Present State and Future Development of the School of Medicine

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Present State and Future Development of the School of Medicine

Robert A. Moore, M.D., Ph.D.
Dean, Washington University School of Medicine
St. Louis, Missouri

Presented before Medical School Alumni attending the Alumni Luncheon at Hotel Jefferson in St. Louis on December 1, 1948, during the Interim Session of the American Medical Association.

It is only rarely that we in St. Louis have the privilege of acting as hosts to the physicians of the United States as represented by the American Medical Association. This also gives us at your School of Medicine the opportunity to meet with the alumni from far and wide and to present to you a brief report of the present state and future development of the Washington University School of Medicine.

There are many topics which I might present, but time is limited, and I shall therefore consider only a few that are of greatest interest to you or that you already have heard something about.
Admissions

As we expected, the accumulation of those who had to defer their collegiate education because of the war is now being felt by the medical schools. Last year we selected 86 freshmen to enter in September, 1948, from 3500 applicants. This year for the class of September, 1949, we will again select 86 from an anticipated 4000 applicants.

It is not possible in this short report to give you details of how this huge number of applications are processed and reviewed. However, let me assure you of at least two things: first, that every application receives consideration by the admissions committee; none is processed routinely by secretaries in the office; and second, that ability is the only criterion on which admissibility is based, a policy with which I am sure you will agree.

I bespeak your patience and tolerance in the consideration of applications from your sons and daughters, and friends. Every application from the son or daughter of an alumnus of this School of Medicine is referred to me by the Admissions Committee. All other things equal, the son or daughter of a physician receives the call over others because we believe his or her background and associations peculiarly fit him or her for a medical career.

We are always glad to have letters from you about applicants whom you know. This is one of the best methods to learn about the personality and character of a young man or woman, two of the criteria to be considered.

I need not tell you that since June 1, 1947, the School of Medicine has been open to all individuals, regardless of race, creed, color, or national origin. At present three Negroes are registered for special courses, one in otolaryngology, one in pathology, and one in hospital administration.
SELECTIVE SERVICE

The relation of medical and premedical students to the Selective Service Act of 1948 is at present confused.

In November, National Headquarters of Selective Service issued regulations calling for deferment of all medical students and of some premedical students.

The plan for premedical students is to have medical schools issue provisional acceptances, revocable at any time, to a prescribed number of students who had completed one year of college.

The basic philosophy of this policy was, first, that there should be no decrease in the number of physicians trained; second, that a physician serving in the national service after an internship is of greater use to the nation than a young infantryman after college; and third, that the education of the physician can be interrupted better after an internship than between premedical and medical courses.

Many contest this last reason and many believe there should be no deferment for any student. The Association of American Universities has petitioned the President to change the regulations so no student under 22 will be deferred for any reason. They further suggest that the Armed Forces draft the students and send them to school.

We are now waiting for the final answer. If the present regulations stand we will this spring select part of the classes of 1950 and 1951 from 2,000 to 3,000 applicants.

If the position of the Association of American Universities prevails, we will prepare for a repetition of 1943-45 with the uniformed student body and all the problems related thereto.

POSTGRADUATE EDUCATION

Before the war the school conducted two formal postgraduate courses — one in ophthalmology, and one in otolaryn-
In 1945 it became apparent that the demand for postgraduate education would be great and that we should expand the program. With the assistance of the Kellogg Foundation we established a division of postgraduate studies under the direction of an assistant dean—at first Dr. Franklin E. Walton, and now Dr. Merl Carson.

We are still experimenting with the types of courses which are needed and desired. This year the program consists of:

A. Long courses in the specialties:
1. Ophthalmology ...............12 students
2. Otolaryngology ...............30 students
3. Pediatrics ....................10 students
4. Anatomy .....................12 students
5. Pathology ....................15 students

79 in all

B. Short courses
1. A 5-day general refresher course in the fall—65 students
2. A 4-week special refresher course in the spring—30 students
3. A 2-day refresher course for laboratory technicians—50 students

This is a total of 224 physicians and technicians given some form of postgraduate training.

In cooperation with the Alumni Association a two-day combined reunion and clinical session is being planned for next spring, April 8th and 9th, details of which will be sent out soon by the Alumni Association.

**Residency Training**

In the year 1948-49 the number of house officerships in the affiliated hospitals is greatly expanded over 1939-40. Today there are 112 regular positions in the Barnes, McMillan and Maternity
Hospitals, and 15 in the Children's Hospital. In addition there are 49 fellows in the clinical departments, giving a total of 176 positions in which the young graduate may have an opportunity for specialty training.

Many conferences, seminars, and clinics are conducted as a part of the educational program for residents. Alumni are always welcome at any of these exercises. A monthly bulletin listing the time and place of each is issued by the Division of Postgraduate Studies. A postcard from you will place you on the mailing list.

Placement of Seniors

Of the 1949 class of 96 students, 65 have internships in teaching hospitals, 10 have accepted Army internships, and 21 have internships in non-teaching hospitals. Thirty-seven of the class are interning somewhere in the state of Missouri and the rest are distributed through 18 states and the District of Columbia. These do not include the ten Army internships.

Undergraduate Educational Program

Changes made in the undergraduate curriculum during the summer of 1947 may be summarized as follows:

1. Lengthening the school year to 36 weeks from 33 weeks.
2. Increasing the emphasis on the functional approach to the preclinical sciences in contrast with the morphologic.
3. Initiation of the second completely correlated course in the first two years on the nervous system.
4. Placement of the course in preventive medicine in the third year so it may be applied in other departments.
5. Increasing emphasis in the last two years on clerkships and seminars and decreasing didactic instruction.
There are no immediate plans for further changes, but we hope to integrate teaching more closely without tearing down present departmental lines.

**Auxiliary Medical Services**

Health care has become a most complex program and the physician through his personal efforts is no longer able to render the service. However, he should be the leader of the entire group. If he is to give leadership in practice, he must also accept responsibility for the education of those who assist him. On this basis, the school and the hospitals now conduct a division of auxiliary medical services with departments as follows:

1. Occupational Therapy ....34 students
2. Physical Therapy ........... 9 students
3. Orthoptic Technology ..... 3 students
4. Hospital Administration...23 students
5. Medical Dietetics .......... 6 students
6. Laboratory Technology .... 8 students
7. Nurse Anesthetists ..........13 students

This is a total of 96 students in departments of auxiliary services.

In addition, there are two autonomous schools in the University within the Medical Center, graduates of which participate in health care—the School of Dentistry and the School of Nursing, the latter with 204 students.

**Summary of Educational Program**

A school of medicine is usually thought of in terms of the undergraduate medical student. You have just heard of many other activities and they total 867 students.

Medical students ................................351
Graduate students ..................................20
Postgraduate students ...............................224
Residents and Fellows ..............................176
Auxiliary Services ..................................96

**Staff and Medical Care in the Hospitals and Clinics**

Some idea of the magnitude of the medical care rendered to the sick and...
injured may be gained from the following figures for 1947.
27,791 admissions to the hospitals
305,742 patient days of care
16,819 admissions to the clinic
136,414 visits to the clinic
38,803 patients visiting the Mallinckrodt Institute of Radiology (July 1, 1947, to June 30, 1948)
Between 5,500 and 6,000 people are in the Medical Center each day and the combined annual expenditures of all participating institutions is about $6,000,000.

Despite this record of service, it is my belief that there are an inadequate number of hospital beds for the community and the staff.

It is a declared policy of the University, and I cannot underscore this too much, to continue a professional staff made up in part of full-time members, and in part of part-time members. Of the 491 present members of the staff, exclusive of residents, 316 are part-time and 175 are full-time. I cannot say that in any one month or year this ratio of 64 percent part-time and 36 percent full-time will still be true, but I can say flatly that the deviation will not be great.

As able young men finish residencies here or come to locate in St. Louis, they will be added to the staff of the school and hospitals, in both part-time and full-time capacities, as facilities are available and as they will contribute to the educational, research, and service program of the school, hospitals, and clinic.

Evidence of this policy is given by new appointments to the faculty and staff in the last 28 months. In this period 13 new part-time physicians have received regular appointments to the staff of the school and hospitals. In the same period the full-time staff in clinical departments has had an increase of 9.
It is apparent, however, that we cannot continue to add clinical staff without increasing facilities. Our basic philosophy is: if we ask a part-time physician to give his time to the school, hospital wards, and clinic without compensation, then we must provide him facilities in the same medical center for his private patients so he can practice efficiently and take part in the full University program.

It is generally agreed that a medical school should have available 6 to 7 beds for each junior and senior student. In normal classes there are 180 to 185 juniors and seniors. This means 1080 to 1215 beds for adequate teaching. With a large part-time staff, with a large staff, and with commitments in postgraduate specialty training we should add 300 beds to this, giving a total of 1400 beds and 1500 beds which should be available in this Medical Center.

A beginning is about to be made in the addition of hospital beds. Through the interest and generosity of Mr. David Wohl of St. Louis, and of the National Advisory Cancer Council, the University has at hand $750,000 to build a hospital for semi-private and private patients suffering from cancer and allied diseases.

And, the Board of the Trustees of Barnard Hospital have voted to move their activities to a new building in the Medical Center. It is hoped that the Barnard and Wohl Hospitals can be integrated as a functional unit without loss of the identity and autonomy of each.

Other plans for construction of additional hospital facilities are afoot, but not sufficiently crystallized to tell you anything definite.

NEWER SPECIALTIES OF MEDICINE

Medicine is a dynamic field and research is constantly adding to knowl-
edge. Some additions require action by those charged with education and administration.

In 1938, with the assistance of the Rockefeller Foundation, we established a new department of neuropsychiatry. In 1944, with the assistance of the Rockefeller Foundation and the Commonwealth Fund we created a new department of preventive medicine and public health.

Some of the new activities cross departmental lines and an administrative unit for these interdepartmental activities called a division has been recognized. Five divisions are now functioning — neurology, gerontology, physical medicine, tumor services, and child guidance.

The school has a group of individuals, second to none in this country, interested in neurology. We hope to encourage these men and provide better facilities for them.

The division of gerontology, which was initiated through the interest of Dr. William B. Kountz, should become one of the outstanding centers for research in the world. Through the foresight and generosity of Mrs. Irma Urbauer, there was provided in her will a trust fund of about $1,500,000 as endowment for “research in geriatrics and allied fields.”

The division of physical medicine presents the culmination of the hopes and ambitions of Dr. Frank Ewerhardt, whose untimely death this fall made it impossible for him to see the result. With the assistance of the National Foundation for Infantile Paralysis, we brought to St. Louis Dr. Sedgwick Mead to succeed Dr. Ewerhardt and have reorganized the departments of occupational and physical therapy. Plans are now under consideration to erect a new building for a rehabilitation center, which would be second to none in this country.

The division of tumor services is just beginning to function and will assume its full activity when the new cancer hospitals are opened.

Child guidance is a recent addition to our activities and one of which we are proud. With the assistance of the Children’s Research Foundation of St. Louis, and the encouragement and assistance of the Community Fund, we established a small clinic in the fall of 1947. It is our hope that other groups will give support and make possible erection of a new building for this clinic.

Other specialties, development of which within our Medical Center are just around the corner, are industrial medicine, nutrition, and dermatology, to name only a few.

**Facilities for the Preclinical Departments**

The expansion of research in the school during the past ten years has been tremendous. Although funds available do not necessarily reflect the amount and quality of research they do give some objective index. Total research grants from outside sources in 1937-38 and 1947-48 were:

- 1937 $79,761
- 1947-48 $545,629

This phase of activity of the School of Medicine — research — has brought great honor to members of the faculty, the most important of which are four
Nobel Laureates, three of whom are now on the faculty: Dr. Joseph Erlanger, Dr. Carl Cori and Dr. Gerty Cori.

It has been increasingly difficult to find space in which to carry on this expanded program. In the spring of 1948 the National Advisory Cancer Council voted a grant of $450,000 to the school for construction of a research building. This fund is to be matched by the University, and although we do not have the other $450,000 at hand, we are proceeding with plans. Mr. Harris Armstrong has been engaged as architect and we hope to break ground by spring of 1949 and open the building in the fall of 1950. The building will form the arm of an “H” between the present North and South Buildings and will connect with them on all floors.

This will give us about 50,000 new square feet of research laboratories and should meet the needs for some years for the preclinical departments.

**Facilities for the Clinical Departments**

Not only has all medical research increased in the last decade, but more particularly clinical research has made tremendous strides.

As this has happened what have we done to provide the facilities? The department of surgery still has the same space, minus several rooms, which it had in 1925 on the second floor of the North Building. The world famous chest service under Dr. Graham has one room in the Barnes Hospital for the laboratory of applied thoracic physiology.

The department of medicine has the tenth floor of the Oscar Johnson Institute but has two to four people to a room. This is completely separated from the wards and other activities of the department.

The department of neuropsychiatry has offices or laboratories on the eighth floor of The Oscar Johnson Institute, on the second floor of the clinic, on the third and fourth floors of the McMillan Hospital, and in a house on Scott Avenue.

Clearly, our objective is defined—to provide unified physical facilities for all activities of each department or specialty so they can function efficiently. How this is to be done, and when it can be done is not apparent but some steps can be delineated.

First, construct a new combined hospital, outpatient department, office, and laboratory building for psychiatry.

Second, add to the north side of the Maternity Hospital space for the outpatient department, operating rooms, delivery rooms, research laboratories, and private rooms for gynecology.

Third, construct new research laboratories for the departments of medicine and surgery close to the hospitals.

Fourth, rearrange space so neurology and neurosurgery may concentrate their entire activities in one building.

Fifth, add to the Children’s Hospital for outpatients, hospital, and research laboratories.

Sixth, add four stories to the Rand-Johnson Building of Barnes Hospital and, if possible, four stories to the Mallinkrodt Institute of Radiology.

All of this is easier to say than do. The cost—about $7,000,000.
A PRIVATE CLINIC AND FULL-TIME

And now, to a topic which has caused more discussion in the last few years than any other topic—a clinic for private patients operated as a part of the Medical Center.

I really have nothing to report to you. This subject has not been on the agenda of the executive faculty since last March, over ten months ago, and therefore there has been no official discussion or action. At that time appointment of a committee was authorized to explore the matter further. However, the committee has not been appointed and there are no immediate plans to activate it.

My own activities have been limited to study of two topics; first, a survey of the contracts of 20 private clinics in this country with a view to determining what physicians consider important when they organize legally into a group; and second, a continuing study of the group clinics which are now being operated as a part of New York University, Duke University, Bowman-Gray University, and Johns Hopkins University.

I have made these studies, not with any idea of bringing forward some plan, but rather in the belief that it is my responsibility as the dean to keep informed on developments in other medical schools.

At the same time we have continued the long established policy—since 1917—of the full-time staff. In the 30 months since I became dean, 9 full-time staff have been added in the clinical departments. Each of these and the others do some private practice; the amount varying with the individual concerned.

THE DEAN’S OFFICE

Perhaps you may be interested in some thoughts about the operation of the Dean’s Office. I might mention two:

First: The dean of a medical school, such as ours, is the administrative offi-
Dr. Alexis Hartmann lectures on acidosis

cer for all the staff, whether they are full time or part time, physicians or doctors of philosophy, faculty or students. Within the broad policies prescribed by the Board of Directors and Chancellor, the dean, with the heads of departments, should see that everyone has an opportunity to do what he most wants to do.

Second: The administrative officers of a professional group should at all costs avoid bureaucracy. Hence I and all the assistant deans—Doctors Carson, Hunter, Watson and Bukantz—retain some professional activity. This, I hope, is the assurance that administrative rules will be superseded by the professional and scientific objectives if there is ever a conflict.

FINANCES

I need not tell anyone who has lived through the last four years in the United States that it has been an increasing struggle to make ends meet. Someway, expenditures have acquired a habit of approximating or exceeding income. Let me assure you it is no easier to balance a budget of a million dollars than it is to balance one of five or ten or fifteen thousand dollars. In fact, I think it is a good deal harder—the larger the figure and the greater the number of individuals involved.

The budget of your Medical School for the year 1948-49, exclusive of special research funds and exclusive of any additions made since July 1, totals $1,729,643. The sources of income to meet these expenditures in percentages of the total are:

- Endowment .................................. 33%
- Tuition and Fees ............................. 18%
- Fees in Mallinckrodt Institute .......... 19%
- Professional Fees of Full-time Staff .................................. 14%
- Laboratory Fees ................................ 2%
- Miscellaneous ................................ 5%
- Not now in sight ............................. 9%

40
In other words, in order to maintain the highest quality of educational program and research in the school, it was considered necessary to authorize the expenditure of $150,142 over and above anticipated income. It is true that unused appropriations and increase in income not foreseen will reduce this figure considerably, but I am not optimistic about balancing the budget this year and, unless the present inflationary tendencies recede, of balancing the budget in future years.

The only alternative to retrenchment and an inevitable decrease in quality of work is to seek new sources of income. We are dedicated to maintaining the best staff possible and of paying those who devote their lives to education and research a salary which does not represent a penalty for having undertaken this activity rather than private practice or industrial research.

I am not at all sure where the money to do this is to come from. But, you can be sure that we want this school to remain a privately endowed and privately operated institution, as free as possible of governmental control, in an increasingly socialized world.

Today there is a definite plan to initiate federal subsidy of medical education and of medical students. In fact, a bill was introduced in the Senate last April. The Public Health Service is now investigating the finances of medical schools.

It is impossible to secure governmental subsidy without some measure of governmental control. I hope, when the day comes, our affairs will be so ordered that we do not require direct subsidy, but only the present research grants, construction grants, and teaching grants.

Scholarships
The full impact of the present inflation has not been felt by medical stu-
ents and will not for the next few years of the G.I. Bill.

With reluctance we have increased tuition and fees by $100 to a total of $700 effective July 1, 1949, and I cannot assure you that there will not be a further increase to $800. The tuition at several comparable schools is now $800.

It is a rare individual who can spend a year at medical school for less than $1,500 to $2,000. How many families in the United States can afford $2,000 a year for four years to educate a son or daughter, especially if there are other children?

Further, the medical student and resident are, in my opinion quite rightly, increasingly refusing to delay marriage and a normal family life to middle age. But, how are they to do this without income or available scholarship funds?

I need not belabor the point that we must busy ourselves with securing funds for scholarships. How much, I do not know, but I suspect the school should have not less than $80,000 a year or 40 percent of the tuition fees if we are not to be charged with discrimination in admissions because of economic state of the applicant and his family, and with being a party to delaying the normal social life of the young physician.

**STUDENT CENTER**

One of my own fondest dreams is a new student center. I have in mind what might be called an educational dormitory, not just a dormitory. What is the educational dormitory or house plan college? Briefly, it is a self-contained living and educational unit. Frequently it is built as a quadrangle. The essential parts are a commons where everyone eats together, living and readings rooms, facilities for recreation such as a small gymnasium, squash courts, handball courts, etc., single and double rooms for men and women, small efficiency apartments for married students, and a master’s home.

The rooms and apartments are built on the stairway plan and a young, sympathetic member of the faculty lives with his family on the first floor of each stairway. A senior member of the faculty, with his family, lives in the master’s home. In the latter there are guest rooms so that important people visiting St. Louis may stay in the college and talk to the students.

Thus, there is not only a place to live, but an atmosphere conducive to scholarship is created.

Students are still living in the same odd rooms, in attics, and in basements as you did 5, 10, and 20 years ago. There is, however, one important difference; 35 percent of all medical students this year are married and 11 percent of all students have young children. There is more truth than fiction in recent cartoons of papa holding the baby on one knee and a textbook on the other knee. Undoubtedly the number of married students will decrease, but it will not return to the 9 percent of the prewar era.

The experience of the undergraduate schools at Yale and Harvard, of the Law School at Michigan, and of the Medical Schools at Harvard and Columbia point clearly to the advantages of the educational dormitory. At Harvard College, the year after the establishment of the
house plan colleges, the average grade of the students increased ten points.

If proper arrangements for living can influence scholarship that much, think of what it could do for the future of American medicine.

The University owns sufficient land for such an undertaking directly east of the present Medical School buildings. The University has a small fund which may be used for a beginning on the recreational facilities.

Next to a superior faculty, if there is any one thing which could make this school outstanding, it is this—an educational student center.

In November the executive committee of your Alumni Association gave me the privilege of presenting this idea and voted to sponsor it. I shall leave it to Dr. Grant to tell you of their reaction and hopes.

Finally, may I express my appreciation for this opportunity to tell you something about your school. Please visit us when you are in St. Louis.

* * *

At the conclusion of Dr. Moore's talk to the 65 alumni attending the luncheon, Dr. Grant discussed the program and solicited the general support of those present. So far, from twenty persons closely connected with the Alumni Association and the School of Medicine, $10,033 has been subscribed in amounts from $100 to $1,000, with an average of $500 each.
THE FOLLOWING new officers were elected at the meeting of the Washington University Medical Society on December 8, 1848: president, Dr. Joseph C. Jaudon (class of 1933); vice-president, Dr. Maurice E. Krahl; and secretary, Dr. Robert J. Glaser. New council members are: Dr. A. Norman Arneson (class of 1928), Dr. Thomas H. Burford and Dr. John C. Finerty. Dr. Gustave J. Dammin is program chairman.

Abstracts of the four papers presented at the Society’s meeting on October 21 are printed herewith, and are followed by those which were given at the election meeting December 8th:

Abstracts of Papers Presented on October 21, 1948:

THE DIAGNOSIS OF CONGENITAL HEART DISEASE BY USE OF THE TAUTOGRAPH

Merl J. Carson, M.D.

Department of Pediatrics

The diagnosis of congenital heart disease has been greatly facilitated by either the intravenous or retroarterial injection of radiopaque material. In the studies done at St. Louis Children’s Hospital and Barnes Hospital, 70 per cent diodrast has been used. For intravenous angiocardiograms the diodrast is injected in either the left or right antecubital vein. A series of ten x-ray plates is taken immediately, with each plate being exposed at intervals of one second. The tautograph, (the automatic machine which makes the rapid exposures possible) was developed by Dr. Wendell G. Scott and makes possible the visualization of the individual chambers of the heart. In this way various malformations of the heart and the pulmonary circulation can be established; namely, tetralogy or Fallot, transposition of the great vessels, Eisenmenger’s complex, pure pulmonary stenosis, non-functioning right ventricle with tricuspid stenosis and interauricular septal defect, etc. In cases of abnormalities of the aorta or great vessels, the diodrast injection is made in a retrograde fashion down the left common carotid artery into the aorta. Thus clear visualization of the aorta and of the great vessels can be obtained. This method has been successful in cases of coarctation of the aorta, patent ductus arteriosus, aneurysm of the aorta, and others.
THE PATHOGENESIS OF ACUTE BACTERIAL LYMPHADENITIS

Ralph O. Smith, M.D. (by invitation), and W. Barry Wood, Jr., M.D.
Department of Medicine

In an effort to clarify the role of lymphatic tissue in antibacterial defense, a study has been made of the cellular reactions in popliteal lymph nodes of rats inoculated in the footpads with Type I pneumococcus.

Acute pneumococcal lymphadenitis is characterized by rapid infiltration of polymorphonuclear leucocytes into the intermediary sinuses of the node and prompt phagocytosis by both the macrophages of the sinuses and the recently arrived leucocytes. By seven hours the polymorphonuclear leucocytes are found densely congregated about the hilar region, and nine hours after inoculation the phagocytosed organisms have been digested and pneumococci are no longer seen in the node. At the end of 24 hours the node presents the picture of a subsiding inflammation with a marked macrophage reaction and regenerating follicles.

By eradication of hilar blood supply, direct intralymphatic injection of pneumococci, and analysis of cells in afferent lymph, it has been shown that the majority of polymorphonuclear leucocytes entering the intermediary sinuses come from capillaries lining these sinuses, whereas the leucocytes present in the subcapsular sinus come from the primary inflammatory focus in the footpad as well as from capillaries of the capsule and the subcapsular portions of the follicles.

Phagocytosis of pneumococci in the foot-pad and popliteal node occurs in less than thirty minutes after inoculation. Because of the promptness with which the phagocytic reaction takes place, and because of the large surface area afforded the leucocytes by the nodal sinuses and interstitial tissues of the foot-pad, it is assumed that the same non-antibody mechanism of “surface phagocytosis” is involved as that previously described in experimental pneumonia.

Fibrin formation in the sinuses of the node is rare. This finding may be related to the observation that five minutes after inoculation mast cell granules, which are known to contain heparin, are strewn throughout the sinuses of the node. The mast cells become vacuolated and almost devoid of granules; later their granules appear to regenerate.

These studies indicate that, early in the course of acute infection, bacteria reaching a regional lymph node elicit a prompt leucocytic response in the node. The resulting enhancement of filtration due to the congregation of leucocytes in the hilar sinuses and the immediate phagocytosis of bacteria in the absence of opsonin, lead to rapid destruction of invading organisms. Thus, an acutely inflamed lymph node, so frequently regarded as a passive filter, in reality plays an active role in antibacterial defense.
THE INHIBITORY EFFECT OF NITROGEN MUSTARD ON THE DEVELOPMENT OF HUMORAL ANTIBODIES, CUTANEOUS HYPERSENSITIVENESS, AND VASCULAR LESIONS IN RABBITS. FOLLOWING INJECTIONS OF HORSE SERUM

Samuel C. Bukantz, M.D. (by Invitation), Gustave J. Dammin, M.W., Keith S. Wilson, M.D. (by Invitation), and Mary C. Johnson, A.B. (by Invitation)

Department of Medicine

The lesions of certain diffuse vascular diseases of men, suspected to result from hypersensitiveness, resemble those appearing in the rabbit after single large intravenous injections of horse serum. The role of antibody in the pathogenesis of these lesions has not yet been clearly defined. Since sulfur and nitrogen mustards are known to suppress antibody formation, we investigated the effect of nitrogen mustard (HN2) on the formation of antibody and on the development of cutaneous hypersensitiveness and vascular lesions.

Rabbits were given 0.5 mg/kg of HN2 every 3-4 days for a total of 7 injections, after the third of which they received 10 cc horse serum per kg I.V. Controls received serum alone. The animals were sacrificed 14 days after the serum dose, after a skin test had been performed with horse serum as antigen. Blood serum samples were obtained before, one week after serum and again upon completion of the experiment. All terminal serums were analyzed for antibody nitrogen content.

Antibody appeared after 1 week in the controls but not until the end of the second week in the treated rabbits. There was a very suggestive direct correlation between the level of antibody developed and the occurrence of vascular lesions and cutaneous hypersensitiveness.

The data suggest that antibody is important in the pathogenesis of the experimental vascular lesions but this has not yet been established in view of the known effect of HN2 upon tissue metabolic functions and enzyme systems besides those in antibody formation.

THE CELLULAR ORIGIN OF THE ADRENOTROPHIC HORMONE

John C. Finerty

Department of Anatomy

An important protective mechanism in the body is the secretion of adrenal cortical hormones in response to stress. This response does not occur in the absence of the anterior hypophysis which acts as a regulator of adrenal function by means of its adrenocorticotrophic hormone.

Attempts to localize the source of adrenocorticotrophic hormone have been principally studies of the structure of the hypophysis in cases of Addison’s
disease, or following complete adrenalectomy in experimental animals. Both conditions are always accompanied by inanition and general metabolic disturbance so that results have been inconclusive. In the present series of experiments, unilateral adrenalectomy of immature male rats has been performed and quantitative histological studies made of their pituitary glands. Under these conditions it is possible to correlate functional activity with structural changes, since the remaining adrenal gland indicates hypophyseal activity.

In response to unilateral adrenalectomy there is hypertrophy of the remaining adrenal gland, and a marked increase in percentage of acidophilic cells.

When unilaterally adrenalectomized rats are exposed to lowered environmental temperatures these changes are accentuated. These observations have been supported by studies of the effect of injection of various estrogens into immature female rats in which there was increased percentage of acidophilic cells, increased adrenotrophic hormone content of the pituitary gland, and adrenal hypertrophy.

These experiments suggest that reduction in circulating adrenal hormone, by removal of adrenal tissue, or by stress, stimulates an increase in number and activity of pituitary acidophiles, and that these cells are the source of adrenocorticotropic hormone.

Abstracts of Papers Presented on December 8, 1948:

SOURCES OF ERROR IN OXIMETRY

James O. Elam, M.D.
Department of Surgery

Photoelectric methods for determining the arterial oxygen saturation in the intact ear of man have been developed by Nicolai, Kramer, Matthes, Goldie, Millikan, Hemingway, Hartman, and Wood. Clinical use of the various oximeters has been limited because of the qualitative results obtained.

After preliminary evaluation of the usefulness of the oximeter to determine cardiac output, oxygen consumption, and circulation times, our efforts have been devoted since September, 1947, to improving the absolute accuracy of the method. Matthes has shown that the residual and the total lung volume as well as the blood volume may also be determined with an accurate oximeter. A quantitative instrument would provide a convenient dynamic approach to the study of cardio-respiratory function and a valuable adjunct to surgical anesthesia.

The major source of error in oximetry has been the failure to obtain complete arterIALIZATION of the ear blood; our studies have shown that the heat stimulus of the light source is inadequate and that the introduction of histamine locally by electrophoresis achieves this purpose. It has been necessary to determine the transmission spectra of the
bloodless and arterialized ear in subjects with various arterial oxygen saturations to establish a basis for designing a more accurate oximeter. These data, obtained with monochromatic light, have shown that it should be possible to build an oximeter accurate to within one per cent of the true value. The calibration data on the new instrument will be reported subsequently.

PERSONALITY FACTORS IN ARTERIAL HYPERTENSION
Gregory C. Gressel, M.D.; Frank O. Shobe, M.D.; George Saslow, M.D.; Phillip H. DuBois, Ph.D.; and Henry A. Schroeder, M.D.

Departments of Neuropsychiatry and Internal Medicine

The frequent personality malfunctioning in hypertensives warrants study. Such study has led to the hypothesis that the personality malfunctioning may be etiological. The most frequent pattern of personality malfunctioning so far described in hypertensives has been one involving habitual inability to show overt, appropriately graded and directed assertiveness.

We have investigated the hypothesis that this and other important patterns of personality malfunctioning occur in hypertensives more frequently than in non-hypertensives.

Hypertensives were compared with two control groups:

A. Patients with chronic somatic disorders and no obvious personality disorder.

B. Patients with chronic personality disorder, but without hypertension or other psychosomatic disorder.

The groups were matched as to age, color, sex education, cultural pattern, occupation, rural-urban life.

Hypertensives show a significantly greater frequency and severity of two patterns: 1. inability to grade assertiveness; 2. obsessive-compulsive behavior. These patterns are habitual and long antedate discovered hypertension.

A QUALITATIVE CHEMICAL CHANGE IN CARCINOGENESIS
Christopher Carruthers, Ph.D., and Valentina Suntzeff, M.D.

Department of Anatomy

Polarography of the lipids of epidermis of mice undergoing carcinogenesis from the application of methylcholanthrene has been investigated in mixtures of unbuffered and buffered solutions of dioxane and containing tetra- butylammonium iodide as supporting electrolyte.

The lipid materials extracted from normal and hyperplastic (methylcholanthrene-treated) epidermis contained two lipids which were reducible at the dropping mercury electrode when electrolysis was carried out in a mixture of 50% water and 50% dioxane (by volume) and a final concentration of tetra-
butylammonium iodide of 0.1 Molar. The half-wave potentials of the two lipid compounds were pH dependent. Under similar conditions of electrolysis the lipid materials extracted from methylcholanthrene-induced and transplantable squamous cell carcinomas did not have a lipid which gave a polarographic wave unless larger amounts of ether were used for extracting the tumor lipids than were used for epidermis. In buffered solutions the single wave disappeared showing that its presence was due to the lipid compound acting as a buffer. The lipid substances of normal human epidermis and human squamous cell carcinomas behaved polarographically as did the corresponding tissues of the mouse. This similarity indicates that the process of carcinogenesis in both species is probably quite similar.

A lipid having the property of acting as a buffer in the unbuffered mixture of water, dioxane and tetrabutylammonium iodide was found in mouse transplantable sarcomas 37 and 180, a lymphosarcoma, undifferentiated lung carcinoma, and in spontaneous mammary carcinomas. Only the lipid materials from cardiac and skeletal muscle and spleen showed a similar polarographic wave under the same conditions although many other mouse organs were examined.

EXPERIMENTAL EVALUATION OF AUTOGENOUS BONE GRAFTS

Fred C. Reynolds, M.D., and David R. Oliver, M.D.
Department of Surgery

There is divergent opinion as to the fate of autogenous and homogenous bone transplants and the relative importance of the various structures of the graft. As a result, two schools of thought have arisen in regards to bone transplantation, probably based on different transplantations of essentially the same experimental observations. First, there are those who believe that some elements of the transplanted bone live and are capable of regeneration. Second, there are those who believe the entire bone graft dies and is completely replaced by osteogenic elements of the host. Because of the important clinical implications of these widely divergent views, the authors felt that a careful and significant experimental comparison of autogenous and homogenous bone transplants should be made.

A review of the literature revealed that studies concerning bone transplantation were begun in the sixteenth century and have continued to the present. The work of Ollier, Barth, MacEwen, Gallie and Phemister has been outstanding in the formulation of present concepts of bone grafting.

The experimental work consisted of transplanting autogenous and various types of homogenous grafts into defects produced in the tibiae of dogs. The homogenous grafts were preserved by merthiolate solution, freezing at −20°C and by boiling. The dogs were sacrificed at weekly intervals and microscopic comparison of the healing of homoge-
nous grafts and the various types of preserved autogenous grafts was made.

There was no evidence from these experiments that any of the bone elements of an autogenous bone transplant lived or retained osteogenic powers. With inlay type grafts, the fixation and replacement of the graft is totally a function of the host tissues. The replacement of both autogenous and homogenous bone grafts is accomplished in an identical fashion, this being by oppositional growth of the host bone. So-called creeping substitution is but a localized phase in the process of appositional bone growth, although three autogenous bone grafts were superior to homogenous bone grafts experimentally only in that the early phase of healing was slightly more rapid and uniform. This, however, is not due to viability and regrowth of the autogenous graft; rather it probably represents less host reaction and tissue specificity which are factors not understood at the present. At the end of ten weeks, no microscopic difference could be seen between the autogenous and homogenous grafts; practically complete replacement was present in both. The merthiolate-preserved and frozen-preserved grafts were indistinguishable experimentally. The boiled homogenous bone, however, proceeded to union much more slowly.

As a result of these experimental studies, the authors feel that the use of preserved homogenous bone grafts is justifiable.

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**ALUMNI REUNION AND CLINICAL MEETING**

**APRIL 8 and 9, 1949**

A stimulating and interesting meeting for medical alumni from all parts of the country will be held on Friday and Saturday, April 8 and 9, at Washington University School of Medicine.

The clinical program will be presented by the various departments of the medical school, covering current advances in medicine, recent research at the school, and newer methods of treatment. Illustrious alumni who have made their mark in other parts of the country will return to participate in the program.

A banquet on Friday evening, April 8, will be the high point of the meeting, and our old professors as well as the new ones all will be there. We do not propose to let all of them make speeches, but might want you to make one.

The clinical program will start at 9 a. m. on Friday and continue all day until 5 p. m. On Saturday, it will be from 9 a. m. until noon. Saturday afternoon can be devoted to personal visits with old friends and classmates.

Make your plans now to return to the School for this meeting. It can’t happen more often than once every five years — don’t miss this chance!

(This reunion-clinic is being sponsored by the officers and executive committee of the Alumni Association.)
Medical Procedures by Staff Members Televised

Physicians attending the Interim Session of the A. M. A. in St. Louis from November 30 through December 3 had the opportunity of witnessing via television a four-day series of clinics and operations from Barnes, Firmin Desloge and St. Mary’s Hospitals. St. Louis University and Washington University Schools of Medicine cooperated with the A. M. A. and E. R. Squibb and Sons in presenting the programs, which were broadcast over closed circuit to Kiel Auditorium. A seven-by-nine foot screen and 13 smaller receiving sets were available for convention members, and sets also were placed in the two medical schools.

Washington University’s portion of the program was conducted on the latter two days of the meeting and included the following presentations: Drs. J. Barrett Brown, Louis T. Byars and Frank McDowell on treatment of burns, including a skin graft; Drs. Cyril M. MacBryde, William H. Daughaday and Peter Heinbecker presenting a symposium on thyrotoxicosis; the use of oxygen therapy in bulbar poliomyelitis by Drs. James O. Elam and Albert Roos; a tumor seminar conducted by Drs. Charles L. Eckert, Lauren V. Ackerman, Heinz Haffner, Eugene M. Bricker, Carl E. Lischer and Edward H. Reinhard.

Dr. Robert Elman on nutritional problems in surgery; Dr. Evarts A. Graham and Thomas H. Burford discussed intrathoracic tumors with an operative demonstration; a symposium on arthritis by Drs. Paul O. Hagemann, J. Albert Key and Sedgwick Mead.

Nutrition Symposium Attracts 350

Approximately 350 persons attended the second annual Nutrition Symposium of the National Vitamin Foundation, which was held at the School of Medicine all day, November 15. The program featured guest speakers and was divided into two sessions, with Dr. Oliver H. Lowry, professor of pharmacology, presiding in the morning, and Dr. Robert E. Shank, professor of preventive medicine, in charge of the afternoon program.

The eight speakers, all from out of the state, were: Dr. Fritz Lipmann (Massachusetts General Hospital), Dr. Otto Bessey (University of Illinois), Dr. W. Eugene Knox (Northwestern University), Dr. Dilworth W. Wooley (Rockefeller Institute for Medical Research), Dr. Heinrich Waelsch (New York Psychiatric Institute), Dr. Joseph Warkany (University of Cincinnati), Dr. Randolph West (Columbia University), and Dr. H. Trendley Dean (National Institute of Dental Research).

This annual symposium was started with a meeting at Columbia University in December, 1947, to stimulate interest in nutrition and nutrition investigation, and is to be conducted each year at a different medical school. Among those attending the St. Louis meeting were staff members, students, and representatives of several groups, among them dietetic and medical specialists in the city and state, science departments at Washington University and at St. Louis University, and a number of pharmaceutical manufacturing firms in the country.
Special Lecture Given by English Doctor

Dr. Patrick L. Mollison of London, England, gave a special lecture to students and faculty members of the School of Medicine on December 17. In his talk on "The Diagnosis of Hemolytic Anemia; The Value of the Coombs’ Test," Dr. Mollison reviewed several applications of the Ashby technique in hematology.

Dr. Mollison is director of the Research Unit of the Blood Transfusion Service, Medical Research Council of Great Britain, and is a staff member of the British Postgraduate Medical School.

28 Staff Members Speak at Interim Session

Twenty-eight members of the School of Medicine faculty participated in the American Medical Association Interim Session, which met in St. Louis from November 30 to December 3, as speakers appearing before various section meetings. Six departments were represented by the 28 doctors.

In addition, seven members of the faculty served as chairmen of various committees and subcommittees. Dr. Llewellyn Sales, Sr., was co-chairman of the local committee on arrangements, and serving as subcommittee chairmen were Dr. William H. Olmstead, Diabetes; Dr. Sherwood Moore, Cancer; Dr. Sedgwick Mead, Poliomyelitis; Dr. Robert A. Moore, Laboratory Diagnosis; Dr. Clinton Lane, Dermatology; and Dr. Wendell Scott, X-Ray Diagnosis.

Alumni at Hawaiian Meeting

Dr. Mildred Trotter, professor of gross anatomy who is on leave of absence as anthropologist for the U. S. Army in the Territory of Hawaii, recently sent the following information about Medical School alumni in Hawaii:

The Fourth Congress of the Pan-Pacific Surgical Association met in Honolulu from August 30 to September 13, 1948, with headquarters at the Royal Hawaiian Hotel. Washington University Medical Alumni who participated in the Congress were:

Dr. Harold Chandler, ’26, who is chief physician for the Oahu Sugar Plantation, presided at the evening meeting on September 3 and gave the presidential address on behalf of the Territorial Association of Plantation Physicians. Dr. Walter Stuck, ’29, from San Antonio, spoke at the same meeting on the treatment of acute fractures, and earlier presented a paper on the surgical treatment of degenerative arthritis of the hip.

Dr. Pendleton Tompkins, ’31, of San Francisco shared in the panel devoted to the cancer problem and later presented papers on gynecologic surgery and treatment of female infertility.

Dr. J. E. Strode, ’15, chief physician at Queens’ Hospital, Honolulu, acted as chairman of the Section on Surgery. His son, Dr. Walter Strode, ’48, returned to Honolulu following graduation to serve internship under his father at Queen’s Hospital.

PLAN NOW TO ATTEND CLINICAL-REUNION IN ST. LOUIS, APRIL 8-9
Departmental News

Anatomy

Regular conferences on the progress of cancer research are being held each month on the second floor of the North Building in the School of Medicine. A typical program at one of these conferences consists of three talks, each not more than fifteen minutes in length, and considerable discussion after each presentation.

Biochemistry

The 1948 St. Louis Award was presented to Dr. Carl F. Cori and Dr. Gerty T. Cori, winners of the 1947 Nobel Prize in Medicine and Physiology, for outstanding citizenry in bringing recognition to St. Louis as a leading medical center in the United States. Presentation was made by the Rev. Alphonse M. Schwitalla, dean of the St. Louis University Medical School, on Nov. 24 in the office of Mayor Aloys P. Kaufmann, with Chancellor Arthur H. Compton, Dean Robert A. Moore, and other University officials in attendance. The St. Louis Award, which is given annually, consists of a scroll and one thousand dollars in cash, which Dr. and Mrs. Cori have turned over to the School of Medicine. The income from this amount will be used for a prize to an outstanding student in biochemistry.

Medicine

Guest speaker before the Cincinnati Academy of Medicine on November 9th was Dr. W. Barry Wood, Jr. His topic was "Defense Mechanism of the Host in Relation to the Chemotherapy of Acute Bacterial Infections."

Neuropsychiatry

A new course for sophomores, "The Pathology of Behavior," was started with the beginning of the second trimester on December 6th. Under the direction of Dr. George Saslow, associate professor of psychiatry, it will be integrated as one continuous course with the third trimester course in conjoint medicine. The class schedule consists of lectures, regular demonstrations, written exercises, and student practice in interviewing patients with all types of illnesses.

Dr. Saul Rosenzweig joined the department on January 1st as chief psychologist of the Child Guidance Clinic. He has been chief psychologist at Western State Psychiatric Institute and Clinic in Pittsburgh, Pa. Dr. Rosenzweig also has a half-time appointment as associate professor in the Department of Psychology at the University.

A new book by Dr. Robert I. Watson, assistant dean and associate professor of medical psychology, has been published recently by Harper and Brothers. Entitled "Readings in the Clinical Method in Psychology," the book emphasizes therapeutic work actually done by psychologists. Containing 740 pages, it is a collection of fifty pages from various sources by leaders in the field of clinical psychology.

Dr. Edwin F. Gildea has been appointed to the newly-established Wallace Renard professorship of psychiatry, which was given to the University by Mr. Wallace Renard, chairman of the board of the Renard Linoleum and Rug
Company of St. Louis. Mr. Renard and his wife have made several grants to the University for support of psychiatry in recent years.

**Occupational Therapy**

Miss Sue P. Hurt, director of the Department of Occupational Therapy, will return to St. Louis on February 1 after a leave of absence, during which she worked toward her master's degree in rehabilitation at New York University. Miss Hurt received a bronze medallion for her work in occupational therapy when she was selected as one of eight "Women of Achievement—1948" at the Women's International Exposition in New York late in October.

**Otolaryngology**

Dr. S. Richard Silverman, lecturer in audiology and director of the Central Institute for the Deaf, spoke before the American College of Surgeons in Los Angeles on October 19, discussing recent developments in hearing aids and lip-reading instruction to deaf children.

Dr. Theodore E. Walsh, professor of otolaryngology, gave four talks at meetings of the Postgraduate Medical Association of South Texas in Houston from December 7 to 9th. His subjects were "What Can Be Done for the Hard of Hearing," "Acute and Chronic Otitis Media," "Diagnosis and Management of Chronic Maxillary Sinusitis," and "Hydrops of the Labyrinth."

Visitors to the Department during November were Dr. J. de Mattos Barretto of Sao Paulo, Brazil, and Dr. John R. Lindsay of the University of Chicago.

**Pathology**

Dr. Lauren V. Ackerman, associate professor of pathology and of surgical pathology, was one of the guest speakers at a conference on Clinical Frontier Problems in Cancer, sponsored by the Somerville County Medical Society in Somerville, N. J., from October 7 to 9th, in cooperation with the American Cancer Society of New Jersey. On November 8th, Dr. Ackerman spoke before a meeting of the Public Health Cancer Association in Boston.

Dr. David Smith, instructor in pathology, returned in January from a three months' leave of absence during which time he studied neuropathology under Dr. Harry Zimmerman at the Montefiore Hospital for Chronic Diseases in New York.

**Physical Therapy**

Dr. Frank H. Ewerhardt, assistant professor emeritus of physical therapeutics, died October 15 at Barnes Hospital at the age of 71. Dr. Ewerhardt was a graduate in physical education at Yale University, then attended the School of Medicine here where he received his medical degree in 1910. His first appointment to the Medical School staff was as assistant in anatomy in 1913, and he received later appointments to the department of medicine. He was assistant professor of physical therapeutics from 1922 until his retirement in July, 1943. A staunch advocate of the amateur status for university athletics, Dr. Ewerhardt served in the University's physical education department from 1905 until 1946, and had served on the staffs of Barnes, Children's, and
Homer G. Phillips Hospitals. He had received the Gold Key Award of the American Congress of Physical Medicine in recognition of his long and distinguished contributions to the field just a month before his death.

A two-year course leading to the degree of bachelor of science in physical therapy now is being conducted in the Medical School under the direction of Dr. Sedgwick Mead, assistant professor of physical medicine. The revised schedule requires three semesters of lecture work and one semester of clinical training, upon completion of which the students are completely qualified to take examinations of the American Registry of Physical Therapy Technicians. Two separate courses are being offered this year. One is the two-year degree course and the other is a one-year certificate course, with the latter being discontinued after this year. The Department of Physical Therapy requires 60 hours of college credit for admission, the same as many other schools of professional training. Recent changes in the curriculum and organization have put the department on a par with the Department of Occupational Therapy in relation to its position in the Medical School family.

Physiology

The Ina C. Urbauer Grant, which is supporting research in gerontology in the School, has made it possible to bring to the Department of Physiology next February Dr. Adolph Surtshin, who will work on the physiological problems as they are related to the study of diseases of the aged. Dr. Surtshin, a graduate of St. Louis University Medical School, will spend part of his time in the laboratories at City Infirmary and the rest in departmental laboratories. He has been working on cardiovascular physiology at Michael Reese Hospital in Chicago.

A step in the further expansion of biophysical research in the School of Medicine has been taken with the addition of Dr. William Sleator, Jr., to the staff of this department on November 1. Dr. Sleator’s training has been primarily in physics, and he came here from the department of physics at the University of Minnesota, where he had been senior research associate since 1946. He did his undergraduate and graduate work at the University of Michigan and worked at the Aberdeen Ordnance Laboratory during the war. His title will be assistant professor of biophysics in physiology.

Postgraduate Division

Seventy-two physicians were enrolled in the five-day refresher course in the general practice of medicine, which was offered here from October 25 through 29th. The majority of them came from Missouri, Illinois, Kansas and Iowa, with a few from more distant points.

The two-day refresher course in laboratory techniques given November 22 and 23 had 52 technicians enrolled, with 25 applicants turned down due to lack of accommodations. Twelve states were represented as follows: Missouri, 17; Illinois, 10; Indiana, 6; Tennessee and Ohio, 5 each; Texas, 3; and one each from New Jersey, Arkansas, Nebraska, Louisiana and Georgia.
Preventive Medicine

Dr. Cecil A. Z. Sharp, assistant professor of public health, resigned from the staff effective November 30 to become regional director of the United Mine Workers of America new health and hospital program. He will have headquarters here in St. Louis. Dr. Sharp also resigned as health commissioner of St. Louis County, a post he had held since April, 1947.

Radiology

Honorable mention was awarded the exhibit on cardiovascular angiography and aortography in the diagnosis of congenital heart disease at the symposium sponsored by the Radiological Society of North America in San Francisco during December. The exhibit was prepared by Drs. Sherwood Moore, Wendell G. Scott, Merl J. Carson, and Thomas H. Burford. This exhibit has been presented at meetings in Atlantic City, Miami, and Springfield, Ill., in recent months.

Dr. Wendell G. Scott, associate professor of clinical radiology, has been named first vice-president of the Mississippi Valley Medical Society, and recently was elected chairman of the Section on Radiology of the Southern Medical Association. During the Radiological Society meetings in San Francisco, Dr. Scott presented a new automatic x-ray camera he has developed which uses continuous rolls of film.

Dr. A. N. Arneson, associate professor of clinical radiology, was one of 17 invited guest speakers on the program of a cancer symposium in Tampa, Fla., early in November. The symposium served also as a postgraduate course for Florida doctors, and was under the direction of the Tumor Clinic of Tampa Municipal Hospital working with the Florida Division of the American Cancer Society.

Dr. Sherwood Moore, professor of radiology, recently was elected a member of the Medical and Scientific Executive Committee of the American Cancer Society.

Surgery

Dr. Robert W. Bartlett, assistant professor of clinical surgery, presented an exhibit on the surgical management of large goiters at the A. M. A. Interim Session in St. Louis in December and also at meetings of the Southern Medical Association in Miami, Fla., last October.

Dr. Ernest Sachs, professor emeritus of clinical neurological surgery, was a guest speaker at the cancer symposium of the South Dakota Division of the American Cancer Society in Sioux Falls during October. His topic was "Malignancies of the Spinal Cord and Peripheral Nerves."

Dr. Evarts A. Graham, professor of surgery, was installed as president of the Interstate Postgraduate Medical Association at meetings in Cleveland during November. He conducted a diagnostic clinic and also spoke on "Surgical Diseases of the Lungs." Dr. Graham attended a celebration in honor of Dr. Edwin P. Lehman, former staff member here about 20 years ago, at the University of Virginia School of Medicine, where Dr. Lehman is professor of surgery, in November.
Dr. Frederick A. Jostes, professor of orthopedic surgery, returned from an eight-week trip to Europe last fall and reported that the lack of drugs such as penicillin, sulfa, and the endocrine substances which are so common here was one of the most surprising things he encountered. He and Mrs. Jostes traveled through France, Belgium, The Netherlands, and England, and found the people of those countries eager to exchange ideas and grateful for anything new they could learn. Dr. Jostes spoke before the International Congress of Orthopedic Surgery and Traumatology, meeting in Amsterdam.

Miscellaneous

Dr. Gustave J. Dammin, assistant professor of pathology and of medicine and director of laboratories at Barnes Hospital, was elected a Fellow in the American Public Health Association during November.

During the meeting of the American Academy of Ophthalmology and Otolaryngology in Chicago during October, Dr. Lawrence T. Post, professor of clinical ophthalmology, and Dr. Theodore E. Walsh, professor of otolaryngology, were awarded honor medals for their services to the Academy during the preceding year.
Publications of the Faculty
October - December, 1948


Brown, J. B. Carcinoma of the face and jaws. In postgraduate cancer clinics of Wisconsin, presented by the Wisconsin division of the American cancer society in cooperation with the State Medical Society of Wisconsin. 1947. pp 5-9.


Scott, V. Procaine penicillin in syphilis. In recent advances in the study of venereal diseases; a symposium. 1948. p. 334.


Alumni News

1891

Joseph W. Charles, a graduate of the old St. Louis Medical College in 1891, has retired from active practice in St. Louis and has spent considerable time writing his memoirs. The Quarterly prints the following excerpts for the interest of the alumni.

Dr. Charles was born in Boonville, Mo., in 1868 and received his A.B. degree from Westminster College at the age of 19. He immediately began studying medicine under Dr. N. F. Baker of Fulton, Mo., and after 15 months entered the St. Louis Medical College. At that time, the College was at Seventh and Clark Avenues, and Dr. Charles recalls that the only way to get out to Kingshighway then was over the old Olive Street cable car which ran on Maryland Avenue at Kingshighway.

In 1888 there were about seven medical schools in St. Louis, says Dr. Charles. The St. Louis Medical College had just lengthened its course to three years of eight months each, with a consequent reduction in the class enrollment. Up to this time, it had been possible for a group of doctors to form a college, with the professors pocketing the money. The St. Louis Medical College formed a fund out of its tuition charges and moved to larger quarters at 18th and Locust Streets in 1891.

After his graduation, Dr. Charles became assistant to the late Dr. M. Hayward Post, who later became president of the American Ophthalmological Society. He received no pay during his first year, a custom of that time, and in the next two or three years received twenty-five dollars per month.

Armed with letters of introduction and borrowed money, Dr. Charles then went to Europe for 22 months of study. He went first to Kiel, Germany, and studied under Flemming, the histologist; Heller, the pathologist; and the eye surgeon Voelkers. Dr. Charles remembers that Flemming told him how the Kaiser was taking money from German universities, and that he believed some day Americans would not need to go abroad for postgraduate work because American universities would excel all others and be heavily endowed.

Eight months later Dr. Charles, accompanied by the late Dr. Albert Taussig of St. Louis, traveled to Berlin to study under the pathologist Virchow and the optics teacher Koenig. After five months in Berlin, he returned to Kiel and worked under Prof. Voelkers, making microscopic slides of eyes removed by the professor. Through this work he was able to bring about two thousand slides back to the United States. While in Kiel, Dr. Charles remembers seeing the opening of the Kaiser's canal for warships at Hamburg.

From Kiel, he went to Snellen's clinic in Utrecht, Holland, for a month; studied at the Sorbonne in Paris under Javal; then spent five weeks at the Royal London Ophthalmic Hospital before returning home. He recalls that he arrived in St. Louis with one dollar and four cents.

In 1896, Dr. Charles opened his own office at 2727 Washington Ave., in a six-room house that was heated by a stove and gas grate and lighted by gas burners. He was appointed consultant and member of the board of directors of the Missouri School for the Blind from 1914 to 1922, and was made chairman of the Committee for the Prevention of Blindness of the Missouri Medical Society.

Dr. Charles was professor of ophthalmology at St. Louis University for several years and from 1930 to 1934 was instructor in ophthalmology at Washington University School of Medicine. He is now an honor member of the St. Louis Medical Society, affiliate Fellow of the A. M. A., emeritus member of the American Ophthalmological Society, life member of the American Academy of Ophthalmology and Otolaryngology, and life
Sandor Horwitz officially retired from his post as Peoria District Health Superintendent for the Illinois State Department of Health on December 31, 1948, after 38 years of service to public health in Illinois. Dr. Horwitz has held this position since 1931, during which time he has aided in the establishment of county health departments and in the improvement of health standards in several communities. Possessor of a medical career that dates back more than 50 years, Dr. Horwitz's principal interest always has been in the field of public health. He was honored by health officers of Illinois and members of the state department of public health at a special luncheon in Peoria on October 27 and was presented with a gift of luggage. Special tribute to him was paid in a statement from Dr. Roland R. Cross, state director of public health. Dr. Horwitz presented a paper on "Thoughts on Bulbar Poliomyelitis" following the luncheon.

W. L. Johnson moved recently to 1446 Ardendale Ave., in San Gabriel, Calif.

F. R. Anthony passed away last February 16 after falling and breaking a hip. He lived in Maryville, Mo.

A note from F. N. Gordon, manager of the Veterans Administration Hospital in Fayetteville, Ark., tells of the death of Richard M. Winn at that hospital on Dec. 15. Dr. Gordon remembers that Dr. Winn was born in New London, Mo., in 1877 and first started practice somewhere in northeast Missouri. Later he moved to Gladewater, Texas, where he had a successful eye, ear, nose and throat practice. He retired from active work about four years ago, did quite a bit of traveling, and resided in the lower Rio Grande Val-
1924  
**Henry J. Lund** can be reached at 6415 Chelton Dr., in Oakland, Calif.

1925  
**Adolphus A. Berger** is living in San Francisco at 761 Twelfth Ave.

1927  
**Arthur C. Fortney** resides at 1122 Ninth Street South in Fargo, N. D.

1928  
**Joel T. Woodburn,** formerly at Bellevue Hospital in New York, is now in the Barnes Building at Muskogee, Okla.

1929  
**Guerdan Hardy** has moved his offices from the Humboldt Building to the Beau-mont Medical Building in St. Louis.

1930  
**Joseph J. Gitt** now has offices in the Continental Building in St. Louis.  
**Herbert H. Gass** is at the E. and R. Center in Belleville, Ill.

1935  
**Edward Massie** of St. Louis attended the Councilor's District Meeting of the Missouri State Medical Association at Fulton, Mo. on Oct. 14, and gave a talk on "Acute Rheumatic Fever." On the following day he spoke before the combined medical groups of Cabool, Houston, West Plains, Mountain Grove and adjoining towns in Missouri.

1936  
**Henry W. Edmonds** and Mrs. Edmonds (Dorothy Gill, '38), have moved from Seattle, Wash., to 7011 Arlington Rd., Bethesda, Md.  
**Lewis E. Rector** is taking a postgraduate course here at the School of Medicine and is switching from pathology to pedi atrics. He will return to his home in Akron, Ohio, to resume practice. His wife, Eleanor Johnson Rector, also is practicing in Akron, with offices in the Akron Loan and Savings Building.

1937  
**H. L. Townsend** is living at 3307 Oriole Dr., Louisville, Ky.  
**Ralph C. Petersen** has moved to 3624 Sierra Vista, Glendale, Calif.  
**George L. Calvyn**, a commander in the U. S. Navy Medical Corps, is a fellow in medicine and preventive medicine at Western Reserve University School of Medicine in Cleveland.  
**Lt. Col. Martin A. Compton** is now at Oliver General Hospital in Augusta, Ga.  
**Joseph A. Fiorito** lives at 59 Trumbull St., New Haven, Conn.

1938  
**Marion Janet Dakin** has moved from Bellevue Hospital to 5330 Lankershim Blvd., North Hollywood, Calif.  
**Cornelius S. Meeker**, formerly in Richland, Wash., is now with the Murray Clinic in Butte, Mont.

1939  
**Miles E. Foster** is on the staff at Clarkson Hospital in Omaha, Nebr.

1941  
**Peter D. Fleming** is practicing in Topeka, Kans., and lives at 2325 Burnett Rd.

1942  
The following letter was received recently from **Bill Reese**:

"Since completing residency training at Phipps Clinic, Johns Hopkins Hospital, and certification by the Boards in psychiatry, I have taken the position as 'Director of Professional Education,' Veterans Administration Hospital, Perry Point, Maryland. I am still allowed time to consult in psychiatry at the Hopkins Medical Surgical Clinic and I am listed as instructor in psychiatry in Hopkins University.

"I make this complicated introduction as justification for boasting of our resident training program in psychiatry at this hospital. No doubt some fellow alumni are acquainted with promising students seeking such specialization."
“Our program is under Dean's Committee supervision and Dr. John C. Whitehorn is a member of this committee. In brief, our three-year program (the time is adjustable to individual needs) includes in-patient work here and rotation through out-patient clinics in Baltimore, both inside and outside VA administration. For example, many of our residents are able to spend some time at Kanner's Clinic in child psychiatry. We have remarkable galaxy of consultants representing various views from psychobiology to psychoanalysis. The supporting basic and clinical work in neurology is supervised by Dr. O. R. Langworthy.

“Best regards to my friends among the alumni.”

French McCain has moved to 2560 Dorchester Rd., Birmingham, Mich., and plans to start practice there very soon.

Edwin M. Hamlin's new address is 1435 Euclid, Berkley 9, Calif.

William J. Davis has moved his offices to the Medical Center Building in Spokane, Wash.

1943

Mary Jordan is living at 6 N. Swarthmore Ave., Ridley Park, Pa.

Henry V. Guhleman has transferred from Johns Hopkins Hospital to the Cushing Memorial Hospital in Framingham, Mass.

Frances Chappell Wilson announces the opening of her office for the practice of ophthalmology in the Stovall Office Building, Tampa, Fla.

Walter J. Kennedy has moved from Sedalia, Mo., to 1001 W. Yakima Ave., in Yakima, Wash.

Richard Spillane can be reached at 1470 Beacon St., Brookline, Mass.

Benjamin Greenwood has moved from Minneapolis to 124 Eveline St., Oshkosh, Wisc.

Burte Guterman's address is 31 Chestnut St., in Worcester, Mass.

Ernest Schwartz is living at 57 Fernwood Dr., in San Francisco.

1944

Marvin Pursell's address has changed to 971 Greeley Ave., Webster Groves, Mo.

William B. Mize announces his association with the Stout Clinic in Sherman, Texas, with a practice limited to obstetrics and gynecology.

J. F. Henry has moved from East St. Louis to Melbourne, Fla.

1946

Albert Rhoades moved last fall from Chevy Chase, Md., back to St. Louis and lives at 5219 Ridge Ave.

1947

Jack Alexander is specializing in internal medicine at T. C. I. Hospital in Fairfield, Ala.

John Bechtold is serving his second year as an assistant resident in medicine at Baltimore City Hospital.

Carroll Behrohorst is interning at St. Louis City Hospital.

Thomas D. Brower is assistant resident in orthopedic surgery at Albany Hospital, Albany, N. Y., until July 1, 1949. He was married in Chicago on Dec. 27, 1948.

Paul Brown is a resident in pediatrics at Fresno County General Hospital in California.

Ted L. Bryan is a resident in medicine at St. Louis City Hospital.

Charles Clay is associated with Dr. Ricketts in Rantoul, Ill.

Robert Coulter is at St. Louis County Hospital in Clayton, Mo.

William Deer, Jr., is at the Federal Hospital in Oak Ridge, Tenn.

Kenneth Dirks is a resident in surgery at St. Louis City Hospital.

William Dunckel, Jr., is assistant to the resident surgeon at University Hospital in Charlottesville, Va., and is specializing in orthopedics.

Robert Fadem has been at Mercy Hospital in San Diego, Calif., since Sept. 1, 1948.

G. C. Fanney, Jr., is living at 1862 E. 101st St., in Cleveland, Ohio.
Alonza Farr is a resident physician at Barnes Hospital.

Glenn Gibson is serving a two-year residency in pediatrics at the Research and Educational Hospital, 1819 W. Polk, in Chicago.

Jack Gregory is assistant in pathology at the Medical School and is resident in pathology at St. Louis County Hospital.

Ted H. Greiner is a research fellow of the National Institute of Health at New York Hospital in N. Y. C.

Daniel Hankey is at Grady Memorial Hospital in Atlanta, Ga.

Charles Harrison is a resident at Olney Sanitarium in Olney, Ill.

William Hausman is in his first year of psychiatric residency training at Worcester State Hospital in Worcester, Mass.

Helen Hofsummer is a junior resident at St. Louis Children's Hospital.

Walter Jantz is taking the applied science course for clinical specialties in surgery at the Medical School.

William Landau is a resident in neurology at St. Louis City Hospital.

Fred Martin, Jr., is at the Sloane Hospital in New York City.

Sydney Mathes can be reached at Salt Lake County Hospital in Salt Lake City, Utah.

Jack Newport is at Hillcrest Memorial Hospital in Tulsa, Okla.

William Perry is assistant resident on ward service at Barnes Hospital.

Vol K. Philips is at New York Hospital in N. Y. C.

Robert Polack is assistant resident in internal medicine at St. Luke's Hospital in St. Louis.

Robert Rainey has completed a rotating internship at Charity Hospital in New Orleans and is now serving as junior resident in surgery at the V. A. Hospital in Nashville, Tenn.

Henry Russell is assistant resident in pathology at a hospital in Berkley, Mich., where he lives at 2646 Wakefield.

Albert Smith is resident in pathology at University Hospital, Arkansas Medical School, in Little Rock.

Gerry Smyth is working on the Anna Raymond Fellowship in cardiology at Presbyterian Hospital in Chicago.

Donald Stallard has offices with the Thompson-Brumm-Knepper Clinic in St. Joseph, Mo.

Leon Stutzman finished his internship at Baltimore City Hospital and now is assistant resident there.

Robert Tanner is a resident physician at Deaconess Hospital, St. Louis.

Crofford Vermillion is serving as one of three new assistant directors at Barnes Hospital, with part-time duty in the clinics.

Robert Wallace finished his internship at San Juaquin General Hospital in Stockton, Calif., last June, and is now practicing and taking further training there.

Glenn Weygandt is with the University Clinics of the University of Chicago.

James Willoughby is now in general practice in Liberty, Mo.
WASHINGTON UNIVERSITY

Arthur H. Compton, Ph.D., Sc.D., LL.D., Bridge Chancellor
Charles Belknap, B.S., Vice Chancellor
Edward K. Graham, Ph.D., Acting Dean of Faculties
Thomas Edward Blackwell, Ph.B., M.S., J.D.,
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The College of Liberal Arts
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The George Warren Brown School of Social Work
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The School of Nursing
Louise Knapp, R.N., B.S., A.M., Director

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Kenneth E. Hudson, B.F.A., Dean

University College
Willis H. Reals, Ph.D., Dean

The Summer School
Frank L. Wright, A.M., Ed.D., Director