1. Department Roster

a. Academic Staff

A. M. Thompson, Ph.D., Professor and Acting Chairman (and Associate Dean for Graduate Studies)
E. B. Brown, Jr., Ph.D., Professor (and Vice-Chancellor for Faculties and Academic Affairs)
D. C. Johnson, Ph.D., Professor (Joint appt. Ob-Gyn)
F. E. Samson, Ph.D., Professor (and Director of Ralph Smith Center for Mental Retardation Research)
L. P. Sullivan, Ph.D., Professor
R. L. Clancy, Ph.D., Associate Professor
N. C. Gonzalez, M.D., Associate Professor
G. N. Loofbourrow, Ph.D., Associate Professor
J. B. Rhodes, M.D., Associate Professor (Joint appt. Medicine)
C. W. Tarr, Ph.D., Associate Professor
J. W. Trank, Ph.D., Associate Professor
J. D. Wood, Ph.D., Associate Professor
P. A. Hensleigh, M.D., Ph.D., Assistant Professor (Joint appt. Ob-Gyn)
W. K. Legler, Ph.D., Assistant Professor
D. N. Erwin, Ph.D., Instructor
K. L. Goetz, M.D., Ph.D., Adjunct Associate Professor
Bin Ching Wang, Adjunct Instructor

b. Postdoctoral Fellows

Louis Green, M.D.
Hafiez Soewoto, M.D., Dept. of Biochemistry, University of Indonesia, Jakarta, Indonesia, July 1, 1975 - July 1, 1976
Tatsuro Sashida, M.D., Dept. of Ob-Gyn, Tokyo University, May 1, 1973 - September 1, 1975

Research Associate - H. C. Cheng, Ph.D.

c. Graduate Students

<table>
<thead>
<tr>
<th>Name</th>
<th>Prelims</th>
<th>Candidate For</th>
<th>Degree Requirements Fulfilled</th>
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<tbody>
<tr>
<td>Lynn R. Brann</td>
<td></td>
<td>Ph.D.</td>
<td></td>
</tr>
<tr>
<td>Lawrence A. Feldman (Entered 7/75 &amp; Withdrew 12/75)</td>
<td></td>
<td>Ph.D.</td>
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<tr>
<td>Richard A. Fenton</td>
<td>3/30/76</td>
<td>Ph.D.</td>
<td></td>
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<tr>
<td>Galen W. Mitchell (Entered 7/75 &amp; Dropped 5/76)</td>
<td></td>
<td>Ph.D.</td>
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<tr>
<td>Noel W. Stoutenburg (Dropped 4/76)</td>
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<td>Ph.D.</td>
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<tr>
<td>David R. Strome</td>
<td></td>
<td>Ph.D.</td>
<td></td>
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<tr>
<td>Dan F. Watson</td>
<td></td>
<td>Ph.D. &amp; M.D.</td>
<td></td>
</tr>
<tr>
<td>Steven N. Yellon (Entered 7/1/75 &amp; Dropped 5/76)</td>
<td></td>
<td>Ph.D.</td>
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</tbody>
</table>
Notes concerning graduate students:

On Graduate Student Research Day, March 12, David Strome presented a paper on "HCO₃⁻ or H⁺ flux in normal and beta-blocked hearts during hypercapnia" and Richard Fenton presented a paper on "The effect of dibutylryl cyclic AMP and glucagon on cardiac muscle pH".

In April at the Federation meetings in Anaheim, California Richard Fenton presented a paper on "The effect of dibutylryl cyclic AMP on cardiac muscle pH", David Strome presented a paper on "The effect of beta adrenergic blockade on myocardial bicarbonate transfer during hypercapnia", and Lynn Brann presented a paper on "Electrical stimulation of the large intestine of piebald mice with hereditary megacolon".

Lynn Brann is Secretary-Treasurer of the Graduate Student Council and the Area III Graduate Student representative to the Lawrence campus. She was named to Who's Who Among Graduate Students, 1975.

Richard Fenton taught physiology in June to the students enrolled in the Summer Enrichment Program.

d. Research Fellow from Macalester College (Summer of 1976)

James Johnson - Dr. Sullivan

2. COURSES TAUGHT

101 - Elementary Physiology (F), part of a 1,000 hour course for Emergency Care. Taught by Dr. Thompson, Ms. Betti Rieber and graduate students. Enrollment 21.

388 - (F and S) Human Physiology, undergraduate physiology course. Taught by Drs. Legler, Trank and Erwin and graduate students. Enrollments 82 and 36.

800 - (770 & 771) - Medical Physiology. All medical students, plus 8 graduate students. Taught by staff.

825 - Biology of Sex. 2 hours (FO). Taught by Dr. Johnson. Enrollment 14.

830 - Cardiovascular Physiology. 3 hours (FO). Taught by Drs. Clancy, Tarr, Trank and Gonzalez. Enrollment 3.
3. ACTIVITIES OF STAFF (Grants and papers are shown in later sections)

Alan M. Thompson, Ph.D., Professor and Acting Chairman

Associate Dean for Graduate Studies - in charge of graduate school affairs at the Medical Center.

In charge of Biological Science Lecture Series and Area College Basic Science Seminars.

Member of Central Administrative Planning Committee for the new building programs with specific subcommittee responsibility for the new Basic Science Building (the Orr-Major Hall).

Elected President of the Kansas City Chapter of the Society for Neuroscience at their November meeting.

Secretary of Society of Sigma Xi chapter for the second year.

October 5-10, 1975 - Attended the Fall meeting of the American Physiological Society in San Francisco.

December 1-3, 1975 - Attended the meetings of the Council of Graduate Schools and the Biomedical Task Force in Atlanta, Georgia.

June 2-5, 1976 - Attended Symposium on Aging Brain and Senile Dementia in Boston.

Hosted various high school and college student groups visiting the department.

E. B. Brown, Jr., Ph.D., Professor

In addition to his duties as Vice-Chancellor of Faculties and Academic Affairs, assisted with the teaching of the Respiration section of the Medical Physiology course.

September 27-28, 1975 - Was installed as president of the Kansas Heart Association at the annual meeting in Wichita.

Continues as Chairman of the Finance Committee of the American Physiological Society.

Serves on Council of the American Physiological Society.

Donald C. Johnson, Ph.D., Professor


August, 1975 - Gave lecture at the University of Oregon School of Medicine, Portland, Oregon.

August 20, 1975 - Attended meeting of the American Institute of Biological Sciences at Oregon State University, Corvallis, Oregon.

Member of Editorial Board of "Biology of Reproduction".

Frederick E. Samson, Ph.D., Professor

October 9-10, 1975 - Attended meeting of the Directors of Mental Retardation Research Centers in Denver at the University of Colorado Medical Center.

October 20-22, 1975 - Held a conference, which he organized, on Neuroanatomical Functional Mapping at the MIT Neurosciences Research Program.

November 2-6, 1975 - Attended annual meeting of the Society for Neuroscience in New York City, at which a paper was presented by J. A. Donoso on work done in Dr. Samson's lab.

November 11-12, 1975 - Sigma Xi Regional Lecturer at Baylor University in Waco, Texas. His lecture: Physical Basis of Brain Function.


March 19, 1976 - Gave closing lecture on "Physical Basis of Brain Function" to a workshop for undergraduate college teachers at the University of Kansas in Lawrence.

April 28-29, 1976 - Gave lectures on Microtubules to the Department of Pharmacology at the University of Tennessee in Memphis.

June 14 - July 19, 1976 - Was selected to participate in a five week session of the Neurosciences Research Program at MIT in Boston.

Lawrence P. Sullivan, Ph.D., Professor

September 27-28, 1975 - Attended annual meeting of the Kansas Heart Association in Wichita.

October 5-10, 1975 - Attended the Fall meeting of the American Physiological Society in San Francisco. Was co-author of a paper entitled "Kinetic analysis of potassium transport in the bullfrog kidney", which was presented by Dr. Donald Deeds.

November 24-25, 1975 - Attended meeting of the American Society of Nephrology in Washington, D.C.


April 12-16, 1976 - Attended meetings of the Federation of American Societies for Experimental Biology in Anaheim, California.

June 3-4, 1976 - Visited the Physiology Department at West Virginia University Medical Center and presented a seminar.

Reviewed manuscripts for the American Journal of Physiology.

Vice President and President Elect of the KUHC Sigma Xi Club.

Member of the Academic Committee.

Member of the Appeals Committee for Faculty Promotions.

Member of the University Learning Environment Improvement Committee.

Member of the Department Fletcher Fund Committee.

Member of the Department Admissions Committee.
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Richard L. Clancy, Ph.D., Associate Professor

September 27-28, 1975 - Attended annual meeting of the Kansas Heart Association in Wichita.

October 5-10, 1975 - Attended Fall Meeting of the American Physiological Society in San Francisco.

February 16, 1976 - Gave lecture on Acid-Base Chemistry at a Continuing Education for Health Workshop on Emergency Care.

April 12-16, 1976 - Attended the meetings of the Federation of American Societies for Experimental Biology in Anaheim, California.

Member of the Program Coordinating Committee of the Kaw Valley Tri-County Heart Association.

Member of Search Committee for new Chairman for Department of Pathology.

Departmental representative for the Biological Science Lecture Series.

Reviewed papers for the Kansas Heart Association.

Directed schedule preparation for the Medical Physiology course.

Overseer of the student lab and lab manual preparation.

Member of the Department Committee on Guest Lecturers.

Gave presentations to groups of visiting high school students.

Directed research of Richard Fenton, graduate student.

Norberto C. Gonzalez, M.D., Associate Professor

October 5-10, 1975 - Attended the Fall meeting of the American Physiological Society in San Francisco.

April 12-16, 1976 - Attended the meetings of the Federation of American Societies for Experimental Biology in Anaheim, California.

Director of departmental seminars for the third year.

Chairman of Department Committee on Guest Lecturers.

Directed research of David Strome, graduate student.

G. N. Loofbourrow, Ph.D., Associate Professor

Medical Center Service:

Served on Basic Science Internal Planning Subcommittee for new Basic Science Building.

Department duties:

Librarian. Book and subscription orders; preparation of journals for bindery; correspondence and follow-up on orders to State Printer for binding; overseeing arrangement of books, etc.

Teaching aids. Arranging for previews of films, slides, tapes; coordination of department efforts for machine teaching, programmed teaching; selection and ordering of visual aid hardware and software; preparation of videotapes.
Graduate Admissions Committee Chairman (Committee for recruiting and evaluating applicants for graduate study in PHSL). Correspondence and interviews with students inquiring about graduate work and with those applying for admission to the Graduate School. Revision of material for Peterson's Guide and correspondence with publisher.

Temporary Advisory Committees. Appointing and chairing a committee to advise each new graduate student.

Graduate Course Announcements. Preparation and distribution of announcements of graduate courses offered each semester.

Old Exam File. Handles old exam file.

Conference Folders. Oversees the preparation of these, and the placing of copies in Clendening Library and our office.

Office Details. Signing time sheets, change-of-status personnel forms, non-academic appointment and change of appointment forms, purchase orders, routine work orders, pharmacy requisitions, travel requests, vouchers, etc.

Fulfilling duties of Department Chairman when Acting Chairman is unavailable.

Serving as Departmental Representative on Graduate Committee.

Departmental Representative for Affirmative Action.

Gave presentations to groups of visiting students.

James B. Rhodes, M.D., Associate Professor

National Meetings Attended:
October 20-22, 1975 - American College GI, Las Vegas, Nevada
February 22-24, 1976 - Hyperalimentation, Massachusetts General Hospital, Boston
March 6, 1976 - Midwest Gut Club, Chicago, Illinois
April 11-15, 1976 - FASEB, Anaheim, California
May 24-26, 1976 - American Gastrointestinal Association, Miami Beach, Florida
May 27-28, 1976 - American Society for Gastrointestinal Endoscopy, Miami Beach, Florida

Presentations:
March 1, 1976 - Phi Zeta Res. Day - College of Veterinary Medicine, St. Paul, Minn.

Member of Animal Care Committee.

Member of Curriculum Committee, Department of Medicine

Member of the Vice-Chancellor's Advisory Committee

Adviser to Graduate Students Beth Buess and Sarah McCammon, both in the Department of Dietetics and Nutrition.

Honors and Awards
S. McCammon, Presentation Award, on Graduate Student Research Day, March 1976.

Special Recognition Award, Department of Medicine for Distinguished Service, June 1976.

Current Research Activities
- Metoclopramide for upper GI motility disturbances
- Oral electrolyte overload for cleansing the colon
- Comparison of elemental diets in normal people
- Cimetidine for benign gastric ulcer
- Hydrolysis of peptides by intestinal peptidases

Support
- J. B. Reynolds Foundation
- Robins Company
- Smith, Kline and French Co.

Teaching Activities
- 5 hours Physiology lectures
- 2 hours Dietetics and Nutrition
- 1 hour Biochemistry

This does not include clinically related activities connected with his joint appointment.

C. Merrill Tarr, Ph.D., Associate Professor

March 4-6, 1976 - Was member of site visit team from National Institutes of Health to Duke University.

June 18, 1976 - Gave a speech to the Kaw Valley Heart Association.


Reviewed grant applications submitted to National Institutes of Health and National Science Foundation.

Departmental representative to Education Committee.

Member of Department Fletcher Fund Committee.

John W. Trank, Ph.D., Associate Professor

September 27-28, 1975 - Attended the annual meeting of the Kansas Heart Association in Wichita.

October 27-31, 1975 - Visited Brown University in Providence, Rhode Island and Duke University in Durham, North Carolina to review the biomedical engineering programs at these schools.

November 22, 1975 - Presented a review of bioengineering to the Science Pioneers at Midwest Research Institute.

December 6, 1975 - Attended the board of directors meeting of the Kansas Heart Association in Topeka.


March, 1976 - Attended the Biomedical Engineering Review panel meeting of the National Institutes of Health in Bethesda, Maryland.
Member of the Board of Directors of the Kansas Heart Association.

Member of the Great Plains Regional Research Review Committee of the American Heart Association.

Chairman of the University of Kansas Medical Center Biomedical Engineering Study Committee.

Member of the Clinical Process Advisory Committee.

Evaluated equipment for teaching application in the new Basic Sciences building (Orr-Major Hall). This included survey of large screen TV projection equipment suitable for auditorium use and a detailed evaluation of recording and analytical equipment for physiology teaching laboratories.

Director of Department Electronics Shop.

Jack D. Wood, Ph.D., Associate Professor

September 5, 1975 - Gave talk entitled "Motility of the Large Intestine of Piebald Mice with Hereditary Megacolon" at 5th International Symposium on Gastrointestinal Motility at Leuven, Belgium.

September 10-13, 1975 - Attended the European Neurosciences Congress in Munich.

September 14-30, 1975 - Did collaborative work with Dr. Claus Mayer at the Physiological Institute in Munich.

September 17-20, 1975 - Attended combined meetings of the German and Austrian Physiological Societies in Vienna.

Received award from the Alexander von Humboldt Foundation for intercontinental travel and for time in Europe to visit the institutes working in his special fields of research. Departed for Germany March 1 and is a visiting professor at the Physiological Institute at the University of Munich until the first part of November.

March 1-April 1, 1976 - Attended the Goethe Language Institute at Grafing, Germany.

June 17-19, 1976 - Visited Physiological Institute of the University of Marburg, West Germany. Presented seminar on "Neurophysiology of Auerbach's Plexus".

June 25, 1976 - Gave seminar on "Neural Control Intestinal Motility" at the Physiological Institute, University of Munich.

June 30-July 3, 1976 - Attended annual convention of the Alexander von Humboldt Foundation in Bonn, West Germany.

Member of the Department Admissions Committee to screen graduate student applications.

Member of the Department Committee on Outside Speakers.

Directed research of Lynn Brann, graduate student.
Paul A. Hensleigh, M.D., Ph.D., Assistant Professor

May 4-5, 1976 - Attended meeting of NIH Grant Review Committee, Bethesda, Maryland.

May 24, 1976 - Lectured and served on panel for symposium on "Role of Community Nurse In Perinatal Care in Kansas".

June 7-11, 1976 - Attended Harvard Genetics Course, Boston, Massachusetts.


Participated in over a dozen other special educational programs in Kansas and Missouri during the year.

Attended 31 other meetings in connection with work in Ob-Gyn Department.

Committees:
- KUHC Human Ethics Committee
- KUHC Radiation Safety Committee
- KUHC Pediatrics Departmental Review Committee
- KUHC Perinatal Obstetric Advisory Board
- KUHC Animal Care Committee
- KUHC Medical Records Committee
- Advisory Committee for Regionalization of Perinatal Care in Kansas
- Committee to Establish the Mid-America Perinatal Association (MA-Pa)
- Research Committee, Ralph Smith Mental Retardation Research Center
- KUHC Steering Committee, Medical Faculty and Faculty Assembly
- National Perinatal Association Advisory and Communications Committees
- KUHC Faculty Promotions Appeal Committee

Service Functions:
- Established back-up laboratory facility for Mid-American Trophoblastic Disease Center.
- Established laboratory referral center for special tests in high risk pregnancy evaluation, including personal telephone contact with referring physicians.
- Established amniocentesis service and genetic counseling service for fetal karyotyping studies.
- Maintained facility for referrals for Oxytocin Challenge tests on high risk gravidas; shared consultations with Dr. Glenn Haswell.
- Provided endocrine lab services not available by hospital clinical lab for patients with infertility and threatened miscarriage.

In addition to OB-Gyn Department responsibilities, taught in the Endocrinology section of the Medical Physiology course and served as a back-up for conferences.

Was advisor for Graduate Student Linda Scott from the Department of Physiology and Cell Biology at KU.

This does not include clinically related activities connected with his joint appointment.
Warren K. Legler, Ph.D., Assistant Professor

Served as computer hardware consultant to Ralph L. Smith Mental Retardation Research Center.

Kenneth L. Goetz, M.D., Ph.D., Adjunct Associate Professor

August 14, 1975 - Presented seminar on prodrug data to INTERx Corporation, Lawrence, Kansas.

October 5-9, 1975 - Attended meetings of the American Physiological Society in San Francisco, California.

October 28, 1975 - Presented Pharmacology Department seminar on pro catecholamines.

November 5, 1975 - Presented lecture on shock for Coronary Care Symposium at Research Hospital, Kansas City, Missouri.

November 17-20, 1975 - Attended meeting of the American Heart Association in Anaheim, California.

January 22, 1976 - Spoke on atrial volume receptors to K.U.M.C. chapter of Sigma Xi.

March 8-12, 1976 - Attended the Endocrine Society Fifth Postgraduate Training Course on Radio assay Techniques in San Diego, California.

April 11-16, 1976 - Attended the FASEB meetings in Anaheim, California and presented a talk at the Circulation Group Symposium.

4. Research Grants active during the year:

Kansas Heart Association (KUMC #9253) $8,000. Mechanism of cardiac muscle buffering. 7/1/75 - 6/30/76. Dr. R. L. Clancy.

Kaw Valley Heart Association (KUMC #9244) $2,342. Effect of hypoxia and catecholamines on myocardial buffering. 7/1/75 - 6/30/76. Dr. R. L. Clancy.

Kansas Heart Association (KUMC #9252) $8,000. Mechanisms of myocardial HCO3- transport in hypercapnia. 7/1/75 - 6/30/76. Dr. N. C. Gonzalez.

Kaw Valley Heart Association (KUMC #9246) $2,800. HCO3- flux as a mechanism of cardiac cell buffering. 7/1/75 - 6/30/76. Dr. N. C. Gonzalez.

NCI-NIH Endocrinology of Experimental Ovarian Tumors. 7/1/74-5/31/77, $97,936; current year, $35,000. Dr. D. C. Johnson.

NSF Biorhythm Induced Gradients in Reproductive Functions. 10/1/74-3/31/77, $49,000; current year, $19,600. Dr. D. C. Johnson.

NIH HD 02 528 - $197,526. Program for Research Center in Mental Retardation. 1/1/76 - 12/31/76. Dr. F. E. Samson.

Lilly Co., American Cancer Research (Endowment #76-2897) - $10,000. Vinca Neuropathies. 1/1/76 - 12/31/87. Dr. F. E. Samson, (with Dr. I. Bettinger).
Ralph L. Smith Fund, $10,000. (For computer use) 1/1/76 - 12/31/76. Dr. F. E. Samson.

NIH AM 15883 - Study of factors affecting renal potassium transport.
2/1/75 - 1/31/76, $26,852. 2/1/76 - 1/31/77, $26,008. Dr. L. P. Sullivan.

Kansas Heart Association (KUMC #9254) $7,996. Relationship between renal cellular NA and K transport. 7/1/75 - 6/30/76. Dr. L. P. Sullivan.

NIH AM 12426 (KUMC #1725). Voltage clamp of cardiac muscle. 2/1/72 - 6/30/76. Total $48,366; current year $12,091. Dr. Merrill Tarr.

Kansas Heart Association (KUMC #9255) $8,000. Electrophysiology of isolated cardiac cells. 7/1/75 - 6/30/76. Dr. Merrill Tarr.

NIH HL 18943 (KUMC #1741) Contractile activity of single cardiac cells. 4/1/76 - 3/31/79. Total $96,752; current year $34,930. Dr. Merrill Tarr.

NIH R01 AM 16813 (KUMC #1151) Study of congenital megacolon of mice. 4/1/74 - 3/31/77. Total $56,979; current year $15,508. Dr. J. D. Wood.


5. Publications


Sashida, T. and D. C. Johnson. The response of the immature rat ovary to gonadotropins; acute changes in cyclic AMP, progesterone, testosterone, androstenedione and oestradiol after treatment with PMS or FSH + LH. Acta Endocrinologica 82: 413-426, 1976.


REVIEW OF THE YEAR AND COMMENTS BY THE ACTING CHAIRMAN

As Acting Chairman of Physiology, I effectively took charge of the department in May of 1973 and officially took charge on August 1. Therefore, this report is written on the third anniversary of my role as Acting Chairman. I will repeat my statement of a year ago and say that hopefully the search is near an end and we can proceed with some of the growth and changes that are needed.

Teaching has continued to consume a good bit of the time of the Physiology staff, at the undergraduate, medical, and graduate levels. No new courses have been introduced during this year. An additional course at the beginning graduate level is being introduced this fall, which is intended primarily for graduate students outside of the basic medical science disciplines. Beginning this fall, the Department has agreed to reorganize the graduate school teaching in such a way that the courses which were previously taught by teams of two or more will now be the primary responsibility of one individual. This is not intended to eliminate the expertise of other people who might be able to contribute to a particular course, but to be sure that one person has the primary responsibility for seeing that the course is properly organized and taught and also for attempting to eliminate some of the considerable overlap in time and coverage that has been involved for many of the staff.

Research has continued at approximately the same level of activity and quality in the department, but as in the past it is extremely important to find new sources of research funds and to exploit them. Dr. David Erwin was on hand in the department as a postdoctoral teacher and researcher in Dr. Wood's laboratory most of the year. Dr. Harold Wilkinson has just come on board as an additional postdoctoral teacher and researcher in Dr. Sullivan's laboratory. As mentioned previously, we have considered it a matter of high priority to build up the staff of postdocs in this department.

We have found the availability of the Fletcher Endowment Fund extremely valuable in bringing in guest lecturers and consultants and in sending staff members and graduate students to scientific meetings.

Unfortunately the high productivity with respect to new Ph.D.'s last year (5) has been followed this year by the failure of all four of our new graduate students to perform satisfactorily in the Medical Physiology course. Perhaps this has not been an unmitigated disaster, since it has occasioned a great deal of discussion and planning for the five new graduate students that are being brought in this year, with unusually good credentials.

The department has continued below its full staffing during the past year because of the failure to find a new chairman. The chairmanship and two other positions remain to be filled with permanent appointees. However, Dr. Helen Cooke, from the Department of Physiology at the University of Iowa, has been appointed to a part-time assistant professorship in the department, which we believe will give a touch of added vigor to the department during the coming year. We are pleased to have her with us. As in the past, much time has been spent on activities which should really be peripheral to our main functions of teaching and research. While these activities are necessary, it is to be hoped that such things as curriculum meetings, attending hearings, filling out forms, and generally defending one's actions, can be held to a minimum.
APPENDIX

Outside Speakers and Visitors

July 9, 1975
Dr. P. Rispens, Laboratory of Chemical Physiology, University of Groningen, Groningen, The Netherlands

October 20, 1975
Dr. John K. Leach, Associate Professor, Cardiology Section, Department of Medicine, University of New Mexico. "Effects of muscle shortening on tension development".

November 5, 1975
Dr. Robert Galambos, Professor of Neurosciences, University of California at San Diego. "Some current problems in auditory physiology".

November 10, 1975
Dr. Harold Spies, Oregon Primate Research Center, Portland, Oregon. "Neuroendocrine studies in the Rhesus monkey".

November 13, 1975
Dr. Hugo Fernandez, Professor, Department of Neurobiology, Catholic University of Chile, Santiago, Chile. "Role of axoplasmic transport in synaptic plasticity".

November 17, 1975
James A. Orr, Ph.D., Department of Physiology & Cell Biology, University of Kansas, Lawrence. "Ventilatory acclimatization of the pony to high altitude".

December 1, 1975
Dr. Sandy Helman, Associate Professor, Department of Physiology and Biophysics, University of Illinois at Urbana. "Studies of electrophysiological phenomena in epithelial tissue".

December 8, 1975
Dr. Gary E. Duke, Associate Professor, Department of Veterinary Biology, College of Veterinary Medicine, St. Paul, Minnesota. "Recent studies in avian G.I. motility".

January 5, 1976
Dr. George Tempel, Department of Biology, University of Missouri at Kansas City. "Renal function in depressed metabolic states, hibernation and hypothermia".

January 12, 1976
Dr. Larry Stoner, Department of Physiology, State University of New York, Syracuse. "Isolated perfused amphibia renal tubules; the diluting segment".
January 23, 1976
Dr. Joseph P. Gilmore, Professor and Chairman, Department of Physiology, University of Nebraska College of Medicine. "Functional role of atrial receptors".

March 29, 1976
Dr. Roger Guillemin, The Salk Institute. "Expanding significance of hypothalamic peptides".

April 27, 1976
Dr. James Schafer, Associate Professor, Department of Physiology and Biophysics, University of Alabama. "Salt and H₂O absorption in proximal straight tubules".

April 29, 1976
John Connors, Department of Basic Science, University of Illinois, Peoria School of Medicine. "The effect of simulated high altitude on myocardial anoxic resistance and thyroid function:.

May 13, 1976
Harold Wilkinson, Department of Physiology and Biophysics, University of Illinois at Urbana. "Temperature adaptation of ion transport in hamster kidney: effect of lipid changes".