-P., Couck, A.-M., Davis, D. R., Gallo, J.-M., Hanger, D.P., Ladhani,

K., Latimer, D., Lewis, C., Lovestone, S., Marquardt, B., Miller, C. C. J., Mulot, S., Reynolds, H., Rupniak, T., Smith, C., Stabel, S. and Woodgett, J.R. (1995) Modulation of PHF-like tau hyperphosphorylation in cultured neurones and transfected COS cells. *Neurobiology of Aging* **16**, 389-397.

Kyriakis, J.M., Woodgett, J.R. and Avruch, J. (1995) The stress-activated protein kinase cascade: a novel ERK subfamily responsive to cellular stress and inflammatory cytokines. *Annals N.Y. Acad. Sci.* **766**, 303-319.

Woodgett, J.R., Kyriakis, J.M., Avruch, J., Zon, L.I., Zanke, B. and Templeton, D. J. (1996) Reconstitution of novel signalling cascades responding to cellular stresses. *Phil. Trans. Royal Society* **351**, 135-141.

Woodgett, J. R., Avruch, J. and Kyriakis, J.M. (1996) The stress-activated protein kinase pathway. *Cancer Surveys* **27**, 127-138.

Kiefer, F., Tibbles, L.A., Lassam, N., Iscove, N. and Woodgett, J.R. (1997) Novel Components of the mammalian stress-activated protein kinase cascades. *Biochem. Soc. Trans.* **25**, 491-498.

Coffer, P.J., Jin, J. and Woodgett, J.R. (1998) Protein kinase B (c-akt): a multifunctional mediator of phosphatidylinositol 3-kinase activation. *Biochem. J.* **335**, 1-13.

Tibbles, L.A.T. and Woodgett, J.R. (1999) The stress-activated protein kinase pathways. *Cellular and Molecular Life Sciences* **55**, 1230-1254.

Stambolic, V., Mak, T.W. and Woodgett, J.R. (1999) Modulation of cellular apoptotic potential: contributions to oncogenesis. *Oncogene* **18**, 6094-6103.

Scheid, M.P. and Woodgett, J. R. (2000) Protein kinases: six degrees of separation? *Current Biology* **5**, R191-194.

Scheid, M.P. and Woodgett, J.R. (2001) Phosphatidylinositol 3' kinase signaling in mammary tumorigenesis. *J. Mammary Gland Biol. Neoplasia.* **6**, 83-99.

Ali, A., Hoeflich, K.P. and Woodgett, J.R. (2001) Glycogen synthase kinase-3: properties, functions and regulation. *Chemical Reviews* **101**, 2527-2540.

Woodgett, J. R. (2001) Judging a Protein by More than its Name: GSK-3. *Science's STKE* 2001 (100): RE12

Scheid, M.P. and Woodgett, J.R. (2001) PKB/Akt: Functional insights from genetic models. *Nature Reviews Molecular Cell Biology*, **2**, 760-768.

Penninger, J.M. and Woodgett, J. (2001) PTEN - Coupling Tumor Suppression to Stem Cells? *Science* **294**, 2116-2118.

Woodgett, J.R. (2002) Open Heart Surgery of PI-3 Kinase Signaling. *Cell Cycle* **1**, 404-405.

Doble, B. W. and Woodgett, J.R. (2003) GSK-3, tricks of the trade for a multi-tasking kinase. *J. Cell Sci.* **116**, 1175-1186.

De Strooper, B. and Woodgett, J. (2003) Alzheimer's disease: Mental plaque removal. *Nature* **423**, 392-393.

Scheid, M. P. and Woodgett, J. R. (2003) Unravelling the activation mechanisms of protein kinase B/Akt. *FEBS Lett.*, **546**, 108-112.

Woodgett, J. R. (2003) Physiological roles of glycogen synthase kinase-3: potential as a therapeutic target for diabetes and other disorders. *Curr. Drug Targets Immune Endocr. Metabol. Disord.* **3**, 281-290.

Patel, S., Doble, B. and Woodgett, J.R. (2004) Glycogen synthase kinase-3 in insulin and Wnt signaling: a double-edged sword? *Biochem. Soc. Trans.* **32**, 803-808.

Salahshor, S. and Woodgett J. R. (2005) The links between Axin and carcinogenesis. *J. Clinical Pathology* **58**, 225-236.

Woodgett, J.R. (2005) Recent advances in the phosphoinositide-dependent kinase-1, protein kinase B/Akt and glycogen synthase kinase-3 signaling cascade. *Curr. Op. Cell Biol.* **17**, 150-157.

Woodgett, J.R. and Ohashi, P.S. (2005) GSK-3: an in-Toll-erant protein kinase? *Nature Immunology* **6**, 752-753.

Ohashi, P.S. and Woodgett, J.R. (2005) Gamma correction: phospholipid kinases as anti-inflammatory targets. *Nature Medicine* (in press).

b) Book Chapters:

Cohen, P., Aitken, A., Damuni, Z., Hemmings, B.A., Ingebritsen, T.S., Parker, P.J., Picton, C., Resink, T., Stewart, A.A., Tonks, N.K. and Woodgett, J.R. (1983) Protein phosphorylation and the neural and hormonal control of enzyme activity. In *Posttranslational covalent modifications of proteins*. Johnson, B. C. (Ed.). pp19-38. Academic Press, New York.

Cohen, P., Parker, P.J. and Woodgett, J.R. (1985) Molecular basis by which insulin activates glycogen synthase in rabbit skeletal muscle. In *Molecular basis of insulin action*. Czech, M.P. (Ed.). pp 213-233. Plenum Press, New York.

Woodgett, J.R., Hunter, T. and Gould, K.L. (1987) Protein kinase C and its role in cell growth. In *Cell Membranes, methods and reviews Vol. III.* Elson, E. L., Frazier, W. A., and Glaser, L. (Eds.). pp 215-340 Plenum Press, New York.

Woodgett, J.R. (1989) Early gene induction by growth factors. *In British Medical Bulletin, Vol. 45; pp529-540.* Churchill Livingstone, London.

Woodgett, J.R. (1990) Integrated signalling. In *Molecular Biology of Oncogenes and Cell Control Mechanisms.* Parker, P. J., and Katan, M., Eds. Ellis Horwood, London.

Hunter, T., Cartwright, C.A., Woodgett, J.R. and Gould, K.L. (1991) Phosphorylation of pp60c-src. In *Molecular Mechanisms in Cellular Growth and Differentiation* pp 25-43. Bellve, A. R., and Vogel, H. J., eds. Academic Press, Florida.

Woodgett, J.R. (1991) Use of synthetic peptides mimicking phosphorylation sites for affinity purification of protein-serine kinases. *Methods in Enzymology.* Vol. 200, 169-178. Hunter, T and Sefton, B., eds. Academic Press, Florida.

Woodgett, J.R. (1991) cDNA cloning and properties of glycogen synthase kinase-3. *Methods in Enzymology.* Vol. 200, 564-577. Hunter, T. and Sefton, B., eds. Academic Press, Florida.

Hughes, K., Pulverer, B. and Woodgett, J.R. (1991) Molecular characterisation of glycogen synthase kinase-3/factor A. In *Advances in Protein Phosphatases*, Vol. 6, 483-502 Eds. W. Merlevede *et al.* University of Leuven Press, Belgium.

Woodgett, J.R. (1992) Study of protein phosphorylation in cell lines. In *Cell Lines in Neurobiology: A Practical Approach.* pp133-159. Ed. J. Wood. IRL Press, Oxford.

Woodgett, J.R. (1995) Glycogen synthase kinase-3α and ß. In *The protein kinase factsbook.* D.G. Hardie and S. K. Hanks, Eds. pp230-232. Academic Press, London.

Brownlees, J., Woodgett, J., Brion, J. P., Anderton, B. H. and Miller, C. C. J. (1995) Transgenic mice harbouring glycogen synthase kinase-3β transgenes as a route for manipulating tau phosphorylation *in vivo.* In Research advances in Alzheimers disease and related disorders. Iqbal, K., Mortimer, J., Winblad, B. and Wisnievski, H. Eds. J. Wiley and Sons, UK.

Woodgett, J.R. (1996) Transcription Factors. In Modular Texts in Molecular Biology (Eds. Heldin, C. and Purton, M) pp321-333. Chapman Hall, London.

Woodgett, J.R. (2001) Protein kinases: physiological roles. In Encyclopedia of Life Sciences, Macmillan, London.

Hoeflich, K.P. and Woodgett, J. R. (2001) Mitogen-activated protein kinases and stress. In Protein Adaptations and Signal Transduction, (Eds. K.B Sorey and J.M. Storey) pp175-193. Elsevier, Amsterdam.

Winegarden, N. and Woodgett, J.R. (2003) Microarrays and drug discovery. World Market Series: Pharmatech. pp130-136, WMRC (UK).

Manoukian, A. and Woodgett, J. R. (2002) Role of Glycogen synthase kinase-3 in cancer:

regulation by Wnts and other signaling pathways. *Advances in Cancer Research* **84**, 203-229.

Woodgett, J.R. (2003) MAP kinases. In: Handbook of Cell Signaling, Volume 1. pp493-498 Elsevier Science (USA).

Lu, C. and Woodgett, J.R. (2004) Laboratory web sites: disseminate information, make friends and influence people. In: the Internet for Biologists (Horton, R. and Sansom, C, eds). OUP Oxford, UK.

Woodgett, J.R. and Takahashi, M. (2005) Protein kinases: physiological roles in cell signalling. In Encyclopedia of Life Sciences, Macmillan, London.

Kockeritz, L., Doble, B., Patel, S. and Woodgett, J.R. (2005) Glycogen synthase kinase-3 – an overview of an over-achieving protein kinase. In: Glycogen Synthase Kinase-3. Current Drug Targets (in press).

Scheid, M.P. and Woodgett, J.R. (2005) Cell survival signaling through phosphatidylinositol 3' kinases and protein kinase B. In: "Apoptosis and Cancer Therapy: Mechanisms and Therapeutic Potentials. Eds:Fulda, S. and Debatin, K.-M. Wiley-VCH.

c) Books Edited:

Protein kinases: Frontiers in molecular biology series. 1994 OUP, Oxford, UK.
Protein kinase Functions: Frontiers in molecular biology series. 2000 OUP, Oxford, UK.

D. PRESENTATIONS AND INVITED LECTURES

1. Meetings/Symposia:
Protein Phosphatases Symposium, Leuven, Belgium, June, 1991
Protein Kinases, FASEB Meeting, Copper Mountain, CO, USA. July, 1991
Protein Phosphatases FASEB meeting, Copper Mountain, CO, USA. August, 1992
International Cyclic Nucleotide and Protein Phosphorylation Symposium, Glasgow, Scotland, September, 1992
British Medical Association Meeting, Sheffield, UK. March 31st, 1993
Les Embiers meeting on immunology, France, May 12th, 1993
Schmitt Symposium, University of Rochester, USA. May 21st, 1994
Biochemical Society General Meeting, Sheffield, UK. July 21st, 1993
15th International Pigment Cell Conference, London, UK. September 27th, 1993
Gordon Conference (Second Messengers and Protein Phosph.) June 16th, 1994
IUPHAR, *In vitro* neurotoxicology conference. Val Morin, Quebec, July 29th, 1994
Winter Conference on Medicinal and Bioorganic Chemistry, Steamboat Springs, CO, USA. January 30th, 1995
Signal Transduction in Normal and Tumor cells, Banff, April 5th, 1995
Current Understanding of intracellular signalling pathways, Royal Society meeting, July 4th, 1995
Amgen Institute Symposium on "Signalling, cell cycle and cell death", August 18th, 1995

ASBMB Fall symposium: Activation of transcription in response to extracellular signaling proteins. Keystone, October 7th, 1995
ASBMB Fall Symposium #1: Transcription factors and signal transduction. Frederick, MD, USA, 13th October, 1995
Keystone meeting on oxidant stress, Santa Fe, New Mexico, January 8-14, 1996
44th Annual Meeting of the Radiation Research Society, Chicago, April 15th, 1996
EMBL Conference "Oncogenes and Growth Control", Heidelberg, 21-24 April, 1996
2nd Annual Symposium on Cell Signalling, Mt. Sinai Hospital, Toronto, June 13-14th, 1996
Protein Phosphorylation in Signal Transduction Pathways, Leuven, Belgium. October 4th, 1996
Cambridge Symposium: Genetic, molecular and structural control of signal transduction, Lake Tahoe, Nevada, November 1-5th, 1996
Biochemical Society/BSI Joint Congress, Harrogate, UK. December 8-13th, 1996
Keystone Meeting on T cell tolerance and Autoimmunity, CO, USA, April 16th, 1997
Tumour Cell Signalling and Cancer Therapy Symposium, Hamilton Regional Cancer Centre. May 22nd, 1997
Messengers of Life and Death, Lexington, Kentucky, USA, July 25, 26th, 1997
FASEB Protein Kinase Conference, Snowmass, Colorado, USA, August 9-14th, 1997
Signalling stress and proliferation, Madrid, Spain, October 29-30th, 1997
Symposium of Biological Significance of SAPK System. New York Academy of Sciences, November 18th, 1997
Society of Toxicology of Canada Symposium, Montreal, December 4-5th, 1997
Howard Hughes Medical Institute International Scholars meeting, Buenos Aires, Argentina, January 16-20, 1998
Signalling in Normal and Cancer Cells, Banff, Alberta, March 6-10th, 1998
BSDB/BSCB meeting, Lancaster, UK, April 1-3, 1998
Jane Coffin Childs Memorial Fund Symposium, Lakeville, CT, October 15-18, 1998
Howard Hughes Medical Institute International Scholars meeting, Rio de Janeiro, Brazil, January 19-22, 1999
University of Colorado Symposium on Oncogene Signalling Networks, Denver, Colorado, April 8th, 1999
Keystone Symposia: Specificity in Signal Transduction, Keystone, Colorado, April 9-14, 1999
NIEHS Symposium on Apoptosis and Growth Factors, Research Triangle, North Carolina, April 19-21, 1999
NEB Signal Transduction Symposium, Toronto, April 26th, 1999
Genetics Society of Canada, Montreal, June 9th, 1999
CBCRI Reasons for Hope conference, Toronto, June 18th, 1999
British Association for Cancer Research, Edinburgh, July 11-14, 1999
9th BioCity Symposium, Turku, Finland, August 26-27, 1999
Biochip workshop, NRC, Ottawa, September 10-11, 1999
PMH Prostate Centre Symposium, Toronto, September 14th, 1999
ISSX Symposium, Nashville, TN, October 18th, 1999
IRAP/NRC symposium, Toronto, November 29th, 1999
Opening symposium of the Food Systems Biotechnology Centre, Guelph, January 19th, 2000
ASCPT meeting, Los Angeles, CA March 17th, 2000
Howard Hughes Medical Institute International Scholars Symposium, Chevy Chase, MD, June 2000

NRC Genomics and Health Initiative meeting, Halifax, NS, August 18th, 2000
International Society of Haematology Symposium, Toronto, August 29th, 2000
New York Academy of Sciences Symposium: PKB/Akt, New York, September 26th, 2000
5th Toronto Sepsis Roundtable meeting October 25th, 2000
1st Annual Toronto Microarray Symposium November 1-2, 2000
23rd Annual San Antonio Breast Cancer Meeting, San Antonio, TX, Dec 6-9th, 2000
Signalling in Normal and Cancer Cells, Banff, Alberta, March 2-6th, 2001
UK Array 2001 Imperial College, London, UK, March 27-28th 2001
Federation of Experimental Biology, Orlando, March 30th-April 4th 2001
2nd Joint SCBA/CCABP symposium, Toronto, May 26th, 2001
CSBMCB annual meeting - microarray workshop, Alliston, Ontario, May 31-June 3, 2001
HHMI international scholars meeting, Vancouver, June 20-24, 2001
Congress of the Associations of Biochemical Psychiatry, Berlin, July 3rd, 2001
FEBS annual meeting, Lisbon, July 4th, 2001
FASEB Protein Kinase Conference, Snowmass, Colorado, USA, August 11-16th, 2001
Communications and Information Technology Ontario symposium, Ottawa, October 11th, 2001
BioNorth 2001, Ottawa, November 5-7th, 2001
Cancer Care Ontario 18th Biennial meeting, Geneva Park, Ontario, November 13th, 2001
Lab on a Chip & Microarrays conference, Zurich, January 14-16, 2002
Keystone meeting on Wnt and β-catenin signaling/protein phosphorylation and mechanisms of cellular regulation, Taos, New Mexico, March 5-10, 2002 (joint session presentation)
CGDN annual meeting -- new technologies, Montreal, April 4-7 2002
CNIO Microarrays 2002, Madrid, Spain, April 11-12, 2002
Kirchoff Institute Conference on Rheumatoid Arthritis, Bad Neuheim, Germany, April 24-26th, 2002
Howard Hughes Medical Institute International Scholars meeting, Palm Cove, Queensland, Australia, June 26-28, 2002.
Peptide Growth Factors Gordon Research Conference, Kimball Union Academy, New Hampshire, August 4-9, 2002
5th Annual symposium on bioinformatics and functional genomics, Turku, Finland, August 19th, 2002
Ontario Genomics and Proteomics Scientific Symposium, Toronto, September 26-27th, 2002
Growth Factors & Metastasis Workshop, Bethesda, October 20-22th, 2002
UHN research day November 12th, 2002
Hot Topics in Endocrinology Symposium, New Orleans, November 15th, 2002
Genome Canada/Genome Spain meeting, Madrid, January 29th, 2003
FEBS meeting on Signal Transduction, Brussels, July 6th, 2003
94th AACR meeting, Washington DC, July 11-14, 2003
FASEB summer conference on Protein Kinases and Protein Phosphorylation, Snowmass, CO, July 19-24, 2003
Proteomics and Bioinformatics Retreat, Maclean House, Toronto, September 4th, 2003
HUPO and IUBMB joint world congress, Montreal, October 8-11th, 2003
Biotechnology Symposium, Kota Kinabalu, Malaysia December 3-5th, 2003
Sixth Conference on Signalling in Normal and Cancer Cells, Banff, Alberta, March 26-30th, 2004
UBC Cell Biology Group Retreat, Loon Lake, BC, April 30 - May2nd, 2004
UBI Cell Signalling Symposium, Dundee, Scotland, June 5-9th, 2004

CFBS Northern Lights conference, Vancouver, June 16-20th, 2004
Cornell Medical College Synposium on Cell Signaling, New York, July 9th, 2004
BioScience 2004, Glasgow, Scotland, July 18-22, 2004
12th International Conference on Second Messengers and Phosphoproteins, Montreal, August 3-7, 2004
8th Annual Heart Failure Society of America, Toronto, September 12-14th, 2004
8th Annual CDA/CSEM conference, Quebec City, October 28-30th, 2004
Genome Canada National Genomics and Proteomics Symposium, Vancouver, November 24-25, 2004
HHMI International Scholars meeting, Merida, Mexico, June 22-25, 2005

2. Invited Lectures:
CNRS, Gif-sur-Yvette, France May 17th, 1993
Massachusetts Medical Centre, Worcester, MA, USA. November 10th, 1993
Abbott Laboratories, Chicago, USA. November 22nd, 1993
Mt. Sinai Hospital, Toronto. December 8th, 1993
Royal Victoria Hospital, Montreal, April 19th, 1994
Dept. Biology, York University, Oct. 24, 1994
University of Chicago, February 24th, 1995
New England Biolabs, Beverly, USA. March 2nd, 1995
L'Hotel Dieu, Quebec City, March 10th, 1995
Merck Research Labs, NJ, USA. March 29th, 1995
University of Calgary, Alta. April 6th, 1995
Georgetown University, Washington, USA. April 20th, 1995
Zeneca, Lancs.,UK. July 7th, 1995
Chiron Pharmaceuticals, Emeryville, CA, USA. September 20th, 1995
Zoolology Department, University of Toronto. October 27th, 1995
Erindale College, University of Toronto, November 10th, 1995
University of Alabama, Birmingham, AL, USA. November 14th, 1995
Biotechnology Research Institute, Montreal, December 15th, 1995
Mobix, McMaster University, Hamilton, Ontario, February 1st, 1996
Amgen Boulder, CO, USA. March 4th, 1996
Hospital for Sick Children, Toronto, March 29th, 1996
Royal Victoria Hospital, Montreal, April 11th, 1996
Pfizer Research Laboratories, Groton, Connecticutt, USA August 4th, 1996
Hershey Medical School, PA, USA. October 1st, 1996
University of Virginia Health Science Center, Charlottesville, PA, USA. October 17th, 1996
National Institute of Medical Research, Mill Hill, UK. December 8th, 1996
State University of New York at Buffalo, USA. January 13th, 1997
Merck Research Laboratories, Rahway and West Pointe, USA, October 23-24th, 1997
McMaster University Biology Dept., November 17th, 1997
University of Michigan, Ann Arbor, USA, December 8th, 1997
Dept. Immunology, University of Toronto, February 16, 1998
Signal Pharmaceuticals, San Diego, February 20, 1998
Queens University, Kingston, Ontario, March 3, 1998
Hospital for Sick Children, Toronto, March 20, 1998

Neuroscience Research Institute, Ottawa, April 20, 1998
Mount Sinai Medical Center, New York, May 26, 1998
Immunex Corporation, Seattle, November 16, 1998
Mount Sinai Hospital, Toronto, December 11, 1998
Robarts Research Institute, University of Western Ontario, London, Ontario, March 11th, 1999
Canadian Genetic Diseases Network meeting, Collingwood, Ontario, April 22nd, 1999
Cardiovascular Research Center, MGH East, Boston, MA, May 20th, 1999
Department of Biological Sciences, U. Calgary, May 28th, 1999
Montreal Neurological Institute, Montreal, October 26th, 1999
University of Montreal, November 30th, 1999
Parke-Davis, Michigan, USA, January 11th, 2000
University of Laval, Quebec, January 14th, 2000
University of Vermont, Burlington, May 8th, 2000
BC Cancer Agency, Vancouver, May 30th, 2000
Samuel Lunenfeld Research Institute, September 8th, 2000
University of Toronto Senior Alumni Association, November 9th, 2000
World Presidents Organization, November 20th, 2000
Eli Lilley, Indianapolis, November 29th, 2000
Dept. Pharmacology, Dalhousie University, Nova Scotia, January 19th, 2001
Department of Laboratory Medicine and Pathobiology, University of Toronto, February 12th, 2001
Department of Medicine, Albert Einstein University, New York, February 27th, 2001
Hospital for Sick Children, Toronto, April 26th, 2001
London Regional Cancer Centre, May 18th, 2001
SIMS informatics series, Toronto, June 8th, 2001
University of Toronto Oncology Rounds, June 15th, 2001
University of Pennsylvania, Philadelphia, October 2nd, 2001
Dartmouth Medical School, Department of Pharmacology and Toxicology, New Hampshire, October 18th, 2001
University of Calgary retreat, Bragg Creek, October 22nd, 2001
Amgen Inc. Thousand Oaks, California, December 2nd, 2001
Texas A&M University, Temple, Texas, February 14th, 2002
Endocrinology city-wide rounds, Toronto, February 15th, 2002
Laboratory of Molecular Pathophysiology, NIH, March 22nd, 2002
Department of Pharmacology, University of Toronto, April 17th, 2002
University of Texas Medical School, San Antonio May 17th, 2002
Van Andel Research Institute, Grand Rapids, MI, May 29th, 2002
Department of Medical Oncology Rounds, OCI, November 6th, 2002
Department of Pharmacology, University of Pittsburgh, February 21st, 2003
Department of Biochemistry, McMaster University, February 27th, 2003
Biotechnology Focus breakfast seminar, Toronto, June 25th, 2003
Eijkman Lecture, University of Utrecht, Holland, October 1st, 2003
University of Virginia, Charlottesville, November 20th, 2003
UCLA Harbor, Los Angeles, December 9th, 2003
Department of Medical Genetics, University of Toronto, March 8th, 2004
Serono Research Institute, Geneva, Switzerland, April 23rd, 2004

QLT, Vancouver, May 24th, 2004
Toronto General Hospital Research Institute, June 2nd, 2004
Dept of Pharmacology, University of North Carolina, December 14th, 2004
Institute of Molecular Pathology, Vienna, Austria, February 3rd, 2005
Dept of Biochemistry, University of York, February 9th, 2005
Dept of Anatomy and Cell Biology, University of Western Ontario, March 11th, 2005
Mayo Clinic, Rochester, MN, April 11th, 2005
Manitoba Institute of Cell Biology, April 28th, 2005
McGill University Cancer Centre, May 11th, 2005
Friedrich Miescher Institute, Basel, Switzerland May 17th, 2005

E. TEACHING AND SUPERVISION

MBP 1022H: Cell Biology for Physicists. This graduate course required approximately 30 hrs of direct teaching per year and was shared with Professor Michael Rauth, OCI. Contribution to design and running of course is 50%. The course was taught between 1993 and 1997. A significant number of physical science graduate students within the Department of Medical Biophysics and other U of T departments have a very limited background in biology but are engaged in studies of the application of physics to biological problems such as tumour imaging, measurement of vascular flow and design of inert material for implant. This course was designed to educate these students to a level where they can understand the jargon, methodology, fundamental principles and outstanding problems of molecular and cellular biology.

MBP 1001Y: Advanced Cell and Molecular Biology. This advanced graduate student course is taught to PhD students and is designed to expose the students to current hot topics in a wide variety of molecular and cell biology. After an introductory lecture describing the field, the students must research a selection of papers and discuss their view of the research area. I design and teach one graduate segment equivalent to 6 hours per annum. Segment taught between 1994 and 1999.

Lectures in University of Toronto courses: BCH 2021, PCL481S, MGB425, MBP1018Y, LMP1019S, JTB2010H.

Member Department of Medical Biophysics Executive Committee (1997-)
Department of Medical Biophysics promotions committee (1998-)
Department of Medical Biophysics Student Admissions Committee (1998-)
Chair, OCI Amgen research awards committee (1995-2001)
Chair, OCI Biosafety committee (1993-2002)

Graduate Student Committees (excluding directly supervised students):

Jacky Chung (Tony Pawson)
Cheryl Wolting (Jane McGlade)
Natalie Meyer (Linda Penn)
Larissa Moniz (Vuk Stambolic)

Amy Lin (Tak Mak, OCI)
Veronique Dorval (Paul Fraser, CNRD)
Stephen Chen (Dan Dumont, Sunnybrook)
Sevad Kaladchibachi (Armen Manoukian, OCI)
Carol Cheung (Tak Mak, OCI)
Mehrdad Hariri (Rama Khokha, OCI)
Kathrin Zaugg (Tak Mak, OCI)
YingJu Jang (Tak Mak, OCI)
Raymond Kim (Tak Mak, OCI)
Norman Anthopoulos (Armen Manoukian, OCI)
Shinyop Kim (Tak Mak, OCI)

Si Tuen Li (Liliana Attisano, U of T) to July 2005
Megan Cully (Tak Mak, OCI) to May 2005
Chris Bakal (Rob Rottapel, OCI) to April 2005
Jennifer Li (Rick Miller, OCI) to November 2004
Stéphanie Backman (Tak Mak, OCI) to August 2004
Diana Birle (David Hedley, OCI) to May 2004
Zubin Master (Dan Dumont, OCI) to April 2004
Margaret Soares (Steve Gallinger, MSHRI) to March 2004
Jorge Wong (Kate Vallis, OCI) to September 2003
Alison Cheung (Tak Mak, OCI) to June 2003
Russell Jones (Pam Ohashi, OCI) to November 2002
Ahalya Mahendra (Greg Hannigan, HSC) to November 2002
Connie Krawczyk (Josef Penninger OCI) to September 2002
Rizwan Haq (Brent Zanke, OCI) to December 2001
Elena Bogdanovic (George Fantus, Mt. Sinai) to December 2001
Venus Lai (Tony Pawson, Lunenfeld RI) to December 2001
Tim Corson (Jerry Warsh, Clarke Institute) to December 2001
Kevin Brown (Violetta Skalski, O CI) to December 2001
Sylvia Ng (David Hedley, OCI) to October 2001
Sanjeev Mariathasan (Pam Ohashi, OCI) to August 2001
Wing-Tze Fan (Mike Moran, U of T) to April 2001
Maurice Ennis (Armen Manoukian, OCI) to April 2001
Minna Woo (Tak Mak, OCI) to December 2000
Bart Kus (Mike Tyers, MSHRI) to December 2000
Jimmy Fata (Rama Khokha, OCI) to November 2000
Mark Lomaga (Tak Mak, OCI) to August 2000
Dana Nohynek (Armen Manoukian, OCI) to July 2000
Jacinth Abraham (Sam Benchimol, OCI) to February 2000
David Smookler (Tak Mak, OCI) to October 1999
Louis-Martin Boucher (Tak Mak, OCI) to October 1999
Jianli Dong (Henry Krause, U of T) to May 1999
Alex Grossman (Tak Mak, OCI) to April, 1999
Madeleine Bonnard (Michael Julius, Wellesley RI) to January 1999
Si Tuen Li (Linda Penn, OCI) to December 1998

Kelly Williams (Jayne Danska, HSC) to December 1998
Mark Benzaquen (Linda Penn, OCI) to October 1998
Thaddeus Allen (Robert Hawley, TTH) to September 1998
Joanna Schulman (Alan Bernstein, Lunenfeld RI) to September 1998
Nhu-An Pham (David Hedley, OCI) to August 1998)
Yu Zhang (Chris Paige, Wellesley RI)
Galina Radeva (Shoukat Dedhar, Sunnybrook)
Susan Randall (Brent Zanke, OCI) to July 1997
Peter Bhoi (Rob Rottapel, Wellesley RI) to September 1996
Trenna Sutcliffe (Sam Benchimol, OCI) to September 1996
Michael Pawsons (Neil Miyamoto, OCI) to July 1995
Jonathan Sheps (Vic Ling, OCI) to July 1995
Jianmin Chen (Sam Benchimol, OCI) to February 1994
Sandra Danilition (Neil Miyamoto, OCI) to October 1993

F. GRADUATE STUDENT THESIS SUPERVISION: ALL CASES, PRIMARY SUPERVISOR:

Ph.D.:
Paul J. Coffer: Identification, cloning and characterisation of novel mammalian protein-serine kinase genes. 1989-1991
Bernd J. Pulverer: Regulation of proto-oncogenes cJun and cMyc by protein-serine kinases. 1990-1992
Vuk Stambolic: Regulation of glycogen synthase kinase 3. 1993-1997
Juan Luo: Targeted disruption of the GSK-3β gene. 1993-2001
Lee Anne Tibbles MD: Role of stress signalling responses in kidney disease 1994-1999
Klaus Hoeflich: Study of stress-activated signalling pathways in Drosophila. 1996-2001
Jin Jing: Physiological roles of protein kinase B. 1995-2004
Maude Tessier: Functional analysis of the SGK family of kinases. 2000-
Lisa Kockeritz: Genetic targets of β-catenin. 2000-2005
Eric Ho: Isoform-specificity of the SAPKs. 2002-

M.Sc.:
Tian Dai: Delineation of the SAP kinase pathway. 1993-1995

Postdoctoral Fellows:
Ivan Gout, MD (Kiev) Cloning and function of PSK-H1. 1987-1989. Present occupation: group leader, Ludwig Institute for Cancer Research, London.
Paul Jeno, PhD (Basle) Subcellular localisation of GSK-3. 1988
Eleni Nikolakaki, PhD (Thessaloniki) c-Jun regulation. 1990-1992 Lecturer, University of Thessaloniki, Greece.
Kenneth Hughes, PhD (London) Expression and regulation of GSK-3. 1991-1994 Director of research, Microbix Inc.
Simon Plyte, PhD (Portsmouth) Functions of GSK-3 in slime mould and fission yeast. 1991-1996 Program leader, Pharmacia/Upjohn, Milan, Italy.
Laurent Ruel PhD (Strasbourg, EMBO Fellow) Wg pathway in *Drosophila*. 1995-1999

Assistant professor, CNRS, Nice, France.
Chao Lu, PhD (Toronto, MRC Fellow) Stress regulation of transcription. 1997-2000 Research Associate, Microarray Centre, Toronto.
Mark Takahashi, PhD (Toronto, MRC Fellow) Stress-induced protein kinase cascades. 1998-2000 Research Scientist, Microarray Centre, Toronto.
Adnan Ali, PhD (Waterloo, NRC Fellow) GSK-3 phosphorylation stress-induced by Wnt. 1998-2000. Assistant professor, University of Windsor.
Stephen Yarwood, PhD (Glasgow, HFSP fellow), transcriptional responses to mitogens. 2000-2001. Lecturer at U. Glasgow.
Michael Scheid (Vancouver, MRC Fellow) Identification of PKB targets in mammalian cells. 1999-2004. Assistant professor, University of York.
Sima Salahshor (Karolinska Institute, Sweden) 2001 -
Bradley Doble (U. Manitoba, CIHR fellow) 2001 -
Monty Gill (U. Toronto) 2001 –
Jane Batt (U. Toronto, CIHR clinical fellow) Sept 2002-June 2004 Assistant professor, University of Toronto.
Satish Patel (U. Dundee) Aug 2003-
Katrina MacAulay (U. Dundee) May 2005-

Ph.D. Examination Committees:
Luc Marangere (Tony Pawson, Lunenfeld RI) September 30, 1994
Zhou Ming (Ron Buick, OCI) November 2, 1994
Jonathan Sheps (Vic Ling, OCI) April 1995
Carol Fode (Jim Dennis Lunenfeld R.I.) September 27, 1995
Liqun Zhang (Alan Bernstein, Lunenfeld R.I.) November 3, 1995
Xianhua Piao (Alan Bernstein, Lunenfeld R.I.) December 14, 1995
Maria Anna Trevisan (Norman Iscove, OCI) September 6,1996
Karen Colwill (Tony Pawson, Lunenfeld R.I.) November 14, 1996
Filio Bilia (Norman Iscove, OCI) July 31, 1997
Yu Zhang (Chris Paige, OCI) October 17, 1997
Don Christopher (Stuart Foster, Sunnybrook) February 2, 1998
Madeleine Bonnard (Michael Julius, TTHRI) January 19, 1999
Doug Chan (Susan Lee-Miller, U. Calgary) May 28, 1999
Louis-martin Boucher (Tak Mak, OCI) October 15th, 1999
Mhairie Skinner (Alan Wildeman, Univ. Guelph) December 22nd, 1999
Simon Rousseau (Jacques Huot, U. Laval), January 14th, 2000
Jacinth Abraham (Sam Benchimol, OCI), February 7th, 2000
Mark Lomaga (Tak Mak, OCI), August 8th, 2000
Jimmie Fata (Rama Khokha, OCI), November 23rd 2000
Len Hua (Peter Li, U of Toronto), December 1st, 2000
Minna Woo (Tak Mak, U of Toronto), December 13th, 2000
Wing-Tze Fan (Mike Moran, U of Toronto) April 30th, 2001
Rizwan Haq (Brent Zanke, OCI) June 26th, 2001, December 17th, 2001
Sanjeev Mariathasan (Pam Ohashi, OCI) August 9th, 2001
Sylvia Ng (David Hedley, OCI) October 19th, 2001
Mark Knapp (Hubert Van Tol, U. Toronto) April 19th, 2002

Connie Krawczyk (Josef Penninger OCI) September 3rd, 2002
Dan C.C. Lin (Tony Pawson, Lunenfeld R.I.) September 30th, 2002
Rusty Jones (Pam Ohashi, OCI) November 13th, 2002
Alison Cheung (Tak Mak, OCI) June 26th, 2003
Emanuel Rosonina (Ben Blencowe, Medical Genetics) February 5th, 2004
Robert Cairns (Richard Hill, OCI) March 11th, 2004
Zubin Master (Dan Dumont, Sunnybrook) April 21st, 2004
Stéphanie Backman (Tak Mak, OCI) August 10th, 2004
Jennifer Li (Richard Miller, OCI) November 30th, 2004
Amy Tony (Charlie Boone, BBDMR) January 25th, 2005
Chris Bakal (Rob Rottapel, OCI) April 19th, 2005
Megan Cully (Tak Mak, OCI) May 20th, 2005
Benjamin Jung (Jim Eubanks, Pharmacology) June 13th, 2005
Si Tuen Li (Liliana Attisano, U of T) July 14th, 2005

Masters Examination Committees:
Jianmin Chen (Sam Benchimol, OCI) September 1993
Michael Parsons (Neil Miyamoto, OCI) August 1995
Trenna Sutcliffe (Sam Benchimol, OCI) September 1996
Peter Bhoi (Robert Rottapel, Wellesley HRI) September 1996
James Mainprize (Martin Yaffe, Sunnybrook) January 1997
Galina Radeva (Shoukat Dedhar, Sunnybrook) January 1997
Susan Randall (Brent Zanke) July 1997
Audrey Chan (Rick Miller, OCI) January 1998
Johanna Schulman (Alan Berstein, MSHRI) September 1998
Kolia Eppert (Irene Andrulis, MSHRI) September 1998
Thaddeus Allen (Bob Hawley, TTH) September 1998
Kelly Williams (Jane Danska, HSC) December 1998
Si Tuen Li (Linda Penn, OCI) December 1998
Donald Knapik (Stuart Foster, Sunnybrook) December 1998
Mary Cheng (Sam Benchimol, OCI) January 1999
David Smookler (Tak Mak, OCI) October, 1999
Carol Holting (Jane McGlade, HSC, Toronto) December 1999
Sherry Winter (Irene Andrulis, SLRI) March 2000
Dana Nohynek (Armen Manoukian, OCI) July 2000
Clare Macgregor (Gil Prive, OCI) September 2000
Jenny Ho (Dwayne Barber, OCI) September 2000
Maurice Ennis (Armen Manoukian, OCI) April 2001
Patrizia Ruoso (David Hedley, OCI) September 2001
Kevin Brown (Violetta Skalski, OCI) December 2001
Gordon Duncan (Tak Mak, OCI) January 2002
Karen Yee (Mark Minden, OCI) April 2002
Susan Moore (Dwayne Barber, OCI) September 2002
Liz Cauldon (Aled Edwards) January 2003
Lan-Chau Kha (Eldad Zacksenhaus, OCI), September 2003

Jorge Wong (Kate Vallis, OCI), September, 2003
Nigel Munce (Lothar Lilge, OCI) November 2003
Marleine Tremblay (Simon Graham, Sunnybrook) January 2004
Margaret Soares (Steve Gallinger, Samuel Lunenfeld RI) March 2004
Diana Birle (David Hedley, OCI) May 2004
Stephen Chen (Dan Dumont) June 2004
Cindy Yau (David Hedley, OCI) September 2004
Ben Pakuts (Jane McGlade) January 2005
Andrew Primeau (Ian Tannock, OCI) July 2005
Sevad Kaladchibachi (Armen Manoukian, OCI) August 2005
Christina Lee (Yaacov Ben-David, Sunnybrook), August 2005

Qualifying Examination Committees:
Tania Benatar (Michael Julius, Wellesley RI) August 1994
Jianli Dong (Henry Krause, U of T) January 1995
Madeleine Bonnard (Michael Julius, Wellesley RI) June 1995
Benoit St. Pierre (Sean Egan, HSC) August 1996
Jacqueline Mason (Dwayne Barber, OCI) February 1998
Valerie Olmsted (Cheryl Arrowsmith, OCI) August 1998
Rizwan Haq (Brent Zanke, OCI) February 1999
Alex Sands (Tak Mak, OCI) April 1999
Sylvia Ng (David Hedley, OCI) August 1999
Liane Chen (Rick Miller, OCI) February, 2000
Jiyong Liang (Joyce Slingerland, Sunnybrook) April 2001
Dominic Falconi (Jane Aubin, U of T) December 2001
Mehredad Hariri (Rama Khokha, OCI) April 2002
Carol Cheung (Tak Mak, OCI) November 2002
Jenny Ho (Sam Benchimol, OCI) March 2003
Brian Nieman (Mark Henkelman, Sunnybrook) June 2003
Kenneth Yip (Fei-Fei Liu, OCI) November 2003
Simon Smuckler (Derek van der Kooy, U of Toronto) January 2004
Véronique Dorval (Paul Fraser, U of Toronto) March 2004

Reclassification Examinations:
Louis-Martin Boucher (Tak Mak, OCI) May 1995
Venus Lai (Tony Pawson, Lunenfeld RI) June 1995
Julia Pak (Jackie Segall, U of T) June 1996
Stanley Liu (Jane McGlade, OCI) June 1997
Nina Jones (Dan Dumont, OCI) July 1997
Wing-Tze Fan (Michael Moran, BBDMR) October 1997
Andrew Ho (Rama Khokha, OCI) May 1998
Victoria Ahn (Gil Prive, OCI) June 1998
Theodore Chang (Jeff Wrana, HSC) June 1998
Sanjeev Mariathasan (Pam Ohashi, OCI) August 1998
Minna Woo (Tak Mak, OCI) October 1998
Norman Anthopoulos (Armen Manoukian, OCI) October 1998

From: Richard Bookman [rbookman@miami.edu]
Sent: Friday, October 21, 2005 6:01 AM
To: mcoombs@law.miami.edu; Faculty Senate Office
Cc: LeBlanc, Thomas J; Ullmann, Steven G.; John Clarkson; Jarrard W Goodwin; David Helfman
Subject: Cancer Biology PhD Program Proposal

I am pleased to present to you and the Faculty Senate a proposal to create a new, university-wide interdisciplinary PhD Program in Cancer Biology. I very much appreciate the willingness of the Senate to consider this proposal at next week's meeting.

The attached program proposal was developed by a Program Steering Committee of our colleagues, chaired by Dr. David Helfman, a professor in the Department of Cell Biology and Anatomy. This committee includes faculty from the College of Arts and Sciences, RSMAS, and the Miller School of Medicine. Under Dr. Helfman's leadership, they have developed a number of innovative ideas for graduate training and this effort has been extensively discussed for many months among medical school faculty, PhD program directors, and department chairs. Support is widespread and deep and the roster of participating faculty is sure to grow in the years to come.

Let me address and summarize a few points to facilitate your review:
1.) This program resembles the Neuroscience Program in that it is interdisciplinary, not based in any one department, draws faculty from across the university, and is governed by rank and file faculty.

2.) The most innovative feature of the proposed program is the "dual mentoring" of PhD students, in which their dissertation supervisor's mentoring is supplemented by a "clinical mentor" who will give the student the opportunity to observe the human and clinical side of cancer. This is not only a fantastic opportunity to draw the often distinct cultures of clinical medicine and basic science research closer together, it also offers a unique chance to draw our clinical colleagues in more closely to the academic research enterprise. From early feedback, I believe that this effort will be both popular and meaningful to faculty and students alike.

3.) The financial support for this program is drawn from medical school resources (for tuition support through my office) and from the Sylvester Comprehensive Cancer Center (for student stipends and a modest operating budget). The latter support was greatly enhanced through the enlightened gift of $1.6 million (!!) from UM Trustee David Fuente and his wife, Sheila. You can read more about this at:
http://www.miami.edu/campaign/donors/priorities_dp_fuente.htm

4.) The attached pdf file contains a number of documents, including i) the program proposal revised in response to review, ii) the report from the external reviewers, iii) the report from the internal review subcommittee of the UM Graduate Council, iv) the Steering Committee's response to the review feedback, and v) the CVs of the external reviewers.

5.) The proposal, as revised, was approved unanimously by the UM Graduate Council at their meeting on October 20, 2005. Dean Ullmann will convey to the Senate, under separate cover, his report of that vote and his approval.

I look forward to meeting with the Senate next week, hearing their reactions to the design of the program, and having the opportunity to respond to any questions or concerns they might have. Please let me know if there are any additional materials that the Senate requires.

Again, many thanks for your help in setting this up so quickly.

Faculty Senate Office

From: Faculty Senate Office

Sent: Tuesday, January 10, 2006 3:01 PM

To: Clarkson, John G.; Bookman, Richard John

Subject: approved Legislation # 2005-03(B)-Establishment of Cancer Biology Ph.D. Program

The below link is your copy of approved Legislation # 2005-03(B)-Establishment of Cancer Biology Ph.D. Program.
https://www.miami.edu/faculty-senate/2005-legislation/2005-03B.pdf

Regards,
Robyn Hardeman

Faculty Senate Office
1252 Memorial Drive
325 Ashe Admin. Building
Coral Gables, Florida 33146
Loc. 4634
Phone: (305) 284-3721
Fax: (305) 284-5515
http://www.miami.edu/fs

November 30, 2005
Faculty Senate minutes

The meeting, held in the RMSB building at the Miller School of Medicine, opened at 3:30 p.m.

CHAIR'S REMARKS
The Chair had no comments beyond her memorandum to Senators included with the agenda.

OTHER ANNOUNCEMENTS
Mary Ann Fletcher informed the Senate that Dorothy Hicks, retired Medical Director for the Rape Treatment Center, passed away.

Steven Green informed the Senate that, starting shortly, an important new benefit will be available at no cost, providing on-line retirement financial planning. It will permit faculty members to examine their current holding in the Faculty Retirement Plan and, if they wish, any other retirement or non-retirement investments; it will also give them options for investment strategies depending on their personal situation and goal. This will be provided by an independent advisor, not one who has any vested interest in the University. The company chosen is LT SADE. There will also be an option, at a very modest fee, to have the company put its advice into effect.

APPROVAL OF AGENDA
The meeting agenda *passed unanimously.*

PRESIDENT'S REMARKS
The President reported that as the Search Committee brings in candidates for the Dean position at the Miller School of Medicine, she and the Provost informally spend time with each candidate to get to know the person. The Search Committee will be meeting shortly to present three or four final candidates and the President and Provost will then hold formal interviews. She reported the death of Sam Yarger, Dean of the School of Education. She is giving an endowed lecture at the American Educational Research meeting this year, which will be dedicated to him. The President shared the various new and ongoing building plans. Regarding the health care changes that were made without input from the Senate, she reviewed the chronology of events that led to the lack of input and stated that the administration will strive for a system that gives the Senate ample time to participate. The President answered questions from the floor.

APPROVAL OF MINUTES
The minutes of September 28, 2005, *passed unanimously.*

PROPOSAL FOR THE ESTABLISHMENT OF THE J. WEISS CENTER FOR SOCIAL, MEDICAL, AND HEALTH INEQUALITIES
Bernard Fogel presented a proposal to establish the J. Weiss Center for Social, Medical, and Health Inequities in the Miller School of Medicine. He stated that the plan is eventually to make the Center a University-wide resource. After discussion, *a motion was made* to approve the proposal. *The motion passed unanimously.*

CANCER BIOLOGY PH.D. PROGRAM PROPOSAL
Richard Bookman presented a proposal to create a Cancer Biology Ph.D. Program. He informed the Senate that this program resembles the current Neuroscience program, which is one of the Miller School of Medicine's most successful programs. After discussion, *a motion was made* to

approve the proposal. *The motion passed unanimously. A motion was made* to waive the second reading. *The motion passed unanimously.*

ELECTION OF GENERAL WELFARE COMMITTEE REPRESENTATIVE FOR THE SCHOOL OF COMMUNICATION

An election was held to fill the vacant General Welfare Committee seat for the School of Communication. Anthony Allegro was elected by written ballot.

PROPOSED RESOLUTION FROM THE SENATE REGARDING UNICCO

This item is being deferred pending the outcome of a meeting with the President and a small group being assembled to discuss this issue with her. The Chair stated that she would report back to the Senate in January.

INFORMATION ITEM: FALL ENROLLMENT REPORT

The Chair informed the Senate in her Chair's remarks memorandum that in the interest of efficiency, she did not schedule an oral presentation on enrollment by Paul Orehovec. Instead he was asked to prepare a written summary of the data, and any questions can be sent directly to Paul at porehovec@miami.edu.

The remainder of the meeting was held in Executive Session to discuss the James W. McLamore Outstanding Service Award and the Outstanding Teaching Award recommendations.

The meeting adjourned at 5:00 p.m.

Kimberly Litman
Secretary of the Faculty Senate

Faculty Senate Office

From: Faculty Senate List [SENATE@LISTSERV.MIAMI.EDU] on behalf of Faculty Senate Office [facsen@MIAMI.EDU]
Sent: Tuesday, February 07, 2006 4:26 PM
To: SENATE@LISTSERV.MIAMI.EDU
Subject: FACULTY SENATE NEWSLETTER

****
A "Reply" to this message will be sent to its author,
not to all other recipients. If you want to follow
up with a message that is distributed to the entire
"SENATE" mailing list, then use the "Reply to All"
function or button on your email program.
****

If you have problems reading the text in this e-mail, visit the following link:
http://www.miami.edu/UMH/CDA/UMH_Main/1,1770,2460-1;44500-3,00.html

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SENATE NEWSLETTER
This newsletter contains information of general interest to the Faculty as well as a summary of the Senate meeting of January 25, 2006.
Materials related to this meeting may be found by following the links from http://www.miami.edu/FacultySenate.

ANNOUNCEMENTS
Please mark your calendars for a number of academic or celebratory events that the Faculty Senate is sponsoring:

Professor Richard Light will present a workshop on "The Role of Academic Assessment in Teaching, Research, and Student Learning" on Tuesday, February 21, from 3:00 to 5:00 p.m. in the James W. McLamore Executive Education Center, 3rd floor dining room, in the Jenkins Building in the School of Business.

The Outstanding Teaching Award ceremony, honoring Diana M. Lopez, Professor of Microbiology and Immunology, will take place on Wednesday, March 1, at 4:00 in the Storer Auditorium.

We have now raised over $45,000 for the John H. Knoblock Memorial Fund and will be officially naming the Senate offices in his honor at a ceremony on March 29, 2006. A more detailed announcement will be made later.

The Distinguished Faculty Scholar Award ceremony, honoring William Whelan, Professor of Biochemistry and Molecular Biology, will take place on Wednesday, April 5, at 4:00 in the Storer Auditorium.

GENERAL INFORMATION
Approval of Legislation:

Legislation #2005-02(B)-Establishment of the J. Weiss Center for Social, Medical, and Health Inequalities (visit https://www.miami.edu/faculty-senate/2005-legislation/2005-02B.pdf to view legislation)

Legislation #2005-03(B)- Establishment of Cancer Biology Ph.D. Program (visit https://www.miami.edu/faculty-senate/2005-legislation/2005-03B.pdf to view legislation)

Legislation #2005-04(B)- Modification of the Faculty Manual Regarding Misconduct in Research Policy (visit https://www.miami.edu/faculty-senate/2005-legislation/2005-04b.pdf to view legislation)

Legislation #2005-05(B) - Establishment of the Johnson A. Sonwan Leadership Institute (visit https://www.miami.edu/faculty-senate/2005-legislation/2005-05b.pdf to view legislation)

IMPORTANT SENATE ACTIONS: JANUARY 25, 2006 MEETING Provost LeBlanc shared with the Senate a summary of the discussions that have taken place regarding a change in the retirement plan. These discussions have been going on for over a year with the Senate's General Welfare Committee, appropriate administrators, and consultants from Towers Perrin. The University is seeking to reduce the volatility of the current retirement plan for staff, which is a defined benefit plan.
Because of such volatility the University took out a large loan a few years ago, which required financial belt-tightening. In discussions between the GWC and the administration, a consensus emerged to move from a defined benefit plan for staff to a defined contribution plan for new staff. Federal regulations require that retirement plans be similar for both faculty and staff, so the proposed change would also have to apply to new faculty hires. Several proposals have been discussed, including match plans (where part of the University's contribution comes automatically and the remainder is paid only as a match against an employee contribution) and no-match plans. Within each type of plan, the provost presented several options that varied in the percentages to be contributed and in the expected additional cost to the University.
After a lengthy discussion, the Senate agreed to take the position that the Provost will consider the comments and do his best for the staff and the faculty as he seeks the approval of the Board of Trustees for a new plan.

As required by Faculty Manual section B3.3, "From the data available on November 15 of each year the Chair shall recommend, and the Senate approve, an apportionment of senators such that a school with faculty tenured in that school shall receive N senators if its voting faculty
(F) is equal to or exceeds the value of a constant (K) times the sum of the sequence two plus three plus four . . . up to N: that is, F_>[2+3+4+ . . .N] x K. The value of the constant (K) shall be selected each year by the Senate upon recommendation of the Chair such that the Senate shall consist of 30 50 voting members. In any apportionment, the Graduate School shall have exactly two senators." After discussion, the Senate voted unanimously to accept the apportionment using the constant of ten giving the Senate a total of 47 members (a change from the current 48).

The Senate indicated its concern about professional boxing at the BankUnited Center, as indicated in Legislation #2005-06(D) below; at the meeting President Shalala concurred with our concerns and informed us that there will be no further such events at the Center.

The Senate has approved and legislation has been forwarded to the President on the following issues:

Legislation #2005-06(D)-Resolution regarding the presentation of professional boxing at the University's BankUnited Center.
(visit https://www.miami.edu/faculty-senate/2005-legislation/2005-06.pdf
to view legislation)

Legislation #2005-07(D)-Amendment to the charge of the Outstanding Teaching Award Committee (section C19.3 of the Faculty Manual) (visit https://www.miami.edu/faculty-senate/2005-legislation/2005-07.pdf
to view legislation)

Faculty Senate Office
325 Ashe Admin. Bldg.
Loc 4634
(305)284-3721 (office)
(305)284-5515 (fax)
http://www.miami.edu/FacultySenate

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Faculty Senate Office

From: Faculty Senate Office
Sent: Tuesday, January 10, 2006 2:30 PM
To: Markowitz, Elizabeth Paz
Subject: approved legislation

The following approved legislation links are sent for your records:

- Legislation #2005-01(B)- Name change for the Women's Studies program in the College of Arts and Sciences

https://www.miami.edu/faculty-senate/2005-legislation/2005-01B.pdf

- Legislation #2005-02(B)-Establishment of the J. Weiss Center for Social, Medical, and Health Inequalities

https://www.miami.edu/faculty-senate/2005-legislation/2005-02B.pdf

- Legislation #2005-03(B)- Establishment of Cancer Biology Ph.D. Program

https://www.miami.edu/faculty-senate/2005-legislation/2005-03B.pdf

- Legislation #2005-04(B)- Modification of the Faculty Manual Regarding Misconduct in Research Policy

https://www.miami.edu/faculty-senate/2005-legislation/2005-04b.pdf

- Legislation #2005-05(B)- Establishment of the Johnson A. Edosomwan Leadership Institute

https://www.miami.edu/faculty-senate/2005-legislation/2005-05b.pdf

Thanks,

Robyn

Faculty Senate Office
1252 Memorial Drive
325 Ashe Admin. Building
Coral Gables, Florida 33146
Loc. 4634
Phone: (305) 284-3721
Fax: (305) 284-5515
http://www.miami.edu/fs

Faculty Senate Office

From: Faculty Senate Office
Sent: Friday, December 09, 2005 2:32 PM
To: LeBlanc, Thomas J; Clarkson, John G.; Bookman, Richard John
Cc: Markowitz, Elizabeth Paz; Robitaille, Magaly
Subject: Faculty Senate legislation #2005-03
Attachments: 2005-03(B)-establishment of cancer biology program.doc

Attached is your copy of legislation that was sent to the President for her approval. You will be sent a copy of the finalized legislation once it has been approved by the President. The 100-page report for this legislation can by accessed by visiting: https://www.miami.edu/faculty-senate/05-06-Senate/11-30-05/CancerBioPgm.pdf

Regards,
Robyn Hardeman

Faculty Senate Office
1252 Memorial Drive
325 Ashe Admin. Building
Coral Gables, Florida 33146
Loc. 4634
Phone: (305) 284-3721
Fax: (305) 284-5515
http://www.miami.edu/fs

Faculty Senate Office

From: Faculty Senate Office

Sent: Wednesday, August 02, 2006 10:37 AM

To: Brenner, Lynne; Brown, Otis B.; Buckley, Reba; Cabrera, Jose M.; Carpintero, Yvette M.; Garcia, Cecilia; Glemaud, Rose-Ketlie; Goff-Tlemsani, Sarah Elaine; Goldschmidt, Pascal J.; Gonzalez, Martha Lopez; Grogg, Sam; Halleran, Michael Ros; Herrera, Marisela; Hipp, James William; Lepisto, Catherine; Lynch, Dennis O.; Orehovec, Paul Martin; Peragallo, Nilda P; Plater-Zyberk, Elizabeth M.; Prilleltensky, Isaac; Ripoll, Blanca Ileana; Robitaille, Magaly; Schwab, Edna L; Segrera-Guerra, Lourdes Eileen; Stadmire, Dawn Renee; Sugrue, Paul K; Temares, M. Lewis; Ullmann, Steven G.; Walker, William

Cc: Markowitz, Elizabeth Paz

Subject: Approved Faculty Senate Legislation

Below is a complete list of legislation that has been approved for 2005-06:

Legislation #2005-01(B) - Name change for the Women's Studies program in the College of Arts and Sciences https://www6.miami.edu/faculty-senate/2005-legislation/2005-01B.pdf

Legislation #2005-02(B) - Establishment of the J. Weiss Center for Social, Medical, and Health Inequalities https://www6.miami.edu/faculty-senate/2005-legislation/2005-02B.pdf

Legislation #2005-03(B)- Establishment of Cancer Biology Ph.D. Program https://www6.miami.edu/faculty-senate/2005-legislation/2005-03B.pdf

Legislation #2005-04(B)- Modification of the Faculty Manual Regarding Misconduct in Research Policy https://www.miami.edu/faculty-senate/2005-legislation/2005-04b.pdf

Legislation #2005-05(B)- Establishment of the Johnson A. Edosomwan Leadership Institute https://www.miami.edu/faculty-senate/2005-legislation/2005-05b.pdf

Legislation #2005-06(D) - Resolution regarding the presentation of professional boxing at the University's BankUnited Center https://www.miami.edu/faculty-senate/2005-legislation/2005-06.pdf

Legislation #2005-07 (D) - Amendment to the charge of the Outstanding Teaching Award Committee (section C19.3 of the Faculty Manual) https://www.miami.edu/faculty-senate/2005-legislation/2005-07.pdf

Legislation #2005-08 (B) - Establishment of the Wallace H. Coulter Center for Translational Research https://www.miami.edu/faculty-senate/2005-legislation/2005-08B.pdf

Legislation #2005-09 (D) - Modification to the charge of the James W. McLamore Outstanding Service Award https://www.miami.edu/faculty-senate/2005-legislation/2005-09.pdf

Legislation #2005-10 (B) - Modification of Faculty Senate apportionment formula (Faculty Manual section B3.3) https://www.miami.edu/faculty-senate/2005-legislation/2005-10.pdf

Faculty Senate Office

From: Faculty Senate Office
Sent: Friday, June 09, 2006 12:57 PM
To: DL - Faculty - All Campuses
Subject: Faculty Senate Legislation for the 2005-2006 term

As required by the Faculty Manual, the Secretary of the Senate is to notify faculty of all approved legislation.

Visit https://www.miami.edu/faculty-senate/Temp/legislation.pdf to view a list of and links to the legislation for the 2005-2006 term.

Please note that you will need to have Adobe Acrobat Reader to access the information. For a free download, visit: http://www.adobe.com/products/acrobat/readstep.html.

If you are not able to access the links by clicking on them within this e-mail, copy the entire url from https to .pdf (or .html) and paste it in your browser.

Please contact the Senate office if you have any questions.

Thank you.

Kimberly Litman
Faculty Senate Office
325 Ashe Admin. Bldg.
Loc 4634
(305)284-3721 (office)
(305)284-5515 (fax)
http://www.miami.edu/FacultySenate

LIST OF FACULTY SENATE LEGISLATION FOR THE 2005-2006 TERM
(click on the link to view legislation)

- **Name change for the Women's Studies program in the College of Arts and Sciences**
  https://www.miami.edu/faculty-senate/2005-legislation/2005-01B.pdf
- **Establishment of the J. Weiss Center for Social, Medical, and Health Inequalities**
  https://www.miami.edu/faculty-senate/2005-legislation/2005-02B.pdf
- **Establishment of Cancer Biology Ph.D. Program**
  https://www.miami.edu/faculty-senate/2005-legislation/2005-03B.pdf
- **Modification of the Faculty Manual Regarding Misconduct in Research Policy**
  https://www.miami.edu/faculty-senate/2005-legislation/2005-04b.pdf
- **Establishment of the Johnson A. Edosomwan Leadership Institute**
  https://www.miami.edu/faculty-senate/2005-legislation/2005-05b.pdf
- **Resolution regarding the presentation of professional boxing at the University's BankUnited Center**
  https://www.miami.edu/faculty-senate/2005-legislation/2005-06.pdf
- **Amendment to the charge of the Outstanding Teaching Award Committee (section C19.3 of the Faculty Manual)**
  https://www.miami.edu/faculty-senate/2005-legislation/2005-07.pdf
- **Establishment of the Wallace H. Coulter Center for Translational Research**
  https://www.miami.edu/faculty-senate/2005-legislation/2005-08B.pdf
- **Modification to the charge of the James W. McLamore Outstanding Service Award**
  https://www.miami.edu/faculty-senate/2005-legislation/2005-09.pdf
- **Modification of Faculty Senate apportionment formula (Faculty Manual section B3.3)**
  https://www.miami.edu/faculty-senate/2005-legislation/2005-10.pdf
- **Resolution wishing Henry King Stanford a rapid and full recovery**
  https://www.miami.edu/faculty-senate/2005-legislation/2005-11.pdf
- **Vote of confidence for the Provost in creating a culture of academic excellence**
  https://www.miami.edu/faculty-senate/2005-legislation/2005-12.pdf
- **Modification of the Faculty Manual regarding Misconduct in Research Policy (Addendum to Legislation #2005-04(B) approved on 12/29/05)**
  https://www.miami.edu/faculty-senate/2005-legislation/2005-13.pdf

- **Resolution pertaining to UNICCO**
  https://www.miami.edu/faculty-senate/2005-legislation/2005-14.pdf

- **Resolution pertaining to UNICCO (Addendum to Legislation 2005-14))**
  https://www.miami.edu/faculty-senate/2005-legislation/2005-15.pdf

- **Elimination of restriction of the required second major, for students in the School of Communication, to those within Arts and Sciences**
  https://www.miami.edu/faculty-senate/2005-legislation/2005-16.pdf

- **Addition of a graduate student as an *ex officio* member of the Student Affairs Committee**
  https://www.miami.edu/faculty-senate/2005-legislation/2005-17.pdf

- **Addition of Senior Vice Provost and Dean of Undergraduate Education as *ex officio* member of the University Curriculum Committee**
  https://www.miami.edu/faculty-senate/2005-legislation/2005-18.pdf

- **Language to rectify discrepancy in the Bulletin and the Faculty Manual regarding credit for laboratory hours**
  https://www.miami.edu/faculty-senate/2005-legislation/2005-19.pdf

Academic Deans' Policy Council
Minutes of the Meeting of December 7, 2005

Provost LeBlanc informed the deans about the need to centralize such information as: stipend budgets, tuition waivers, health insurance, etc. Steve Ullmann reported that the training has been done. Another training session will take place in a few weeks, and support will be provided.

Senate Matters

#2005-02

Mary Coombs reported that the Faculty Senate approved the J. Weiss Center for social, medical, and health inequalities; and approved a Cancer Biology Ph.D. program. #2005-03
Dates for award ceremonies have changed. The new dates are: The James W. McLamore Award will be held February 1 and the Distinguished Faculty Scholar Award will be held April 5.

Academic Deans' Policy Council
Minutes of the Meeting of January 11, 2006

Faculty Housing

Provost LeBlanc briefed the deans about faculty housing resources. He has met with Dave Lieberman and Diane Cook regarding data, commuter distance, rental and housing costs. He discussed residential properties owned by UM that can house faculty, namely the Four Fillies Farm, and a major development project near the Metro Zoo, rental housing around campus, and the 16 townhouses of University Village. By providing affordable housing within easy commuting distance, faculty can become more active in the university community. He will meet with Dave Lieberman and Diane Cook to discuss other potential projects. He asked the deans for ideas or suggestions. Dave Lieberman discussed subsidized housing, and other approaches that should be studied, noting that our actions impact the University's budget, and would need Board approval.

Senate Matters

2005-01

Mary Coombs reported that the Senate approved the name change of the Women's Studies program to Women's and Gender Studies Program; the establishment of the Jay Weiss Center for Social, Medical, and Health Inequalities, establishment of the Cancer Biology Ph.D. Program and the establishment of the Johnson A. Edosomwan Leadership Institute. The Faculty Manual policy regarding misconduct in research had to be changed to meet federal rules and laws. The McLamore Outstanding Service Award ceremony honoring Andreas G. Tzakis will take place on February 1st at 4 pm in the McLamore

2005-02
2005-03
2005-05
2005-04

UNIVERSITY OF Miami

11-30-05 Faculty Senate Agenda

FACULTY SENATE MEETING

Miller School of Medicine

Rosenstiel Medical School Building (RMSB), 4th Fl Auditorium,

November 30, 2005 - 3:30 P.M.

AGENDA

***FOR YOUR CONVENIENCE, CLICK HERE FOR A COMPLETE AGENDA PACKET (just click and print)**

(Item B2 is not included in the packet, click on the B2 below to print.)

			Approx. Time
A.		**Introductory Matters**	
	A1.	#Chair's remarks	3:30
	A2.	President's remarks	3:35
	A3.	Approval of today's agenda	3:55
	A4.	#Approval of minutes of September 28, 2005	4:00
		(note: there was no October Senate meeting due to hurricane Wilma)	
	A5.	Other announcements	4:05
B.		**General Matters**	
	B1.	#Proposal for the establishment of the J. Weiss Center for Social, Medical, and Health Inequalities - B. Fogel	4:10
	B2.	#Cancer Biology Program proposal - R. Bookman	4:25
	B3.	Election of General Welfare Committee representative for the School of Communication	4:45
	B4.	Proposed resolution from the Senate regarding Unicco	4:50
	B5.	#Information item: Fall enrollment report	
C.		**Other Business**	5:10
D.		**Executive Session**	5:15
	D1.	James W. McLamore Outstanding Service Award recommendations	
	D2.	Outstanding Teaching Award Recommendation	
E.		**Adjournment**	

related material linked in Adobe Acrobat format. You must have Adobe Acrobat Reader installed on your computer in order to access the material. **Click here** for installing

11/30/05 FS agenda item B2

Please note that some steps ordinarily taken before submitting proposals to the Senate have not been taken. We will discuss this at the FS meeting.

* Proposal is included in Final Legislature Tab along with President's memo.

From: Richard Bookman [rbookman@miami.edu]
Sent: Friday, October 21, 2005 6:01 AM
To: mcoombs@law.miami.edu; Faculty Senate Office
Cc: LeBlanc, Thomas J; Ullmann, Steven G.; John Clarkson; Jarrard W Goodwin; David Helfman
Subject: Cancer Biology PhD Program Proposal

I am pleased to present to you and the Faculty Senate a proposal to create a new, university-wide interdisciplinary PhD Program in Cancer Biology. I very much appreciate the willingness of the Senate to consider this proposal at next week's meeting.

The attached program proposal was developed by a Program Steering Committee of our colleagues, chaired by Dr. David Helfman, a professor in the Department of Cell Biology and Anatomy. This committee includes faculty from the College of Arts and Sciences, RSMAS, and the Miller School of Medicine. Under Dr. Helfman's leadership, they have developed a number of innovative ideas for graduate training and this effort has been extensively discussed for many months among medical school faculty, PhD program directors, and department chairs. Support is widespread and deep and the roster of participating faculty is sure to grow in the years to come.

Let me address and summarize a few points to facilitate your review:
1.) This program resembles the Neuroscience Program in that it is interdisciplinary, not based in any one department, draws faculty from across the university, and is governed by rank and file faculty.

2.) The most innovative feature of the proposed program is the "dual mentoring" of PhD students, in which their dissertation supervisor's mentoring is supplemented by a "clinical mentor" who will give the student the opportunity to observe the human and clinical side of cancer. This is not only a fantastic opportunity to draw the often distinct cultures of clinical medicine and basic science research closer together, it also offers a unique chance to draw our clinical colleagues in more closely to the academic research enterprise. From early feedback, I believe that this effort will be both popular and meaningful to faculty and students alike.

3.) The financial support for this program is drawn from medical school resources (for tuition support through my office) and from the Sylvester Comprehensive Cancer Center (for student stipends and a modest operating budget). The latter support was greatly enhanced through the enlightened gift of $1.6 million (!!) from UM Trustee David Fuente and his wife, Sheila. You can read more about this at:
http://www.miami.edu/campaign/donors/priorities_dp_fuente.htm

4.) The attached pdf file contains a number of documents, including i) the program proposal revised in response to review, ii) the report from the external reviewers, iii) the report from the internal review subcommittee of the UM Graduate Council, iv) the Steering Committee's response to the review feedback, and v) the CVs of the external reviewers.

5.) The proposal, as revised, was approved unanimously by the UM Graduate Council at their meeting on October 20, 2005. Dean Ullmann will convey to the Senate, under separate cover, his report of that vote and his approval.

I look forward to meeting with the Senate next week, hearing their reactions to the design of the program, and having the opportunity to respond to any questions or concerns they might have. Please let me know if there are any additional materials that the Senate requires.

Again, many thanks for your help in setting this up so quickly.

General Welfare Committee
November 16, 2005
3:30 p.m.
School of Law Library-(conference room, 4th floor)

1. Chair's remarks (3:30)

2. #Proposed revision of the University's Demonstration Policy – M. Borgeest (3:35)

3. #Faculty pursuing a degree in the department in which they have an academic appointment – S. Ullmann (3:50)

4. #Cancer Biology Ph.D. Program proposal – R. Bookman (4:05)

5. #Proposal for the establishment of the J. Weiss Center for Social, Medical, and Health Inequalities – B. Fogel (4:20)

6. Outstanding Teaching Award – E. Clasby (4:35)
   a) nomination for 2006
   b) #modification of charge

7. #Interpretation of the Faculty Manual by General Counsel – A. Swan (4:50)

8. Unicco issue re: wages, health benefits, and bid to unionize (5:10)

related material included

Cancer Biology Ph.D. Program Proposal

This report was sent to you as a separate link because the report is 100 pages long.

Tracking Sheet

KL

Subject: Multidisciplinary Graduate Program in the Study of the Biology of Cancer

History of action taken

DATE	ACTION TAKEN
3/9/05	Advised M. Coombs that I read an article in E-Veritas regarding a $1.6 million gift from David Fuente and his wife that will be used to launch a multidisciplinary graduate program in the study of the Biology of Cancer. I asked her if she agreed that this is something that needs to come before the senate, she agreed.
	I sent Dr. Jarrod Goodwin, Director of the Sylvester Cancer Center, an email of congratulations and a reminder that this was something that needed to come before the senate for approval and provided a link to the guidelines for submission of proposals and deadlines.
3/10/05	Dr. Goodwin responded and emailed back thanking me for my email noting that they are generally aware of the process and will share my email with Dr. Helfman and Dr. Bookman to discuss and develop a time line. He said news of the donation received a big splash before it officially exists.
	Follow up tickler set for 6/13.
5/17/05	Steve Green emailed the Senate noting that he saw an article in Veritas regarding this program and I advised him that I have already been in touch with Dr. Goodwin.
6/13/05	Sent follow-up email to Dr. Goodwin with a cc to Dr's Helfman and Bookman.
	Dr. Bookman responded as follows: We have worked closely with Dean Steve Ullmann of the Graduate School to follow all the procedures for the establishment of new PhD programs. Please feel free to contact Dean Ullmann if you want or need independent confirmation or clarification of the current working timeline for review of the Cancer Biology PhD program proposal. The Steering Committee for the Cancer Biology PhD program, chaired by Dr. David Helfman, submitted a proposal to the Graduate Council at their May meeting. The Graduate Council formed a review subcommittee and they will meet with Dr. Helfman and a few faculty on July 11th. In the meantime, Dr. Helfman has submitted to the Graduate School a list of six non-UM faculty who might serve as external reviewers of the proposed program. We are hoping to arrange a site visit for them over the summer. If all of this works, then the Graduate Council might be able to consider the sub-committee report in September or October. If the program is approved, then it is my understanding that it would be referred to the Faculty Senate, if it is also approved by Dean Ullmann.

	The Cancer Biology PhD program is proposed to be a university-wide degree-granting program involving faculty from many schools and colleges. Therefore, it is my understanding that a review by any individual school council is not required. Despite this lack of formal requirement, I am scheduled to meet with the Medical School Council on June 28th. I will present an overview of the program and solicit input from my colleagues on the Council at that time. The proposal has also been distributed to the chairs of the six basic science departments at the medical school with a request that they distribute it to their faculty for comment and suggestions. Dr. Helfman is gathering that input as it comes in to him. Dr. Helfman, Dr. Goodwin, the members of the Steering Committee and I all welcome feedback from other interested faculty. We are sure that such input can only help to make this program better and make it a more effective interdisciplinary training environment.
	Follow-up tickler set for Nov. 1, 2005
	I spoke to Mary and advised her that this proposal does not appear to have gone through the appropriate approval (as an interdisciplinary proposal).
	I advised Dr. Bookman of this and he said that this mirrors the Neurological Surgery proposal and he doesn't recall that approval from faculty of different schools involved, etc. were required.
	I sent him a copy of the Neurological proposal which did require approval but also noted that the senate should look into having this requirement eliminated for Graduate programs. This was back in the early 90's and we cant find any record of the Senate looking into this.
1/16/05	Dr. Helfman, in place of Dr. Bookman presented a proposal to the GWC. M. Coombs suggested, at my request, that I include the following as a cover note for this item when sent to the Faculty Senate. "Please note that some steps ordinarily taken before submitting proposals to the Senate have not been taken. We will discuss this at the Faculty Senate meeting."
11/30/05	Dr. Bookman presented the proposals. No discussion took place regarding all approval steps not being followed. The Senate approved unanimously.
12/8/05	Legislation #2005-03(B)- sent to the President.
12/21/05	Received signed legislation.
	FILE CLOSED

pend. leg.

UNIVERSITY OF Miami

Office of the Provost

TO: Faculty Senate

FROM: Steven G. Ullmann, Ph.D. /u
Vice Provost for Faculty Affairs and
University Administration
And Dean of the Graduate School

DATE: October 21, 2005

SUBJECT: Cancer Biology Program

I wanted to make you aware that the Graduate Council, after reviewing the recommendations by a team of external reviewers and a team of internal reviewers, and considering the revised proposal based on those recommendations, has unanimously approved the Ph.D. proposal in Cancer Biology. Deliberations and the formal vote took place on October 20, 2005. The proposal is now passed on to the Faculty Senate for its consideration.

Thank you very much. Please take care.

SGU:rb

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