Anatomy, Dept. of

Anatomy at Duke University Medical Center

1930-1983

ANATOMY AT DUMC 1930-1980

A. Dean Davison's preamble:

The goal of the Duke University Medical Center from the beginning has been to emphasize the importance of sound teaching, good medical care, cordial and informal student-faculty relations, and mutually helpful public relations with the medical profession.

The content and arrangement of the curriculum are less important than the enthusiasm and interest and desire to work which a dedicated instructor can instill into a student.

"One of the greatest assets in informal student-faculty relationships is Josh Turnage's barbecue cabin (Nance's Seafoods, etc.). Visitor from this country and abroad frequently are more impressed with Turnage's barbecue than with some of our other activities. The following is a typical letter: "I still recall my visit to Duke several years ago, and particularly the barbecue."

Barbecue and also spaghetti dinners are especially helpful in breaking down faculty-student barriers because their informality puts everyone at ease. As one member of the faculty said: "How can you be dignified while eating barbecue or spaghetti?"

Students and faculty were encouraged to call each other by their first names. Whenever I am call Dr. Davison, I am embarrassed and feel that trouble is brewing. (The Univ. Med. Center - 1927-1960, W. C. Davison)

B. The department of anatomy chaired by Dr. Francis H. Swett, 1930-1943.

The staff consisted of Dr. Swett as chairman, in charge of gross anatomy. He was also chairman of the Admissions Committee.

Dr. Duncan C. Hetherington was in charge of micro-anatomy & neuroanatomy.

Other members were: Dr. Roger Baker, W. Henry Hollinshead, Ph.D. candidate. Some clinical staffmembers from surgery & neurology were utilized.

All anatomy space: laboratories (teaching), staff members offices & labs, departmental library, store room, and departmental office were located on the 4th floor of Davison Building.

The Gothic architecture of the building, with the many dormer windows on the 4th floor, resulted in the room-arrangement dictating, to a degree, the distribution of the students for class work.

No one room was large enough to accomodate the entire class. The largest room plus two adjacent smaller rooms could accomodate half of the class; these rooms were used for micro-anatomy and neuro-anatomy.

Three fairly large rooms and two small but adjacent rooms were fitted for the gross anatomy course.

The medical school was on the quarter system, with the pre-clinical courses extending from the 1st of October to the end of June.

School was in session 5 and 1/2 days per week (1/2 day on Saturday).

Anatomy extended over two quarters (Oct. thru March); 572 hours devoted to the course: gross 440 Hrs., micro 66 hrs., neuro 66 hrs.

During the 1st quarter the students were in biochemistry 1/2 day per week; the other 5 days in anatomy: gross & micro.

During the 2nd quarter was 2 half-days in gross and 2 in neuro.

Dr. Swett's philosophy of teaching anatomy was a spin-off of the Mall laboratory method. Anatomy was best learned in the laboratory and not in the lecture hall.

Dr. Swett was a member of the department of anatomy at Johns Hopkins Med. School, when Dr. Lewis Weed was chairman. Weed was a student of Mall. Dr. Hetherington received his M.D. at Hopkins, so he was also acquaint-with the Mall system.

The following statement by Dr. Swett was included in the early bulletins of DUMC:

ANATOMY AT DUMC (cont.)

"In all courses considerable freedom is allowed the student in his selection of working hours and in planning his own methods of attack. Emphasis is placed upon the study of material in the laboratory, supplemented by a few lectures and frequent small-group conferences upon any phases of the work then current. All of the instruction is designed to be as informal and as nearly individual as possible."

You will recall that since the dissecting rooms were relatively small, the class was divided into two groups (A & B). While one of these groups was in histology the other group was in gross, and subdivided into smaller groups (multiples of four) according to the size of the gross lab room they occupied. One full day and two half-days the entire class would be in the gross labs, during the 1st quarter. During the 2nd quarter each group is in neuro 2 half-days per week and in gross 1 half-day per week.

According to Dr. Swett, in a paper Who Teaches Anatomy Anyhow? (1942):

"On opening day each group of 12 to 20 students, according to the number of instructors available, associates itself with a staff member for the fraction of the quarter indicated by the number of student groups. This instructor works with the group both in dissection and in histology (or neurology) for his allotted time, then exchanges groups with another. The students go immediately to the laboratories and work. During the first several days, much time is spent in demonstration and in careful supervision of the various laboratory tasks. Students are shown what use can be made of the textbook, the atlas, the library, the microscope. Such an arrangement permits the closest possible contact, assures the necessary individual guidance and encouragement, and facilitates correlation of the various phases of anatomy . . .". They are encouraged to be friendly and to get acquainted with each other and with us.

The textbooks recommended for the students in anatomy was a thorn in the side of book salesmen. Why couldn't we settle on a required textbook for all students? In gross we recommended: Gray, Morris, Cunningham and Piersol. And the suggestion was made that a copy of each be available at each table. In histology: Maximow & Bloom was recommended for students who had had a course in college. Other recommended texts were: Bailey, Cowdry, Bremer, Jordan and Ham. [Atlases: Sobotta, Spalteholz and Toldt. (Grant's atlas had not yet been published.)] In neuro-anatomy: Ranson, Strong & Elwyn, Larsell, Mettler, Krieg. Peele's Pearls, later to become The Neuroanatomic Basis For Clinical Neurology, was in mimeograph form and handed out to each student.

In accord with Dr. Swett's statement that "considerable freedom is allowed the student in his selection of working hours", the labs were available at all times--days, nights and Sundays. And the students took advantage of this option. Unfortunately the policy had to be terminated when a firebug prowled the hospital. Insurance companies would not permit such a condition.

Dr. Swett did not believe in examinations, and the first two years I was on the staff I cannot recall that any were given. How were students evaluated? The personal contact (in two phases of the subject) in the lab was the main factor. Spontaneous discussion with small groups, unannounced written exercises in gross (a simple case, a description of some anatomical set of relationships, which were "severely criticised for the benefit of future occasions but no grade or other value is placed on them." It is the option of the student to take part or not. Similar activities are carried out in histology and neuroanatomy. Grades from the various departments are not turned in to the Dean's office. The intellectural activites of

ANATOMY AT DUKE (cont.)

the students in any given subject are indicated on the offical records by the terms passed or failed. It does away with the tiresome and inaccurate figuring which accompanies a numerical grading system, and permits a certain latitude of judgment when rating students "good," "bad" and"indifferent," -- which is about as close as anyone can come to it anyhow--and is as close as is needed." At the end of the term all the instructors met together and evaluated the students. A unanimous vote was necessary to fail a student. And only one grade was given for Anatomy, not separate grades for the subdivisions of anatomy. Each instructor would have had contact with each of the four groups during each term.

Although Dr. Swett was chairman of the Admissions Committee he spent considerable time in the gross lab, not on a regular basis, but enough that he knew every student personally. Dr. Hetherington had no contact with the students in gross anatomy -- and that suited him just fine.

Dr. George Baylin,a radiologist, also had status in the department of anatomy. he conducted small group discussions in the gross labs and would take small groups down to radiology dept. for demonstrations & discussions of x-ray anatomy and fluoroscopy.

I joined the staff the fall of 1940. The teaching staff in anatomy consisted of Dr. Swett, Dr. Hetherington, Drs. Hollinshead, Everett, Youngstrom and Peele.

As before: Dr. Swett was in charge of gross, visiting the lab often, but not on a regular basis. Dr. Hetherington was in charge of micro & neuro. Drs. Hollinshead, Everett, Youngstrom & Peele were the group instructors, and I was a relief man. There were 66 students in the 1st year class.

Dr. Swett died suddenly of a coronary occlusion in February of 1943. He was 50 years old. The U. S. was into its second year of World War II. Dean Davison had been called to Washington, and Dr. Swett was, for all intents and purposes, the dean of the medical school. This responsibility superimposed on his deparmental ones, plus the work associated with the Admissions Committee, all took their toll.

I have already referred to his ability to evaluate students and people in general. Dr. Karl Mason, a colleague of Dr. Swett at Vanderbilt, said of him: "He always amazed me by his ability to acquaint himself with each new class of students in such a short space of time. Names, personal history and characteristics, good qualities and undesirable ones, all seemed to be revealed to his discerning eye long before they became apparent to others. At the same time, no one could have been more tolerant of the shortcomings of students, or more skillful in calling them to the attention of the student by a few crisp and pertinent remarks at the proper psychological moment.

"Most impressive was his ability to maintain the sternest of discipline whenever necessary and, at the same time, maintain the most informal and friendly relations with his students, technical staff and associates in general."

Dr. Swett had just been elected Secretary-Treasurer of AAA at their 1942 meeting. 1943 was a sad year for AAA: the newly elected president, Dr. Edgar Allen (Prof. of anatomy at Yale) died within a week of one another, both of coronary occlusions.

Dr. Hetherington was appointed to serve as acting chairman of the department until 1944.

Dr. Karl Youngstrom resigned his post in anatomy in 1943 to work on an M.D. degree, under military sponsorship. Little did he know he would have to serve two years in China!!

ANATOMY AT DUMC (cont.)

C. Department of anatomy chaired by Dr. Joseph E. Markee 1944-1966.

Dr. Markee was chosen from three candidates: Corbin, Magoun & Markee.

Markee was a student of Bartelmez at the Univ. Chicago. His entire academic performance, before coming to Duke, was at Stanford. He brought Dr. C. H. Sawyer along with him from Stanford; Sawyer took Karl Youngstrom's place.

Dr. Markee was appointed as chairman of the Admissions Committee. As with Dr. Swett, this appointment limited the amount of time Dr. Markee could spend in the lab with the students.

One major change in the teaching schedule was the inauguration of two or three weekly lectures in gross anatomy. From the beginning the lectures were illustrated; the early ones via the blackboard and some 3-1/4 x 4-1/4 & some 35 mm. slides.

Then Dr. Markee and Dr. Hollinshead collaborated on making a color movies of a complete dissection. Dr. Hollinshead made the dissection and Dr. Markee did the photography - in color. They did an excellent job.

From then on the lecture was mainly a narration of the movie, with stops at appropriate places to enforce a concept or relationship with lantern slides. Joe's cart was well equipped - including a large ash tray since Joe was a chain smoker.

With the movie as a preview of a body area to be dissected in the lab, more students completed the dissection of the cadaver than ever before.

For a year or two several x-ray plates were made of each cadaver. This not only gave the students an added perspective of their cadaver, but occasionally gave a preview of some thing to be watched for in the dissection: e.g., a bifid rib.

It was not uncommon for an instructor to help students satisfy their curiosity concerning some situations on their cadaver: e.g. a fairly large and firmer-than-fat structure in the thymic region - is it firm fat or did some thymic tissue persist? Or a partially descended testis, are the seminiferous tubules functional?

During Dr. Markee's regime the so-called oral demonstrations were inaugurated in the gross labs. The body was subdivded into 18 regions: anterior chest wall & axilla, anterior abdominal wall & inguinal region, brain & cranial fossae, heart & lungs, pelvic viscera, etc.. A list of the demonstrations was posted in the gross labs near each table. When all four students felt the dissection was complete and well done, and that they had studied the region, they scheduled a demonstration with an instructor - usually not the groups current instructor. Dr. Markee made himself available for as many demonstrations as possible. The students were supposedly knowledgeable on surface anatomy, gross anatomy, and developmental and microscopic anatomy when appropriate.

The demonstration might take anywhere from 30 minutes to 2 hours, depending on several factors: degree of preparation & interest.

The demonstration was not only a device for evaluating students, but was a teaching devise sine the students could ask questions.

If the instructor felt that all four students did a satisfactory job he signed the demonstration sheet; if not it had to be rescheduled.

All in all, I think both students and instructors enjoyed the experience.

About 1952 a graduate program in anatomy was approved. Leon Walker and Don Christian were the first two candidates in the program. Walker is a professor of anatomy at Tulane Medical School and Christian is chairman of the department of Ob.-Gyn. at the Univ. of Arizona. Other products of the program active in teaching in anatomy are: Joe Wells, Lois Perkins (deceased), Aroon Santadusit, Tejatat Tejasen, Wm. Hall, "Billi" Winer, and Bob Benton. Joe Osinchak. There may be others.

ANATOMY AT DUMC (cont.)

Toward the end of the '50's a Clinical Research Training Program was instituted. Dr. Moses joined the anatomy staff about this time (1958?).

By 1966 the time was ripe for another change - a major one!

University policy prescribed that departmental chairmen should step down at age 65. Thus, Dr. Markee stepped down and Dr. J. David Robertson was appointed to serve as chairman.

Dr. Markee continued to teach courses until his death in 1970, except for one year when he was granted a leave-of-absence.

D. The department of anatomy chaired by J. David Robertson 1966-____.

In the late 50's or early 60's a committee was appointed to discuss the advisability of changing the medical curriculum. This seemed to be a popular pastime at the time. Whatever the stimulus was for change it won out here at DUMC when a so-called "core" curriculum was approved to be set in motion in 1967.

I do not know all the reasoning behind deciding that a change in curriculum was necessary. But the philosophy behind the idea was rather sound: why should the entire class of medical students go lock-step through four years of medical training, when as they go out into practice they will become internists, surgeons, obstetricians, pathologists, psychiatrists, etc. So, as I got it, the idea was that each department (preclinical & clinical) was to determine a "core" of material, in their domain, that would be ~~necessary~~ essential for any M.D., regardless of his specialty. The "cores" would have to be condensed to such a point that during the first two years of medical school the students would be exposed, in core form, to the entire old four-year curriculum. At the end of this period, so the theory went, each student would be able to determine his future course as a doctor. Therefore, during the last two years of school each student could sort of tailor-make his program by taking elective courses in the preclinical departments during the third year, and electives in the clinical departments during the fourth year. What a wonderful idea! Why had it taken so long for someone to come up with an idea like that?

I mentioned this plan to a former graduate of DUMC, who was an excellent student and is now a very successful plastic surgeon. Without further comment from me he said: "It won't work. Many students do not really make their final decision about practice until the intern, or even the resident stage."

The "core" in anatomy would consist of 252 hours for gross, micro and neuro; quite a cut from the former 575 hours

As already stated, Dr. Markee took a leave of absence during the year the "core" curriculum was introduced, thus leaving Dr. Robertson full freedom & responsibility in organizing and implementing the anatomy "core".

Somehow, somewhere, with the drastic cut in time for gross anatomy, the suggestion was made to use late fetuses or still-borns for dissection in gross in place of adult cadavers. I do not know how the suggestion arose; I was asked about it. Without investigating the rationale of the plan, or of thinking it through, I replied with respect to my own experience is dissecting fetuses. I knew that well-fixed and preserved fetuses could be dissected rapidly, and that certain relationships were of interest and informative. However, I did not recall, at the time, that I had dissected an adult first. To obtain an adequate supply of well preserved fetuses required more time and preparation than we had for that first year. It was a rather unsatisfactory experience all around. Next year we went back to cadavers.

How goes the current anatomy "core"? Gross? Micro, o.k. (?) Neural sci.?? I don't really know.

ANATOMY AT DUMC (cont.)

The "core" curriculum was probably the major change in the anatomy department, but there were several accompanying side-effects.

Increased enrollment was accompanied by an increase in staff: from 7 in 1940 to 20 in 1982.

Rather than the well supplied departmental stock room with its slides, cover slips, paraffin, alcohol, chemicals, stains, glass ware, etc., each staff member was expected to finance his research program by means of grants, from numerous funding agencies, which had sprung up following World War II.

The research of the staff members became much more diversified, even quite foreign to some of the old-timers: electron microscopy, x-ray diffraction, spectroscopy, cell & molecular biology.

Logistic semi-isolation: three different floors in the same building, and one floor in another.

This change was not totally unexpected to the observant. Anatomy as a discipline had been undergoing change since the 16th century.

From 16th century anatomy has arisen:

Microscopic anatomy	Applied anatomy
Embryology	Physical anthropology
Experimental embryology	Neuroanatomy
Tissue culture	Histo- & cyto-chemistry
Cytology	Electron microscopy with all its ancillary tools & technics.
Genetics	

There is even some hesitancy as to what to christen a department in new medical schools. Of 129 departments in 1976, 106 used Department of Anatomy; 22 used such variations as:

Dept. of Anat. & Cell Biol.
" " " & Neurobiol.
" " " & Reprod. Biol.
" " Biological Structure
" " Human Morphology
" " Structural Biology
" " Biomedical Anatomy

I was interested in the notice from the medical library on selected recent acquisitions in Anatomy & Histology (1982): cf. appended list.

No doubt the changes in anatomy as a discipline over the past 30 years or so have been of some concern to the officers of AAA. In the last issue (Aug.) of Anatomical News the president asks: What are anatomy departments doing to solve current problems? I mention 3 of the questions asked:

How can our graduate students gain a satisfactory training in classical anatomy, and at the same time obtain the background in contemporary biology and the strong research outlook that they will need for successful scientific careers?

How much teaching should our graduate students do as part of their graduate training?

How can we encourage more attendance at the annual Anatomy Meetings?

Many subtle and a few major changes have taken place at DUMC since 1930 and I'm sure the end is not yet. Maybe Dr. Hetherington was prophetic when he said of the new curriculum: "I'll give it ten years, then they'll go back to the way it was, and think they have discovered something new."

SELECTED RECENT ACQUISITIONS

7/20/82

ANATOMY AND HISTOLOGY

BIOLOGICAL MEMBRANES / ed., Dennis Chapman. QH 601 B522 v.4 1982

Böck, Peter. THE PARAGANGLIA. QS 504 M73h v.6 pt.8 1982

CELL AND MUSCLE MOTILITY. QH 647 C33 v.1 1981

CELL BIOLOGY OF EXTRACELLULAR MATRIX / ed., E. D. Hay. QH 506 C33 1981

CELLULAR CONTROLS IN DIFFERENTIATION / ed., C. W. Lloyd. QH 607 C33 1980

CHEMIOSMOTIC PROTON CIRCUITS IN BIOLOGICAL MEMBRANES / ed., V. P. Skulachev. QH 601 C42 1981

EFFECTS OF LOW TEMPERATURES ON BIOLOGICAL MEMBRANES / ed., G. J. Morris. QH 653 Ef36 1980

International Symposium on Mucus in Health and Disease. MUCUS IN HEALTH AND DISEASE II / ed., E. N. Chantler. QS 532.5m8 In8p 1981

Vinnikov, I. A. EVOLUTION OF RECEPTOR CELLS: CYTOLOGICAL, MEMBRANOUS AND MOLECULAR LEVELS. QH 506 M73 v.34 1982

CARDIOVASCULAR PHARMACOLOGY OF THE PROSTAGLANDINS / ed., A. G. Herman.
QU 90 C17 1980

CLINICAL BIOCHEMISTRY: CONTEMPORARY THEORIES AND TECHNIQUES / ed., H. E. Spiegel.
QY 90 C61 v.1 1981

COMPLEX CARBOHYDRATES / ed., Victor Ginsburg. QU 135 C71m v.83 1982

COPPER PROTEINS / ed., T. G. Spiro. QU 55 C79 1981

ENDORPHINS: CHEMISTRY, PHYSIOLOGY, PHARMACOLOGY, AND CLINICAL RELEVANCE / ed., J. B. Malick. QU 68 En25 1982

International Symposium on Flavins and Flavoproteins, 7th. FLAVINS AND FLAVOPROTEINS / ed., Vincent Massey. QU 55 Sy687f 1981.

International Symposium on Recent Advances in GABA Study ... PROBLEMS IN GABA RESEARCH, FROM BRAIN TO BACTERIA, 1981. Journal Stacks: Excerpta Medica: International Congress Series No. 565.

INTRACELLULAR PH, ITS MEASUREMENT, REGULATION, AND UTILIZATION IN CELLULAR FUNCTIONS: PROCEEDINGS ...1981 / ed., Richard Nuccitelli. QU 105 In82 1981

LACTOSE DIGESTION: CLINICAL AND NUTRITIONAL IMPLICATIONS / D. M. Paige.
QU 83 L11 1979

LEUKOTRIENES AND OTHER LIPOXYGENASE PRODUCTS / ed., Bengt Samuelsson.
QU 90 L57 1981

LIPOSOMES, DRUGS, AND IMMUNOCOMPETENT CELL FUNCTIONS / ed., Claude Nicolau.
QU 93 L664 1980

WHAT ARE ANATOMY DEPARTMENTS DOING TO SOLVE CURRENT PROBLEMS?

How can our graduate students gain a satisfactory training in classical anatomy, and at the same time obtain the background in contemporary biology and the strong research outlook that they will need for successful scientific careers?

How much teaching should our graduate students do as part of their graduate training?

How can we encourage more attendance at the annual Anatomy Meetings?

(Anatomical News: Series 3, No. 18, Aug. 1984.)

The development of histo- and cyto-chemical technics, the advent of electron microscope triggered a revolution in anatomical concepts and research interests. This accompanied by a post-World War II improvement in the economy and congressional approptiation of ample research funds, all set the stage for change in the discipline long known as ANATOMY.

By 1976 some 22 of the American medical schools had made changes in the name of the Department of Anatomy. Changes in the curriculum format became quite common. Even here at DUMC in 1966 the so-called "core" curriculum was inaugurated.

Miscellaneous information on the "Hopkins influence"
on Duke Univ. Med. Sch. Anatomy.

Ross G. Harrison, Ph.D. Hopkins, 1894; M.D. Bonn 1899; anatomy staff at Hopkins 1896-1907 (under Mall's tutelage of Franklin P. Mall. (1862-1917) Chr. zool. at Yale 1907-

Lewis H. Weed, M.D. Hopkins 1912; anatomy staff 1914-

Francis H. Swett, Ph.D. Yale 1922; anatomy staff ~~at~~ at Yale 1921-1922; anatomy staff at Hopkins 1922-1925; assoc. pfof. of anatomy at Vanderbilt 1925-1930. To Duke as Prof. & chrm. 1930.

R. Sidney Cunningham, M.D. Hopkins 1915; anat. staff 1915-1925; to Vanderbilt, as chrm., 1925. Caring Swett & Weddington with him.

Duke - 1943

DEMONSTRATIONS

The demonstrations listed on the attached sheets are to be given by the student to his two partners and an instructor.

The material to be demonstrated and discussed may involve any phase of the particular region demonstrated, including surface, developmental and functional anatomy.

Each student is responsible for all the subject matter of each demonstration, but usually will be asked to give only a part thereof.

It is highly desirable that dissection of several regions should proceed at the same time, rather than that all members of a demonstration group concentrate upon completing one particular region. Also, it is necessary that each dissector participate as equally as possible in the dissection of each region. For these reasons, the dates preceding the topics listed below are not to be regarded as absolute deadlines, but rather as a guide to the time by which any particular dissection should have been completed and reviewed. Demonstrations should be given in the sequence indicated by the dates, but without regard to the sequence in which subjects appear under any one date. Do not allow your demonstrations to accumulate; when a topic is completed, arrange for a demonstration as soon as possible thereafter, regardless of the stage of dissection of other regions listed under the same date.

Completion of any demonstration should not be interpreted as precluding subsequent discussions of these regions.

DEMONSTRATIONS

Table
Room

Demonstrators: 1
2
3

Approximate date for completion	Topic (region of body)	Instructor's OK
April 14	Pectoral region and anterior thoracic wall.	_____
May 6	Axilla and scapular region.	_____
May 6	Buttocks; back, including suboccipital region, spinal cord, and vertebral column.	_____
May 12	Anterior abdominal wall, inguinal region.	_____
May 19	Thigh.	_____
May 26	Pleura, pericardium and peritoneum.	_____
May 26	Neck and face.	_____
June 12	Heart, lungs and abdominal viscera	_____
June 12	Leg and foot	_____
June 12	Head, including only mandibular nerves and musculature; the cranial fossae; orbit; lingual and sublingual regions.	_____
June 19 or (June 24)	Arm, forearm and hand.	_____
June 26 or (July 9)	Perineum	_____

Should joints be included? where?

July 3 or (July 20)	Head: including only internal, middle and external ears; pharynx; cranial nerves 7, 8, 9, 10, 11, 12.	_____
July 17 or (August 2)	Head: including especially nose and paranasal sinuses; larynx; cranial autonomic system.	_____
July 17 or (August 2)	Pelvis	_____

DEPARTMENT OF ANATOMY
DUKE UNIVERSITY SCHOOL OF MEDICINE

1931 F. H. Swett, Prof. of anatomy;
D. C. Hetherington, Assoc. Prof., in charge of histology & neurology.
51 students in the first 1st-year class.
429 hours of anatomy.

1932 F. H. Swett, Prof. of anatomy and chairman of department.
D. C. Hetherington, Assoc. prof. of anatomy (histol. & neurol.).
Roger Baker, Instr. in anatomy; C. L. Haywood, Instr. in Anat. & Surg.
T. L. Peele, Assist. in anatomy.
Mary E. Shipp, research assist.

1933 Swett & Hetherinton as above.
Roger Baker shifts to Pathology.
Henry Hollinshead, Instr.; John W. Everett, Instr.
T. L. Peele, Assist.
Shipp, res. assist.
Fall quarter: Oct. 3-Dec. 19: gross & micro. 429 hrs.
Winter quarter: Jan. 4-Mar. 22: gross and neuro 154 hrs. (583 hrs.)

1934 Swett & Hetherington as above.
Hollinshead, Everett & Haywood Instr.
Peele, Assist.
Shipp, Res. assist.
Oct. 2-Dec. 18: gross & histo. 429 hrs. Jan. 2-Mar. 21: gross & Neuro. 154 Hrs.
28,176 vols in med. sch. libr. & 412 journals.

1935 Swett & Hetherington as above.
Hollinshead, Everett, Haywood & Finkelsteins (surg.) Instr.
J. L. Jones; A. S. Morrow, W. Schultze, Assists.
Ship, Res. Assist
Oct. 1-Dec. 20: 429 hrs. 5 d. per wk. gross & histol.; Jan. 3-Mar. 21: 154 hrs. 2 d. per wk.
gross & neuro.
63 students in first-year class.

1936 Swett & Hetherington as above.
Hollinshead, Everett, Finkelstein Assocs.
George Baylin, Assist + Morrow, Newbern & Schultze.
Ship, Res. Asst.
Oct. 5- Dec. 22: gross & Histo. 429 hrs., ~~Spring~~ Winter quarter: 154 hrs.

1937 Swett & Hetherington as above.
Hollinshead & Everett Assocs.
R. W. Graves, Instr.
Baylin, M. Burns, Newbern, Raper, Ross & Wells, Assists.
Shipp, Res. Asst.

DEPARTMENT OF ANATOMY
DUKE UNIVERSITY SCHOOL OF MEDICINE

1938 Swett & Hetherington as above.
Hollinshead, Everett & Graves Assocs.
R. C. MacCardle & K. A. Youngstrom, Instr.
Ross & Wells, Assists.
Shipp. Res. asst.
71 students in first-year class.
Sept. 29- Dec. 17; Jan 2-Mar. 18.

1939 Swett & Hetherington, same as above.
Hollinshead & Everett, Assist. Profs.
Youngstrom, Peele, & Baylin, Instr.
Monroe, Ray, Assists.
Jane Craig, Res. assist.
66 students in first-year class.

1940 Swett & Hetherington, as above.
Hollinshead, Everett, as above.
Youngstrom, Peele, Baylin and K. L. Duke, Instr.
E. C. Beyer, & C. C. Stauffer, Assist.
Craig, Res. asst.
Oct. 3-Dec. 21. Jan. 2-Mar. 15.

In all courses considerable freedom is allowed the student in his selection of working hours and in planning his own methods of attack. Emphasis is placed upon the study of material in the laboratory, supplemented by a few lectures and by frequent small-group conferences upon any phases of the work then current. All of the instruction is designed to be as informal and as nearly individual as possible. (Dr. Swett)

1941 Swett & Hetherington, as above.
Hollinshead & Everett, as above.
Youngstrom & Peele, Assoc.
Baylin & Duke, Instr.
Littler & Ricketson, Assist.
Jane Craig, Res. asst.
Oct. 2-Dec. 20 and Jan. 5-Mar. 21

General principles and the functional viewpoint of living anatomy are stressed in the hope that the student may be stimulated to secure a working knowledge of anatomy in the broadest sense. Fresh tissue, living cells are utilized. Cooperation with radiology; use of clinical cases.

1942 Swett & Hetherington, as above.
Hollinshead & Everett, as above.
Youngstrom & Peele, as above.
Baylin & Duke, as above.
Jane Craig, Res. asst
Oct. 5- Dec. 19. Jan. 7-Mar. 21. 68 students in first-year class.

Advanced courses: demonstration of prepared dissections; brain modeling; special neurology; experimental neurology; seminars in original literature and anatomical problems.

DEPARTMENT OF ANATOMY
DUKE UNIVERSITY SCHOOL OF MEDICINE

1943 Dr. Swett died; Duncan appointed Acting chairman

1944 J. E. Markee, Prof. & chairman
Hetherington, Assoc. prof.
Hollinshead, Everett and Peele, Asst. prof.
Duke and Sawyer, Assoc. Balin, Instr.

K. Youngstrom, M.D. 1945

1946 Markee and Hetherington, Prof.
Hollinshead, Assoc. prof.
Everett, Peele and Sawyer, Asst. prof.
Duke and Baylin, Assoc.

1947 Markee, Hetherington, & Hollinshead, Prof. → to Mayo Clinic
Everett, Assoc. prof.
Peele, Sawyer, & Duke, Asst. prof.
Baylin, Assoc.
72 students. 642 hours of anatomy.

1948 Markee & Hetherington, Prof.
Everett, Assoc. Prof.
Peele, Duke & Sawyer, Asst. prof. (Baylin)
B. Townsend, M.D., Instr.

1949 Markee & Hetherington, Prof.
Everett, Peele, Sawyer, Assoc. prof.
Duke, Asst. prof. Balin, Assoc.
Townsend, Instr.

1950 Markee, Hetherington, Everett, & Sawyer, Prof.
Duke, Asst. Prof.
Baylin, Assoc.

1951 & 1952 The same. Rxcept Duke, Assoc. prof. in 1951

1953 Senior staff same as above, except R. F. Becker in as Assoc. prof.
Wrenn, Mansker, Park, Gore & Altany, Instr.

1954 Senior staff same as above.
Hook, Watt, Jackson, Instr.
76 students; 617 hours for anatomy.

1955 Senior staff same as above.
Grunt, Ph.D., Harmon, M.D., Instr.

1956 Senior staff same as above.
Grunt, Knisely, Ph.D., Instr.

1957 All staff same as above.

1958 All staff same as above. Knisely leaves.

DEPARTMENT OF ANATOMY
DUKE UNIVERSITY SCHOOL OF MEDICINE

1959 All staff same, except Knisely promoted Assoc. prof.
76 students. 537 hours of anatomy.

1960 Staff same except Moses added as Assoc. prof.

1961 Same as above except Cuyler added as Assoc. prof.
Goree, M.D., Assoc.
McFalls, M.D. & Joe Wells, Ph.D., Instr.

1962 Staff same as above.
76 students. 537 hours.

1963 Staff same except Venetta added as Instr.

1964 Same as above except Hertha Cress, Ph.D., added Assoc.
80 students. 531 hours.

1965 Senior staff same except Peele, Prof., McFalls, Asst. prof.
Bassett, M.D., Assoc.; Venetta, Ph.D., Instr.

1966 Senior staff same except addition of Buettner-Janusch, Ph.D.,
Assoc. prof.
Junior staff same except addition of Jim Wilson, Ph.D. and
Mary Alice Rundles, A.B., Instr.
Markee remains as chairman thru June of 1966 - then Robertson.

1967 Senior staff the same.
Bill Redmond, Ph.D., Instr.
New "core"curriculum begins. 252 hours of anatomy!
Elective courses: Anatomy related to locomotion (Markee, Everett, Becker, Duke and Bassett. Anatomy of the viscera (Markee, Everett, Becker & Duke. Internal cranium and deep face (Markee, Everett, Duke and McFalls. Speciall dissections of restricted regions.
Cytological genetics (Moses). Biochemical cytology (Moses). Biophysical cytology (Everett & Duke ???!!!). Neurocytology (Peele, Markee & Duke??). Physical anthropology (B-J).

1968 Additions to staff: J. H. Prost, Assoc., V. Morgan, Redmond & Jim Wilson, Instr.

1969 Sheila Counce, joins staff

DEPARTMENT OF ANATOMY
DUKE UNIVERSITY SCHOOL OF MEDICINE

1967 Robertson, Markee Everett, Moses & Peele - profs.
Christin, McFalls, Malhaley, Prost - asst. profs
Becker, Buettner-Janusch & Duke - assoc. profs.
Goree & Bassett - assocs. + McMasters

1968 Profs. same as above + Buettner-Janusch
Becker & Duke - assoc. pfofs.
Christian, Mahaley, Prost - asst. profs.
Bassett, Counce - assocs.

1969 Profs. same as above. Assoc. profs. same as above.
Assist. Profs. + Longley. Assocs. same as above

1970 Profs. same as above.
Assoc. profs. + Reedy
Asst. profs. - same as above + Kilburn and Shafland
Assocs. Cartmill, Bergeron.
Inst. Morgan.

1940 - 7

1970 - 14

Subsequently Hylander, Kay, Cant, Hall, Jakoi, Corless, Costello, Erickson, Lin

Adelman, Fletcher, Johnson (Kurt)

DUKE UNIVERSITY
MEDICAL CENTER LIBRARY

Newsletter #127 October 1983

A list of some titles:

ANATOMY & HISTOLOGY:

Cell differentiation: Molecular basis & problems.
Cell interactions & development: Molecular mechanisms.
Cell membranes, methods & reviews.
Molecular biology of the cell.
Pathobiology of cell membranes (B. F. Trump)
Mechanisms of cell motility: Molecular aspects of contractility.

OTHER TITLES:

Morphology of congenital heart disease. (WG 220, M82, 1983*
Moore, K.L.: Before we are born: basic embryology & birth defects.
Atlas of human reproduction by scanning electron microscopy.
(Hafez, ed; QS 17, At65, 1982)
The ovary. (Serra, ed.; WP 320, Ov12; 1983.)

Designation of the "Department of Anatomy" in 129 institutions in 1976:

Department of Anatomy	106
" " " & Cell Biology	2
" " " & Neurobiology	1
" " " & Reproductive Biology	1
" " Anatomical Sciences	4
" " Biological Structure	1
" " Cell Biology	3
" " " " & Anatomy	1
" " Human Anatomy	1
" " " Morphology	1
" " Neurobiology	1
" " " & Anatomy	1
" " Structural Biology	1
" " Surgery: Section of Gross Anatomy	1
Division of Anatomy	1
" " Biology & Medicine	1
Department of Biomedical Anatomy	1

advent of histo & cyto-chemistry & especially of the EM triggered a revolution in anatomy this accompanied by the [illegible] research [illegible] the formation of the Dept of anat at Duke

Some seminar topics scheduled by the Department of Anatomy at U.N.C. and DUMC in 1982:

Cyclic reluation (regulation) of the seminiferous epithelium.
Cell surface glycoproteins: purification and characterization using monoclonal antibodies.
The structure of dimeric cytochrome c oxidase and its association with the phospholipid bilayer.
Electron microscopy of protein molecules and their self-assembly: fibrinogen and fibrinonectin.
Organization of the efferent vestibular nuclei in the toadfish, Opsanus tau.
Structure of membrane bound (Na^+, K^+)-AtPase.
New methods in the basic and clinical assessment of sperm function during transport and fertilization.
Brain Ligatin: An endogenous lectin which binds Acetylcholinesterase.
Biological implications of gap junction structure, distribution and composition.
Influence of cholesterol on bilayer organization and on water penetration into membranes.
Afferent influences on neuronal form: As seen through the ear of a chicken.
Another look at the Taylor-Amos model of decorated actin.
X-ray and neutron diffraction from lipid bilayers and reconstituted membranes.
Bubbles and diamonds: an infinite periodic minimal surface in a liquid-crystalline lipid.
Myelination as a paradigm of cell interactions in the developint central nervous system.
Developmental aspects of GABAergic neurons.
Primate extrastriate cortex.

Dr. C. Donald Christian, Formerly Of Duke Faculty

Dr. C. Donald Christian, 57, recipient of a 1973 Duke University Distinguished Medical Alumnus Award, died Sunday at his home in Tucson, Ariz., after a lengthy illness.

Christian was a native of Parker, Kansas.

He graduated from the University of Kansas at Lawrence before moving to Durham.

At Duke University, Christian received his doctorate in anatomy in 1955 and his medical degree in 1958.

Christian completed his medical residency in obstetrics and gynecology at the Sloane Hospital for Women at Columbia Presbyterian Medical Center in New York City.

He was on the faculty at the University of Florida School of Medicine from 1962 to 1964.

In 1964, he replaced Dr. Edwin Hamblen as the director of reproductive endocrinology in the department of obstetrics and gynecology at Duke University.

He was chairman of the department of obstetrics and gynecology at the University of Arizona's College of Medicine from 1969 until his death.

Christian was a member of the American Board of Obstetrics and Gynecology, which he served as director of evaluation for the past several years.

Dr. Arthur Christakos, a Duke University professor of obstetrics and gynecology, described Christian as "an authority in the field of reproductive endocrinology, being instrumental in founding the subspecialty boards in that field.

"He made numerous original contributions through his research in human reproductive endocrinology since he was a graduate student in anatomy and a medical student at Duke," said Christakos, who met him in 1964. "He a trusted collegue" and "he felt it was his mission in life to train young physicians to manage the diseases of women," Christakos said.

A memorial service will be held at 10 a.m. Wednesday in St. Thomas the Apostle Catholic Church in Tucson.

Christian is survived by his wife, Mrs. Nancy Young Christian; two sons, Chad Christian of Phoenix, Ariz., and Van Christian of Tucson; a daughter, Miss Beth Christian of Phoenix; and a stepsister, Mrs. Hankie Holefelder of Wilmington, Kansas.

Instead of flowers, donations may be made to the C.D. Christian Memorial Library, Department of Obstetrics and Gynecology, Arizona Medical Center, 1501 N. Campbell St., Tucson, Ariz. 85724.

SELECTED RECENT ACQUISITIONS

ANATOMY AND HISTOLOGY

BIOLOGY AND PATHOLOGY OF ELASTIC TISSUES. QS 532.5E5 B52 1980

Bock, Peter. PEROXISOMES AND RELATED PARTICLES IN ANIMAL TISSUES. QH 581 C332 v.7 1980

Carleton, H. M. CARLETON'S HISTOLOGICAL TECHNIQUE. QS 525 C18h 1980

CELL MEMBRANES AND VIRAL ENVELOPES. QH 601 C334 1980 v.1-2

Elwood, J. M. EPIDEMIOLOGY OF ANENCEPHALUS AND SPINA BIFIDA. QS 675 E/88e 1980

Int. Bari Conf. on the Organization and Expression of the Mitochondrial Genome. PROCEEDINGS. QH 603 In85o 1980

Int. Sympos. on Tissue Culture in Medical Research. PROCEEDINGS. QS 530 In82p 1980

THE JOHNS HOPKINS ATLAS OF HUMAN FUNCTIONAL ANATOMY. QS 17 J62j 1980

Kissel, Pierre. THE NEUROCRISTOPATHIES. QS 604 K64n 1981

Seminar on Reproductive Physiology and Sexual Endocrinology. BLASTOCYST-ENDOMETRIUM RELATIONSHIPS. QP 251 In82p 1980

ANESTHESIOLOGY

Campkin, T. V. NEUROSURGICAL ANAESTHESIA AND INTENSIVE CARE. WO 200 C15n 1980

NEURAL BLOCKADE IN CLINICAL ANESTHESIA AND MANAGEMENT OF PAIN. WO 300 N39 1980

TO MAKE THE PATIENT READY FOR ANESTHESIA: MEDICAL CARE OF THE SURGICAL PATIENT. WO 178 T55 1980

BIOCHEMISTRY

THE BIOCHEMISTRY OF GLYCOPROTEINS AND PROTEOGLYCANS. QU 55 B52 1980

BIOLOGICAL REGULATION AND DEVELOPMENT. QH 508 B52 v.2 1980

BIOLOGY OF COLLAGEN. QU 55 B522 1978

Burke, S. R. THE COMPOSITION AND FUNCTION OF BODY FLUIDS. QU 105 B91c 1980

CALCIUM AND CELL FUNCTION. QU 55 C12 v.1 1980

CHEMICAL RECOGNITION IN BIOLOGY. QH 506 M73 v.32 1979

ENZYMATIC BASIS OF DETOXICATION. QU 120 En99 1980 v.1-2

ENZYME INHIBITORS AS DRUGS. QU 143 En99 1979

Evans, W. H. PREPARATION AND CHARACTERISATION OF MAMMALIAN PLASMA MEMBRANES. QU 25 L11 v.7 1979

HEART CREATINE KINASE: THE INTEGRATION OF ISOZYMES FOR ENERGY DISTRIBUTION. QU 141 H35 1979

Int. Conf. on Fibrous Proteins. FIBROUS PROTEINS: SCIENTIFIC, INDUSTRIAL AND MEDICAL ASPECTS. QU 55 Sy6825p 1979 v.2

Int. Sympos. on Coenzyme Q. BIOMEDICAL AND CLINICAL ASPECTS OF COENZYME Q. QU 135 In826b 1979

Int. Sympos. on Superoxide and Superoxide Dismutases. BIOLOGICAL AND CLINICAL ASPECTS OF SUPEROXIDE AND SUPEROXIDE DISMUTASE. QU 140 Eu74p 1979 v.2

IRON. QP 535.F4 Ir6 1980

LIPOSOMES AND IMMUNOBIOLOGY. QU 93 L662 1980

LIPOSOMES IN BIOLOGICAL SYSTEMS. QU 93 L66 1980

THE PEPTIDES: ANALYSIS, SYNTHESIS, BIOLOGY. QU 68 P39 v.2A 1980

Pfaff, D. W. ESTROGENS AND BRAIN FUNCTION: NEURAL ANALYSIS OF A HORMONE-CONTROLLED MAMMALIAN REPRODUCTIVE BEHAVIOR. QL 761 P47e 1980

Pigman, W. W. THE CARBOHYDRATES: CHEMISTRY AND BIOCHEMISTRY. QU 75 P62c v.1B 1980

THE PROSTAGLANDINS. QU 90 P945 1979

PROTEIN PHOSPHORYLATION AND BIO-REGULATION. QU 55 P942 1979

VITAMIN E: A COMPREHENSIVE TREATISE. QU 179 V83 1980

WORLD NUTRITION AND NUTRITION EDUCATION. QU 145 W892 1980

BIOMEDICAL ENGINEERING

Conf. on Engineering in Medicine and Biology. PROCEEDINGS. QT 34 C76p 1980

CRC HANDBOOK OF CLINICAL ENGINEERING. QT 34 C42 v.1 1980

PHYSICAL TECHNIQUES IN MEDICINE. QT 34 P56 v.2 1980

CARDIOVASCULAR SYSTEM

CARDIAC ARRHYTHMIAS: THEIR MECHANISMS, DIAGNOSIS, AND MANAGEMENT. WG 330 C174 1980

CARDIAC ISCHEMIA AND ARRHYTHMIAS. WG 300 C173 1980

CHILDHOOD PREVENTION OF ATHEROSCLEROSIS AND HYPERTENSION. WG 340 C43 1978

CORONARY CARE. WG 300 C814 1981

CORONARY-PRONE BEHAVIOR AND CORONARY HEART DISEASE: A BIBLIOGRAPHY. WG 300 C815 1980

AMERICAN ASSOCIATION OF ANATOMISTS

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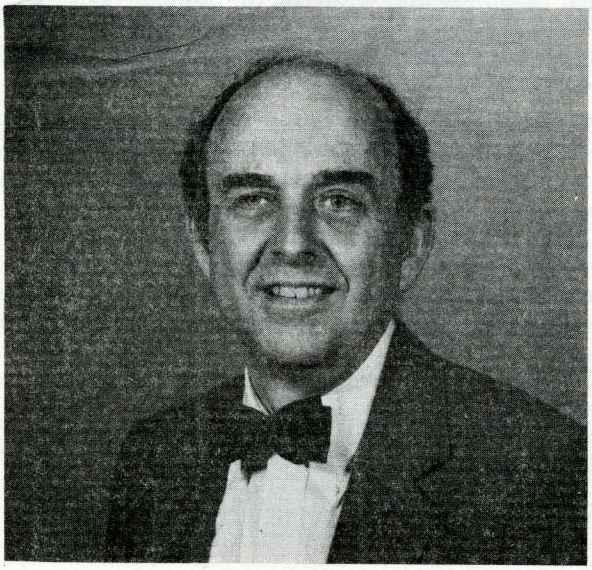
August, 1984

Anatomical News



A. KENT CHRISTENSEN, PH.D.

PRESIDENT'S MESSAGE

Inserted into this issue of the *Anatomical News* is a page of questions which concern anatomy departments. I hope you will remove this page and give the questions some consideration. If you or your department have developed approaches that deal effectively with some aspect of the questions, I would very much appreciate hearing from you. Thank you.

In this presidential message I would like to acknowledge some of the individuals and groups whose effort and dedication help carry our Association forward year by year.

The affairs of the Association are run on a day-to-day basis from the office of the Secretary-Treasurer, Dr. William P. Jollie (Medical College of Virginia). Bill is assisted in this large undertaking by an able secretary, Mrs. Betty Whitlock. They put out the *Anatomical News* four times a year, the *Proceedings* and membership list once a year, and the *Directory of Anatomy Departments* once every four years. They keep membership records, and carry on the abundant correspondence and telephoning that is necessary to coordinate a variety of association

(*Continued on Page 2*)

CANDIDATES FOR OFFICERS AND EXECUTIVE COMMITTEE 1985

Each year during the annual meeting the President of the Association appoints a Nominating Committee for officers and Executive Committee members for the coming year. During the meeting in Seattle President Allen C. Enders appointed the following committee: Doctor Gwen V. Childs, University of Texas Medical Branch; Doctor Carmine Clemente, U.C.L.A. School of Medicine; Doctor Michael Gershon, Columbia University; Doctor Robert O. Kelley, University of New Mexico (Chairman); and Doctor Barry F. King, University of California, Davis. As mandated by the Constitution, this committee already has submitted a slate of candidates to the Secretary in order that the ballots can be prepared. As is customary, a ballot and a short curriculum vitae of each nominee will be mailed out to the membership in the fall. In addition to those candidates proposed by the Nominating Committee, whose names are listed below, there will be space on the ballot for write in votes. We hope you will exercise your right to vote for the officers of your Association.

FOR PRESIDENT ELECT

Douglas E. Kelly

J. David Robertson

FOR SECOND VICE PRESIDENT

Lloyd Guth

Bryce L. Munger

FOR EXECUTIVE COMMITTEE

John F. Fallon

Karen A. Holbrook

Drew M. Noden

John A. Trotter

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PRESIDENT'S MESSAGE

(*Continued from Page 1*)

activities. Dr. Jollie is responsible for managing all funds used by the Association, and for maintaining full accounting records. The responsibilities of the Secretary-Treasurer are very extensive, and we owe Bill a debt of gratitude for the fine manner in which they are being carried out.

Putting on the annual meeting each year and publishing announcements, program and abstracts involve a bewildering array of arrangements and details, which are the year-long preoccupation of the Program Secretary, Dr. Charles E. Slonecker (University of British Columbia). We are fortunate to have someone of Chuck's ability and dedication in this demanding position.

The AAA Executive Committee, consisting of 15 officers and elected councillors (chaired by the President), meets twice a year to decide policy, solve major problems, discuss and plan the annual meeting, and determine the direction the Association will take in the ensuing months. It hears reports from the various AAA committees, as well as representatives to other organizations. It may appoint subcommittees for particular functions. For example, an *ad hoc* subcommittee, chaired by Dr. Leonard Ross (Medical College of Pennsylvania), is currently developing recommendations for further improvement of the annual meeting and for raising the attendance. Over recent years there has been a concerted effort on the part of the Executive Committee to improve the scientific image of the Association.

The Advisory Committee of Young Anatomists (ACYA) has added a new dimension to the leadership of our Association. Formed about two years ago, this committee, consisting of six assistant professors and two postdoctoral fellows, has provided a substantial input to the Executive Committee, representing the outlook and interests of the younger members of our Association. The committee chairman, Dr. John C. Herr (U. of Virginia) is a member of the AAA Executive Committee, and plays a very active role in deliberations during its two annual meetings. The efforts of the ACYA are having a significant effect on the direction our Association is taking.

The Public Affairs Committee, chaired by Dr. Gordon I. Kaye (Albany Medical School), has the responsibility of looking out for the Association's interests in Washington, and also joins with other societies to promote favorable legislation for basic biomedical research in general.

Several groups have developed exceptional scientific symposia and talks each year for our annual meetings. We have enjoyed the two Vice-Presidential Symposia, the Bensley Lecture, Refresher Course and symposia offered by the AAA Educational Affairs Committee, presentations of the Morphogenesis Club, and the exciting symposia for graduate students sponsored by the Association of Anatomy Chairmen. These fine presentations have enhanced the scientific level of our annual meetings and are very much appreciated.

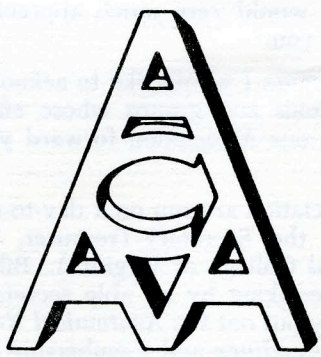
The AAA Archivist, Dr. George "Erik" Erikson (Brown University), has assembled a vast collection of photographes, taped interviews and documents relating to the history of the Association. He has also built up an impressive computer database, from which a diversity of current and past information about our membership can be obtained. These extensive archives should constitute a unique resource for historical studies on American and Canadian anatomy in the future.

One of the groups within the Association that has shown vigor and initiative at the annual meetings is the Interest Group in Gross Anatomy, devoted to the improvement of gross anatomy teaching. Working under the auspicies of the Educational Affairs Committee of the AAA, this interest group presented a very informative and well-attended symposium at the Seattle meetings last April. The symposium dealt with new imaging techniques (CATSCAN, NMR and others) being used for clinical diagnosis and study of the human body, which offer new challenges and opportunities in gross anatomy teaching. I attended part of this symposium in Seattle and enjoyed it very much.

The next annual meeting of the Association will be held in Toronto on May 5-9, 1985. As you know, Toronto is a lovely city and is relatively inexpensive. It is said to be within one hour's flying time of 60% of the U.S. population. This will be the first joint meeting of the American Association of Anatomists and the Canadian Association of Anatomists, and promises to be a memorable occasion. The Local Arrangements Committee, chaired by Dr. Keith L. Moore (University of Toronto), is already engaged in extensive preparations. There will be excellent scientific symposia, as well as papers and posters. On Sunday afternoon, May 5th, a reception will be held in the Department of Anatomy at the University of Toronto (only a short distance from the hotel) for all members attending the meetings. Tours will be conducted for those who would like to see the department.

We will hope to see you all in Toronto next May.

TORONTO, CANADA SITE OF FIRST JOINT MEETING AAA/CAA May 5th to May 9th, 1985



LOGO 1985

The University of Toronto, Faculty of Medicine, is looking forward to acting as your host for the 1985 Joint Meeting of the American and Canadian Association of Anatomists. Not only is the Local Committee, under the Chairmanship of Dr. Keith L. Moore, looking forward to the presentation of a stimulating scientific program, but also to making this a memorable visit for you to our city.

Roughly translated the Indian word "Toronto" means "the meeting place", a fitting description for this sparkling and dynamic city of about three million people nestled on the Canadian side of Lake Ontario. We hope

(*Continued on Page 3*)

TORONTO — SITE OF FIRST JOINT MEETING AAA/CAA

(*Continued from Page 2*)

you'll make Toronto the place to meet your Anatomy colleagues in 1985.

Toronto is one of North America's popular meeting places because it is a clean, safe city. You can enjoy a colorful and varied nightlife — everything from a frenzied disco beat to the ballet, opera, symphony, and legitimate theatre.

Toronto is a city to explore and discover — walking along its tree-fringed streets, exploring the revitalized waterfront, cruising around its island waterways, or zooming by on the city's very efficient and clean subway system.

Among the many things that are a "must" to see are the Science Centre, Casa Loma (yes, Toronto has a real castle!), Wonderland, The Royal Ontario Museum, McLaughlin Planetarium, The Art Gallery, the CN Tower (the tallest free-standing structure in the world), the Toronto Eaton Centre, the Metro Zoo, and the University of Toronto with its unique downtown campus (serving over 45,000 students).

May is usually a pleasant month in Toronto. The weather should be spring-like with day highs of 60 to 75 degrees. Accompanying Persons' Activities will include tours of the city, a visit to Ontario Place, excursions to some of the surrounding communities, a trip to Niagara Falls and Niagara-on-the-Lake.

We hope to see you in Toronto. Persons interested in the Accompanying Persons' Program should write to Mrs. Marion Moore, 65 Harbour Sq., PH5, Toronto, Ontario, Canada M5J 2L4 for details of our programs.

PRELIMINARY PROGRAM FOR THE 1985 ANNUAL MEETING

The 98th Annual Meeting of the AAA is being held in conjunction with the 29th Annual Meeting of the Canadian Association of Anatomists (CAA) at the Toronto Sheraton Centre Hotel on May 5-9, 1985. Preregistration forms for hotel reservations are contained in the "Call for Abstracts" packet which will be mailed out on August 15. All qouted costs are in Canadian dollars which are currently being exchanged at 75¢ in U.S. funds (one U.S. dollar will purchase $1.34 in Canadian currency).

The favorable exchange rate makes the costs of the Sheraton Centre Hotel rooms competitive for Toronto in this peak spring season. The hotel is an excellent facility for our meeting and we encourage the members to stay in the headquarters hotel.

It is a good idea to exchange U.S. dollars for Canadian currency in a bank rather than at the hotels and restaurants. The exchange rate is usually better for the buyer and there are two commercial banks in the Sheraton Centre.

Highlights of the preliminary program include Sunday evening lectures by Roger Gorski (UCLA) on "Sexual Differentiation of the Brain" and Karen R. Hitchcock on "Controls of Cell Differentiation in the Lung". A Graduate Student Colloquium on "Molecular Biology and the Microtome" is being organized for Monday afternoon by Michael Gershon for the Association of Anatomy Chairmen. Speakers include John Pintar (Columbia) — "*In situ* Hybridization in Endocrinology and Development"; and Stanley Watson (University of Michigan) — "Strategies for Using and Expanding c-DNA Probes as Neuroanatomical Tools".

On Tuesday morning the Second Vice President's Symposium on "Subcellular Mechanisms Controlling Intracellular Communications Between Excitable Cells" is being organized by Jerry Sutin (Emory University). The Special Interest Group in Gross Anatomy also will have a panel Wednesday morning on "Teaching Anatomy in the 21st Century". Details for the Gross Anatomy session are being arranged by Stewart P. Mennin of the University of New Mexico.

The Canadian Association of Anatomists will sponsor a Mini Symposium on Tuesday afternoon on "The Concept of a Stem Cell" and a half day symposium on Wednesday on "Determinants of Cellular Polarity". Vic Kalnins (University of Toronto) is the organizer for both CAA events.

Also on Wednesday, Stephen Meier (University of Texas, Austin) has arranged a half day Symposium for the Morphogenesis Club on "Patterning in Early Embryonic Development". Speakers include Stephen Meier — "Axial Patterning"; Michael Solrush (University of Iowa) — "Limb Patterning"; and William Jeffrey (University of Texas, Austin) — "Molecular Patterning".

The Educational Affairs Committee has organized a half day for Thursday morning which includes a State of the Art Lecture on "Morphology and Function of the Blood-Brain Barrier". Speakers will be Milton Brightman (NIH' and William M. Partridge (UCLA). John Povlishock (Medical College of Virginia) is the organizer . A Mini Symposium also is being organized for the EAC by Gwen V. Childs (University of Texas, Galveston) on Imaging Techniques. Gwen Childs will talk on "Molecules in Movement as seen with Enhanced Imaging Video Interference Microscopy"; Robert Allen (Dartmouth University) will speak on "Video Enhancement Imaging: Methodology and Application"; and D. Lansing Taylor (Carnegie Mellon University) will speak on "Visualization Receptors for Fluorescent Analogs".

The 1985 Program also includes the Cajal Club Meeting on Sunday and a wine and cheese reception sponsored by the Dean of Medicine for all delegates at the

(*Continued on Page 4*)

PRELIMINARY PROGRAM FOR THE 1985 ANNUAL MEETING

(*Continued from Page 3*)

University of Toronto from 6-8 p.m. on Sunday evening. The General Session on Monday evening will include presentations of the Herrick, Bensley and Henry Gray Awards as well as the Presidential Address by Kent Christensen on "Functional Organization of the Testis". A Socializer will be held on Tuesday night, and Wednesday evening will be a "Free Evening" for the AAA delegates. The CAA will hold its annual "Quebec Dinner" on Wednesday evening.

Platform and Poster sessions will be held Monday through Thursday at the Sheraton. Abstracts are to be sent to the Program Secretary, Chuck Slonecker, by December 1, 1984. The deadline has been extended this year due to the slightly later time of the Annual Meeting in May. Make plans to attend and participate in the 1985 Meeting!

XII INTERNATIONAL ANATOMICAL CONGRESS, 1985

The International Federation of Associations of Anatomists will convene its twelfth congress at the Barbican Centre in London, England, from August 11 to August 17, 1985. The official languages will be English, French, and German; and simultaneous translation of presented papers will not be provided. The Organizing Committee consists of Professor R. J. Harrison, F.R.S., Congress President, and Professor J. D. Lever and J. W. S. Harris, Congress Secretary and Congress Treasurer, respectively. The official mailing address for the Congress is: Secretariat, XII International Anatomical Congress, 100 Park Road, London NW1 4RN, England. A provisional program lists several symposia for most days of the meeting. On August 12, there will be symposia on Cell Biology and Histochemistry, Neuroanatomy (CNS) and Physical Anthropology. On August 13 symposia will be on Reproduction and Reproductive Endocrinology, Neuroanatomy (PNS) and Musculo-skeletal Systems. On August 14 a Garden of England Tour is planned. The symposia continue on August 15: Embryology and Teratology, Splanchology and Quantitative Morphology; and on August 16 there will be symposia on General Endocrinology, Cell Growth, Renewal and Repair and Somatic Growth. On each day of the meeting submitted papers also will be presented which must deal with original materials and must be presented in 10 minutes in English, French, or German. In addition to the Garden of England Tour on August 14, a full social program is planned that includes a concert at the Barbican Centre and visits to places of general and/or scientific interest in London, Windsor, Cambridge and Oxford.

If you wish to receive further information you are urged to write the Secretariat immediately. A program, registration forms, summary forms and hotel accomodation forms will be sent in November 1984 to people who have indicated an interest in attending.

British Airways has been appointed the official carrier for this Congress and can offer participants special cost effective travel arrangements on an individual or group basis.

NEW ORLEANS IN OCTOBER

The Southern Society of Anatomists will meet in New Orleans, October 17-20, 1984, at Le Pavillon Hotel on Poydras Street, within walking distance to the World's Fair which will be in full swing at that time. The Anatomy Department of the LSU Medical School in New Orleans is hosting this event which includes, in addition to papers from the platform, a symposium on Current Concepts of Pain and Its Management. The invited speakers for this Friday morning symposium are William D. Willis, Jr., M.D., Ph.D. (Marine Biomedical Institute, Galveston, Tx), Donald E. Richardson, M.D. (Department of Neurosurgery, Tulane Medical School), Randy Malloy, D.D.S., Ph.D. (oral surgeon in private practice) and Steve Taylor, M.D. (Department of Psychiatry, LSU Medical School). The weather should be lovely then and an ideal time to meet in the City that Care Forgot. If anyone would like more information about the meeting, please write Diane E. Smith, Program Chairman, Department of Anatomy, LSU Medical School, 1901 Perdido Street, New Orleans, La. 70112. Registration fee is $40 for members and $45 for nonmembers (a years membership is included in this registration fee).

PUBLIC AFFAIRS COMMITTEE

The Public Affairs Committee of the Association continues to work closely with the Public Policy Committee of the American Society for Cell Biology and with the Public Affairs representative of the Association of Anatomy Chairmen. The joint Legislative Alert Committee (LAC) formed by these three organizations has been tracking the progress of the NIH reauthorization bills, the Animal Welfare Legislation, and the 1985 NIH Appropriations bill, among others. The Legislative Alert Network has been triggered twice and was particularly effective in the mark up period on the NIH appropriation bills.

The Association is particularly pleased that ASCB has been admitted to the Council of Academic Societies of the Association of American Medical Colleges; with ASCB, AAA, AAC, and the Society for Neurosciences working together both independently and under the

(Continued on Page 5)

WHAT ARE ANATOMY DEPARTMENTS DOING TO SOLVE CURRENT PROBLEMS?

A. KENT CHRISTENSON, *President*
American Association of Anatomists

The field of anatomy has a long, distinguished history in which we can all take pride. At the same time we recognize that our field is a dynamic scientific discipline that continues to grow and develop as a part of contemporary biology. Along with growth and change there are inevitably a few problems.

This supplement to the *Anatomical News* contains a list of some problems that anatomy departments across the U.S. and Canada are facing. During the next few months we are anxious to receive suggestions from departments and individuals about what they have been doing in an effort to solve problems such as these.

Anatomy departments may not all have the same goals and needs. All anatomy departments should have solid and effective teaching programs, but the extent of research emphasis varies considerably from one department to another. The reasons for these differences include departmental size, resources and history. Although some of the problems listed below are shared by most departments, the list tends to emphasize problems faced by departments that aspire to be strong in research.

If your department has developed effective approaches to solve one or more of the problems listed below, or if you have good ideas yourself, I would appreciate it if you would let me know about them. Perhaps you see other important problems that are not on the list, for which you have suggestions. We need to benefit from each other's ideas. A few months from now, in the February issue of the *Anatomical News*, I will summarize the various approaches that have been suggested for each of the problems.

Please send comments or suggestions to me at the following address: Dr. A. Kent Christensen, Department of Anatomy and Cell Biology, Medical Science II Building, The University of Michigan Medical School, Ann Arbor, MI 48109 (telephone 313/763-1287).

How can anatomy faculty, usually carrying heavier teaching loads than their peers in other basic science departments, better compete for grants and tenure, as well as fulfill themselves as scientists?

Discussions of this topic usually come to the conclusion that anatomists need to work harder than their peers to achieve these goals, and should do so. Are there any other steps that would facilitate this progress toward research achievements?

How can we attract a larger pool of quality applicants for our anatomy graduate progrms?

Over the last decade, we have all seen a serious decline in the number of applicants for graduate training in our departments. Even though this has been a national trend and has also been felt by other basic medical sciences, it is a critical problem we need to solve. Our graduate programs are producing the next generation of anatomists, and we need to attract the best possible talent.

How can we manage to fund our graduate students at competitive levels?

This question overlaps somewhat with the previous one. Many departments are finding it difficult to offer stipends to incoming graduate students, and to maintain support in subsequent years. The level of stipends is a problem. If the graduate student is paid as a research assistant on an NIH grant, the stipend level is supposed to be about $5,500, which is the authorized NIH level. However, many departments outside our field are supplementing stipends up to about $7,000-$8,000, which helps them attract better students.

How can our graduate students gain a satisfactory training in classical anatomy, and at the same time obtain the background in contemporary biology and the strong research outlook that they will need for successful scientific careers?

Research-oriented anatomy departments expect their graduate students to emerge from their training prepared to work at the frontiers of their chosen fields, and to be part of the excitement in contemporary biology. This often requires a stronger background in cell biology, biochemistry and allied fields than has been expected of our students in the past. And yet we still want our students to know anatomy and to identify with this field.

In most of our departments, the central focus of the first year of graduate training is on coursework in gross anatomy, histology and neuroanatomy. Important as these courses are, they generally do not involve extensive scientific problem solving and do not contribute very strongly to the research outlook of the students. The heavy coursework of the first year may make it difficult

PUBLIC AFFAIRS COMMITTEE

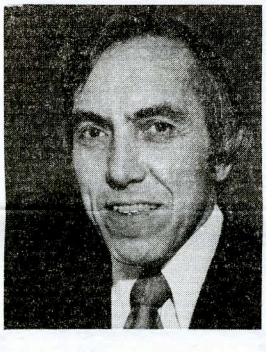
(Continued from Page 4)

AAMC umbrella, the effectiveness of the presentation of anatomy's needs, beliefs, and concerns to the Congress have been increased significantly.

There will be a joint meeting of the ASCB, AAA and AAC Public Policy/Public Affairs representatives at the ASCB National Office in Bethesda on August 10th. The purpose of the meeting is to discuss ways for enlarging and improving the effectiveness of the LAC and for further refining common strategies relative to the laboratory animal legislation and the NIH legislation. Kent Christensen (ASCB) Doug Kelly (AAC) and Gordie Kaye (AAA) will attend this meeting and would welcome any input or suggestions from the membership that would make for a more effective representation of our Association.

ANATOMISTS IN THE NEWS

DOCTOR MALCOLM H. HAST, Northwestern University Medical School, was awarded the Arnott Demonstratorship for 1984-85 from the Royal College of Surgeons; DOCTOR E. RUSSELL HAYES, State University of New York at Buffalo, was the recipient of a Distinguished Service Award for his contributions to the academic program of the School of Medicine. DOCTOR KEITH L. MOORE, University of Toronto, was awarded the *J.C.B. Grant Award* by the Canadian Association of Anatomists at its annual meeting in June 1984. The Award, which that Association considers the highest award it bestows, is presented each year to an outstanding anatomist "in recognition of meritorious services and outstanding scholarly accomplishments in the field of anatomical sciences".



KEITH L. MOORE, PH.D.

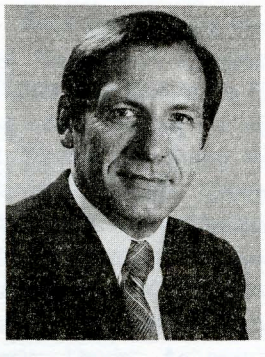
DOCTOR HELEN A. PADYKULA, University of Massachusetts Medical School, was awarded an Honorary Doctor of Science degree from Mount Holyoke College; and DOCTOR C. ROMERO-SIERRA, Queen's University, has been assigned by the International Union of Radio Sciences (URSI), a body of the International Council of Scientific Unions, the task to prepare and edit a review of the literature related to the interaction of non-ionizing radiation with living systems.

NATIONAL ACADEMY OF SCIENCES ELECTS FOUR MEMBERS OF THE ASSOCIATION

Recently it was announced that DOCTORS MARILYN G. FARQUHAR, Yale University, GERALD D. FISCHBACH, Washington University, ELIZABETH D. HAY, Harvard Medical School, and JAMES M. SPRAGUE, University of Pennsylvania, have been elected to membership in the National Academy of Sciences.

PROMOTIONS

DOCTOR ROBERT F. DYER. Lousiana State University Medical Center, has been named Vice-Chancellor for academic affairs of the Medical Center and Dean of its School of Graduate Studies; DOCTOR ANN H. BUNTMILAM, University of Washington, has been promoted to Professor of Ophthalmology; DOCTOR KAREN A. HOLBROOK, University of Washington, has been promoted to professor of the Department of Biological Structure, DOCTOR KEITH L. MOORE, University of Toronto, has been appointed Associate Dean, Basic Sciences, in the Faculty of Medicine.



ROBERT F. DYER, PH.D.

The following members of the Association have been appointed chairmen of departments of anatomy: DAVID H. CARR, McMaster University; ROBERT ECHT, Michigan State University; SHIRLEY ANN GILMORE, University of Arkansas; EDWIN G. JONES, California College of Medicine, Irvine; ROBERT LASHER, University of Colorado; BRUCE MAGUN, University of Oregon; and MORRIS E. WEAVER, University of Oregon School of Dentistry.

IN MEMORIAM

The Association has suffered great loss through the recent deaths of DOCTOR LEROY R. BOLING, Professor of Anatomy, Washington University School of Dental Medicine; DOCTOR BELA HALPERT, Professor Emeritus of Pathology, Baylor College of Medicine; DOCTOR FRED A. METTLER, Professor Emeritus of Anatomy, College of Physicians and Surgeons, Columbia University; and DOCTOR GEORGE N. RONSTROM, Professor Emeritus of Anatomy, Louisiana State University.

AMERICAN ASSOCIATION OF ANATOMISTS

Dr. William P. Jollie, Secretary-Treasurer
Department of Anatomy
Medical College of Virginia
Box 101, MCV Station
Richmond, Va. 23298

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Dr. Kenneth L. Duke
Dept. of Anatomy
Duke University Medical Center
Durham, N. C. 27710

April 7-12 April 21 - May 3, 1958

	Mon	Tues.	Wed	Thurs.	Fri.	Sat
8:30						
9:30	Psych.	Anatomy - A / Physiol. - B	Psych.	Anatomy - A / Physiol. - B	Anatomy - A / Physiol. - B	Physiol.
10:30			Physiol.			
11:30	Physiol.					Clinical Neurology
12:30						
1:30	Anatomy - B / Physiol. - A	Anatomy - B / Physiol. - A	Free	Anatomy - B / Physiol. A	Pharma.	
2:30						
3:30						
4:30						
5:00						

Second Three Weeks

May 5-24, 1958

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
8:30	Anatomy - A / Physiol - B	Psych.	Biochem (x2)	Anatomy - B / Physiol - A	Anatomy - B / Physiol - A	Psych
9:30		Physiol.	Physiol.			Physiol.
10:30			Biochem. Conf. (x2)			
11:30		Radiology				clinical Neurology
12:30						
1:30	Anatomy - B / Physiol - A	Anatomy - A / Physiol - B	Free	Anatomy - A / Physiol - B	Biochem Lab. (x2)	
2:30						
3:30						
4:30						
5:00						

SEMINAR SCHEDULE FOR GRADUATE STUDENTS

Anatomy Department, 1957-58

November 20, 1957: MAHALEY, Structural and functional considerations of hypothermia.

December 4, 1957: SANTADUSIT, Review on the tissue culture of the spinal ganglion in chick.

December 18, 1957: WELLS, Hypothalamic cytoarchitecture.

January 15, 1958: PERKINS, Changes brought about by loss of autonomic innervation in spinal cord injuries.

January 29, 1958: KING, Histochemistry in neural tissue. Theory, techniques and applications.

February 12, 1958: MAHALEY, Metabolism of nervous tissue.

February 26, 1958: WELLS, Nature of neurosecretory substance.

March 12, 1958: PERKINS, Cerebrospinal factors in the production of spasm.

March 26, 1958: KING, Theories of smell.

Open Date: SANTADUSIT, Studies upon implanted ovarian tissues in the rat following cultivation in vitro for varying periods of time.

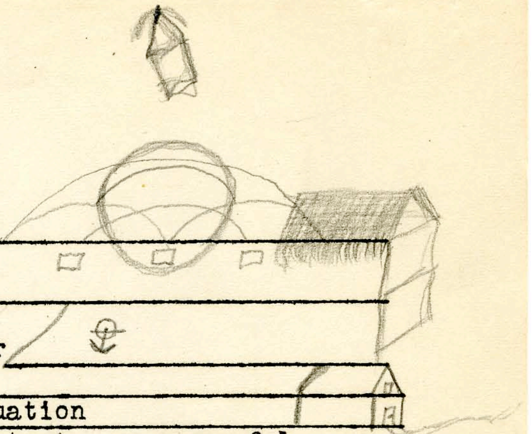
DUKE UNIVERSITY
SCHOOL OF MEDICINE
Student Record

Please:
1. Fill in student's grade.
2. Underline your personal evaluation of each student. Comment if necessary in the space provided.
3. Sign each sheet.

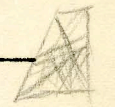
Subject ______________________

Date ______________________

Instructor ______________________



I irrelevant
O omission
X incorrect
A ambiguous



Name	Grade	Personal Evaluation			
		intelligent	industrious	competent	resourceful
		cooperative	slow	incompetent	immature
		enthusiastic	indifferent	unreliable	mature
		uncooperative	dull	reliable	irritating
		initiative	pleasing	bluffer	confused
		intelligent	industrious	competent	resourceful
		cooperative	slow	incompetent	immature
		enthusiastic	indifferent	unreliable	mature
		uncooperative	dull	reliable	irritating
		initiative	pleasing	bluffer	confused
		intelligent	industrious	competent	resourceful
		cooperative	slow	incompetent	immature
		enthusiastic	indifferent	unreliable	mature
		uncooperative	dull	reliable	irritating
		initiative	pleasing	bluffer	confused
		intelligent	industrious	competent	resourceful
		cooperative	slow	incompetent	immature
		enthusiastic	indifferent	unreliable	mature
		uncooperative	dull	reliable	irritating
		initiative	pleasing	bluffer	confused
		intelligent	industrious	competent	resourceful
		cooperative	slow	incompetent	immature
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		uncooperative	dull	reliable	irritating
		initiative	pleasing	bluffer	confused
		intelligent	industrious	competent	resourceful
		cooperative	slow	incompetent	immature
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		cooperative	slow	incompetent	immature
		enthusiastic	indifferent	unreliable	mature
		uncooperative	dull	reliable	irritating
		initiative	pleasing	bluffer	confused

ANATOMY GROUP ASSIGNMENTS

Group	Sept. 16 - 27	Sept. 28 - Oct. 4	Oct. 5 - Oct. 11	Oct. 12 16
I	Everett, Wells Knisely	Ford, Grunt	Becker Christian	Duke Milam
II	Duke Milam	Everett Christian	Ford Wells, Knisely	Becker Grunt
III	Becker Grunt	Duke Wells, Knisely	Everett Milam	Ford Christian
IV	Ford Christian	Becker Milam	Duke Grunt	Everett Wells, Knisely

	Oct. 17 - Oct 24	Oct 25 - Nov. 2	Nov. 4 - Nov. 20	Nov. 21 - Dec. 13	Dec. 14 - Jan. 17
I	Everett Milam	Ford Grunt	Ford	Becker	Wells
II	Duke Grunt	Everett Christian	Everett	Ford	Becker
III	Becker Christian	Duke Knisely, Wells	Wells	Everett	Ford
IV	Ford, Wells Knisely	Becker Milam	Becker	Wells	Everett

HISTOLOGY
AUTUMN AND WINTER QUARTERS
1956-1957

GROUPS I and III		GROUPS II and IV
Tues. Oct. 2 9:30 A.M	Assign lockers, demonstration of use of Microscopes	Tues. Oct. 2 1:30 P.M.
Thurs. Oct. 4 1:30 P. M.	Blood, fixed and fresh	Fri. Oct. 5 1:30 P. M.
Tues. Oct. 9 1:30 P.M	Connective tissue cells and fibers	Wed. Oct. 10 8:30 A.M.
Thurs. Oct. 11 1:30 P.M.	Cartilage and Bone	Fri. Oct. 12 1:30 P.M.
Tues. Oct. 16 1:30 P.M.	Epithelium, Mesothelium and Endothelium	Wed. Oct. 17 8:30 A. M.
Thurs. Oct. 18 1:30 P. M.	Smooth, Voluntary, Cardiac muscle and Purkinje tissue	Fri. Oct. 19 1:30 P.M.
Tues. Oct. 23 1:30 P.M.	Blood Vessels	Wed. Oct. 24 8:30 A.M.
Fri. Oct. 26 8:30 A.M.	Capillaries and lymphatics	Fri. Oct. 26 1:30 P.M.
Tues. Oct. 30 1:30 P.M.	Slide description	Wed. Oct. 31 8:30 A.M.
Fri. Nov. 2 8:30 A.M.	Lymph nodes	Fri. Nov. 2 1:30 P.M.
Tues. Nov. 6 1:30 P.M.	Spleen and thymus	Wed. Nov. 7 8:30 A.M.
Fri. Nov. 9 8:30 A.M.	Blood Formation	Fri. Nov. 9 1:30 P.M.
Tues. Nov. 13 1:30 P.M.	Esophagus and stomach	Wed. Nov. 14 8:30 A.M.
Fri. Nov. 16 8:30 A.M.	Small and large intestine	Fri. Nov. 16 1:30 P.M.
Tues. Nov. 20 1:30 P.M.	Salivary glands	Wed. Nov. 21 8:30 A.M.

Friday. Nov. 23 8:30 A.M.	Pancreas	Fri. Nov. 23 1:30 P.M.
Tues. Nov. 27 1:30 P.M	Liver	Wed. Nov. 28 8:30 A.M.
Fri. Nov. 30 8:30 A.M.	Respiratory System	Fri. Nov. 30 1:30 P.M.
Tues. Dec. 4 1:30 P.M.	Excretory System	Wed. Dec. 5 8:30 A.M.
Fri. Dec. 7 8:30 A.M.	Male reproductive system	Fri. Dec. 7 1:30 P.M.
Tues. Dec. 11 1:30 P.M.	Female reproductive system	Wed. Dec. 12 8:30 A.M.
Fri. Dec. 14 8:30 A.M.	Endocrines and female reproduction	Fri. Dec. 14 1:30 P.M.
	HOLIDAY Dec. 15 to Jan. 7, '57	
Tues. Jan. 8 1:30 P.M.	Endocrines	Wed. Jan. 9 8:30 A.M.
Fri. Jan. 11 8:30 A.M.	Slide description	Fri. Jan. 11 1:30 P.M.

First Three Weeks

April 8-12 April 21 - May 3, 1958

	Monday	Tuesday		Wednesday	Thursday		Friday		Saturday
8:30	Neuroanatomy Lecture	Neuroanatomy A	Physiology B	Neuroanatomy Lecture	Neuroanatomy A	Physiology B	Neuroanatomy A	Physiology B	Physiology Lecture
9:30				Physiology Lecture					
10:30									
11:30	Physiology Lecture								Clinical Neurology
12:30									
1:30	Neuroanatomy B	Physiology A	Neuroanatomy B	Physiology A	Free Time	Neuroanatomy B	Physiology A	Pharmacology Lecture	
2:30									
3:30									
4:30									
5:00									

* On Tuesday April 8, the entire class will have a Physiology lecture, 8:30 - 9:30 A. M. Group A will then have Neuroanatomy from 9:30 - 12:30; Group B, Neurophysiology. Wednesday A. M., April 9, will be devoted entirely to Physiology lectures. Hours will be posted later.

Second Three Weeks

May 5-24, 1958

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8:30	Neuroanatomy A / Physiology B	Neuroanatomy Lecture	Biochemistry Lecture (X2)	Neuroanatomy B / Physiology A	Neuroanatomy B / Physiology A	
9:30		Physiology Lecture	Physiology Lecture			Physiology Lecture
10:30			Biochemistry Conference (X2)			
11:30		Radiology				Clinical Neurology
12:30						
1:30	Neuroanatomy B / Physiology A	Neuroanatomy A / Physiology B	Free Time	Neuroanatomy A / Physiology B	Biochemistry Laboratory (X2)	
2:30						
3:30						
4:30						
5:00						

NEUROANATOMY COURSE, Spring, 1958

Group A		Group B
April 8, 8:30 April 10, 8:30	Spinal Nerves and Spinal Cord.	April 8, 1:30 P. M.
April 11, 8:30	External and Internal Anatomy of Brain Stem.	April 10, 1:30 P. M.
April 22, 8:30	Cranial Nerves 3, 4, 6, and Vestibular Division of 8.	April 21, 1:30 P. M.
April 24, 8:30	Cranial Nerves 5, 7, 9.	April 22, 1:30 P. M.
April 25, 8:30	Cranial Nerves 10, 11, 12.	April 24, 1:30 P. M.
April 29, 8:30	The Cerebellum	April 28, 1:30 P. M.
May 1, 8:30	The Thalamus	April 29, 1:30 P. M.
May 2, 8:30	The Hypothalamus	May 1, 1:30 P. M.
May 5, 8:30	The Basal Ganglia	May 5, 1:30 P. M.
May 6, 1:30 P. M.	Cerebral Hemispheres, Cortical Areas. Blood Supply. Cerebrospinal Spaces.	May 8, 8:30
May 8, 1:30 P. M.	Somatic Sensory System. Spinal Cord. Thalamus. Parietal Lobe.	May 9, 8:30
May 12, 8:30	The Visual System.	May 12, 1:30 P. M.
May 13, 1:30 P. M.	The AuditorySystem.	May 15, 8:30
May 15, 1:30 P. M.	The Somatic Motor System.	May 16, 8:30
May 19, 8:30	The Somatic Motor System.	May 19, 1:30 P. M.
May 20, 1:30 P. M.	The Somatic Motor System.	May 22, 8:30
May 22, 1:30 P. M.	The Olfactory System; The Hippocampus and Limbic Lobe.	May 23, 8:30

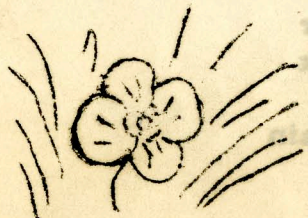
Duke University - Duke Hospital
School of Medicine
School of Nursing

PRESENT

a

SPRING CONCERT

By The
Medical Men's Chorus
Dr. K. L. Duke, Director
And
The Nurses' Choir
Jean Munro, Director



Duke Hospital Amphitheater
Thursday Evening
May 12, 1955
7:30 P. M.

Duke University - Duke Hospital
Medical Men's Chorus
Dr. Kenneth L. Duke, Director

Tenors: W. A. Dickinson, David Jones, James Jackson, Charles Scheil, John Snow, Norman J. Wilson

Baritones: Irving Allen, George Cassady, James Hall, Daniel N. Tucker

Basses: Roger J. Berry, William Hassler, Herbert F. Johnson, William Smith

Duke Hospital
Nurses' Choir
Jean Munro, Director

Sopranos: Fran Brawley, Jane Chandler, Barbara Hoffman, Margaret Lightsey, Martha McDaniel, Jean Parker, Ann Rush, Dawn Tillett

Altos: Donna Hager, Bev Hopkins, Margaret Ann Kornegay, Edna Quinn, Kay Shepherd, Nan Schoederer, Mary Ann Stark, Burton Stevens, Marguerite Thain, Kay Thompson

Accompanist: Pat Harlan

Program: Roger J. Berry Publicity: Herb Johnson

PROGRAM

I. The Happy Wanderer.....Möller
Begin the Beguine.....Porter
On the Sunny Side of the Street.....McHugh
The Birth Of The Blues.....Warnick
Topsy and Eva Fantasie.....Wilson
The Nurses' Choir

* * *

II. Mood Indigo.....Ellington
Great Day.....Youmans
Temptation.....Brown
Stars of the Summer Night.....Woodbury
The Medical Men's Chorus

* * *

III. Swedish Rhapsody.....Wildman
Pat Harlan, pianist

* * *

IV. Song of the Forge.....Folk Tune
Home on the Range.....arr. Frey
The Hunter's Moon.....Hyde
The Long Day Closes.....Sullivan
The Medical Men's Chorus

* * *

V. Dixieland Break:
Bill Davis, piano Henry Moestellar, trumpet
Kenneth Duke, trombone Sid LeBauer, clarinet

* * *

VI. Comin' Thru the Rye.....arr. Simeone
Were You There.....arr. Ringwald
soloist: Martha McDaniel, soprano
The Twenty-Third Psalm.....Malotte
soloist: Margaret Lightsey, soprano
The Holy City.....Adams
The Medical Men's Chorus
and The Nurses' Choir

DUKE, Kenneth L., Department of Anatomy, Duke University Medical Center, Durham, North Carolina. Some names and events involved in getting microscopic anatomy accepted as an integral part of the anatomical curriculum.

The anatomy curriculum in the early American medical schools was gross anatomy, and that only. Exemplary of this situation was the anatomy offered at the University of Pennsylvania Medical School in 1765. William Shippen, Jr., the professor of anatomy, received his formal training in London from William and John Hunter, and in Edinburgh from Alexander Monro (Primus). For many years anatomy was taught by surgeons for surgeons, and with little or no attempt to increase anatomical knowledge.

Toward the middle of the 19th century a course in microscopic anatomy was introduced in some European universities. However, the problem of spherical and chromatic aberration in microscope lenses and the primitive methods of preparing histological specimens inhibited acceptance of the microscope as a teaching tool until later in the century. Then histologists, especially in Germany, attracted the attention of such Americans as Horner, Leidy, Minot, Piersol, Mall, and others who set the stage for microscopic anatomy to be introduced into the medical curriculum.

Of necessity such American pioneers in histology as Holmes at Harvard and Horner at Pennsylvania merely demonstrated examples of a select few histological specimens to their students. Microscopes were in short supply in the early American medical schools and histological preparations consisted mainly of toto mounts and teased and macerated tissues. Then too, the cell doctrine was still in swaddling clothes.

By the end of the first decade of the 20th century all reputable medical schools in America taught microscopic anatomy as an integral part of the curriculum.

the University of Alabama in Birmingham UNIVERSITY STATION / BIRMINGHAM, ALABAMA 35294

July 26, 1977

Dr. Kenneth L. Duke
Department of Anatomy
Duke University Medical Center
Durham, North Carolina 27710

Dear Ken:

I was flattered that you knew of our paper on Holmes. He was an interesting old coot even though F.T.Lewis had a very poor opinion of him. An ironic situation I found was that the 'detur' once given to F.T.L. was a copy of the "Autocrat of the Breakfast Table". He wrote a long, and I think scathing comment in the flyleaf but it was in Latinso that I'm not too sure of what he said.

There is an article on Microscopy in Vol. 67, '76 of Isis that you might be interested in. I read it several months ago and it is now at the bindery so I can't give you the exact reference to the page number. Another reference I found interesting was a book by Dora B. Weiner "Raspail, Scientist and Reformer". There is a good picture in it of the simple microscope Raspail used and such as Holmes brought home with him from France.

I too miss seeing friends at the Anatomy meetings although it is embarassing at times not to be able to wall names that belong to familiar faces. This year I was recovering from pulmonary emboli at the time of the meeting. My doctor put in a Mobin-Uddin umbrella in my inferior vema cava to stop other clots from getting to my lungs.

With warmest regards.

Sincerely yours,

Tom

Tom Hunt

Dr. Lovett & I first met him about 1938 or 1939 while I was still a graduate student. Somehow, I can't recall the details of the situation, Jim Stevenson and I got up to the 4th floor. Mrs. Lovett took us in tow. We met Drs. Lovett, Bellerington & Hollinshead. These 3 and Dr. Lovett I saw off & on, Sigma Xi meetings, on campus, etc.

During the spring of 1940, when my graduate work was drawing to a close, Dr. Gray came into my lab to see if I had plans for the summer. If I was to be there, he had some research money he could offer. I said I wouldn't mind staying in the area if I could find a job. Dr. Gray recalled a conversation he had a month or two earlier with Dr. Lovett in which he asked if any pre-graduate students would be interested in a career in anatomy. Dr. Gray said he didn't know why he didn't think of me at the time, but that he would contact Dr. Lovett if I was interested. The events from this time until Oct. 1, 1940, when I got my first check as an anatomist, were hectic and will be recorded somewhere else.

I found Dr. Lovett to be a quiet, unassuming and fair individual. Evidently he brought some of the Mall philosophy of the "why" and "how" of anatomy in the medical curriculum. It was the job of the staff to not only know anatomy (gross, micro & neuro) and be able to dispense it, but just as important to know each student individually. Formal lectures for the entire class were drastically non-existent. The teaching was done in the lab. and weekly (or biweekly) conferences with small groups.

About 1941 or 1942 some of the staff - Henry & Talmage were ring-leaders as I recall - campaigned for [illegible] exams of some sort, but evidently without Dr. Lovett's approval.

a staff meeting was called. as soon as the subject was brought up, Dr. Levitt chided us for the undemocratic method of going about the policy change. We did make some change but not as drastic as some wanted. It did point out that Dr. Levitt was much fairer than we had been.

← Dr. F. H. Swett, chairman 1930-1943. Gross anat.

Dr. D.C. Hetherington (1930-196) neuro. & micro.

Dr. H. Hollinshead (1930-194)

Dr. J. W. Everett (1932-1977)

Dr. Ross McCardle

Dr. Karl Youngstrom

Dr. Talmage Peele (19 -1978)

Dr. Kenneth L. Duke (1940-19)

Dr. J. E. Markee, chairman (1943-1966; [illegible])

Dr. W. Knisely

Dr. R. F. Becker

Dr. M. J. Moses

Dr. J. Buettner-Janusch

Dr. J. D. Robertson, chairman (1965-) 66?

Dr. Wm Longley

Dr. M. Seeley

Dr. W. Shaffland

Dr. M. Cartmill

Dr. H. Ericksen

Dr. F. Farder

Dr. Wm Hall — Mark Adelman

Dr. S. Coyne

Dr. K. Johnson

Dr. Wm Hylander 1972

R. Kay 1973

T. Strickler "

Joe Corless

Jakoi

Marchase

Schachat

Cant

429 / 100 / 329   429 / 56 / 373

Anatomy came to Duke Univ. Sch. of Med. ~~Jt~~ the fall of 1930 when a class of 30 first-year students was admitted.

Dr. Francis H. Swett (Ph.D.) was Prof. of Anatomy, & chmn. of the dept in charge of gross anatomy. Dr. Duncan C. Hetherington (Ph.D., M.D.) was Assoc. Prof. in charge of histology and neuro-anatomy. Roger Baker (M.D.) was Assoc. Instr. in Anatomy and Henry Hollinshead (Ph.D.) was Instructor in Anatomy.

The Departmental office, ~~and~~ library, ~~and~~ the staff members offices and/or research labs, and all teaching labs were on the 4th floor of the Davison building. By virtue of the Gothic architecture, gross anatomy was taught in four small laboratories, each accommodating from 16 to 24 students. Histology & neuroanatomy utilized one large and two adjoining smaller labs

no ¶. The old amphitheater was availble for lectures — which was seldom used during the first ~~two~~ decade and a half of the med. school.

Dr. Swett was a member of ~~on~~ the teaching staff at The Johns Hopkins Sch. of Medicine for 3 - years. Dr. Hetherington was a graduate of that school. Dr. Baker

Drs Swett, Hetherington, (& Hollinshead) were at Vanderbilt Univ. Med. Sch. when it opened, under the chairmanship of Dr. Sidney Cunningham, who was also on the anatomy staff at Hopkins before ~~going~~ to Vanderbilt. Thus, the staff members of the first Duke anatomy department were well aware of, if not indoctrinated with, the Mall tradition of teaching anatomy.

Dr. Baker switched to pathology after 2 years, thus creating a vacancy, which was capably filled by Dr. John W. Everett (in 1932).

Hist. Oncol. at Duke U.

1930

F.H. Scott, Prof.

D.C. Hetherington, Assoc. Prof.

H. Hollinshead

Roger Baker - 1930-1932 MD Harvard
1½ yr. shifted to pathol.

1932 John Everett (took R. Baker's place)

1937 Roer McCardle, Karl Youngstrom

1939 Tolmage Peele

1940 Scott, Hetherington, Hollinshead, Everett, Youngstrom, Peele, & Duke

1943 Marken, Hetherington, Hollinshead, Everett, Peele, Duke & Sawyer

Teaching modified Hopkins format.

SELECTED RECENT ACQUISITIONS

ANATOMY AND HISTOLOGY

BIOLOGY AND PATHOLOGY OF ELASTIC TISSUES. QS 532.5E5 B52 1980

Bock, Peter. PEROXISOMES AND RELATED PARTICLES IN ANIMAL TISSUES. QH 581 C332 v.7 1980

Carleton, H. M. CARLETON'S HISTOLOGICAL TECHNIQUE. QS 525 C18h 1980

CELL MEMBRANES AND VIRAL ENVELOPES. QH 601 C334 1980 v.1-2

Elwood, J. M. EPIDEMIOLOGY OF ANENCEPHALUS AND SPINA BIFIDA. QS 675 E/88e 1980

Int. Bari Conf. on the Organization and Expression of the Mitochondrial Genome. PROCEEDINGS. QH 603 In85o 1980

Int. Sympos. on Tissue Culture in Medical Research. PROCEEDINGS. QS 530 In82p 1980

THE JOHNS HOPKINS ATLAS OF HUMAN FUNCTIONAL ANATOMY. QS 17 J62j 1980

Kissel, Pierre. THE NEUROCRISTOPATHIES. QS 604 K64n 1981

Seminar on Reproductive Physiology and Sexual Endocrinology. BLASTOCYST-ENDOMETRIUM RELATIONSHIPS. QP 251 In82p 1980

ANESTHESIOLOGY

Campkin, T. V. NEUROSURGICAL ANAESTHESIA AND INTENSIVE CARE. WO 200 C15n 1980

NEURAL BLOCKADE IN CLINICAL ANESTHESIA AND MANAGEMENT OF PAIN. WO 300 N39 1980

TO MAKE THE PATIENT READY FOR ANESTHESIA: MEDICAL CARE OF THE SURGICAL PATIENT. WO 178 T55 1980

BIOCHEMISTRY

THE BIOCHEMISTRY OF GLYCOPROTEINS AND PROTEOGLYCANS. QU 55 B52 1980

BIOLOGICAL REGULATION AND DEVELOPMENT. QH 508 B52 v.2 1980

BIOLOGY OF COLLAGEN. QU 55 B522 1978

Burke, S. R. THE COMPOSITION AND FUNCTION OF BODY FLUIDS. QU 105 B91c 1980

CALCIUM AND CELL FUNCTION. QU 55 C12 v.1 1980

CHEMICAL RECOGNITION IN BIOLOGY. QH 506 M73 v.32 1979

ENZYMATIC BASIS OF DETOXICATION. QU 120 En99 1980 v.1-2

ENZYME INHIBITORS AS DRUGS. QU 143 En99 1979

Evans, W. H. PREPARATION AND CHARACTERISATION OF MAMMALIAN PLASMA MEMBRANES. QU 25 L11 v.7 1979

HEART CREATINE KINASE: THE INTEGRATION OF ISOZYMES FOR ENERGY DISTRIBUTION. QU 141 H35 1979

Int. Conf. on Fibrous Proteins. FIBROUS PROTEINS: SCIENTIFIC, INDUSTRIAL AND MEDICAL ASPECTS. QU 55 Sy6825p 1979 v.2

Int. Sympos. on Coenzyme Q. BIOMEDICAL AND CLINICAL ASPECTS OF COENZYME Q. QU 135 In826b 1979

Int. Sympos. on Superoxide and Superoxide Dismutases. BIOLOGICAL AND CLINICAL ASPECTS OF SUPEROXIDE AND SUPEROXIDE DISMUTASE. QU 140 Eu74p 1979 v.2

IRON. QP 535.F4 Ir6 1980

LIPOSOMES AND IMMUNOBIOLOGY. QU 93 L662 1980

LIPOSOMES IN BIOLOGICAL SYSTEMS. QU 93 L66 1980

THE PEPTIDES: ANALYSIS, SYNTHESIS, BIOLOGY. QU 68 P39 v.2A 1980

Pfaff, D. W. ESTROGENS AND BRAIN FUNCTION: NEURAL ANALYSIS OF A HORMONE-CONTROLLED MAMMALIAN REPRODUCTIVE BEHAVIOR. QL 761 P47e 1980

Pigman, W. W. THE CARBOHYDRATES: CHEMISTRY AND BIOCHEMISTRY. QU 75 P62c v.1B 1980

THE PROSTAGLANDINS. QU 90 P945 1979

PROTEIN PHOSPHORYLATION AND BIO-REGULATION. QU 55 P942 1979

VITAMIN E: A COMPREHENSIVE TREATISE. QU 179 V83 1980

WORLD NUTRITION AND NUTRITION EDUCATION. QU 145 W892 1980

BIOMEDICAL ENGINEERING

Conf. on Engineering in Medicine and Biology. PROCEEDINGS. QT 34 C76p 1980

CRC HANDBOOK OF CLINICAL ENGINEERING. QT 34 C42 v.1 1980

PHYSICAL TECHNIQUES IN MEDICINE. QT 34 P56 v.2 1980

CARDIOVASCULAR SYSTEM

CARDIAC ARRHYTHMIAS: THEIR MECHANISMS, DIAGNOSIS, AND MANAGEMENT. WG 330 C174 1980

CARDIAC ISCHEMIA AND ARRHYTHMIAS. WG 300 C173 1980

CHILDHOOD PREVENTION OF ATHEROSCLEROSIS AND HYPERTENSION. WG 340 C43 1978

CORONARY CARE. WG 300 C814 1981

CORONARY-PRONE BEHAVIOR AND CORONARY HEART DISEASE: A BIBLIOGRAPHY. WG 300 C815 1980

Dr. Duke

MEMORANDUM

To: Department of Anatomy Faculty

From: S.J.C.

Date: August 10, 1983

Subject: Anatomy's Listing in 1983 Peterson's Guide

Attached is a copy of the departmental listing in Peterson's Guide. Please note the faculty is now divided according to field of interest.

SJC/cba

Enclosure

DUKE UNIVERSITY

Department of Anatomy

Programs of Study

The Department of Anatomy offers graduate study in three areas leading to the Ph.D. degree in anatomy: cell and molecular biology, gross anatomy and physical anthropology, and neuroanatomy.

In cell and molecular biology, there is a particular emphasis on structural biology at microscopic and molecular levels. Areas of special interest include cellular membranes, cell motility and cytoskeleton, self-assembly of macromolecules, chromosome structure and movement, developmental genetics, and cell-cell interaction. The department has a strong program in high-resolution electron microscopy and X-ray diffraction in conjunction with techniques of biochemistry and immunology. There is also a strong program in physical anthropology, with emphasis on evolutionary, cranial, dental, and locomotor morphology, and the behavior of primates.

The department offers a variety of opportunities for research in the neurosciences. Specific areas in which students may work include biochemical and biophysical studies of nerve membranes and their proteins and lipids; neuroendocrine regulation of reproduction; and light and electron microscopic investigations of the patterns of connectivity in the vertebrate central nervous system, with emphasis on comparative neuroanatomy and the relationship of the structural organization to function.

The department participates in several interdepartmental training programs, including those in cell and molecular biology, genetics, neurobiology, biological systems, and pharmacology.

All students are required to take the core courses in anatomical sciences (gross anatomy, microscopic anatomy, and neuroanatomy), equivalent to the first-year program for medical students. This program is completed in the first semester, and the students then select other courses, both within and outside the department, according to their academic interests and needs. A qualifying exam is normally taken near the end of the second year, after which a dissertation proposal is presented and research begun. A requirement to teach for the equivalent of two semesters in the core anatomy courses is an important part of graduate training, since it prepares the student for a position in medical education.

Research Facilities

Six modern electron microscopes and state-of-the-art facilities for specimen preparation and for optical and computer image reconstruction make the Duke Department of Anatomy an outstanding center for high-resolution electron microscopy of cells and macromolecules. Modern facilities for X-ray diffraction and a wide range of standard biochemical instrumentation are available in the various laboratories. The department also has a unique cryo–electron microscope.

The Duke University Primate Facility, located in Duke Forest, a 5-minute drive from the Department of Anatomy, houses one of the world's most diversified collections of living prosimians available for biochemical, baryological, anatomical, and behavioral research. The paleontology laboratory of the Duke Primate Facility houses a unique collection of comparative cast collections and early Tertiary vertebrate fossils, providing one of the world's most complete records of the earliest apes and monkeys. This is the major research laboratory in the United States concerned with the origin of higher primates.

Financial Aid

A variety of University fellowships and training grant programs provide tuition and stipends of $5000-$6000. Most students receive full financial support.

Cost of Study

Tuition and fees are $6964 (subject to change) for 1983-84. After preliminary exams are passed, this amount drops to $1540 per year.

Cost of Living

Graduate students are eligible to live in University-owned housing located near campus. Rents for apartments for the academic year range from about $1500 to $3000 per person, while town houses, intended primarily for married students, rent for $300 to $450 per month, depending on size and furnishings. The Department of Housing Management can provide additional information on University housing and assist students seeking off-campus housing. There are apartments in the area renting for $150 to $350 per month.

Student Group

Duke University has a total enrollment of approximately 9,000 full-time students. Of this number approximately 3,000 are engaged in graduate or professional studies.

The Area

The University is located in Durham, a city of 100,000 in a metropolitan area of 250,000. The University of North Carolina in Chapel Hill and the Research Triangle Park are both 12 miles away. The pleasant climate and rural surroundings invite outdoor activity. The ocean and the Appalachian Mountains are 3 to 4 hours to the east and west, respectively, and Washington, D.C., is about 5 hours away by car.

The Medical Center

The Medical Center is located on the Duke University campus, and the Department of Anatomy serves a role in both the Medical School and the Graduate School. The complex of research laboratories and teaching personnel in the different departments of the University and Medical Center, all grouped within a short walk of each other, makes Duke University one of the largest and most comprehensive centers in the country for the study of life sciences.

Applying

Students interested in financial aid or participation in interdepartmental training programs for the fall semester should apply by February 1; late applications are considered as places and funding permit. Applicants are sought who have a strong undergraduate background in biology and the physical sciences. Graduate Record Examination scores are required from all applicants. Prospective students are encouraged to contact faculty members (listed on the reverse side) whose interests overlap their own and to request the department's detailed brochure.

Correspondence and Information

Dr. Sheila J. Counce, Director of Graduate Studies
Department of Anatomy
Duke University Medical Center
Durham, North Carolina 27710
Telephone: 919-684-2018

THE FACULTY AND THEIR RESEARCH

Biophysics; Cellular, Molecular, and Developmental Biology

J. David Robertson, James B. Duke Professor and Chairman; M.D., Harvard; Ph.D., MIT. Molecular structure, contact relationships, and function of unit membranes; structure and function of synapses and of peripheral and central nerve tissue; structure of photoreceptors in vertebrates and invertebrates.

H. Ping Beall (Ting-Beall), Assistant Medical Research Professor of Anatomy and Physiology; Ph.D., Tulane. Molecular organization and electrical properties of bimolecular lipid membranes; structure and function of cellular membranes; lipid-protein interaction.

Joseph M. Corless, Associate Professor of Anatomy and Associate in Ophthalmology; M.D., Ph.D., Duke. Structure of vertebrate photorecptors; structure and function of biological membranes; organization of vertebrate retina; diseases of the retina.

M. Joseph Costello, Assistant Professor of Anatomy; Ph.D., Duke. Membrane structure and function: lens junctions, photoreceptors, cytochrome oxidase model membranes; cryofixation methods; membrane fusion.

Sheila J. Counce, Professor of Anatomy; Ph.D., Edinburgh. Developmental biology and genetics; cellular bases of morphogenesis.

Eric L. Effmann, Professor of Radiology and Associate Professor of Anatomy; M.D., Indiana. Mammalian vascular embryology; microangiography; stereomicroradiology.

Harold P. Erickson, Professor of Anatomy; Ph.D., Johns Hopkins. Structure of biological macromolecules and their self-assembly (microtubule assembly, clotting of fibrin); electron microscopy; optical and computer image processing.

Emma R. Jakoi, Assistant Professor of Anatomy; Ph.D., Duke. Biological membrane structure and function; structure and function of ligatin; cell-cell recognition.

David A. Kopf, Assistant Medical Research Professor of Anatomy; Ph.D., Chicago. Physics; electron microscopy.

Michael K. Lamvik, Assistant Professor of Anatomy; Ph.D., Chicago. Cryomicroscopy; analytical microscopy; ribosome and muscle structure.

William Longley, Associate Professor of Anatomy; Ph.D., London. X-ray diffraction and electron microscope studies of macromolecules.

Alan D. Magid, Assistant Medical Research Professor of Anatomy; Ph.D., Washington. Mechanochemistry of muscle contraction; X-ray diffraction and electron microscopy of muscle.

Richard B. Marchase, Assistant Professor of Anatomy; Ph.D., Johns Hopkins. Intercellular adhesive specificities; biochemical basis for retinotectal selectivity; intracellular trafficking of cell-surface proteins.

Darrell R. McCaslin, Assistant Medical Research Professor of Anatomy; Ph.D., Duke. Structure and function of membrane proteins; interactions of membrane components; transduction of information and energy across biological membranes.

Thomas J. McIntosh, Associate Professor of Anatomy; Ph.D., Carnegie-Mellon. Structure and function of biological membranes; ultrastructure of model membranes and lipid bilayers.

Montrose J. Moses, R. J. Reynolds Professor of Anatomy; Ph.D., Columbia. Fine structure and function of nucleus and chromosomes; analytical light and electron microscopy.

R. Bruce Nicklas, Professor of Zoology and Anatomy; Ph.D., Columbia. Cell biology; chromosome movement in mitosis; experimental studies of living cells.

Michael K. Reedy, Associate Professor of Anatomy; M.D., Washington. Molecular basis of muscle contraction; fidelity of EM fixation; microscopic mass measurement.

Jane S. Richardson, Associate in Anatomy; M.A., Harvard. X-ray crystallography of proteins.

Patricia M. Saling, Assistant Professor of Obstetrics and Gynecology and Anatomy; Ph.D., Pennsylvania. Cell biology of mammalian fertilization; gamete interaction; sperm membrane antigens.

Fred H. Schachat, Assistant Professor of Anatomy; Ph.D., Stanford. Biochemical and structural analysis of hereditary muscle deficiencies; structure-function relationships in myosin.

Kenneth A. Taylor, Assistant Medical Research Professor of Anatomy; Ph.D., Berkeley. Three-dimensional image reconstruction from electron micrographs; membrane and muscle structure; myosin filament assembly.

Neurobiology; Neuroendocrinology

Nell B. Cant, Assistant Professor of Anatomy; Ph.D., Michigan. Neurobiology; structure, function, and development of brain-stem auditory system.

Irving T. Diamond, James B. Duke Professor of Psychology, Professor of Physiology, and Lecturer in Anatomy; Ph.D., Chicago. Function, structure, and evolution of thalamus and cortex.

John W. Everett, Professor Emeritus of Anatomy; Ph.D., Yale. Neuroendocrinology; hypothalamic-pituitary control of ovulation and corpus luteum function.

William C. Hall, Professor of Anatomy and Associate Professor of Psychology; Ph.D., Duke. Evolution of neocortex; connections and ultrastructural organization of thalamus and cortex; anatomy of the visual system.

Chia-Sheng Lin, Assistant Professor of Anatomy; Ph.D., Vanderbilt. Structure and function in the central nervous system.

E. Lee Tyrey, Associate Professor of Obstetrics and Gynecology and Assistant Professor of Anatomy; Ph.D., Illinois. Neuroendocrinology of reproduction; hormone receptors; radioimmunoassay.

Physical Anthropology; Functional Anatomy; Primate Evolution

Frank H. Bassett III, Professor of Orthopedics and Assistant Professor of Anatomy; M.D., Louisville. Athletic injuries.

Matt Cartmill, Professor of Anatomy and Anthropology; Ph.D., Chicago. Physical anthropology; differentiation and evolution of primates; arboreal adaptations in mammals; mammalian cranial morphology; systematics.

Kenneth L. Duke, Associate Professor Emeritus of Anatomy; Ph.D., Duke. Comparative histology of the reproductive tract; history of anatomy.

William E. Garrett Jr., Assistant Professor of Orthopedic Surgery and Anatomy; M.D., Ph.D., Duke. Muscle physiology and fine structure in normal and injured tissues.

William L. Hylander, Professor of Anatomy, Associate Professor of Anthropology, and Associate Director of the Primate Facility; D.D.S., Illinois; Ph.D., Chicago. Physical anthropology; mammalian craniofacial biomechanics.

Richard F. Kay, Associate Professor of Anatomy; Ph.D., Yale. Primate paleontology; dental anatomy of primates; mammalian functional anatomy.

Ross D. E. MacPhee, Assistant Professor of Anatomy; Ph.D., Alberta. Evolution of primates; cranial ontogeny and morphology; systematics.

Elwyn L. Simons, James B. Duke Professor of Anthropology and Anatomy and Director of the Primate Facility; Ph.D., Princeton. Relationships and evolutionary history of primates, from lemurs to man.

Kathleen K. Smith, Assistant Professor of Anatomy; Ph.D., Harvard. Morphology and evolution of vertebrates, with particular interest in the cranium of reptiles; musculoskeletal functions; mechanics of tongue and jaw musculature.