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CHAIRMAN’S REPORT

This past year was an eventful one for the department, marked by Dr. Greenwald stepping down as Chairman on June 30 of this year and the search for a new Chair. The exemplary service that Dr. Greenwald gave to the department for the past 16 years was highlighted on May 21. A Symposium on Reproductive Biology, organized by Dr. Terranova and a faculty committee, brought four outstanding scientists and personal friends of Dr. Greenwald to KUMC to present major addresses. This was followed by a banquet attended by family, friends and former students and postdoctoral fellows of Dr. Greenwald. Following a 3 month stint in London, Dr. Greenwald is back in his research laboratory.

After a national search, Dr. James L. Voogt, Professor in the Department of Physiology at KUMC was offered the Chair in Physiology. He began his duties August 1, 1993.

There were no additions to or subtractions from the primary faculty of the department. Dr. Girish Shah, an associate professor with a primary appointment in Urology, received a joint appointment in the department and moved his laboratory to WHE. Two faculty were promoted to Professor effective July 1, 1993 - Drs. Peter Smith and Michael Soares. Bonnie Vande Velde, a long-time member of the office staff, retired at the end of this academic year and recruitment for a replacement is underway.

Research

This year witnessed another increase in research funding by the faculty, in the face of greater competition for research dollars from NIH. According to the most recent NIH Summary of Extramural Awards, the Department of Physiology at KUMC ranked 58th out of 106 Departments of Physiology located in Medical Schools. The KUMC Research Administration Funding Report for Fiscal Year 1993 indicated that the Department of Physiology received $1,491,137 in direct costs research monies from extramural sources, and a total of $2,119,502. However, not all is roses. There were only 2 new or competitive renewal NIH grants that came into the department in FY 93, and several faculty are up for renewal on their existing NIH grants in FY 94. We need to re-double our efforts and use every opportunity to obtain funding, including non-government sources whenever possible.

Several faculty made significant contributions of their time to the national research community. Drs. Paul Terranova, Peter Smith (recently appointed Chair of Neurology B Study Section) and Michael Soares served as regular members of NIH study sections, and Drs. James Voogt and Paul Cheney were ad hoc members of study sections. Dr. Soares also organized a Serono Symposium entitled "Trophoblast cells: Pathways for Maternal-Embryonic Communication", held in Las Vegas, Nevada.

Teaching, graduate and postdoctoral training

Significant improvement was made by second year medical students in their performance on NBME Part I. Compared to a national failure rate of 9%, less than 1% of our students failed. The average score for the Physiology section of the exam was above the national average. Credit must be given to the students who worked hard to reach this level of achievement, to the Admissions Committee who recruited them, and to the faculty throughout the basic science departments who inspired them. Several faculty, including Drs. Greenwald, Valenzeno and Gonzalez were formally recognized for their teaching efforts in Medical Physiology by the students. Unfortunately, Student Voice has not provided an evaluation of the second major course that we teach for medical students, namely Neuroscience. In the
future a better and more timely evaluation of all courses will be done. Curtis Beauregard, second year medical student, received the Alan M. Thompson Award for his excellence in Physiology, measured by his course work and research in the laboratory of Dr. Peter Smith.

The department also made a major contribution to the education of graduate students in Medicine, Allied Health and Nursing. Under the able leadership of Dr. Peter Smith, Advanced Human Physiology was taught to 69 graduate students. Dr. Tom Imig coordinated Neurophysiology for 59 occupational therapy students, and provided excellent leadership as the course director for the Medical Neuroscience course co-taught with the Department of Anatomy and Cell Biology for 230 medical and physical therapy students. Drs. Greenwald and Terranova provided important leadership as coordinators of Medical Physiology for 199 students. The department also taught 4 graduate courses: Cell Physiology, Reproductive Physiology, Pregnancy, Growth & Development, and Aging, and Advanced Renal Physiology. Dr. Valenzeno did an excellent job coordinating the departmental seminar program.

A new development in our teaching program came about through the combined efforts of the Departments of Physiology and Anatomy and Cell Biology. Beginning this Fall the two departments are teaching a 5 credit hour graduate course, Cell Structure and Function. Hopefully this kind of cooperative effort will pave the way for increased interdisciplinary graduate activities in the future.

The graduate program, under the experienced and careful leadership of Dr. Richard Clancy, had 15 doctoral and 2 master’s level students enrolled. Frank Samson (Tom Imig, mentor) and Xiao-ning Wang (Gil Greenwald, mentor) received their Ph.D. degrees, and Xing-Jian Lu (Michael Soares, mentor) received his M.S. degree. Several students received honors for presentations given at meetings (see Notes Concerning Graduate Students).

During this past year 17 postdoctoral fellows pursued research in the department. They were supported by research grants and NRSAs.

The Future: Goals and Challenges

A major transition occurred at the end of this academic year. Dr. Greenwald removed his chairman’s hat and resumed full-time faculty activities as Distinguished Professor of Physiology. What is found in this report represents the final year of his era and it shows that this year was probably the most productive for the department. The department is left in a strong position as I begin as Chair. Almost all of the faculty are either PIs or co-investigators on NIH grants. The teaching programs remain strong and the spirit of cooperativity among faculty that Dr. Greenwald developed through his recruitments remains, for which I am most grateful. The future looks bright.

In the next 5 years the department will take on a building program. Recruitment is already started for a new assistant professor to begin 7/1/94. It is anticipated that there will be several retirements in the department in the next few years. As we fill these positions, we must find the best, most-talented young scientists available. These new faculty will be the major source of new growth in our research and graduate program for the next 10-15 years. They also will influence our teaching programs. The emphasis will be on individuals who have strong backgrounds in molecular and cellular biology. The tools of molecular biology are very powerful. When used appropriately, these techniques will help us understand physiological function and disease. Integrative physiology and molecular biology are not mutual exclusive. Using transgenic animals will allow us to express and delete proteins that have key roles in regulating cell and tissue function. Understanding cell function will allow us to better understand organismic homeostasis. Physiology is poised to reclaim its preeminence as the discipline that contributes most to our knowledge of how organisms
function, and therefore how diseases can be cured. It is important that we identify potential faculty who have important physiological problems to study, and who know how to appropriately apply molecular biology to these problems.

A second goal of the next several years will be to enhance our graduate program. We have to increase our recruitment efforts so that we reach every student in the several states surrounding Kansas City who is a potential graduate student. We also need to recruit highly qualified M.D./Ph.D. students into our program. We must begin to look at ways to integrate our graduate program. Interdisciplinary research is here to stay, and the artificial walls that separate research in departments are coming down. It is important that we make it possible for our graduate students to participate in this interdisciplinary research effort.

External pressures are mounting for major changes in how we teach medical students. Problem-solving is the new approach. Of course, Physiology has always used this approach to a certain extent. How much further we go in this will depend on the result of critical analysis of the effectiveness of problem-solving based curriculum. Until now very little good information is available. Results of our students on the last national examinations strongly suggests we are teaching our students in a way compatible with the expectations of our medical education leaders. A second pressure is on the type of physician we train. Society and the government is telling us to produce more generalists to serve primary care areas where shortages exist. All departments of the medical school, but especially the clinical departments, need to address this issue.

Another goal of the department this year will be to make the office more efficient and service oriented. Both Linda Carr and Joella Judd have done a tremendous job during the last several months when we were short-handed. However, hiring a new person in the office is critical to serving the needs of the faculty and students. We also will be improving our electronic communication in the office and department this year. The load of paper-work, telephone tag, calendar coordination all can be helped greatly if we tie into Ethernet and form a Local Area Network using Novelle. However, justification and full benefit from this system will be realized only if Support Services, including the Purchasing and Accounting Departments also use this system. Efficient classroom scheduling and a campus-wide calendar would also greatly facilitate programs in the departments. It is very important that the institution support information transfer via electronics rather than 'pony express’ technology.

Fiscal matters continue to challenge us. To recruit the very best, we must be prepared to pay more than the average. To retain the best, we must provide tangible rewards. To provide necessary departmental support, salary shrinkage targets must be dealt with realistically. To feel good and proud of where we work, the faculty and administration together must develop a vision for the future. As we work towards the next century, I am optimistic that the Department of Physiology and the School of Medicine will attain great scholarly heights.

James L. Voogt, Ph.D.
Professor and Chairman
Department of Physiology
a. Faculty

Primary Appointment in Physiology

Paul D. Cheney, Ph.D., Professor (Director of Ralph L. Smith Center for Mental Retardation)
Richard L. Clancy, Ph.D., Professor
Norberto C. Gonzalez, M.D., Professor
Gilbert S. Greenwald, Ph.D., Distinguished Professor and Chairman
Thomas J. Imig, Ph.D., Professor
Steven M. LeVine, Ph.D., Assistant Professor
Fred E. Samson, Ph.D., Professor Emeritus
Peter G. Smith, Ph.D., Associate Professor
Michael J. Soares, Ph.D., Associate Professor
Lawrence P. Sullivan, Ph.D., Professor
Merrill Tarr, Ph.D., Professor
Joseph S. Tash, Ph.D., Associate Professor
Paul F. Terranova, Ph.D., Professor
John W. Trank, Ph.D., Professor
Dennis P. Valenzeno, Ph.D., Associate Professor
James L. Voogt, Ph.D., Professor

Joint Appointment in Physiology

Sudhansu K. Dey, Ph.D., Professor (Joint appt. Ob-Gyn)
Donald C. Johnson, Ph.D., Professor (Joint Appt., Ob-Gyn)
Girish Shah, Ph.D. Associate Professor (Joint Appt., Urology)
Travis Solomon, M.D., Ph.D., Professor (Joint Appt., Medicine, Kansas City VA Hosp.)
Larry Welling, M.D., Ph.D., Professor (Joint Appt., Pathology, Kansas City VA Hosp.)

Modified Title

Lydia Arbogast, Ph.D., Research Assistant Professor
Geracimo Bracho, Ph.D., Research Assistant Professor
Sanjoy K. Das, Ph.D., Research Assistant Professor
Santanu Deb, Ph.D., Research Assistant Professor
Jeffrey Radel, Ph.D., Research Assistant Professor (Joint Appt., Occupational Therapy Ed.)
John G. Wood, Ph.D., Research Assistant Professor (Joint Appt., Surgery)
Daniel J. Welling, Ph.D., Research Professor (Kansas City VA Hospital)
Cheryl Cahill, Ph.D., Adjunct Assistant Professor (Joint Appt., School of Nursing)
Deborah Kipp, Ph.D., Adjunct Assistant Professor (Joint Appt., Dietetics & Nutrition)
Kenneth L. Goetz, M.D., Ph.D., Adjunct Professor
Theodore Lawwill, M.D., Adjunct Professor (Chairman, Dept. of Ophthalmology)
b. Postdoctoral Fellows
Sanat Chatterjee, Ph.D.
Linda Crane, Ph.D.
Andrey Frolov, Ph.D.
Kazuyoshi Hashizume, Ph.D.
H. Kishi, D.V.M.
Zuhang Li, M.D.
Joanne Marcario, Ph.D.
Jennifer Marcinkiewicz, Ph.D.
Yoshihiro Moue, M.D.
B. C. Paria, Ph.D.
Frank Samson, Ph.D.
Xiao-Ning Wang, M.D./Ph.D.
Toshiya Yamamoto, Ph.D.
Qing-Xue, Zhang, Ph.D.
M. Zubin, Ph.D.
Wei Yuan, Ph.D.
Yan Zong Zhe, M.D.

c. Graduate Students

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<tr>
<th>Name</th>
<th>Prelims</th>
<th>Candidate for</th>
<th>Degree Requirements Fulfilled</th>
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<tr>
<td>Toni Clinton</td>
<td>9/91</td>
<td>Ph.D.</td>
<td></td>
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<tr>
<td>Sandra Elliott</td>
<td>9/89</td>
<td>Ph.D.</td>
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<td>Rebecca Flietstra</td>
<td></td>
<td>Ph.D.</td>
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<td>Gary Hamlin</td>
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<td>Ph.D.</td>
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<tr>
<td>Jean Hiebert</td>
<td>8/91</td>
<td>Ph.D.</td>
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<tr>
<td>Kelly Humpherys</td>
<td></td>
<td>Ph.D.</td>
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<td>Melissa Jones</td>
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<td>Ph.D.</td>
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<tr>
<td>Karen Kover</td>
<td></td>
<td>Ph.D.</td>
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<tr>
<td>Xing-Jian Lu</td>
<td></td>
<td>M.S.</td>
<td>6/93</td>
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<tr>
<td>Brian McKiernan</td>
<td></td>
<td>Ph.D.</td>
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<tr>
<td>Christine Rasmussen</td>
<td></td>
<td>Ph.D.</td>
<td></td>
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<tr>
<td>Frank Samson</td>
<td>7/88</td>
<td>Ph.D.</td>
<td>11/92</td>
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<tr>
<td>Xiao-ning Wang</td>
<td>11/90</td>
<td>Ph.D.</td>
<td>9/92</td>
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<tr>
<td>Darren Wallace</td>
<td></td>
<td>M.S.</td>
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<tr>
<td>James Warn, Jr.</td>
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<td>Ph.D.</td>
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<tr>
<td>Robert Whitman</td>
<td>3/88</td>
<td>Ph.D.</td>
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<tr>
<td>Rob Zachow</td>
<td>7/92</td>
<td>Ph.D.</td>
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Toni Clinton presented an abstract titled: "Tumor necrosis factor alpha stimulates proliferation and steroidogenesis of human granulosa-lutein cells in vitro" at both the 1992 Midwest Reproductive Colloquium and the 1992 KUMC Student Research Forum. She also attended the 1992 Society for the Study of Reproduction annual meeting in Vancouver, British Columbia. As a member of the American Fertility Society, she attended the annual meeting in New Orleans, Louisiana. As a member of the Reproductive Biology Special Interest Group, she was chosen to be trained to serve as an inspector for andrology and embryology laboratories as part of the joint AFS/CAP infertility laboratory accreditation program. In April, Toni accepted a position in the Department of Obstetrics and Gynecology as Director of the Infertility laboratories.

Rebecca Flietstra received a National Science Foundation award. In October 1992 she attended the annual Neuroscience meeting held in Anaheim, California. In the fall of 1992 she gave seven lectures to the O.T. students for the Physiology 398 course covering the visual system and development & hypothalamus. In the Spring of 1993 she co-chaired the Student Research Forum and gave a slide presentation at the Forum entitled "Rat Choriocarcinoma Cells Partially Inhibit Suckling-Induced Prolactin Release" for which she received an Honorable Mention.


Jean Hiebert is the student representative on the GSAC Committee. She presented a poster at the annual Neuroscience Meeting in Anaheim, California entitled "Increased Rate of Sympathetic Ingrowth to Smooth Muscle of Neonatal Rat" in October 1992. She delivered ten lectures to O.T. students for the Physiology 398 course covering reflexes, voluntary movement, language and hearing. She also gave a presentation at the 1993 Student Research Forum entitled "Effect of Tissue Age on Reinnervation by Different Neuronal Populations".
Kelly Humpherys received a fellowship from the Woodrow Wilson Foundation to attend a biotechnology seminar for a month in the summer of 1993 in Princeton, New Jersey.

Melissa Jones attended the Society for the Study of Reproduction meeting held in Raleigh, NC and presented a poster entitled "Ontogeny of Hamster Placental Lactogen-II". At that same meeting she also co-chaired the session on Pregnancy and Parturition. In April 1993 she presented a poster at the Kansas Health Foundation Symposium entitled "Cell Differentiation in a Rat Choriocarcinoma". She was first author on a paper submitted in June to Biology of Reproduction entitled "Temporal and Regional Expression of Placental Lactogen-II on RNA and Protein in the Hamster Placenta".

Karen Kover attended the 25th annual meeting of the Society for the Study of Reproduction held in Raleigh, North Carolina in July 1992. In Fall semester 1992 she presented lectures to Neurophysiology 398 on vestibular, oculomotor and somatic sensory systems as well as a lecture on aging. In April 1993 she gave a Student Research Forum presentation on the topic of analysis of steroid hormone effects on lactoferrin gene expression in the mouse uterus. She also presented seminars on the same topic to the Department of Physiology and the Reproductive and Developmental Biology group.

Xiaoning Wang attended the Society of the Study of Reproduction annual meeting in Raleigh, North Carolina in July, 1992, and gave a presentation entitled "Effects of estrogen and FSH on Ovarian Folliculogenesis and Steroidogenesis in Hypophysectomized Mice" at the meeting. She defended her dissertation (Effects of Gonadotropins on Ovarian Follicular Recruitment, Growth and Early Embryonic Development in the Cyclic or Hypophysectomized Mouse) in September, 1992. Her co-authored publications during this fiscal year were "Hypophysectomy of the cyclic mouse: I. Effects on folliculogenesis, oocyte growth and FSH and hCG receptors, Biology of Reproduction, 1993; "Hypophysectomy of the cyclic mouse: II. Effects of FSH and LH on folliculogenesis, FSH- and hCG-receptors and steroidogenesis", Biology of Reproduction, 1993; "hCG or human recombinant FSH induced ovulation and subsequent fertilization and preimplantation embryo development in hypophysectomized FSH-primed mouse", Endocrinology, 1993.
Rob Zachow lectured on Electrophysiology and Higher Cortical Function in the 398 Neurophysiology course Fall semester 1992. In July 1992 Rob gave a poster session at the IX Annual Ovarian Workshop, Serono Symposia, held in Chapel Hill, N.C. entitled "Tumor Necrosis Factor-α Induces Clustering of Ovarian Theca-Interstitial Cells In Vitro". In December 1992 Rob presented a departmental seminar entitled "Tumor Necrosis Factor-α (TNF) and Theca-Interstitial Cells: Actions of TNF at Multiple Sites Within Multiple Cell Signaling Pathways. In February he presented a seminar entitled "Tumor Necrosis Factor-α Inhibits Luteinizing Hormone-Stimulated Androgen Production by Ovarian Theca-Interstitial Cells at Multiple Loci Within the Adenosine 3’:5’-cyclic Monophosphate-Dependent Signal Transduction Pathway at the 6th Annual Midwest Reproduction Colloquium held at the Women’s Research Institute in Wichita, KS and received Commendable Research Award for Scientist-in-Training. In April he gave a Student Research Forum presentation entitled: "Tumor Necrosis Factor-α Inhibits Luteinizing Hormone-Supported Androgen Synthesis by Ovarian Theca-Interstitial Cells at Multiple Sites Within the cAMP-Mediated Signal Transduction Pathway" and received Honorable Mention. Rob was also first author of a paper published by *Endocrinology* in December 1992 entitled: "Tumor Necrosis Factor-α Induces Clustering of Ovarian Theca-Interstitial Cells In Vitro". In May 1993 Rob also presented a seminar to the Reproductive and Developmental Biology Group entitled "TNF and Ovarian Theca-Interstitial Cells: Inhibitory Actions of TNF Within the LH-Supported, cAMP-Dependent Protein Kinase-Dependent Cell Signaling Pathway. In June 1993 he was first author on a paper submitted to *Molecular and Cellular Endocrinology* entitled "Implication of Protein Kinase C and Protein Tyrosine Kinase Pathways in Mediating Tumor Necrosis Factor-α Induced Clustering of Theca-Interstitial Cells". In 1993 Rob was also granted membership to the Endocrine Society, the Society for the Study of Reproduction and the American Physiological Society.
COURSES TAUGHT

Major Service Courses

398 - Neurophysiology. 3 credits. Fall 1992. Taught by physiology graduate students. Enrollment 59. Dr. Imig coordinator.


Departmental Graduate Courses


The Departmental Seminar program was directed by Dr. Dennis Valenzano. Thirty-Eight speakers made presentations, sixteen of which were from outside the university. In addition to support from the department, the Office of the Dean of the School of Medicine and the MRRC made important financial contributions to our program. Two endowed seminar series continued this year: The Kathleen M. Osborn Lecture Series sponsored Dr. Roger Gosden from the University of Edinburgh and the Abrahams Lecture sponsored Dr. Michael Welsh, University of Iowa.

9/17/92 John Williams, M.D./Ph.D. 
Dept. of Physiology 
University of Michigan
Intracellular Mechanisms in the Regulation of Pancreatic Acinar Cell Secretion

9/14/92 Joan Hunt, Ph.D. 
Department of Pathology, KUMC
Origin and Potential Effects of Cytokines in Female Reproductive Tissues

9/17/92 John Williams, Ph.D. 
Department of Physiology 
University of Michigan
Intracellular Mechanisms in the Regulation of Pancreatic Acinar Cell Secretion

9/21/92 Xiao-Ning Wang (Dissertation Defense) 
Department of Physiology 
KUMC
Effects of Gonadotropins on Ovarian Follicular Recruitment, Growth and Early Embryonic Development in the Cyclic or Hypophysectomized Mouse

9/28/92 Norberto Gonzalez, Ph.D. 
Department of Physiology, KUMC
Systemic O₂ Transport During Exercise in Hypoxia-Acclimated Rats

10/5/92 Bruce Kimler, Ph.D. 
Department of Radiation Biology 
KUMC
Structural and Functional Damage Induced by Irradiation of the Developing Rat Brain

10/12/92 William Kinsey, Ph.D. 
Department of Anatomy, KUMC
Signal Transduction During Fertilization

10/22/92 Martin Sonenberg, M.D./Ph.D. 
Cornell University Medical College and Sloan Kettering Cancer Center
Biologically Active Helix 3 Peptides of Growth Hormone

10/26/92 S. K. Dey, Ph.D. 
Department of Physiology, KUMC
TGF-α/EGF-receptor Signaling in Embryo-Uterine Interactions During Implantation

11/9/92 Joseph S. Tash, Ph.D. 
Department of Physiology, KUMC
Regulation of Sperm Motility by Phosphorylation and Dephosphorylation Cascades
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<th>Date</th>
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<td>11/16/92</td>
<td>Frank Samson (Dissertation Defense) Department of Physiology, KUMC</td>
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<td>11/19/92</td>
<td>Michael J. Welsh, M.D. Howard Hughes Medical Institute University of Iowa</td>
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<tr>
<td>11/23/92</td>
<td>Stanley Nelson, Ph.D. Dept. of Anatomy &amp; Cell Biology KUMC</td>
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<tr>
<td>11/30/92</td>
<td>Sanjoy K, Das, Ph.D. Department of Physiology, KUMC</td>
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<td>12/2/92</td>
<td>Donald W. Pfaff, Ph.D. Laboratory of Neurobiology and Behavior Rockefeller University, NYC</td>
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<td>12/7/92</td>
<td>Rob Zachow Department of Physiology KUMC</td>
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<td>12/14/92</td>
<td>Steven LeVine, Ph.D. Department of Physiology, KUMC</td>
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<tr>
<td>12/21/92</td>
<td>Mark Weiss, Ph.D. Dept. of Anatomy and Physiology Kansas State University</td>
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<td>1/11/93</td>
<td>Lawrence P. Sullivan, Ph.D. Department of Physiology, KUMC</td>
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<td>1/25/93</td>
<td>Andrey Frolov, Ph.D. Department of Physiology, KUMC</td>
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<td>2/1/93</td>
<td>Jeffrey Radel, Ph.D. Dept. of Occupational Therapy Education KUMC</td>
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<td>Thomas J. Gill, III, Ph.D. University of Pittsburgh</td>
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<tr>
<td>2/8/93</td>
<td>Richard Alper, Ph.D. Dept. of Pharmacology, Toxicology and Therapeutics, KUMC</td>
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<td>Neuron Azimuth Sensitivity in Primary Auditory Cortex Revealed by Ear Plugging</td>
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<td>Function of Normal and Mutated CFTR: Clues for Understanding Cystic Fibrosis</td>
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<td>The Role of Transition Metals in Free Radical-Induced Brain Damage</td>
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<td>Unique Features of Epidermal Growth Factor Receptors in the Mouse Uterus</td>
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<td>Molecular Studies of Hormonal Influences on Hypothalamic Neurons</td>
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<td>Morphologic and Steroidogenic Effects of TNFα on Ovarian Theca-Interstitial Cells</td>
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<td>The Role of Reactive Oxygen Species in the Pathogenesis of Multiple Sclerosis</td>
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<td>Afferents to the Supraoptic Nucleus from Subfornical Organ and Tubero mamillary Nucleus</td>
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<td>Fluid Secretion by MDCK Cysts</td>
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<td>Photodestruction of Biological Systems In Vitro Sensitized by Chlorin E6</td>
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<td>Neural Transplantation as a Tool for Experimental Neurobiology</td>
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<td>Molecular Genetics of the MHC Linked Region and the Effect of These Genes on Reproduction</td>
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<td>Cardiovascular and Neuroendocrine Responses to Central Serotonin Administration</td>
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b. In press


De S.K., Paria, B.C., Dey, S.K. and Andrews, G.K. Stage-specific effects of cadmium on preimplantation embryo development and implantation in the mouse. Toxicology.


Dey, S.K., Das, S.K., Paria, B.C., Flanders, K.C. and Andrews, G.K. Expression and binding of transforming growth factor-βs in the mouse embryo and uterus during the preimplantation period. Serono Symposium


Fan, Q. and Smith, P.G. Decreased vasoactive intestinal polypeptide-immunoreactivity of parasympathetic neurons and target innervation following long-term sympathectomy. Regulatory Peptides.


Mewes, K. and Cheney, P.D. Primate rubromotoneuronal cells: parametric relations and contribution to wrist movement. J. Neurophysiology


Smith, P.G. and Beauregard, C.L. Conversion of parasympathetic nerve function from prejunctional inhibition to postjunctional excitation following sympathectomy of rat periorbital smooth muscle. Brain Research.


Wang, X.N. and Greenwald, G.S. Synergistic effects of steroids with FSH on folliculogenesis, steroidogenesis and FSH- and hCG-treated receptors in the hypophysectomized mouse. J. Reprod. Fert.


Zachow, R.J., P.F. Terranova. Involvement of protein kinase C and protein tyrosine kinase pathways in tumor necrosis factor-α induced clustering of ovarian theca-interstitial cells. Molecular and Cellular Endocrinology.


c. Abstracts


The total grant awards, direct and indirect, for FY '93 for principal investigators whose direct costs are credited to the department, was $2,612,936. This excludes Drs. Dey and Johnson, who have their primary appointments in Ob/Gyn. When their grants are included the total is $3,391,183.


Wesley Foundation, Wichita, KS - Growth Factors in Pregnancy Establishment. May 01, 1990 - April 30, 1993. Principal Investigator. $61,000 Direct costs; $10,000 Indirect costs.

NIH - Embryonic Signals in Establishment of Pregnancy in the Pig. August 1, 1991 - July 31, 1994. $75,000 Direct costs. (Subcontract from K-State University)


Lalor Foundation - Role of IGF-I in Implantation. (Postdoctoral Fellowship) September 1, 1990 - August 31, 1992. $28,000 Direct costs.

The Rockefeller Foundation - Postdoctoral Fellowship. July 1, 1993 through June 30, 1995. $50,000 direct costs.

Kansas Health Foundation - Postdoctoral Fellowship. July 1, 1993 through June 30, 1994. $20,000 direct costs.


NSF (EPSCoR) - Chemical Microstructure by Molecular Microscopy. Clifton E. Meloan, P.I. October 18, 1992 through October 17, 1995. Total direct costs $300,000. One year direct costs $100,000.


G. V. Shah: NIH - Paracrine Interactions in Regulation of Prolactin. May 1992 through April 1996. $334,276 total direct costs. $75,733 direct costs for 92-93; $19,691 indirect costs for 92-93.


P. G. Smith: NIH NINCDS - Sympathetic Neuroplasticity. Principal Investigator. Total project period July 1, 1990 - June 30, 1994. Total direct costs $440,000; Indirect costs $216,000. Annual direct costs $105,000; Indirect costs $51,000.


USDA - Trophoblast Conference. Principal Investigator. August 1, 1992 to June 30, 1993. Total direct costs: $6,005; no indirect costs.


American Heart Association - Reactive Oxygen Species and Single Cardiac Cell Function. Co-Principal Investigator with C.M. Tarr. Total grant period 7/01/89 through 6/30/93. $28,500, $29,600, $29,995 direct costs each year.


**Paul D. Cheney**, Ph.D., Professor (Director, MRRC)

**Meetings Attended:**
- **October 18-20, 1992** - attended the MRRC Center Director's meeting held in Washington, D.C.
- **December 3-5, 1992** - attended a meeting in New York City entitled "HIV/AIDS and the Brain" sponsored by the Association for Research in Nervous and Mental Disease, Inc.

**Committees:**
- **Department:**
  - Chairman, Promotions and Tenure Committee
  - Member, Dissertation Committee, Frank Samson
  - Member, Dissertation Committee, Jean Hiebert
- **KUMC:**
  - Member, School of Medicine Promotion and Tenure Committee
  - Member, School of Medicine Advisory Committee on Space
  - Member, School of Medicine Biochemistry Chair Review Committee
  - Member, Kansas MRRC Internal Scientific Advisory Committee
  - Member, Neurology Department Research Committee
  - Coordinator, Kansas City Chapter, Society for Neuroscience

**Editorial and Grant Reviews:**
- Ad hoc reviewer *Journal of Neurophysiology*
- Ad hoc reviewer *Experimental Brain Research*
- Ad hoc reviewer *Neuroscience*
- NIH - Neurology B2 Special Study Section, Committee Chairman

**Honors:**
- Invited to speak at a symposium on Cortical Control of Limb Movement to be held November 13, 1993 at SUNY.

**Teaching activities:**
- Medical Neuroscience
  - 6 hours lecture
  - 16 hours lab - gross brain dissection

**Trainees:**
- Brian McKiernan - Graduate Student
- Joanne Marcario - Postdoctoral Fellow
- Robert Thompson - summer student 1993
Richard L. Clancy, Ph.D., Professor

Meetings attended:
September 23-26, 1992 - Attended the American Physiological Society meeting, 'Biology of Exercise', held in Colorado Springs, CO.
March 28-April 1, 1993 - Attended Experimental Biology meeting held in New Orleans, LA.

Committees:
Departmental:
   Chairman, Graduate Student Affairs Committee
KUMC:
   Member, Graduate Student Council
   Member, Faculty Handbook Revision Committee
   Chairman, Faculty Assembly Council
   Member, Faculty Evaluation Task Force Committee
   Member, Task Force Evaluation Graphic Arts and Photography
State:
   Kansas Board of Regents - Council of Faculty Senate Presidents

Grants reviewed:
   American Heart Association, Kansas Affiliate

Teaching Activities:
   Medical Physiology 800/801
      12 hours lecture - Cardiovascular
      10 hours laboratory
      16 hours conferences
      10 hours computer assisted learning
   Physiology 705 - Advanced Human Physiology
      8 hours lecture
   Prematriculation Course (Minority Students)
      9 hours lecture
      5 hours computer assisted learning

Trainees:
   Robert Whitman - Graduate Student
   Janet Pierce, DSN - Research Project - Center for Behavioral Studies of Fatigue Management, Contractile and Biochemical Changes in Diaphragm Fatigue NIH, NCNR.
Meetings attended:

August 5-8, 1992 - Attended the Serono Symposium on Trophoblast-Endometrial Relationship held in Las Vegas, Nevada as an invited speaker.

September 6-10, 1992 - Attended the Satellite Symposium of Endocrinology of Embryo-Endometrial Interaction held in Bordeaux, France as an invited speaker.

October 31, 1992 - Attended the American Fertility Society Annual Meeting held in New Orleans, LA as an invited speaker.

November 7-9, 1992 - Attended the Biology of Epidermal Growth Factor meeting held in Nashville, Tennessee as an invited speaker.

February 8-17, 1993 - Attended the Indo-US Workshop on Molecular Approaches to Reproduction Research (organized by Fogarty International, NIH) held in Bangalore, India as an invited participant.

Committees:

Departmental:
- Member, Ph.D. Committee, Xing Lu, Physiology Graduate Student
- Member, Ph.D. Committee, Gary Hamlin, Physiology Graduate Student

KUMC:
- Chairman, Search Committee for Microbiology Chair
- Member, Advisory Committee for MRRC
- Member, Search Committee for Chair Selection of Psychiatry Department
- Member, Executive Committee of Society of Research Scholars
- Member, Ph.D. Committee, Lou Chuan, Biochemistry graduate student
- Member, Ph.D. Committee, Kyle Hooper, Biochemistry graduate student
- Member, Ph.D. Committee, Laurie Pan, Pharmacology graduate student

National:
- Member, Organizing Committee, Satellite Symposium of 9th International Congress of Endocrinology on Endocrinology of Embryo-Endometrial Interaction held on September 6-10, 1992, in Bordeaux, France.

Editorial and Grant Reviews:
- Biology of Reproduction
- Journal Reproduction and Fertility (U.K.)
- J. Histochemistry and Cytochemistry
- Development Biology
- Endocrinology
- Molecular Endocrinology
- Australian Journals of Scientific Research
- Molecular Reproduction & Development
- Human Reproduction (UK)
- National Science Foundation
- USDA

Seminars Presented:

October 26, 1992 - presented a departmental seminar entitled "TGF-α/EGF-receptor Signaling in Embryo-Uterine Interactions During Implantation.

May 24, 1993 - presented a seminar to the Department of Anatomy and Cell Biology, KUMC.
Dr. Dey (continued)

Honors:
Invited speaker, Winter Annual Joint Meeting of British and German Society of Reproduction to be held in Aachen, Germany, December 15-18, 1994.

Teaching Activities:
Medical Physiology
12 hours laboratory
18 hours conference
PHSL 809 - Reproductive Graduate Course
6 hours lecture

Trainees:
Karen Kover, Physiology Graduate Student
B.C. Paria, Ph.D. - Postdoctoral Fellow
Xiao-Ning Wang, M.D./Ph.D. - Postdoctoral Fellow
Liqing Fan, M.S. - Research Associate
M. Zubin, Ph.D. - Postdoctoral Fellow
Greg Bongers - Medical Student 1992-93 (placed 1st in 1993 Student Research Forum)
Sharon McCray - Undergraduate Student, KU Lawrence, 1991-93
Ansley Spencer - Undergraduate Student, Wellesley College, Boston, MA 1991-2
Norberto C. Gonzalez, M.D., Professor

Meetings Attended:
August 16-20, 1992 - Attended the symposium on Respiration in Health and Disease: Lessons from Comparative Biology held in Bochum, Germany and presented a lecture.
February 9-13, 1993 - Attended the Eighth International Hypoxia Symposium held at Lake Louise, Alberta, Canada and presented a poster.
March 28 - April 1, 1993 - Attended the Experimental Biology 93 meeting held in New Orleans, LA and presented a paper and co-authored a poster.

Committees:
KUMC
Member, School of Medicine Election Committee
Member, School of Medicine Curriculum Committee
Member, School of Medicine Education Council
Extramural
Member, Research Committee, AHA- Kansas Affiliate

Editorial and Grant Reviews:
Ad hoc reviewer Journal of Applied Physiology
Ad hoc reviewer AJP: Regulatory, Integrative and Comparative Physiology

Seminars presented:
August 17, 1992 - Presented a seminar entitled "Oxygen Transport during Exercise in Rats Acclimated to Environmental Hypoxia" at the Symposium on Respiration in Health and Disease: Lessons from Comparative Physiology, held in Bochum, Germany.
February 18, 1993 - Presented a seminar entitled "Effect of Simulated Altitude on the Oxygen Transport System" at the V.A. Medical Center in Bay Pines, Florida.
September 28, 1992 - Presented a departmental seminar entitled "Systemic O₂ Transport During Exercise in Hypoxia-Acclimated Rats"

Honors:
Honors in Education, Student Voice, 1993
Named President Elect, American Heart Association, Kansas Affiliate

Teaching activities:
Medical Physiology
11 hours lecture - Respiratory Physiology
2 two-hour review sessions
12 conference sessions
4 laboratory sessions

Trainees:
Yoshihiro Moue, M.D., Post Doctoral Fellow
Lars Erwig, Medical Student from Hanover Medical School, Hanover, Germany
Kent Perry, Medical Summer Student, 1992-93
Carl F. Painter, Summer Student, 1992
Meetings Attended:
July 12-15, 1992 - Attended the annual meeting of the Society for the Study of Reproduction held in Raleigh, NC and took part in symposium on 25th anniversary of SSR
January 14-15, 1993 - Attended the Association of Chairman of the Departments of Physiology meeting held in Hutchinson Island, Florida.
March 22-25, 1993 - Attended an NIH workshop on Menopause held in Bethesda, MD

Committees:
Departmental:
Co-coordinator, Mo-Kan Reproductive Workshop
Member, Thesis Committee for Karen Kover
Member, Thesis Committee for Rob Zachow
Member, Thesis Committee for Toni Clinton

National:
Consultant, Cambridge University Press, Chicago
Consultant, Ligand Pharmaceuticals, San Diego, CA
Member, Nominating Committee, Society for the Study of Reproduction

Editorial and Grant Reviews:
ad hoc reviewer - Biology of Reproduction
- J. Reproduction and Fertility
- Therengiology
- Proc. Soc. Exp. Biology and Medicine
- Health Research Council of New Zealand

Seminars presented:
October 22, 1992 - Presented talk to the Department of Obstetrics & Gynecology at Menorah Hospital, KCMO
November 9, 1993 - Presented a seminar to the Department of Anatomy and Physiology at Kansas State University in Manhattan, KS
November 12, 1992 - Presented a seminar at Ligand Pharmaceuticals in San Diego, CA

Academic Honors:
Honors in Education, Student Voice Forum - 1993
Carl Hartman Award, 1993, Society for the Study of Reproduction

Teaching activities:
Physiology 800 - Medical Physiology (Co-coordinator)
9 hours lecture - G.I. Physiology
Physiology 705 - Advanced Human Physiology
6 hours lecture - G.I. Physiology

Trainees:
H. Kishi, D.V.M. - Postdoctoral Fellow
Wei Yuan, Ph.D. - Postdoctoral Fellow
Meetings Attended:
October 25-30, 1992 - Attended the annual Society for Neuroscience meeting held in Anaheim, CA

Committees:
Departmental:
Librarian
Member, Graduate Affairs Committee
KUMC:
Member, MRRC Advisory Committee
Member, MRRC Space Committee
Member, Faculty Library Committee
Alternate Member, Student Union Board of Directors

Editorial and Grant Reviews:
Journal of Neurophysiology
Journal of Neuroscience
Journal of Comparative Neurology
Hearing Research
National Science Foundation
National Research Council Canada
National Research Council Australia

Teaching Activities:
PHYS/ANAT 840 - Medical Neuroscience (Course Director)
6 hours lecture
4 three hour laboratory sessions
Physiology 398 - Neurophysiology for O.T. Students
Course Director (taught by Graduate Students)

Trainees:
Frank Samson - Graduate Student/Postdoctoral Fellow
Donald C. Johnson, Ph.D., Professor

Meetings Attended:
July 12-15, 1992 - Attended the annual meeting of the Society for the Study of Reproduction held at North Carolina State University in Raleigh, NC

Committees:
Departmental:
Ph.D. Thesis committee for Xiao-ning Wang
Ph.D. Thesis committee for Rob Zachow
Ph.D. Thesis committee for Toni Clinton
Ph.D. Thesis committee for Rebecca Flietstra

KUMC:
Ph.D. Thesis committee for Christin Coulter, Pharm-Toxicology student
Ph.D. Thesis committee for Peter Bullock, Pharm-Toxicology student

Editorial and Grant Reviews:
Biology of Reproduction

Seminars presented:
April 23, 1993 - Presented a seminar entitled "Sexual Differentiation of the Central Nervous System" to the Department of Anatomy and Physiology at Kansas State University, Manhattan, KS.

Teaching Activities:
Medical Physiology
7 hours lecture
8 conferences
3 laboratory sessions

Trainees:
Linda Crane, Ph.D. - Postdoctoral Fellow
Sanat Chatterjee, Ph.D. - Postdoctoral Fellow
Steven M. LeVine, Ph.D., Assistant Professor

Committees:
Departmental:
  Graduate Student Advisory Committee
University:
  Chairman, M.D./Ph.D. Advisory Committee
  Member, Medical Faculty Council
  Member, Executive Committee of the Medical Faculty
  Mental Retardation Research Center Advisory Committee
  Member, Thesis Committee for Dale Hogan
  Member, Thesis Committee for Zoia Murresen
  Member, M.D./Ph.D. Advisory Committee
  Member, Student Research Forum Judging Committee
  Coordinator, Neuroscience Journal Club

Seminars presented:
  December 14, 1992 - Presented a departmental seminar entitled "The Role of Reactive Oxygen Species in the Pathogenesis of Multiple Sclerosis"

Honors:
  Invited speaker at the 12th Leukodystrophy National Conference to be held in July 1993 at Northern Illinois University in DeKalb, Illinois.

Teaching Activities:
  PHSL 840 (Medical Neuroscience)
    6 hours lecture
    8 hours laboratory
    1 hour review
  PHSL 810 (Cell Physiology)
    3 hours lecture
  PHSL 784 (Faculty Research Forum)
    1.5 hours

Trainees:
  Christine A. Rasmussen - Physiology Graduate Student
  Stuti Dang, M.D. - Physiology Graduate Student
  Damian Synder - High School Student
Meetings Attended:


October 15-18, 1992 - Attended the inaugural symposium on Molecular Mechanisms of Aging held in Kansas City, MO.

October 25-29, 1992 - Attended the Society for Neuroscience Annual Meeting held in Anaheim, CA and co-authored a poster entitled "Oxidative Stress and Antioxidant Response in Rat Piriform Cortex Associated with Kainic Acid-Induced Seizures".

June 11-26, 1993 - Attended the Neurosciences Research Program entitled "Free Radicals in Brain Function" held at M.I.T. in Cambridge, MA.

Committees:

Departmental:
Scrivener-Scribe
Photographer PRO-TEMPORE

KUMC:
Coordinator/Advisor, Seizure Research Group
Member, Thesis Committee for Maria Romanas, Pharmacology Ph.D. candidate

University:
Coordinator, Free Radical Research Group
Coordinator, KUMC proposal to NIH for Institutional Development Award
Member, Advisory Committee, Kansas Mental Retardation Research Center
Member, Advisory Committee, Center for Biobehavioral Studies of Fatigue Management (School of Nursing, KUMC)
Member, Advisory Committee, Center for Environmental & Occupational Health

State:
Consultant, Kansas City Star science editor

National:
Scientists' Institute for Public Information (Media Resource Service, New York NY)
Consultant, Wall Street Journal

Editorial and Grant Reviews:
Member, Scientific Advisory Board, Encyclopedia of Neuroscience Year Book
Guest Referee for Brain Research
ad hoc reviewer, Research Applications for V.A. Medical Center

Seminars Presented:
February 8, 1993 - Presented seminar entitled "Oxygen Free Radicals in Brain Damage" to the University of Kansas Discussion Club, Lawrence campus
March 2, 1993 - Presented a seminar entitled "Free Radicals in Aging and Neurodegenerative Diseases" to the KUMC Aging Center
April 20, 1993 - Presented a seminar entitled "New Program Development on Free Radicals in Brain Damage - A Report" to the MRRC External Advisory Committee

June 30, 1993 - Presented a seminar entitled "Peptides, Oxygen Free Radicals, Alzheimer's Disease" for the University of Kansas EPSCOR Program (NIH), Lawrence campus

Trainees:

Matthew Layton - M.D. (Ph.D. candidate with T.L. Pazdernik)
Yumi Kamijo, M.D. (Ph.D. candidate at Showa University, Tokyo, Japan)
Maria Romanas - M.D./Ph.D. candidate with T.L. Pazdernik)
Jennifer Wagner - M.D./Ph.D. candidate with T.L. Pazdernik)
Patrick Mullins - summer student with T.L. Pazdernik)
Alison Draper (Ph.D. candidate with T.L. Pazdernik)
Girish Shah, Ph.D., Adjunct Associate Professor

Meetings Attended:
  May, 1993 - Attended the annual meeting of the American Urologists Association held in San Antonio, Texas and made a podium presentation.
  June, 1993 - Attended the annual meeting of the Endocrine Society held in Las Vegas, Nevada and gave a poster presentation.

Committees:
  Local:
    Member, Research and Development Committee, V.A. Medical Center

Editorial and Grant Reviews:
  American Journal of Physiology: Endocrinology & Metabolism section
  Merit Review applications, Department of Veterans Affairs

Seminars Presented:
  May, 1993 - Presented a departmental seminar entitled "Regulation of Prolactin Secretion"

Honors:
  Invited speaker at the Gordon Conference on Prolactin to be held in January, 1994

Teaching Activities:
  PHSL 705 - Advanced Human Physiology
    10 hours lecture
    4 review sessions

Trainees:
  Qing-Xue Zhang - Post-doctoral Fellow
  Zuhang Li - Post-doctoral Fellow
  Walter Rayford - Resident
  Vo, Dai Xuan - Summer Student
Meetings Attended:

October 22-24, 1992 - Attended the Neurology B Study Section Subcommittee 2 Meeting held in San Pedro, CA
October 25-28, 1992 - Attended the annual meeting of the Society for Neuroscience in Anaheim, CA and presented a poster
February 16-18, 1993 - Attended the Neurology B Study Section Subcommittee 2 Meeting held in Bethesda, MD
April 5-7, 1993 - Attended the 21st annual meeting of the Society for Neurovegetative Research held in Bologna, Italy and presented a paper
June 21-23, 1993 - Attended the Neurology B Study Section Subcommittee 2 Meeting held in Bethesda, MD

Committees:

Departmental:
- Member, Graduate Student Advisory Committee
- Chairman, Dissertation Committee for Jean Hiebert, Physiol. Ph.D. candidate
- Member, Dissertation Committee, Frank Samson, Physiology Ph.D. candidate
- Member, Dissertation Committee, Chris Rasmussen, Physiol. Ph.D. candidate
- Member, Dissertation Committee, Brian McKiernan, Physiol. Ph.D. candidate

KUMC:
- Chair, Institutional Animal Care and Use Committee
- Member, Faculty Assembly Research Committee
- Chair, Student Promotions Subcommittee of the Academic Committee
- Member, Faculty Assembly Committee
- Member, Biochemistry Chair Review Committee
- Member, Dissertation Committee, Tony Zink, Pharmacology Ph.D. candidate
- Member, Dissertation Committee, Lawrence Davidow, Pharmacology Ph.D. Candidate

Local:
- Member, Research Committee, American Heart Assoc., Kansas Affiliate

National:
- Chairperson, Neurology B2 Study Section

Teaching activities:

Medical Physiology
- 2 hours lecture
- 2 laboratory sessions

Medical Neuroscience
- 3 hours lecture
- 8 hours laboratory

Physiology 705 (Advanced Human Physiology)
- 10 hours lecture
- 3 review sessions
Dr. Smith (continued)

Trainees:

Jean Hiebert, Physiology Ph.D. Candidate
Qin Fan, Visiting Scientist from Pharmacology Branch, Drug Research Center, Guangzhou Pharmaceutical Corp.
Angela Stapleton, Medical Student
Curtis Beauregard, M.D./Ph.D. student
Meetings Attended:
July, 1992 - Attended the Gordon Research Conference on Reproductive Tract Biology held in Plymouth, New Hampshire
August, 1992 - Attended a Serono U.S.A. symposium on "Trophoblast Cells: Pathways for Maternal-Embryonic Communication" held in Las Vegas, Nevada
June, 1993 - Attended the Annual Meeting of the Endocrine Society held in Las Vegas, Nevada and chaired a session on "Fetal-Placental Endocrinology"

Committees:
Departmental:
Member, Graduate Student Advisory Committee
Member, Dissertation Committee for Jean Hiebert (Physiology)
Member, Dissertation Committee for Rebecca Flietstra (Physiology)
Member, Dissertation Committee for Karen Kover (Physiology)
Member, Dissertation Committee for Xiao-Ning Wang (Physiology)
KUMC:
Member, Institutional Animal Care and Use Committee
Member, Biological Lecture Series Seminar Program Committee
Member, Physiology Chair Search Committee
Member, Advisory Committee for the KUMC Hispanic Center of Excellence
Member, Advisory Committee for the Center for Reproduction Research
Member, Dissertation Committee for Sen Xiao (Biochemistry)
Member, Dissertation Committee for Xiaoming Zhang (Anatomy)
Member, Dissertation Committee for Gang Lian (Anatomy)
National:
Organizer of the USA sponsored Serono Symposium entitled "Trophoblast cells: Pathways for Maternal-embryonic communication, held August 6-9th, 1992 in Las Vegas, Nevada.
Ad hoc member of Human Embryology and Development Study Section

Editorial and Grant Reviews:
ad hoc reviewer for - Endocrinology
- Biology of Reproduction (Member, Editorial Board)
- Journal of Reproduction and Fertility
- Molecular Endocrinology
- Placenta
- Histochemical Journal
- Cancer Research
- Differentiation
- USDA Competitive Research Grants Program
- Proceedings of National Academy of Sciences
- Genes & Development

Seminars presented:
July, 1992 - Presented a seminar entitled "Trophoblast Cell Differentiation" at the Gordon Research Conference on Reproductive Tract Biology held in Plymouth, New Hampshire

March, 1993 - Presented a seminar entitled "Endocrine Differentiation of the Placenta" At the Reproductive Biology Research Center, Vanderbilt University, Nashville, TN

May, 1993 - Presented a seminar entitled "Trophoblast and Decidual Cell Signalling Systems" to the Department of Anatomy & Cell Biology, KUMC

Teaching activities:
Medical Physiology
8 hours of lecture
10 conferences
4 laboratory sessions
Physiology 810 - Cell Physiology
4 hours lecture
Physiology 808 - Reproductive Physiology
2 hours lecture
Physiology 809 - Pregnancy, Growth & Development and Aging
4 hours lecture
Anatomy 854 - Developmental Biology
1.5 hours lecture

Trainees:
Kazuyoshi Hashizume - Postdoctoral Fellow
Toshiya Yamamoto - Postdoctoral Fellow
Xing-Jian Lu - Graduate Student (completed Masters Degree June '93)
Gary Hamlin - Graduate Student
Melissa Roberts - Graduate Student
Christine Rasmussen - Graduate Student
Daniel Prohaska - Summer Student (summer of 1992)
Jason Wittmer - Summer Medical Student (summer of 1993)
Lawrence P. Sullivan, Ph.D., Professor

Meetings Attended:
- November 1992 - Attended American Society of Nephrology annual meeting held in Baltimore, MD
- April 1993 - Attended meetings of the Federation of American Societies for Experimental Biology held in New Orleans, LA

Committees:
- Departmental:
  - Formulated schedule for Medical Physiology course
- Local:
  - Chairman, Faculty Resources and Planning Committee
  - Member, Research Committee, School of Medicine
  - Member, Faculty Council, School of Medicine
  - Member, Graduate Travel Committee, Graduate School
  - Member, Steering Committee, Kirmeyer Fitness Center
  - Coordinator, Renal Journal Club
- National:
  - State Network Chair, American Society of Nephrology
  - Deputy Editor, Journal American Society of Nephrology

Editorial and Grant Reviews:
- Journal American Society of Nephrology
- Ad hoc reviewer, American Journal Physiology

Seminars Presented:
- January 11, 1993 - Presented a departmental seminar entitled "Fluid Secretion by MDCK Cysts"

Teaching Activities:
- Medical Physiology
  - 11 hours lecture - Renal Physiology
  - 12 hours problem sessions
  - 8 conferences
  - 4 laboratory sessions
- Physiology 784 (Faculty Research Program)
  - 2 hours lecture
- Physiology 800 (Cell Physiology)
  - 7.5 hours lecture
- Physiology 820 (Advanced Renal Physiology)
  - 32 hours lecture

Trainees:
- Darren Wallace, Graduate Student
- Stuti Dang, Graduate Student
Merrill Tarr, Ph.D., Professor

Teaching Activities:
Medical Physiology
  12 hours lecture
  10 conference sessions
  4 laboratories
Physiology 810 (Cell Physiology)
  8 hours lecture

Trainees:
  Andrey Frolov, Post-Doctoral Fellow
Meetings Attended:
July 29-31, 1992 - Attended the Society for the Study of Reproduction meeting held in Raleigh, NC
November 15-19, 1992 - Attended the American Society for Cell Biology meetings held in Denver, CO

Committees:
Department:
Member, Graduate Student Affairs Committee
Member, Thesis committee for Rob Zachow
Director, Departmental graduate subprogram: Molecular and Cellular Physiology

KUMC:
Member, Faculty and Education Committee
Chairman, Special Committee to Review a Student Grievance

Editorial and Grant Reviews:
Biology of Reproduction
Cell Motility and the Cytoskeleton
Cell Physiology
Developmental Biology
Journal of Cell Biology
J. Andrology
Journal of Reproduction and Fertility
Molecular Endocrinology
NIH

Seminars presented:
Presented a seminar to the Reproduction Group, KUMC
Presented a seminar to the Midwest Sea Urchin Group

Teaching activities:
PHSL 810 (Cell Physiology) - Course Coordinator
  5 lectures, 1.5 hours each
Medical Physiology
  8 conference sessions
  4 laboratory sessions
Cell Biology (Anatomy and Cell Biology course)
  2 lectures, 1.5 hours each
Developmental Biology (Anatomy and Cell Biology course)
  1 two hour lecture

Trainees:
Matthew Troester, Undergraduate summer student
Meetings Attended:

July 9-11, 1992 - Attended the IX Ovarian Workshop held at Chapel Hill in North Carolina and was co-author of two presentations.


September 30 - October 2, 1992 - Attended the Reproductive Biology Study Section at NIH, Bethesda, MD.

February 8-10, 1993 - Attended the Reproductive Biology Study Section at NIH, Bethesda, MD.

February 26-27, 1993 - Attended the Society for the Study of Reproduction Winter Board of Directors Meeting held in New Orleans, LA

March 12-13, 1993 - Attended the Women's Research Institute Midwest Colloquium on Reproduction held in Wichita, KS

May 19-22, 1993 - Attended the 84th Annual Meeting of the American Association of Cancer Research held in Orlando, FL and co-authored a presentation

Committees:

Departmental:

Member, Physiology Schedule Review Committee
Member, Ph.D. Graduate Committee for Rob Zachow
Member, Ph.D. Graduate Committee for Toni Clinton

KUMC:

Member, MRRC Advisory Board
Member, MRRC Histology Review Committee
Member, Radiation Safety Committee
Member, International Center for Cell Science, KUMC Advisory Board
Member, School of Medicine Research Committee
Member, OB/GYN Search Committee for Reproductive Endocrinology
Member, OB/GYN Search Committee for Cytogeneticist

State:

Member, Missions Review Committee, VA Medical Center
Consultant, Miles Corporation, Stillwell, KS

National:

Member, Reproductive Biology Study Section NICHD, 1989-93
Member, Editorial Board, Journal of Endocrinology
Member, Promotion Review, EPA, Research Triangle Park, NC
Member, Board of Directors and Secretary, Society for the Study of Reproduction
ad hoc member, Dissertation Committee, Kumkum Aswol, Department of Zoology, Banaras Hindu University, Varanasi

Editorial and Grant Reviews:

Endocrinology
Biology of Reproduction
Journal of Clinical Endocrinology & Metabolism
NIH - Reproductive Biology
Seminars Presented:
July 16, 1992 - Presented a seminar entitled "Ovarian Tumor Necrosis Factor alpha" to the Departments of Physiology and Gynecology & Obstetrics, University of Maryland, Baltimore, MD
November 10, 1992 - Presented a seminar entitled "Ovarian Tumor Necrosis Factor alpha" to the Department of Gynecology & Obstetrics, University of Texas Health Sciences Center, Houston, TX
December 18, 1992 - Presented a seminar entitled "Ovarian Tumor Necrosis Factor alpha" to the Department of Cell Biology at the University of Medicine and Dentistry of New Jersey in Stratford, NJ
April 20, 1993 - Presented a seminar entitled "Ovarian Tumor Necrosis Factor alpha" to the Department of Gynecology & Obstetrics, Harvard University, Boston, MA

Teaching Activities:
Medical Physiology - Course Coordinator
  8 conferences
  4 laboratories
Physiology 830 (Cellular Physiology)
  4 hours lecture
Physiology 808-809 (Reproduction)
  2 discussion hours with graduate students

Trainees:
Jennifer Marcinkiewicz, Ph.D., post-doctoral fellow
Yan Zong Zhe, M.D., post-doctoral fellow
Toni Clinton, graduate student
Rob Zachow, graduate student
Amitabh Krishna, Ph.D., Visiting Scientist
Jan Uilenbroek, Ph.D., Visiting Scientist
John W. Trank, Ph.D., Professor

Meetings Attended:
September 11-13, 1992 - Attended the 'Computers in Physiology Teaching' meeting held in Newport, Oregon. Invited discussant of "Cardiovascular Function Laboratories" application to medical physiology

Committees:
Departmental:
Electronic shop supervisory committee
Teaching laboratory review committee

KUMC:
Member, Faculty Assembly Informatics Committee
Member, Information Resources Committee

Local:
Member, Biomedical Electronics Technician Advisory Committee, Johnson County Community College
Member, Board of Directors Greater Kansas City Div., American Heart Association
Consultant, Interex Division of Merck Industries, Lawrence, KS
Consultant, Marion Merrell Dow, Inc. of Kansas City, MO

State:
Member, Board of Directors, American Heart Association, Kansas Affiliate
Chairman, Bylaws Revision Committee, American Heart Association, Kansas Affiliate

Seminars:
April 21, 1993 - Invited participant in "Info '93", KUMC and presented talk entitled "Interactive Video Aids in Teaching Cardiovascular Physiology".

Honors:
Invited to participate in the "Sylvia Beach Conference on Computers in Physiology Teaching" to be held in Newport, Oregon September 10-12, 1993.

Teaching Activities:
Physiology 800 (Medical Physiology)
9 hours lecture - Electrocardiography, Hemodynamics, Blood Pressure Regulation, Venous Circulation, System Dynamics
8 conferences (16 hours)
24 hours laboratory teaching and supervision
Laboratory management for all Medical Physiology Laboratories

Physiology 842 (Medical Neuroscience)
2 hours Optics lecture - demonstration

Physiology 705 - Advanced Human Physiology
6 hours lecture - Respiration
Dennis P. Valenzeno, Ph.D., Associate Professor

Meetings Attended:
September 7-12, 1992 - Attended the 11th International Congress on Photobiology held in Kyoto, Japan
June 26-30, 1993 - Attended the 21st Annual Meeting of the American Society for Photobiology held in Chicago, IL

Committees:
Departmental:
Seminar coordinator
Chairman, Alan Thompson Award Committee
Member, Evaluation Committee for Research Assistant Professor appointment

Local:
Member, Pre-Matriculation Program Steering Committee

National:
Member, Publication Committee, American Society Photobiology

International:
Member, Scientific Advisory Committee for the 5th European Congress of Photobiology

Editorial Reviews:
ad hoc reviewer - Photochemistry and Photobiology
ad hoc reviewer - Biochimica et Biophysica Acta
ad hoc reviewer - Natural Products Letter

Seminars Presented:
June 30, 1993 - Presented an invited symposium talk entitled "Membrane as Photodynamic Targets" at the American Society for Photobiology meeting held in Chicago, IL

Honors:
Student Voice Teaching Award, Honors in Education, 1992-93
Selected as member to the International Scientific Advisory Committee for the 5th European Congress of Photobiology to be held in Marburg, Germany, September 1993
Nominee for Secretary of the American Society for Photobiology

Teaching Activities:
Medical Physiology
  6 hours lecture
  12 conferences
  3 laboratories
PHSL 705 - Advanced Human Physiology
  8 hours lecture
  2 hours review
PHSL 810 - Cell Physiology
  4 hours lecture
Health Careers Pathways Program
  7 hours lecture
Dr. Valenzeno (continued)

Trainees:
  Andrey Frolov, post-doctoral fellow
  Jason Anderson, high school student
  Vance Burns, summer medical student
Meetings Attended:
- September 30-October 2, 1992 - Attended the Biochemical Endocrinology Study Section at NIH, Bethesda, MD
- October 25-30, 1992 - Attended 22nd annual meeting of the Society for Neuroscience held in Anaheim, CA
- June 8-12, 1993 - Attended the 75th annual meeting of the Endocrine Society held in Las Vegas, NV

Committees:
Departmental:
- Chairman, Dissertation Committee, Joanne Mathiasen
- Chairman, Dissertation Committee, Sandra Elliott
- Chairman, Dissertation Committee, Rebecca Flietstra
- Member, Dissertation Committee, Frank Samson
- Member, Graduate Committee, Gary Hamlin
- Member, Graduate Committee, Brian McKiernan
- Member, Graduate Committee, Karen Kover
- Member, Master’s Committee, Xing-Jian Lu

KUMC:
- Chairman, Medical Faculty Teaching Awards Committee
- Member, Health Career Pathways Program Advisory Committee
- Member, MRRC Advisory Committee and Space Subcommittee
- Member, Promotion and Tenure Committee
- Member, Dissertation Committee, Mike McMaster, Biochemistry Graduate Student
- Member, Microbiology Chair Search Committee
- Director, Center for Research in Reproduction

Editorial and Grant Reviews:
- Editorial Board - Endocrinology
- ad hoc reviewer - Neuroendocrinology
  - Life Sciences
  - Molecular and Cellular Neuroscience
  - Pharmacological Research
  - Journal of the American Society of Nephrology
  - Medical Physiology textbook by Rhoades & Tanner

Seminars Presented:
- March 17, 1993 - Presented a seminar entitled "Placental Factors Alter Hypothalamic Neuronal Function and Prolactin Secretion" as a candidate for the chair of Physiology, KUMC

Teaching Activities:
- Physiology 800 - Medical Physiology
  - 10 conferences
  - 4 lab sessions
Dr. Voogt *(continued)*

PHSL/ANAT 840 - Medical Neuroscience
   1 lecture
PHSL 808/809 - Reproduction
   several one-on-one sessions
Prematriculation Course - Minority Students
   6 hours lecture

Trainees:
   Rebecca Flietstra - doctoral student, NSF Fellowship
   Joanne Mathiasen - doctoral student
   Lydia Arbogast - postdoctoral - NRSA