Department Roster

a. Academic Staff

G. S. Greenwald, Ph.D., Distinguished Professor and Chairman
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
A. M. Thompson, Ph.D., Professor
R. L. Clancy, Ph.D., Associate Professor
N. C. Gonzalez, M.D., Associate Professor
J. B. Rhodes, M.D., Associate Professor (Joint appt. Medicine)
C. N. Tarr, Ph.D., Associate Professor
J. W. Trank, Ph.D., Associate Professor
J. L. Voogt, Associate Professor
J. D. Wood, Ph.D., Associate Professor
J. S. Connor, Ph.D., Assistant Professor (one year only appointment)
H. J. Cooke, Ph.D., Assistant Professor
W. K. Legler, Ph.D., Assistant Professor
P. F. Terranova, Ph.D., Assistant Professor
K. L. Goetz, M.D., Ph.D., Adjunct Professor
Bin C. Wang, Ph.D., Adjunct Instructor

b. Postdoctoral Fellows

Hector D. Croxatto, M.D.
Paul R. Leiffer, Ph.D.
Srinivas K. Saidapur, Ph.D.
Kazuyushi Taya, D.V.M.
Archie Vomachka, Ph.D.
Harold L. Wilkinson, Ph.D., Instructor

Table: Degree Requirements Fulfilled

<table>
<thead>
<tr>
<th>Graduate Students</th>
<th>Prelims</th>
<th>Candidate For</th>
<th>Degree Requirements Fulfilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dennis C. Fater</td>
<td></td>
<td>Ph.D.</td>
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<tr>
<td>Robert E. O’Neill</td>
<td></td>
<td>Ph.D.</td>
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<tr>
<td>Chon-Hwa Tsai</td>
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<td>Ph.D.</td>
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<tr>
<td>Dianne L. Vermillion</td>
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<td>Ph.D.</td>
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<tr>
<td>Mary S. Vomachka</td>
<td></td>
<td>Ph.D.</td>
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<tr>
<td>Dan F. Watson</td>
<td>10/77</td>
<td>Ph.D. &amp; M.D.</td>
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</tbody>
</table>
Notes concerning graduate students:

Danny Watson was named to Who's Who Among Graduate Students in Colleges and Universities, 1977.

On February 2, 1978 on Medical Student Research Day, ten students presented papers, and Danny Watson was the winner of the Russell Haden Medal, the top prize for medical student research. His paper "Pargyline induces faster components of axonal transport in motor neurons" was then presented at the 1978 National Student Research Forum in Galveston, Texas which was held May 26-29.

Choon-Hwa Tsai presented a paper on "Temporal changes in steroid synthesis by cultured hypophysectomized rat ovaries" on Graduate Student Research Day, March 3.

COURSES TAUGHT

101 - Elementary Physiology (F), part of a 1,000 hour course for Emergency Care. Taught by Dr. Thompson, Ms. Linda Gericke and graduate students. Enrollment 19

388 - Human Physiology (F), undergraduate physiology course. Taught by Drs. Cooke, Legler, Samson, Terranova and Graduate Student Danny Watson. Enrollment 120. (S) Special session taught by Drs. Samson and Terranova. Enrollment 5.


825 - Biology of Sex (FO) 2 hours. Taught by Dr. Johnson. Enrollment 10.

830 - Cardiovascular Physiology (FO) 3 hours. Taught by Dr. Clancy, assisted by Drs. Goetz and Wang. Enrollment 7.

800 - (770-771) - Medical Physiology. Taught by staff. Fall course enrollment - 122 medical students and 2 graduate students. Spring course - 87 medical students and 3 graduate students.
### Department Seminars

<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/26/77</td>
<td>Dr. Ralph Adams, Chemistry, KU</td>
<td>Electrochemistry techniques applied to brain functions rated to catecholamines</td>
</tr>
<tr>
<td>10/ 3/77</td>
<td>Dr. Wayne Osness, Health, Phys. Ed. &amp; Recreation, KU</td>
<td>Effect of exercise on the cardiovascular system</td>
</tr>
<tr>
<td>10/10/77</td>
<td>Dr. E. Othmer, Psychiatry</td>
<td>Electrophysiology and computer analysis of sleep</td>
</tr>
<tr>
<td>10/17/78</td>
<td>Dr. Brower Burchill, Physiology &amp; Cell Biology, KU</td>
<td>Microtubule dynamics &amp; glutathione metabolism in phagocytosing human neutrophils</td>
</tr>
<tr>
<td>10/24/77</td>
<td>Dr. Wayne Moore, Pediatrics</td>
<td>Growth hormone binding and correlation with growth hormone therapy</td>
</tr>
<tr>
<td>10/31/77</td>
<td>Dr. J. D. Wood</td>
<td>Intracellular recording of electrical activity in neurons of Auerbach's plexus</td>
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<tr>
<td>11/ 7/77</td>
<td>Dr. Gilbert S. Greenwald</td>
<td>Exogenous progesterone: negative effects on estrogen secretion</td>
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<tr>
<td>11/14/77</td>
<td>Dr. Helen Maguire</td>
<td>Mechanisms of platelet aggregation: studies with adenine analogs</td>
</tr>
<tr>
<td>11/28/77</td>
<td>Dr. John C. Davis, Physiology &amp; Cell Biology, KU</td>
<td>FSH and cAMP actions on Sertoli cells in culture</td>
</tr>
<tr>
<td>12/ 5/77</td>
<td>Dr. A. J. Yarmat, Learning Resources</td>
<td>Overview of the educational support services at KUMC</td>
</tr>
<tr>
<td>1/ 23/78</td>
<td>Dr. Earl Butterfield, Pediatrics</td>
<td>Memory control processes and their development</td>
</tr>
<tr>
<td>1/30/78</td>
<td>Dr. Gunther Schlager, Systematics &amp; Ecology, KU</td>
<td>Genetic studies and hypertension</td>
</tr>
<tr>
<td>2/ 6/78</td>
<td>Dr. Michael Silverglat, Psychiatry</td>
<td>Platelet as a model for synaptic chemistry</td>
</tr>
<tr>
<td>2/20/78</td>
<td>Dr. Stanley Nelson, Pharmacology</td>
<td>Functional and anatomical aspects of amphetamine stereotypia</td>
</tr>
<tr>
<td>2/27/78</td>
<td>Dr. Alan M. Thompson</td>
<td>Update on the blood-brain barrier</td>
</tr>
<tr>
<td>3/13/78</td>
<td>Dr. Harold L. Wilkinson</td>
<td>The effect of ouabain on K transport in the bullfrog kidney</td>
</tr>
<tr>
<td>3/20/78</td>
<td>Dr. Merrill Tarr</td>
<td>Mechanical properties of the single cardiac cells</td>
</tr>
<tr>
<td>4/24/78</td>
<td>Dr. Donald C. Johnson</td>
<td>Ovarian steroidogenesis</td>
</tr>
<tr>
<td>5/ 8/78</td>
<td>Dr. Helen J. Cooke</td>
<td>Transport characteristics of newborn rabbit intestine</td>
</tr>
</tbody>
</table>

### Outside Speakers

<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>8/25/77</td>
<td>Dr. Richard E. Talbott</td>
<td>&quot;In quest of a functional model for postural control in dogs and humans&quot;</td>
</tr>
<tr>
<td>9/ 1/77</td>
<td>Dr. Paul D. Cheney</td>
<td>&quot;Organization and functional properties of the cortico-motor neuronal system in the primate&quot;</td>
</tr>
</tbody>
</table>
10/12/77 - Dr. G. ten Bruggencate
Professor and Chairman, Physiological Institute
University of Munich School of Medicine
"Potassium and calcium concentration measured with ion selective micro-
electrodes in the extracellular fluid of the cerebellum during quiescence
and stimulus-evoked activity"

11/ 1/77 - Dr. Andrew P. Even
Department of Anatomy
University of New Mexico
"Developmental aspects of proximal tubule and intrarenal vascular system
in puppy kidney"

11/17/77 - Dr. Narender P. Reddy
Cardiovascular Research Institute
University of California, San Francisco
"Lymph propulsion"

12/12/77 - Dr. J. H. Gordon
Department of Anatomy
University of California, Los Angeles
"Alterations of estrogen sensitivity in septal lesioned rats"

3/ 3/78 - Dr. Abba Kastin
Professor of Medicine, Tulane University
& Chief, Endocrinology Section, VA Hospital
New Orleans, Louisiana
"CNS effects of hypothalamic-pituitary peptides"

3/ 6/78 - Dr. Frank Moody
Professor and Chairman, Department of Surgery
University of Utah
"Gastric mucosal barrier"

3/31/78 - Dr. Judith A. Ramaley
Department of Physiology
University of Nebraska
"Theories of puberty onset"

4/ 3/78 - Dr. Peretz Lavie
Behavioral Biology Department
Israel Institute of Technology
"Ninety minute ultradian biorhythms during sleep and wakefulness"

4/19/78 - Dr. Howard Bern
Department of Zoology
University of California, Berkeley
"The evolution of prolactin"

5/ 1/78 - Dr. Arnold M. Katz
Head, Division of Cardiology
University of Connecticut
"Actions of the adrenergic nervous system on the heart"
"Cation selectivity of active transport pathway in the isolated turtle colon"

Publications


b. In press


Greenwald, G. S. Ovulatory response of hypophyssectomized hamsters to deferred injection of LH. J. Reprod. Fert., in press.
Greenwald, G. S. Modification by exogenous progesterone of estrogen and gonadotropin secretion in the cyclic hamster. Endocrinology, in press.


Voogt, J. L. Control of hormone release during lactation. Clinics in Obstetrics and Gynecology 5, in press.


c. Abstracts


Research Support


Internal grant support from St. Luke's Hospital Foundation for Medical Education and Research.

NIH Grant HL 13623, renewed for 3 years beginning 7/1/78.


HEW-NICHO - Research Fellowship Support. Institution allowance $3,000.

D. C. Johnson: National Science Foundation, Biorhythm induced gradients in reproductive functions, 10/1/74-8/30/77, $49,000.

NIH, Aging effects on ovarian tumorigenesis, 9/29/77-8/31/80, $154,441.

J. B. Rhodes: For GI research, J. B. R. Foundation, $15,000; H. H. Robins, $5,000; Nautilus Research $11,000. No direct or indirect costs; 7% administrative costs.


Eli Lili Co. - Microtubule involvement in neuropathies, July 1, 1978 - June 30, 1979 (with Irene Bettinger). Direct Costs $10,000, no indirect.


Co-investigator with Dr. Joe R. Kimmel on NIH grant, Structure-function relationships in proteins, for 4 years. Total amount $215,634. First year $51,580 Direct Costs, $21,417 Indirect. Dr. Kimmel is principal investigator.

ACTIVITIES OF STAFF

Richard L. Clancy, Ph.D., Associate Professor

April 7, 1978 - Attended the meeting of the Kansas Heart Association Research Committee.
April 10-14, 1978 - Attended the meetings of the Federation of American Societies for Experimental Biology in Atlantic City, New Jersey.

Member of the Kansas Heart Association Research Committee.
Member of the Human Experimentation Committee, St. Luke's Hospital, Kansas City, Mo.
Member of the Faculty Assembly and Chairman of the Medical Faculty Steering Committee.
Member of the Faculty Student Affairs Committee.

Chairman of the Graduate Admissions Committee of the Department.

Serves as an ad hoc referee for Proceedings of the Society for Experimental Biology and Medicine and the American Journal of Physiology.

Directed research work of Carol Branson, medical student, who submitted a paper on this work on Medical Student Research Day.

Teaching activities:
- Physiology 705 - 26 hours - General, neuro, and cardiovascular physiology.
- Cardiovascular Physiology 830 - 48 hours.
- Medical Physiology - 14 hours per class (2 classes during year).

Was promoted to Professor effective July 1, 1978.

Helen J. Cooke, Ph.D., Assistant Professor

September 12-16, 1977 - Attended the International GI Motility meetings at the Royal College of Physicians in Edinburgh, Scotland.

November 2-4, 1977 - Attended meeting of the American Federation for Clinical Research in Chicago.

April 10-14, 1978 - Attended the meetings of the Federation of American Societies for Experimental Biology in Atlantic City, New Jersey.

Is serving on the committees of graduate students Dianne Vermillion and Robert O'Neill.

Member of the Graduate Admissions Committee of the department.

Teaching Activities:
- Physiology 388
  5 hours gastrointestinal, 4 hours renal, and 2 hours metabolism
- Physiology 705
  8 hours gastrointestinal
- Medical Physiology
  12 hours conferences and 9 hours labs

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


October 9-14, 1977 - Attended the American Physiological Society fall meetings, Miami.

November 28-December 1, 1977 - Attended the American Heart Association meetings, Dallas.

April 9-14, 1978 - Attended the F.A.S.E.B. meetings in Atlantic City.

Chairman, Human Investigation Committee, St. Luke's Hospital.

Chairman, Animal Care Committee, St. Luke's Hospital.

Member, Radioisotope Committee, St. Luke's Hospital.

Reviews articles for the American Journal of Physiology on ad hoc basis.

Is directing research of graduate student Dennis Fater.

Teaching Activities:
- Medical Physiology
  4 hours lecture each course

Physiology 830
4 hours lecture
Norberto C. Gonzalez, Ph.D., Associate Professor

On sabbatical leave at the Department of Physiology, Max Planck Institute for Experimental Medicine, Göttingen, West Germany.


March, 1978 - Attended the annual meeting of the German Physiology Society, Göttingen, Germany.

Outside lectures:

October, 1977 - Cardiothoracic Institute, University of London. "Contribution of extracellular bicarbonate to the regulation of myocardial cell pH".

February, 1978 - Department of Zoophysiology, University of Aarhus, Aarhus, Denmark. "Role of a $H^+$ or $HCO_3^-$ transmembrane flux on the regulation of skeletal and cardiac muscle pH".

April, 1978 - Laboratoire de Physiologie Respiratoire, CNRS, Strasbourg, France. "Mechanisms of regulation of myocardial cell pH during hypercapnia".

April, 1978 - Department of Biology, Zoological Station, Ville Franche-Sur-Mer, France. "Relative contribution of passive chemical buffering and of transmembrane fluxes on the regulation of cell pH of normal and hypertrophic hearts".

Reviewed grant applications for the National Science Foundation.

Gilbert S. Greenwald, Ph.D., Distinguished Professor and Chairman

August 13-17, 1977 - Attended meeting of the Society for the Study of Reproduction at Austin, Texas.


October 7-9, 1977 - Presented a major address on "Recent Advances in Reproductive Endocrinology" to the 25th Japanese Congress of Endocrinology in Sendai, Japan.


June 11-13, 1978 - Attended a Workshop on Ovarian Follicular/Corpus Luteum in Miami Beach, Florida.

June 14-15, 1978 - Attended the annual meeting of the Endocrine Society.


Member, Organizing Committee, Workshop on Ovarian Function, NIH, Miami.

Committees - local:

Promotions and Tenure Committee
Chairman, lecture series "The Scientific Basis of Medical Practice"
Committee on Distinguished and Named Professors
Member, Interinstitutional Executive Committee
Member, Editorial Board of Endocrinology.


Reviewed grant applications for National Science Foundation.

Teaching activities:
- Physiology 806 (Endocrinology)
  8 hours lecture
- Medical Physiology
  5 hours lecture on Endocrinology Fall course
  5 hours lecture on Endocrinology Spring course
- Conducted conference group Spring course

Post-doctoral Fellows:
- Archie Vomachka, Ph.D.
- Srinivas K. Saidapur, Ph.D.
- Kazuyushi Taya, D.V.M.
- Hector D. Croxatto, M.D.

Pre-doctoral student: Charles H. Bill II (Anatomy)

Donald C. Johnson, Ph.D., Professor of Gynecology & Obstetrics and Physiology

August 14-17, 1977 - Attended meeting of the Society for the Study of Reproduction, Austin, Texas.

March 15-18, 1978 - Attended meeting of the Society for Gynecologic Investigation in Atlanta, Georgia.

June 14-16, 1978 - Attended meeting of the Endocrine Society, Miami Beach, Florida.

Named Research Professor in Human Reproduction.

Directs the research programs of 3 graduate students: Chon-Hwa Tsai and Mary Vomachka, Physiology and Claude Powers, Pharmacology.

Teaching activities:
- Physiology 806 - Endocrinology
  Coordinator and gave 8 lectures, Fall 1977
- Physiology 825 - Biology of Sex
  In charge of course, Fall 1977
- Medical Physiology
  In charge of Endocrinology section
  Conference and Laboratory Section, Fall semester
Warren K. Legler, Ph.D., Assistant Professor

November 28 - December 9 - Attended a RSX 11-M class at the Digital Equipment Corporation.

Director of Ralph L. Smith Mental Retardation Research Center Computing Laboratory.

Member of NRRRC Computer Committee.

Teaching activities:

Medical Physiology
Schedule coordinator for both courses.
Had conference and lab section in fall semester course.

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

Meetings:
October 3-4, 1977 - Clinical Trials Methodology, NIH, Bethesda, Md.
October 17-20, 1977 - Internal Medical Postgraduate course., KUMC.
February 17-18, 1978 - Internal Medicine, Kansas American College of Physicians, Topeka.
March 4, 1978 - Midwest Gut Club, Omaha, Nebraska.

Outside lectures:
"Oral/Parenteral Nutrition in Inflammatory Bowel Disease", Internal Medicine Postgraduate Course, Kansas City, Kansas, 10/19/77.
"GI Physiology for Clinical Dieticians", KUMC, 11/14/77.
"Metoclopramide for placement of small bowel biopsy instruments", FDA, Washington, D.C., 1/16/78.
"Meet the Professor", Kansas American College of Physicians, Topeka, 2/17/78.
"GI Physiology for Clinical Dieticians", KUMC, 3/6/78.
"Inflammatory Bowel Disease - Recent Concepts", Stormont-Vail Hospital, Topeka, 4/8/78.
"Geriatric GI Disorders", Family Practice Postgraduate Course, KUMC, 4/27/78.
"Malabsorption Syndromes", St. Joseph Hospital, Wichita, 5/18/78.

Committees:
Member of committee to Review the Bylaws of the Faculty Assembly
Member, Long Range Planning Committee.
Member, Advisory Committee of the Department of Dietetics and Nutrition.
Member, Post Graduate Education Committee of the Department of Medicine.

Graduate students:

Rose Bondy - Dietetics & Nutrition
Susan Knopp - Dietetics & Nutrition
Mary Ellen Clark - Nursing

Teaching activities:

Medical Physiology - 12 lectures on GI Physiology, November '77 and March '78
PHSL 818 - Gastroenterology - 4 lectures

Frederick E. Samson, Ph.D., Professor

Meetings attended:

August 13-19, 1977 - Max Planck Neuropsychiatry Institute, Munich.
August 20-26, 1977 - International Society for Neurochemistry, Copenhagen.
October 23-26, 1977 - Conference on Manipulative Therapy, Michigan State University.
October 31-November 1, 1977 - Mental Retardation Research Centers Directors meeting, Boston, Massachusetts.
November 6-10, 1977 - Society for Neuroscience National Meeting, Anaheim, California.
May 15-17, 1978 - Mental Retardation Research Center Directors meeting, Denver.

Outside lectures given:

September 6, 1977 - Dept of Neurology, KUHC.
August 22 - "Effect of Nocodazole on Fast Axoplasmic Transport", International Society for Neurochemistry meeting (poster session).
October 23-26 - "Axoplasmic Transport Derangement"; also chaired session on "Trophic Action of Nerves", Michigan State University.
November 16 - Lecture "Brain Research" to Electrical Engineering class in Bioengineering, KU.
March 6 - "Mental Retardation Research", University of Kansas Discussion Group, KU.
Committees

Outside KUHC
Chairman, University of Chicago Alumni Fund, Greater Kansas City area.
Chairman, Program Committee, American Society of Neurochemistry for 1980 meeting, Houston, Texas.
Served on Ph.D. thesis committees at KU, Lawrence for:
  Young Lee, Dept. of Biochemistry
  Daniel Cawley, Department of Biochemistry
  Mary Hedbloom, Department of Biochemistry
  Mary Lou Michaelis, Department of Human Development
Chairman, Planning Committee for encouraging research collaboration between Mental Retardation Research Centers.

Local
Director, Ralph L. Smith Research Center
Chairman, Research Committee of the Ralph L. Smith Research Center
President, Sigma Xi, Kansas City Club
Member, Kansas City Chapter, Society for Neurosciences (Sec-Treas, 1977-78; President, 1978-79)
Member of Ph.D. Thesis committees for:
  George Kemper, Department of Anatomy
  Robert Stephens, Department of Anatomy
  Bernard Schnieder, Department of Pharmacology
  J. Alexander Donoso, Department of Pharmacology
  Danny Watson, Department of Physiology
  Robert O’Neill, Department of Physiology
Member of Minicomputer Committee, Ralph L. Smith Research Center
Chairman, Judging Committee for Graduate Student Research Day
Member of Inter-campus Liaison
Chairman, Visiting Lecturers Committee, Department of Physiology
In charge of Seminar Series, Department of Physiology
Scrivener-Scribe, Department of Physiology

Editorial Service
Reviews approximately 6 grant application per year for the National Science Foundation.
Medical students working with him: Valerie Chow and George Pierson.

Teaching Activities:
  Physiology 388, Spring semester - 5 lectures; Fall semester - By special arrangement made for 4 anesthesiology nursing students, Drs. Terranova and Samson handled the course, sharing the lectures equally.
  Medical Physiology - Handled a conference section for the Fall class (approximately 12 2-hour conferences)
  Physiology 850 (Research)
    Fall semester - 1 student, 3 hours
    Spring semester - 2 students, 5 and 4 hours respectively
  Physiology 860 (Thesis)
    Spring semester - 2 students, 3 and 2 hours respectively
  Physiology 782 (Advanced Topics)
    Fall semester - 1 student, 3 hours.
Lawrence P. Sullivan, Ph.D., Professor

October 10-14, 1977 - Attended the Fall meeting of the American Physiological Society in Hollywood, Florida.

November 21-22, 1977 - Attended meeting of the American Society of Nephrology in Washington, D.C.; participated in selection of free communications for presentation at meeting and chaired free communication session on Acid-Base Mechanisms.

April 9-12, 1978 - Attended the FASEB meetings in Atlantic City, New Jersey.

June 18-23 - Attended the International Congress of Nephrology in Montreal, Canada.

November 1, 1977 - Lectured on "Glomerular Function in Health and Disease" at Menorah Hospital.

January 16, 1978 - Gave a talk at the County Heart Society at Garden City, Kansas and also gave TV and radio interviews for the Heart Association in several towns in southwest Kansas.


Member, Program Advisory Committee of the American Physiological Society.

Research Publicity Director, member, Research Committee and Member, Board of Directors, American Heart Association, Kansas Affiliate.

Member, Research Committee of the Great Plains Region of the American Heart Association.

Member, Student Evaluation Committee, KUMC.

Organized and chaired Sigma Xi panel discussion on "Role and support of research at KUMC".


Reviewed on ad hoc basis grant applications for the National Science Foundation.

Teaching Activities:

- Physiology 705 - 8 hours lecture
- Physiology 806 - 2 hours lecture
- Medical Physiology
  - 9 hours lecture + 6 2-hour problem sessions in Fall course
  - 9 hours lecture + 6 2-hour problem sessions + lab and conference section in Spring course.
- Medical Pharmacology course - 2 hours lecture on Diuretic Agents

Merrill Tarr, Ph.D., Associate Professor

July 15-16, 1977 - Was an invited participant in a Symposium on Voltage Clamp and Striated Muscle in Poitiers, France.

July 17-23 - Attended the International Physiological Congress in Paris, France.

September, 1977 - Lectured on Cardiac Electrophysiology to a graduate course class at the University of Missouri at Columbia.
October, 1977 - Attended the fall meetings of the American Physiological Society in Hollywood Beach, Florida. Presented a paper entitled "Sarcomere length-resting tension relation in single frog atrial cardiac cells". Co-authored a paper presented by N. Shepherd entitled "Sarcomere dynamics in single isolated cells of frog heart".

February, 1978 - Lectured on Muscle Physiology in the Department of Physiology at the Emory University School of Medicine and presented a seminar on "Mechanical properties of single cardiac cells".

April, 1978 - Attended the spring meetings of the Federation of Societies for Experimental Biology in Atlantic City, New Jersey and co-authored a paper presented by J. W. Trunk entitled "An instrumentation system for the study of isolated single cardiac cells mechanical properties".

Member of Editorial Board of Circulation Research.

Reviewed grant applications for the National Science Foundation.

Post-doctoral fellow: Paul Leiffer (10/1/76 to present)

Teaching Activities:

Medical Physiology (Fall semester)
- 6 hours lecture on nerve electrophysiology
- 1 hour lecture on cardiac electrophysiology
- 4 hours problem and review sessions on electrophysiology
- 2 hours lecture on muscle physiology
- 2 hours problem and review sessions on muscle physiology
- 6 hours conference sessions
- 9 laboratory sessions (2-6 hours each)

Medical Physiology (Spring 1978)
- 6 hours lecture on nerve electrophysiology
- 2 hours lecture on cardiac electrophysiology
- 4 hours problem and review sessions on electrophysiology
- 2 hours lecture on muscle physiology
- 2 hours problem and review sessions on muscle physiology

Paul F. Terranova, Ph.D., Assistant Professor

August 14-20, 1977 - Attended the meeting of the Society for the Study of Reproduction in Austin, Texas and the Workshop on "Ontogeny of Receptors and Molecular Mechanisms of Reproductive Hormone Action" sponsored by the Center for Population Research, National Institutes of Health.

April 10-14, 1978 - Attended the FASEB meetings in Atlantic City, New Jersey.

George Parker worked with him the Summer of 1978 as part of the Kaw Valley Medical Society program.

Teaching Activities:

Physiology 388, Spring semester - 11 lectures (5 on Cell Physiology and 6 on Neurophysiology).

Fall semester - With Dr. Samson handled the course for 4 anesthesiology nursing students, sharing the lectures equally.

Physiology 705 - Gave 4 2-hour lectures on Endocrinology.

Medical Physiology - Shared the duties for a conference section in the Fall course and was in charge of a full lab and conference section for the Spring course.
Alan M. Thompson, Ph.D., Professor and Associate Dean for Graduate Studies


November 29-December 2 - Attended the meeting of the Council of Graduate Schools in New Orleans, Louisiana.


March 7-8 - Attended Career Placement Day of the Associated Colleges of Central Kansas in Bethel, Kansas.

March 29 - Presented a one-day seminar on various aspects of the blood-brain barrier at Brooks Air Force Base, at their invitation.

April 10-14 - Attended the F.A.S.E.B. meetings in Atlantic City.

June 29-30 - Participated on the National Research Council (NASA) panel in Washington, D.C.

Member, Planning Committee for Health Service Administration Program

Member of Faculty Assembly Bylaws Committee.

Member of Calendar and Catalog Committee, KUMC.

Member of Graduate School Bylaws Committee.

In June read Associateship applications for National Research Council.

May 25-26 - Assisted with the visit of Dr. Stanley Rapoport of NIH who gave two lectures on the Blood-Brain Barrier to the Society for Neuroscience.

Teaching Activities:

Physiology 101 (Fall, 1977)
In charge of class; also gave 17 lectures and reviews out of the 39 total. Was in charge of and/or participated in 3 lab days out of the 6.

Medical Physiology - in charge of Transport and Body Fluids section; gave 6 lectures to both courses plus review sessions and special help to students - was in charge of a full lab and conference section for the fall course.

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

October 9-14, 1977 - Attended the Fall meetings of the American Physiological Society in Hollywood, Florida.


March 8-12 - Was in Galveston, Texas consulting about biomedical engineering.

April 7 - Attended the meeting of the Kansas Heart Association Research Committee in Topeka.

April 10-14 - Attended the FASEB meetings in Atlantic City, New Jersey.

January 12, 1978 - Was the program speaker for the Kansas City Region of the Institute of Electrical and Electronic Engineers and Biomedical Engineering.

February 14 - Lectured on "Electrical Safety" at Pediatric Cardiology seminar.
Member of a joint KUHC - School of Engineering Biomedical Engineering Curriculum Committee.

Member of the Board of Directors of the Kansas Heart Association.
Member of the Kansas Heart Association Research Committee.
Member of the American Heart Association Regional Research Review Board.
Member of the Biomedical Engineering Technician Advisory Committee of Johnson County Junior College.
Member of the Kansas Heart Association Community Program Committee.
Shares in the post-doctoral training of Paul Leiffer.
Supervisor of the Physiology Electronics Shop.
Consultant to University of Texas Medical Branch in Galveston - biomedical engineering research and development and service.
Consultant to Burnett Instruments, Lawrence, Kansas - physiological monitoring electrodes.

Teaching Activities:
Medical Physiology (each course)
12 hours Hemodynamics and Cardiovascular Control Systems
14 two-hour conferences
8 laboratory sessions
Physiology 827-827 - Physiological Instrumentation I and II
(covers basic electronics as well as specific instrumentation)
40 hours lecture
24 hours lab
Critical Care Nursing
24 hours lecture on the physiology and reality of hospital-patient electrical hazards
EE 236 Medical Instrumentation, KU, Lawrence
2 lectures

James L. Voogt, Ph.D., Associate Professor

April 10-14, 1978 - Attended meetings of the Federation for Societies of Experimental Biology in Atlantic City, New Jersey.

September 28, 1977 - Gave a seminar on "The Brain and Prolactin" to the Neuroscience Club of Kansas City.

October 12, 1977 - Gave seminar for the Department of Anatomy and Physiology at Kansas State University on "Recent studies on the control of prolactin secretion".

Gave 8 lectures at St. Luke's Hospital, Kansas City, Missouri on Endocrinology of Reproduction.

Chairman, Physiology Department Library Committee.

Editorial services: Did 5 ad hoc reviews for Endocrinology and 1 for Science.

Teaching Activities:
Physiology 806 - 2 lectures
Medical Physiology
11 hours lecture on Endocrinology (5 Fall and 6 Spring)
In charge of one full conference and laboratory section in the Spring course.
Spent June 30-September 23, 1977 as Visiting Professor at the Physiological Institute in Munich, West Germany on a von Humboldt fellowship.


September 12-17, 1977 - Attended the Sixth International Symposium on Gastrointestinal Motility in Edinburgh, Scotland; presented paper on Neurophysiology of Auerbach's Plexus.

October 23-26, 1977 - Invited guest at workshop of the American Gastroenterological Association on Smooth Muscle Physiology at Hyannis, Massachusetts.

October 27, 1977 - Visited Columbia University in New York City.

March 3-6, 1978 - Attended and presented a paper on Action of Serotonin on Enteric Neurons at meeting of the Midwest Gut Club in Omaha, Nebraska.


March 20, 1978 - Gave seminar on "Slow Excitatory Postsynaptic Potentials" at National Institutes of Mental Health, St. Elizabeth's Hospital, Washington, D.C.

May 22-26, 1978 - Attended meeting of the American Gastroenterological Association at Las Vegas, Nevada, and was one of three principal speakers at a symposium on Pathophysiological and Clinical Aspects of Achalasia, speaking on "Inhibitory neuronal control of intestinal musculature".

Lectured on "Binocular Vision and Stereopsis" at Baptist Hospital in Kansas City, Mo.

Member of Editorial Board of the American Journal of Physiology: Metabolism, Endocrinology and Gastrointestinal Physiology Section.

Reviewed grant applications for the National Science Foundation.

Member, Graduate Student Admission Committee of Department of Physiology.

Promoted to Professor effective July 1, 1978.

Teachings Activities:

Physiology 818 - shared teaching duties with Drs. Rhodes and Cooke.

Medical Physiology (each course)
16 lectures in Neurophysiology (in charge of section)
3 lectures in GI Physiology (shared duties of section with Dr. Rhodes)
It was predicted in last year's report that all three vacant faculty positions would be filled in the coming academic year. This indeed has come true with the addition to the staff of Dr. Paul Cheney, assistant professor of Physiology; Dr. Paul Terranova, assistant professor of Physiology; and Dr. James Voogt, associate professor of Physiology. They are all heartily welcomed to the "family" and we look forward to a long and productive relationship as they add to the teaching and research objectives of the department.

It is axiomatic that there are three requirements for a first rate academician: teaching, research and service, and it is expected (or at least hoped!) that the faculty will excel in all of them. Progress continues to be made but there is room for improvement in all of the areas. As a newcomer to the department, I was unaware of the heavy teaching load in paramedical courses. In September, 1978 there are about 220 students enrolled in courses involving allied health and nursing personnel. This is equal to the number of students involved in Medical Physiology in the Winter and Spring semesters. If the load of paramedical teaching continues to proliferate, additional staff may be needed if the department is to meet all of its assignments.

I believe the department is committed to quality in teaching and is conscientious in carrying out its assignments. A recurring theme at faculty meetings is whether we are really getting across in the Medical Physiology course. Is the "t" score system removing the incentive of students to work hard? Would a letter grade system be preferable to our current pass-fail? Why don't our students do better on Part 1 of the National Board exam? Has the student note-taking service become too much of a crutch and a bad habit for students? Perhaps one of our problems is that we overteach? (My own simplistic theory!) These are all healthy signs of disagreement and evidence that the faculty has not become complacent in its teaching responsibilities.

The list of publications during the past year and "in press" attests to the research activity of the department; but even here, there is room for improvement. The amount of teaching hours assigned to a medical faculty is ridiculously small with the majority of time available for scholarly activity. There is therefore no excuse for faculty not to be vigorously engaged in research. In a university setting, research is as natural as eating and breathing, and the department's reputation at the national level is judged by its research performance. The grant situation is admittedly bleak in comparison to the golden age of the 50s and 60s, but evidence of ingenuity, continued productivity and novel approaches and problems still pay off in the art of grantsmanship.

A number of the staff are involved in service activities on the national level but this will be further enhanced as our reputation as a research oriented department increases.

All in all, it has been a good year, but each one should be better than the one before. All that is needed is that everyone works to their capacity, not because they are being prodded but because of the pleasure derived from a job well done.