

7-1944

# Washington University Medical Alumni Quarterly, July 1944

Follow this and additional works at: [http://digitalcommons.wustl.edu/med\\_alumni\\_quarterly](http://digitalcommons.wustl.edu/med_alumni_quarterly)

---

## Recommended Citation

Washington University Medical Alumni Quarterly, July 1944. Bernard Becker Medical Library Archives. Washington University School of Medicine, Saint Louis, Missouri. [http://digitalcommons.wustl.edu/med\\_alumni\\_quarterly/27](http://digitalcommons.wustl.edu/med_alumni_quarterly/27)

This Article is brought to you for free and open access by the Washington University Publications at Digital Commons@Becker. It has been accepted for inclusion in Washington University Medical Alumni Quarterly by an authorized administrator of Digital Commons@Becker. For more information, please contact [engeszer@wustl.edu](mailto:engeszer@wustl.edu).

The  
WASHINGTON UNIVERSITY  
MEDICAL ALUMNI  
QUARTERLY



PUBLISHED IN THE INTEREST OF  
THE UNIVERSITY AND THE ALUMNI

+++++

Physiological Potentialities of a Single Steroid

++

Case Reports of the Barnes Hospital

+++++++

Vol. VII

JULY, 1944

No. 4

**OFFICERS OF THE ALUMNI ASSOCIATION OF  
WASHINGTON UNIVERSITY SCHOOL OF MEDICINE**

President: Dr. J. W. Thompson '23  
Vice-President: Dr. Charles Duden, '26  
Vice-President: Dr. Carl Harford '33  
Secretary-Treasurer: Dr. Rogers Deakin '23

**Executive Committee**

Term Expires 1945	Term Expires 1946	Term Expires 1947
Dr. V. P. Blair, '93	Dr. Charles Stone, '08	Dr. Glover H. Copher, '18
Dr. Theodore Hanser, '22	Dr. Frank McNalley, '17	Dr. Franz Arzt, '26
Dr. Louis H. Jorstad, '24	Dr. Robert Mueller, '17	Dr. Louis Aitken, '27
Dr. Lee B. Harrison, '27	Dr. Frank Bradley, '28	Dr. George W. Ittner, Jr., '31

---

**EDITORIAL BOARD**

**WASHINGTON UNIVERSITY MEDICAL ALUMNI QUARTERLY**

Representing the University:

Dr. Robert J. Terry, '95  
Dr. Alexis Hartmann, '21  
Dr. Paul Hageman, '34

Representing the Alumni:

Dr. Louis H. Jorstad, '24  
Dr. James W. Bagby, '33\*  
Dr. Leo Wade, '38

Dr. Robert A. Moore, Editor-in-Chief

---

Office of the Washington University Medical Alumni Quarterly, 602 South Euclid  
Avenue, St. Louis 10, Missouri

---

Published quarterly by Washington University School of Medicine, St. Louis 10,  
Mo. Entered as second class matter December 14, 1937, at the Post Office at  
St. Louis, Mo., under the act of August 24, 1912.

---

\* In the Armed Forces.

# The Washington University Medical Alumni Quarterly

---

---

VOL. VII

JULY, 1944

No. 4

---

---

## The Physiological Potentialities of a Single Steroid

BY ROBERT F. LOEB, M.D.  
Lambert Professor of Medicine\*

Presented as the Annual Leo Loeb Lecture, Washington  
University Medical School, May 16, 1944

At the outset let me express my deep appreciation to you for doing me the honor to ask me to deliver the Leo Loeb Lecture this year. When Mr. Hodge first wrote me, I was quite overwhelmed and my emotions were mixed. I was sorely tempted to accept this flattering invitation to join the list of investigators who have come here each year to pay tribute to Dr. Loeb in whose honor this lectureship was established by Phi Beta Pi, and yet for a number of reasons, it was with reluctance and some feeling of guilt that I decided to come. First of all, I don't like making speeches. Furthermore, I must confess the quality of scientific accomplishment that has been set by preceding lecturers is difficult to sustain. And finally, though not least, there entered a very personal consideration. None of us care to display ourselves before our relatives, particularly before those for whom we have profound respect, the deepest admiration and sincere affection—all of which I have for Leo Loeb. Despite all these misgivings, I have succumbed to temptation and, be it for better or for worse, I shall proceed with a Leo Loeb Lecture.

Some twelve years ago, at the Presbyterian Hospital in New York, our attention was attracted by the striking similarity of the clinical picture exhibited by patients suffering from acute adrenal insufficiency and patients known to be suffering from serious depletion of sodium salts and

---

\* From the College of Physicians and Surgeons, Columbia University and Presbyterian Hospital, New York, N. Y.

water. This observation led to a series of studies in which it became apparent that the symptoms exhibited by a patient in an Addisonian crisis likewise were occasioned to a large extent by severe depletion of water and sodium salts. This was first established by demonstrating a decrease in the concentration of the sodium ion in the blood in association with hemoconcentration. It was next ascertained that sodium salt and water were lost from the blood and interstitial fluid through excessive excretion by the kidneys in the course of the development of adrenal insufficiency. It is now generally believed that this disturbance results from a decrease in the reabsorption of the sodium ion and water by the renal tubules. Associated with the depletion of salt and water there appeared depression of renal function, due in part to a decrease in renal blood flow.

Early in the course of these studies it was demonstrated that the replacement of salt and water in patients with Addisonian crises often corrected the chemical disturbances present with striking clinical improvement and that the addition of 10 to 20 grams of salt daily to the diet maintained many patients in remarkably good health for many years. Indeed, Harrop and also Allers showed later that totally adrenalectomized dogs could be kept alive indefinitely by the oral administration of large quantities of sodium salts without recourse to the use of extracts of the adrenal cortex. Finally, the importance of the disturbance of sodium and water metabolism in adrenal insufficiency was established by the fact that the withdrawal of sodium salts from the diet of a patient with hypoadrenalism precipitated with promptness and regularity a crisis of alarming severity.

In addition to the disturbances in sodium and water metabolism and decrease in renal function induced by hypofunction of the adrenal cortex in Addison's disease, it was found, as others had observed in adrenalectomized animals, that there is an accumulation of the potassium ion in the blood plasma. This increase in potassium probably results from increased reabsorption of this ion in the renal tubules as is indicated by the observations of Harrison. Thus it appears that the adrenal cortex normally exerts a regulative influence upon the reabsorptive activity of the renal epithelium and that in adrenal insufficiency this regulative function is seriously deranged. This is now an old story familiar to most of you. It is retold at this time because it serves as a basis for the studies to be presented this evening.

In 1938, Reichstein, in Zurich, synthesized desoxycorticosterone (DCA) and subsequently demonstrated that it was identical with a steroid which he had isolated from the adrenal cortex of animals. In the past five years it has become apparent that the esters of this steroid are capable of producing a variety of striking physiological effects which to us have proved

of considerable interest, and which constitute the basis for discussion under the cryptic title chosen for this talk.

Best known of the effects of DCA are those which result from its administration in the presence of adrenal insufficiency. Levy Simpson in England was the first to determine the effectiveness of DCA in the treatment of Addison's disease. Subsequently, Thorn and then others in this country, including our own group, amplified these observations and made quantitative studies concerning the action of this hormone. It turned out, as you know, that the effects of desoxycorticosterone esters upon Addisonian patients and adrenalectomized animals are qualitatively similar to those resulting from the administration of sodium salts, but that they are quantitatively far more effective. Similar in action to the sodium ion also is the fact that DCA appears to have only "life-maintenance" activity: i.e., effect on electrolyte and water metabolism and that it exerts little effect upon the capacity of physical work as shown by Ingle. Furthermore, like the sodium ion, DCA has no demonstrable effect on carbohydrate or protein metabolism, thereby standing in sharp contrast to other cortical steroids of the nature of corticosterone, 17-hydroxycorticosterone and 11-dehydro-17-hydroxycorticosterone.

When we first undertook our clinical studies on the effect of desoxycorticosterone esters in the treatment of adrenal insufficiency in man, over-enthusiastic treatment was found to result in cardiac dilation pulmonary edema, and generalized anasarca. This experience induced us to initiate systematic observations on the effects of desoxycorticosterone administered to normal animals over a prolonged period of time.

For this purpose, 20 to 25 mg. of desoxycorticosterone acetate were administered daily to dogs for many weeks. Contrary to our expectation, these animals failed to store extracellular fluid progressively and they failed to develop cardiac dilation.

However, in the course of two to five weeks, the dogs developed two striking physiological disturbances. The first of these syndromes, studied by Doctor Ferrebee and Doctor Ragan in our laboratory, resembled diabetes insipidus in that there was a marked increase in water "turnover" without change in body weight. The magnitude of this disturbance could be influenced by the addition or withdrawal of sodium salts from the diet. The development of this syndrome might possibly have been anticipated from the earlier studies of Tiel and of Britton and Sylvette.

It might be of interest to relate in detail the developments in two dogs. For two weeks before injections of the steroid were begun in the first animal, which was maintained on a standardized meat diet, the water intake averaged 400 cc. a day. The urine volume was approximately the same

and the specific gravity of the 24-hour specimens was about 1.045. At the end of six weeks of injection with the hormone, the animal was drinking not 400 cc. but 1000 cc. a day. A corresponding increase in urine volume to about 1 liter a day took place and the specific gravity fell to 1.025. At the end of seven weeks, the meat (and therefore potassium content) of the diet, was decreased. Forty and then 80 milli-equivalents of sodium chloride were added daily to the drinking water. The addition of this amount of salt to the regime resulted in a further increase in water intake accompanied by an equal increase in urine output and a fall in specific gravity to a level of about 1.008. After the withdrawal of salt, the volume of fluid exchange returned to about 1 liter daily.

The effect of potassium chloride upon the water "turnover" was then studied. The addition of 30 to 80 m. eq. of this salt daily had no effect upon water exchange, although the specific gravity of the urine rose to 1.015. Potassium chloride was discontinued and, as before, there was a striking augmentation of water "turnover" with a fall in specific gravity in the urine when the potassium chloride was replaced by sodium chloride. The blood serum in this dog and all other animals receiving daily injections of DCA over a considerable period of time showed a slight but consistent rise in the sodium concentration of the serum. This rise in serum sodium is also present in patients with diabetes insipidus. There was no consistent change in serum protein concentration in the animals studied but a definite fall in serum potassium was encountered regularly.

In another dog, the effects of pitressin, the withholding of water and the withdrawal and readministration of desoxycorticosterone were studied. In this dog, the syndrome of diabetes insipidus had been well established by the administration of 8.5 grams of sodium chloride and 25 mgm. of hormone each day for several weeks. The level of polydipsia and polyuria lay between 4000 and 6000 cc. daily and no change in body weight occurred. Pitressin in large doses caused some decrease in fluid exchange with a slight fall in serum sodium concentration and a slight increase in urine specific gravity, changes qualitatively characteristic of human diabetes insipidus, but quantitatively less marked.

Restriction of fluid intake to 1500 cc. for 1 and 2 days at different times resulted in a sharp rise in serum sodium concentration with a rise in urine specific gravity but without severe dehydration. Following the first period of fluid restriction, there was a rise in water intake and urine output and a corresponding fall in urine specific gravity and serum sodium level.

The next step in this study was to discontinue the injections of desoxycorticosterone but to continue the administration of sodium chloride. This

was done to determine whether the diabetes insipidus was a permanent disorder resulting from the prolonged administration of DCA and to determine the importance of the daily salt ration itself in the water drinking of the dog. Despite the continuance of salt administration, there was a prompt cessation of polydipsia and polyuria. In the course of 7 days, the urine specific gravity rose to normal, the water exchange fell to 1.5 liters daily, and the serum sodium concentration fell slightly. The readministration of desoxycorticosterone resulted in the reappearance of the entire syndrome with increased water consumption, increased urine volume and a decrease in urine specific gravity with a slight but definite rise in serum sodium concentration. At autopsy there was some decrease in the size of the adrenal glands. No lesions were discernible in the kidneys and pituitary gland.

It is tempting to speculate upon the mechanism by which desoxycorticosterone acetate is capable of producing the physiological upheaval described. The syndrome resembles true diabetes insipidus with two exceptions. First, the effect of pitressin is quantitatively less than might be anticipated and second, dehydration did not appear following the withholding of fluid with a continuation of a low specific gravity of the urine. Thus, the syndrome induced appears to be more of an obligatory polydipsia rather than an obligatory polyuria. Whatever the mechanism of the polydipsia may be, the consequent polyuria tends to enable the normal dog to avoid excessive retention of sodium. A rapid flow of urine through the tubules would tend to counteract the increased sodium reabsorption which is presumably brought about by this adrenal cortical hormone.

I should like next to consider the second syndrome which was encountered as a result of the continued administration of desoxycorticosterone esters to normal dogs. When this hormone, in the dosage mentioned, is injected into dogs on a general diet, there appears in the course of 4 to 5 weeks an extraordinary type of muscle weakness. In the early stages, the disorder in our animals appeared as bouts of periodic weakness. In these attacks, it was impossible for the animals to raise their heads, and weakness of the extremities, particularly the hind legs, was often marked. These periodic attacks of weakness, during which reflexes were maintained, in contrast to familial periodic paralysis, usually occurred in the afternoon and would disappear by the following morning. In the course of about 10 days to 2 weeks, the weakness became progressively more severe and continuous. If not treated, the animals would finally succumb. This syndrome of intermittent muscle weakness accompanied the development of the syndrome of diabetes insipidus already described and consequently the same



changes in serum electrolytes were encountered: i.e. an increase of 4 to 8 m. eq. per liter in sodium concentration and a depression of potassium to about 2.5 m. eq. per liter.

It was found that if the animals were given a 0.15 per cent solution of potassium chloride to drink instead of tap water, the development of muscle weakness could be either prevented or cured, but as already stated, it had no influence upon the development of the diabetes insipidus. The substitution of tap water for potassium chloride solution led to the appearance of intermittent muscle weakness in about ten days. It was found that the administration of potassium chloride tended to prevent the decrease in serum potassium levels but had no effect upon the elevated sodium concentration, which, as stated, appears to be related to the increased thirst and water drinking in these dogs.

In order to gain information concerning the mechanism of the paralysis resulting from the continued administration of desoxycorticosterone acetate, muscle biopsies were made in these animals. The first specimen was taken before the initiation of therapy, the second after the appearance of paralysis, and the third when the appearance of paralysis was either prevented or cured by the addition of potassium chloride to the drinking water. Histological study revealed a curious fragmentation of the muscle fibres. This has more recently been found by Darrow in the skeletal and heart muscle of rats treated with desoxycorticosterone.

Analysis of these biopsy specimens revealed that the skeletal muscle of animals with severe weakness contained a high concentration of sodium and a decrease in the concentration of potassium as had been described by Darrow in the muscles of rats treated with desoxycorticosterone esters. Furthermore, it was shown that when paralysis was inhibited by the addition of potassium chloride to the drinking water, the accumulation of sodium in the muscle did not take place. Analysis of the muscle specimens from paralyzed animals for nitrogen, chloride and water indicated no apparent change in the extracellular water jacket or so-called chloride space. Furthermore, it was possible to show that the intracellular replacement of potassium by sodium which took place with the development of muscle weakness was on an approximately 1 to 1 basis, an atom of sodium being gained for each atom of potassium lost by the muscle.

The fact that muscle weakness and the intracellular accumulation of sodium could be prevented by the administration of potassium ion despite the persistence of an elevation of the serum sodium concentration suggests that the potassium lost from the cells is *replaced and not displaced* by sodium. In other words, it appears that sodium goes into muscle cells only after potassium comes out. This view is consistent with the idea that

desoxycorticosterone, by increasing the renal excretion of potassium, lowers the serum potassium concentration and shifts the equilibrium between intra- and extracellular potassium in the direction of an increased loss of potassium from the cells. Heppel's observations on the increase in intracellular sodium of rats raised on a low potassium diet offer support for this interpretation. It seems clear, therefore, that when the available supply of potassium is reduced either by excessive excretion or by reduction in intake, sodium replaces the potassium which is lost from the muscle cells.

I should like to discuss just one more physiological disturbance which can be potentiated by the administration of the steroid under discussion this evening. In its effect upon the disturbances in Addison's disease, in the evolution of the diabetes insipidus-like syndrome described, and in the development of intermittent muscle weakness in normal dogs, the effects of desoxycorticosterone can be related in one way or another to the effect of this hormone upon the kidney tubules. In the activity to be mentioned now, this correlation has not been established at this time.

In 1939, we first observed the development of arterial hypertension in two patients with Addison's disease after some months of treatment with desoxycorticosterone. In the same year we observed some elevation of blood pressure in two dogs following the continued administration of this steroid. Since that time many more studies of Addisonian patients and observations in animals by others have confirmed the fact that this hormone may cause elevation of the blood pressure.

In these reports, it has not become apparent whether the observed increase in blood pressure is due to salt and water retention or to some other unexplained action of the hormone. In order to clarify this problem, it seemed desirable to study the effect of DCA and of salt upon the blood pressure, blood volume, and sodium concentration of the blood in comparable groups of patients with Addison's disease. In addition, it seemed of importance to determine the action of DCA and of sodium chloride in a group of patients without adrenal disease and without an underlying disturbance of electrolyte and water metabolism. This study was carried out by Drs. Perera, Knowlton and Lowell in our Department of Medicine.

I should like first to tell you of the results observed in a group of 15 patients with Addison's disease maintained on salt alone. These patients were comparable in age and sex to the group receiving DCA. The average period of treatment with salt alone was in excess of three years. The blood sodium was maintained at a normal level and no significant hypertension developed in any of these patients. At no time did the recorded diastolic pressure exceed 90 mm. Hg. In only two patients were systolic values observed above 140 mm. Hg. and then only on one and two readings respec-

tively, over a period in which many lower values were recorded. The plasma and total blood volumes were within accepted normal limits in the patients in this series in whom measurements were made.

For purposes of comparison, a group consisting of 24 Addisonian patients which had been treated with DCA with or without additional salt was analyzed. All but five had been followed for more than one year, the average period of observation being two years. In this series, blood pressures in excess of 140/90 were observed repeatedly in 13 of 24 patients (in contrast to none out of 15). In this group, four had a history suggestive of vascular disease prior to the onset of their adrenal disease and were therefore excluded from the study. Even so, this leaves 9 of 24 patients who, upon sustained treatment with DCA and without reason to suspect underlying hypertensive disease, developed definite elevation of blood pressure (reaching a maximal level in excess of 200/100 in contrast to the absence of hypertension in the group treated with salt alone). In the group treated with DCA, like the group treated with salt, there was no evidence that the elevation of blood pressure was dependent upon an increase in plasma or total blood volume. Furthermore, the elevation of blood pressure was not dependent upon abnormal elevation of the concentration of sodium in the serum as was the case in the development of diabetes insipidus in animals.

The third group of patients in whom the effect of DCA upon arterial blood pressure was studied consisted of 3 individuals with rheumatoid arthritis. They were maintained on standardized regimes for observation at the Goldwater Memorial Hospital. After a two weeks' control period they were given 10 to 20 gms of sodium chloride daily in addition to their diets for two weeks. Then they received 10 mgs. of DCA daily for 7 weeks. During this time, the intake of salt was reduced in two of the patients. After seven weeks, the administration of DCA and added salt was discontinued.

In these patients, as in the other groups, there was no definite correlation between the blood and plasma volumes and the height of the blood pressure.

These studies confirm the earlier observations indicating that many patients with Addison's disease under treatment with DCA develop hypertension and our recent observations on patients without adrenal disease show this cannot be considered a change associated solely with hypoadrenalism.

The mechanism of this elevation is not clear, but as yet there is no evidence in the groups studied that it leads to the arteriolar changes which have been recently reported by Selye in animals receiving large doses of desoxycorticosterone and sodium salts simultaneously over long periods of

time. As a matter of fact we have not observed the changes described by Selye in our dogs which developed diabetes insipidus and periodic weakness, nor have definite changes been observed in the arteries of 2 of our patients who died after having been under treatment with DCA for several years.

From our studies, it is apparent that the development of hypertension cannot be ascribed to the restoration of the electrolyte and fluid balance to normal in patients with previous adrenal insufficiency. This restoration occurs promptly when acute hypoadrenalism is treated with adequate salt and replacement therapy, whereas the hypertension observed after treatment with DCA requires weeks or months to become apparent. Also, no abnormal increase in blood pressure appeared in the group of Addisonian patients treated with salt alone over long periods of time despite the fact that all maintained a normal serum electrolyte pattern, and a normal blood volume (in those patients in whom it was measured).

It is also apparent now that the elevation of blood pressure cannot be correlated with excessive retention of salt or water in the circulating blood or with the development of edema. In the group of Addisonian patients treated with DCA, the appearance of hypertension was not associated with abnormally high concentration of the sodium ion in the blood serum. Furthermore, the circulating plasma volume was essentially normal, as you have seen, at a time when the blood pressure was significantly elevated. Finally, the plasma volume in the group of patients without adrenal disease showed no consistent increase as the arterial pressure rose. It might be added that excessive accumulation of interstitial fluid cannot be considered of importance since none of the group of Addisonian patients developing hypertension had edema at this time.

The possibility exists that unrelated hypertension might have been present in all of the patients who developed abnormal elevation of blood pressure during treatment with DCA. This seems improbable statistically because none of the comparable group treated with salt alone developed hypertension. Furthermore, some of the patients developed hypertension during treatment with DCA whereas some of these same individuals had previously maintained normal blood pressure levels while under treatment with salt alone for a number of years.

Cold pressor tests were carried out in the various groups studied. Undue lability of the vascular system, as determined by this test, could not be established as a cause for the elevation of pressure since the responses observed bore no consistent relation to the presence or absence of hypertension.

Thus it appears that the basis for the elevation of blood pressure following the prolonged administration of DCA remains obscure. It does not

appear to be referable either to abnormalities of salt and water retention or to underlying hypertensive disease. It seems probable that DCA acts directly or indirectly upon the peripheral vascular system, and with your permission I should like to indulge in speculation concerning a possible mechanism involved. Dr. Carnes, who worked with us earlier, suggests that the development of hypertension may be associated with the loss of potassium and its replacement by sodium in the smooth muscle cells of the arterioles. We have already observed that this type of change occurs in skeletal muscle. If potassium is replaced by sodium in smooth muscle, as Carnes suggests, then an increase in intracellular sodium may conceivably result in an increase in vascular tone. This hypothetical increase in vascular tone could serve as the basis for the gradual development of hypertension resulting from the continued administration of DCA.

If experimental observation lends support to the view expressed, then the development of hypertension may be correlated with the other activities of desoxycorticosterone described. For example, in adrenal insufficiency, DCA increases to normal the reabsorption of the sodium ion and reduces to normal the reabsorption of potassium. In normal dogs, DCA increases the reabsorption of the sodium ion abnormally so that its concentration exceeds the normal in the blood. This change appears to be responsible for the development of the diabetes insipidus-like syndrome characterized by excessive thirst. Furthermore, as we have seen, DCA administered to normal dogs gives rise to the excessive excretion of the potassium ion (i.e. decreased reabsorption). This in turn lowers its concentration in the blood plasma and finally in the striated muscles. The ultimate replacement of the potassium lost from the muscles by sodium is associated with the development of periodic muscle weakness.

In conclusion, we may state that, whereas the point of departure for this talk was a description of the physiological potentialities of a single steroid, we end with the concept that these widely diverse activities may in the last analysis all result primarily from the influence exerted by desoxycorticosterone upon the selective reabsorption of the sodium and potassium ions by the renal tubular epithelium.

# Case Reports of the Barnes Hospital

## Clinical and Postmortem Records Used in Weekly Clinicopathologic Conferences at Barnes Hospital, St. Louis

W. BARRY WOOD, JR., M.D., AND ROBERT A. MOORE, M.D., EDITORS

### CASE 51

#### PRESENTATION OF CASE

N. W., a 49 year old white truck driver, entered Barnes Hospital on March 27 and died on April 2, 1944.

*Chief Complaints:* Abdominal pain, vomiting, diarrhea, pain in the chest, swelling of the ankles, and loss of weight.

*Family History:* Irrelevant.

*Past History:* The patient had typhoid fever at the age of 15; there were no complications. When 23 years old, he developed a primary penile sore for which he was treated with about 12 intravenous injections. His blood had not been tested since that time until a few months previous to admission when he was told that the report was bad. However, he took no further treatment. He had always been in sufficiently good health to work hard until the onset of the present illness. Significant in his systemic history is the fact that during recent months he had had transient double vision, lasting but a minute or two at a time. Since childhood he had had a draining right ear. On that side hearing had always been impaired and there was occasional tinnitus. A year previous to admission he had his teeth removed because of sore gums but no plates were worn thereafter. For some years he had had increasing nocturia to 3 times during the night. He was married at the age of 21. His wife had 9 pregnancies and no miscarriages. The patient worked always as a farmer and truck driver. He drank whiskey 2 or 3 times each day and smoked 2 packages of cigarettes.

*Present Illness:* Four months before admission, the patient began to have intermittent pains in the abdomen which he described as burning or searing in character. These would occur first in the upper abdomen and spread outward and downward. They were very severe and lasted 2 or 3 hours at a time. They gradually increased in frequency and intensity. Shortly thereafter, pains in the lower part of the chest developed. These were likewise periodic and were felt as a sense of constriction. They became progressively worse and lasted for irregular intervals. The pa-

tient maintained that he also had had occasional shooting pains down his legs which became somewhat stiff. Nine weeks previous to admission, he lost his appetite. About this time diarrhea began with 6 to 7 thin, dark movements a day. He vomited occasionally. His diet was apparently very restricted for the last 2 months and consisted only of rice, malted milk, coffee, orange juice, prunes and apple sauce. He had lost about 50 lbs. and had remained in bed since the onset of diarrhea. Other symptoms were shortness of breath on getting out of bed, some swelling of the ankles, pain in the back which was vaguely related to abdominal pain, and some cough with the production of thick sputum. He had received various types of medication from his local physician.

*Physical examination:* T. 37.6° P. 90 R. 20 BP 108/78.

The patient appeared chronically ill and seemed mentally somewhat obtunded. He complained of abdominal distress. The skin was dry and showed evident loss of weight. The pupils were unequal, slightly irregular and failed to react to light but responded to accommodation. The fundi were apparently within normal limits. There was purulent material in the right auditory canal. The drum was entirely absent and pus exuded from the orifice. The left drum was intact. The mouth was edentulous. The lips were dry and slightly cyanotic. Percussion of the lungs showed some impairment at the right base over which auscultation revealed decreased breath and voice sounds. A few fine moist rales were heard both above this area and at the left base. The heart was slightly enlarged both to the right and to the left on percussion, and there seemed to be some enlargement of the mediastinum in the region of the 2nd and 3rd interspaces to the left. The rhythm was regular, but the sounds were of poor quality with a soft systolic murmur at the apex in association with the first sound. The abdomen was flat. On palpation there was marked tenderness to very slight pressure in the mid-epigastrium. However, the skin was not hyperesthetic to pin prick. The pain persisted on release of the hand. The liver was palpable 2 finger breadths below the right costal margin and was very tender. The surface felt rough. The spleen was not palpable nor were there other masses. There was slight tenderness over the upper and lower lumbar regions of the spine. Slight pitting edema of the ankles was present. The prostate was not remarkable. The tendon reflexes were somewhat hyperactive but equal and considered physiological. Vibratory sense was intact. No sensory changes were elicited.

*Laboratory Findings:* Blood count—red cells 6,750,000, hemoglobin 16.3 grams, white cells 33,600, differential: eosinophils 1%, "stab" forms 6%, segmented forms 72%, lymphocytes, 18%, monocytes 3%. *Urinalysis*—albumin 3+, sugar negative, numerous hyaline and granular casts, a few

white and red blood cells. *Kahn* reaction positive. *Wassermann*—cholesterinized antigen positive, non-cholesterinized antigen negative. *Hematocrit* 51%. *Blood chemistry*—non-protein nitrogen 31 mgm%, total proteins 5.1 grams%, albumin 3.3, globulin 1.8.  $\text{CO}_2$  combining power 47.8 vol%; sodium chloride 592 mgm%; amylase 29 units; spinal fluid (dynamics not measured) cells 0, Pandy 4+, proteins 44 mgm%. *Wassermann* negative with both antigens; colloidal gold curve 1222210000. *Circulation time* 25 seconds. *Venous pressure* 110 mm  $\text{H}_2\text{O}$ . *Gastric analysis*—no free HCl after histamine (on 2 occasions). *Electrocardiogram*—low voltage in leads I and III (slight slurring and notching; T waves low upright in lead I—interpretation: myocardial damage. *Roentgenogram* of the chest showed only aortic lengthening. Open film of the abdomen negative.

*Course in Hospital:* A gastro-intestinal roentgenographic series was begun but not completed because of fecal impaction. The patient was given 2000 cc of 5% glucose in saline subcutaneously. The following day he was given amigen intravenously but this was discontinued when he developed a chill, after 200 cc had been received. The temperature rose to 39.7°. The patient then vomited 150 cc of greenish fluid. He was given one liter of 10% glucose in saline, following which the venous pressure was 140 mm  $\text{H}_2\text{O}$ . On the day after admission there were a trace of albumin and numerous hyaline and granular casts in the urine. The following 2 days he received 1 liter of 10% glucose intravenously and 2 liters of 5% glucose in saline subcutaneously. On March 31 the patient became markedly edematous; the venous pressure was but 110 mm of water. He was given 1 liter of 10% glucose intravenously. The following day (April 1) edema continued and he developed a right-sided pleural effusion. He became irrational and uncooperative and required side restraints on the bed. He was placed on a salt-free diet and digitalization was begun. On that day red blood cells were 6,890,000, the white blood cells 34,800 and the hematocrit 59.5%. On April 2 the patient was comatose and aroused only when subjected to painful stimuli. There was edema of the legs, of the presacral region, of the abdominal wall, and of the arms. There was no papilledema. The heart rate was 94, respirations 30, and blood pressure 100/65. Occasional extrasystoles were present as well as the systolic murmur heard on admission. The peripheral pulse was weak and circulation time was 28 seconds. The lungs were clear. The urinary output became diminished. The non-protein nitrogen rose to 45 mg%. Until that day he had received about 60 grams of sodium chloride parenterally (during 4 days). In spite of medication, including 50 cc of magnesium sulphate in an effort to loosen his bowels, 48 grams of aminophylline intramuscularly, 500 cc of plasma, and 1 cc of mercupurin, he continued to fail. Catheteriza-



tion produced 300 cc of dark urine. Coma became complete and the patient died.

### Clinical Discussion

DR. HARRY ALEXANDER: This very complicated case presents many clinical problems in the diagnosis. We must first consider the patient's principal symptoms which were abdominal pain, vomiting, diarrhea, pain in the chest, swelling of the ankles, and loss of weight. He had no free hydrochloric acid. Dr. Scheff, would you comment concerning the duodenal cap?

DR. HAROLD SCHEFF: The patient had severe pain in the upper abdomen with tremendous loss of weight. With these symptoms one must consider a lesion of the upper gastro-intestinal tract. I might be suspicious of carcinoma of the stomach. However, the roentgenograms do not show a great deal. We cannot see the duodenal cap in these films. There could be a small lesion around the pylorus not visible in these films.

DR. ALEXANDER: Do you believe then, that a duodenal ulcer is unlikely?

DR. SCHEFF: Yes, I do. The pain of a duodenal ulcer is usually not as severe as described in this protocol. However, if the ulcer penetrates posteriorly into the pancreas, it may give rise to excruciating pain. There is not enough reason to suspect a lesion of the duodenum in this patient. We must also consider the fact that this patient had achlorhydria and with this important piece of information we should be able to rule out a duodenal ulcer.

DR. ALEXANDER: Do you believe we will see lesions of the gastro-intestinal tract?

DR. SCHEFF: I am not sure. This man had tertiary syphilis, and I think we should consider gastric crisis.

DR. ALEXANDER: The patient had in addition a palpable liver that was roughened. You mentioned that this may be a gastric crisis. Dr. Smith, this patient had a penile lesion at the age of 23 that was not treated, and a positive Kahn and Wassermann. His spinal fluid contained no casts, proteins were 44 mgm% colloidal gold curve 1222210000. Do you believe that most of his symptoms may be explained on the basis of syphilis?

DR. JOHN SMITH: The occurrence of fixed pupils and bouts of severe abdominal pain radiating to the lower part of the chest would suggest tabes dorsalis. He had a positive Kahn and from this we would assume that he had syphilis. The spinal fluid is usually positive in active tabes dorsalis. The Wassermann in the spinal fluid is positive in 90 or 95 per cent of cases. The colloidal gold curve is generally altered. The lymphocytic count is usually elevated. The protein is elevated in approximately

90 per cent of the cases. In some cases these findings may largely disappear; the Wassermann may become negative and the colloidal gold curve may reach lower ranges. With this history and with these changes one certainly thinks of central nervous system syphilis. Everything seems to have become negative in the spinal fluid in this instance, and the syphilis may be inactive.

DR. ALEXANDER: He had a 4 plus Pandy. I would be suspicious of this finding. Is it true that the symptoms of tabes are actually due to activity of the spirochetes, causing a small granulomatous lesion in the posterior roots?

DR. JOHN SMITH: The symptoms of tabes depend upon the destruction in the spinal cord. The destruction may remain after the spirochetes disappear.

DR. ALEXANDER: The onset of tabetic symptoms is a matter of a few months.

Dr. John Smith: I am very much inclined to doubt that this is a tabetic crisis.

DR. ALEXANDER: Dr. Wilson, do you believe that this man had active tabes?

Dr. Keith Wilson: I think that tabetic crisis should be considered after other diagnoses have been exhausted. In many cases where the diagnosis of tabetic crisis has been made other lesions turn up to explain the abdominal pain. With tabetic pain one usually does not see this type of picture. The spinal fluid changes are usually more pronounced.

DR. ALEXANDER: Is the spinal fluid negative after tabetic symptoms?

DR. WILSON: The spinal fluid usually shows some change; at least the cell count will be elevated and the proteins increased. The Wassermann may not be positive unless one uses as much as one cc of fluid for the test.

DR. ALEXANDER: This is not thought to be active tabes dorsalis then? Any suggestions as to what may have caused all these pains?

DR. WILSON: A lesion of the upper gastro-intestinal tract would be ruled out. The red count is high. A polycythemia may give rise to gastro-intestinal symptoms on a vascular basis.

DR. ALEXANDER: Dr. Sale, do you believe that this will turn out to be a dissecting aneurysm?

DR. LLEWELLYN SALE: No. In the first place the patient did not have hypertension. The dissecting aneurysm is rarely found in people who do not have hypertension. This picture did show lengthening of the aorta but it is not the picture of dissecting aneurysm, that is, with rupture in the wall of the aorta.

DR. ALEXANDER: May one have dissecting aneurysm originating in the abdominal aorta?

DR. SALE: They do not originate in the abdominal aorta.

DR. ALEXANDER: Do you think that there is any suggestion of aortic aneurysm?

DR. SALE: Only that he had pain in the abdomen that radiated to the back. The patient had no signs of an aneurysm of any size.

DR. ALEXANDER: Would you find an abdominal aneurysm with syphilis?

DR. SALE: Syphilis of the aorta below the diaphragm is rare.

DR. ALEXANDER: This man had a very high white and red count. On admission his red blood cell count was 6,750,000, and his white cells 33,600. At that time he was dehydrated. After the administration of saline his red cells rose to 6,890,000 and the hematocrit rose from 51 to 59 per cent. The red cells had risen and the hemoglobin and white cells were essentially the same. Dr. Moore, what is your opinion as to the possibility of polycythemia vera in this case?

DR. CARL MOORE: I do not think it very likely. In the first place the spleen was not palpable; splenomegaly is present in at least two thirds of all patients with polycythemia vera. Furthermore, this man's symptoms were rather severe. It would be most unusual to have symptoms of this degree developing in a patient with polycythemia vera whose count was under seven million.

DR. ALEXANDER: Why do you think he had almost seven million red cells when he was apparently over-hydrated? Polycythemia vera would, of course, account for this.

DR. CARL MOORE: I think that this is a secondary polycythemia but I do not know what the primary condition was. There was no evident circulatory or pulmonary change to interfere with the proper oxygenation of the blood.

DR. ALEXANDER: Can one tell at postmortem whether this is secondary polycythemia or primary polycythemia?

DR. CARL MOORE: Sometimes I suppose it is possible. It might be quite difficult unless the long bones could be examined, but pathologists usually do not have this opportunity.

DR. ALEXANDER: What may one see?

DR. CARL MOORE: One would find hyperplasia of the red marrow in secondary polycythemia but not to the same degree as in polycythemia vera.

DR. ROBERT MOORE: Specific lesions have been described in polycythemia vera. I have my doubts that one could take pathological specimens alone

and make that diagnosis. The clinical history and laboratory findings must be taken into consideration.

DR. ALEXANDER: These lesions are in the bone marrow?

DR. ROBERT MOORE: Yes, they are.

DR. ALEXANDER: Dr. Massie, one of the prominent symptoms was edema which appeared early. Rales were heard in the chest. On percussion the patient had an enlarged heart. He had albuminuria of 3 plus which was reduced after rest. How important do you believe that the cardiac symptoms were in this case?

DR. EDWARD MASSIE: I would conclude that the cardiac aspect of this case is not important. Some of the features do impress one as suggesting cardiac failure, such as the marked edema and the abnormal electrocardiogram. On the other hand there are many factors which point to a fairly adequate cardiovascular system, such as the absence of hypertension, fairly normally sized heart on X-ray, the absence of significant murmurs, and the very few basal rales which were heard on admission. Most important is the fact that the venous pressure remained within normal limits in spite of the massive edema. It is true that the venous pressure reading rose slightly from 110 to 140 milligrams but then even after the administration of much salt and water it fell again to the original level. Certainly cardiac failure of any significant degree could not have been present with these normal readings taken during the time that the edema was progressing. I would conclude that the edema was simply a consequence of the excessive administration and retention of fluid.

DR. ALEXANDER: Then you feel that the edema is of the salt retention type?

DR. MASSIE: Yes.

DR. ALEXANDER: Do you think that this might have led to his eventual death? He developed coma and perhaps cerebral edema.

DR. MASSIE: The loss of fifty pounds of weight in nine weeks is indeed impressive. The most likely cause must be a malignant disease. We do not have any roentgenograms of the colon. Perhaps a carcinoma of the large intestine might be the basis of this patient's trouble. A lesion in the right colon would have given the symptoms of intestinal obstruction suggested by his intermittent abdominal pain. We do not have evidence that blood was present in the stools however, which is somewhat against a gastrointestinal malignancy.

DR. ALEXANDER: This man had no teeth. His diet was limited. Do you think that could have contributed to his loss of weight?

DR. MASSIE: I do not think that starvation would cause a fifty pound loss in nine weeks.

DR. SCHEFF: It is difficult to conceive of a lesion in the large bowel giving rise to the severe pain that this patient had. This patient did not have obstructive symptoms, there was no evidence of loss of blood and if there were a lesion in the right side of the colon one might expect a macrocytic hyperchromic type of anemia. I do not think we should consider a lesion in the large bowel.

DR. ALEXANDER: The blood proteins were high. He might have had avitaminosis.

DR. SMITH: We might also consider mesenteric thrombosis. I recall a case of mesenteric thrombosis in which there were thromboses occurring in small branches of the arterial arcades. It gave this picture.

DR. ALEXANDER: Polycythemia vera could do that. How great was his ascites?

DR. WAYLAND MCFARLANE: Very marked as the disease progressed. However, it was slight at the time of hospital admission.

DR. ALEXANDER: His liver was felt to be roughened and firm. We have mentioned central nervous system syphilis. This man had syphilitic lesions of a tertiary character in the liver and pancreas. I have seen luetic lesions present this picture. The red cell increase could come from that. Low amylase and tender liver is important and the uncontrolled Wassermann in the circulating blood is common.

DR. WILSON: I do not think that we have taken into consideration the kidney findings.

DR. ALEXANDER: The patient had three plus albumin and casts. The non-protein nitrogen rose to 45 mgm%. Do you feel that he had a nephritis?

DR. WILSON: He probably had. Polycythemia associated with nephritis would be secondary.

DR. ALEXANDER: Possibly a primary nephritis.

DR. WILSON: This patient had structural lesions in the kidney.

DR. MASSIE: How would you explain this man's terminal coma? He was not uremic nor would it be likely that cerebral edema per se would keep him comatose for 18 hours.

DR. ALEXANDER: This patient had transient diplopia. He saw double before he had the abdominal pain. He also had a running ear. When he came in it was stated that he was not confused but forgetful and was not alert which would show some mental retardation. He developed coma. If

you are suggesting that this man had a cerebral lesion there is reason for it. In tabes one gets lues. Lues will account for 50% of rather sudden cases of diplopia.

STUDENT: Was a stool examination performed?

DR. MCFARLANE: Yes, and no blood was found.

STUDENT: Is lead poisoning worth considering? He had intestinal pain and cerebral symptoms. He eventually went into coma.

DR. ALEXANDER: Yes, that is a good point. Any other suggestions?

DR. SCHEFF: I would still like to consider a carcinoma of the body or tail of the pancreas or any retroperitoneal structure that might cause pressure on the nerves.

DR. CARL MOORE: Dr. Alexander, what is your diagnosis?

DR. ALEXANDER: We have had many suggestions, and as yet we do not all agree on one diagnosis. Carcinoma, lues, polycythemia have all been discussed, with the thought that this probably is an aneurysm, as well as carcinoma of the pancreas and cerebral syphilis. One could defend carcinoma of the gastrointestinal canal. I was impressed somewhat with the idea of polycythemia. It is very difficult for me to explain secondary polycythemia. The patient's pains may be due to a lesion of the liver, but a definite diagnosis is lacking.

#### **Clinical Diagnosis**

Tabes dorsalis; ? gastric crisis  
 Syphilitic aortitis  
 Arteriosclerotic heart disease  
 Cardiac insufficiency

#### **Anatomic Diagnosis**

##### PRIMARY

Leiomyosarcoma involving the inferior surface of the liver, the portal vein, and the right adrenal gland  
 Thrombosis of the portal vein with partial occlusion of the lumen  
 Multiple thrombi in the portal regions of the liver  
 Chronic passive congestion of the liver  
 Mucinous adenocarcinoma arising from the glands of the hepatic ducts and confined to the parenchyma of the liver

#### **Pathologic Discussion**

DR. ROBERT MOORE: The exact point of origin of this tumor cannot be determined with certainty. The malignant potentialities are shown in the invasion of the portal vein.

The carcinoma of the liver is an incidental finding and apparently did not cause any of the signs or symptoms.

## Publications by the Staff of the School of Medicine

March - May, 1944

- Alexander, H. L., Cori, C. F., Krebs, E., et al. Carbuncle of the neck; fatty degeneration of liver, moderate; arteriosclerosis of aorta, moderate, of pulmonary and coronary arteries, slight; focal fibrosis of pancreas, advanced, with metaplasia of pancreatic ducts; hyalinization of islets of pancreas; glycogen vacuoles in epithelium of renal tubules and in nuclei of liver; fatty degeneration of renal tubules; intercapillary glomerulosclerosis, slight. (Barnes case 43) *J. Missouri M. A.*, 41: 75-78, April, 1944.
- Alexander, H. L., Goldman, A., Massie, E., et al. Emphysema of lungs (clinical history of bronchial asthma for twenty years and of death in acute asthmatic attack); obstruction of small bronchial branches by thick mucus; hemoperitoneum (1,000cc.) (Barnes case 45) *J. Missouri M. A.*, 41: 97-100, May, 1944.
- Alexander, H. L., Harford, C. G., Bulger, H.A., et al. Partially healed suppurating wound of left hip and absence of left lower extremity; healed wounds of neck, left forearm, right flank, right thigh; amyloid infiltration of adrenal glands; amyloid infiltration of kidneys, advanced, with fibrosis (clinical history of uremia, ten days); blood in renal tubules; fatty degeneration of epithelium of renal tubules; organizing fibrinous pericarditis; bronchopneumonia of the lower lobes of the lungs; chronic pyelonephritis. (Barnes case 44) *J. Missouri M. A.*, 41: 78-82, April, 1944.
- Alexander, H. L., Harford, C. G., Massie, E., et al. Chronic cholecystitis; cholelithiasis; cholangitis with periportal fibrosis of liver, slight; acute hemorrhagic necrosis of the pancreas, with abscess formation in the lesser omental sac and the left retroperitoneal region (sequestration of the pancreas); fat necrosis of the greater omentum, the mesentery, the gastrosplenic ligament and the appendices epiploicae of the descending colon; thrombosis of the portal vein, splenic vein and the left coronary vein of the stomach; small biliary calculus in the ampulla of Vater obstructing the common bile duct and pancreatic duct, perforation of the gallbladder; bile-tinged serous peritonitis, right side (1,000cc. estimated). (Barnes case 42) *J. Missouri M. A.*, 41: 57-61, March, 1944.
- Alexander, H. L., Massie, E., Bulger, H.A., et al. Tuberculous pyelonephritis, left; tuberculous ureteritis; partial constriction of right renal artery by tuberculous lymph node; arteriolar nephrosclerosis with necrosis of arterioles; hypertrophy and dilation of the heart; chronic passive congestion of liver, lungs and spleen; acute serofibrinous pleurisy; acute fibrinous pericarditis. (Barnes case 41) *J. Missouri M. A.*, 41: 54-57, March, 1944.
- Allen, W. M. The biological activity of various estrogens. *South. M. J.*, 37: 270-280, May, 1944.
- Allen, W. M., Cohen, L., MacBryde, C. M., Sexton, D. L. & Werner, A. A. Round table discussion on endocrine therapy. *Weekly Bull. St. Louis M. Soc.*, 38: 228-240, March, 1944.
- Beamer, P. R., Smith, E. B. & Barnett, H. L. Histoplasmosis. Report of a case in an infant and experimental observations. *J. Pediat.*, 24: 270-280, March, 1944.
- Bieseke, J. J. & Cowdry, E. V. Chromosomal changes in epidermal carcinogenesis. *J. Nat. Cancer Inst.*, 4: 373-384, Feb. 1944.
- Bishop, G. H. The structural identity of the pain spot in human skin. *J. Neurophysiol.*, 7: 185-198, May, 1944.
- Blades, B.B. & Dugan, D. J. Pseudobronchiectasis. *J. Thoracic Surg.*, 13: 40-48, Feb., 1944.

- Blattner, R. J., Heys, F. M. & Harrison, M. L. K. A filterable virus isolated from a case of Kaposi's varicelliform eruption. *Science*, 99: 432-434, May 26, 1944.
- Blattner, R. J. & Heys, F. M., with the technical assistance of Margaret B. McDonald. Blood-sucking vectors of encephalitis: experimental transmission of St. Louis encephalitis (Hubbard strain) to white Swiss mice by the American dog tick, *Dermacentor variabilis* Say. *J. Exper. Med.*, 79: 439-454, April, 1944.
- Bradley, F. R. Education of the house staff now and after the war. *South. M. J.*, 37: 240-243, April, 1944.
- Brown, J. B., & McDowell, F. Treatment of metastatic carcinoma of the neck. *Ann. Surg.*, 119: 543-555, April, 1944.
- Brown R. L. Effect of seminal constituents on spermatozoa. *J. Urol.* 51: 443-445, April, 1944.
- Brown, R. L. On the care of human sperm. *J. Lab. & Clin. Med.*, 29: 211-213, Feb., 1944.
- Carruthers, C. & Suntzeff, V. The role of calcium in carcinogenesis. *Science*, 99: 245-247, March 24, 1944.
- Cooke, J. V. Rocky Mountain spotted fever in children. *Yale J. Biol. & Med.*, 16: 495-507, May, 1944.
- Cowdry, E. V. & Thompson, H. C., Jr. Localization of maximum cell division in epidermis. *Anat. Rec.*, 88: 403-409, April, 1944.
- Crossen, R. J. & Loeb, L. Effect of long-continued administration of an estrogen on the sex organs of mice which have passed the reproductive period. *Arch. Path.*, 37: 202-212, March, 1944.
- Dingle, J. H., Abernethy, T. J., Badger, G. F., Buddingh, G. J., Feller, A. E., Langmuir, A. D., Ruegsegger, J. M. & Wood, W. B., Jr. Primary atypical pneumonia, etiology unknown. *Am. J. Hyg.*, 39: 67-128, Jan., 1944.
- Dingle, J. H., Abernethy, T. J., Badger, G. F., Buddingh, G. J., Feller, A. E., Langmuir, A. D., Ruegsegger, J. M. & Wood, W. B., Jr. Primary atypical pneumonia, etiology unknown (Pt. I) *Am. J. Hyg.*, 39: 61-128, Jan., 1944.
- Dingle, J. H., Abernethy, T. J., Badger, G. F., Buddingh, G. J., Feller, A. E., Langmuir, A. D., Ruegsegger, J. M. & Wood, W. B., Jr. Primary atypical pneumonia, etiology unknown. (Pt. III). *Am. J. Hyg.* 39: 269-336, May, 1944.
- Elman, R. Penicillin as a chemotherapeutic agent in the treatment of surgical infection. *Weekly Bull. St. Louis M. Soc.*, 38: 217-218, Feb. 25, 1944.
- Elman, R. & Lischer, C. The local skin lesion in experimental burns and its relation to systemic manifestations. *Surg. Gynec. & Obstet.*, 78: 346-349, April, 1944.
- Ewerhardt, F. H. Physical exercise. Glasser, Otto, ed., *Medical Physics*, Yearbook Pub. 1944, 1040-1043.
- Gildea, E. F. Nervousness and fatigue. *Clinics*, 2: 1346-1360, April, 1944.
- Gildea, E. F. Physiological research in psychiatry. Sladen, F. J. ed., *Psychiatry and the war*, Thomas, 118-124, 1943.
- Godwin, R. W. Tornwaldt's disease. Characteristic headache syndrome and etiology. *Laryngoscope*, 54: 66-75, Feb., 1944.
- Graham, E. A. Indications for total pneumonectomy. *Dis. of Chest*, 10: 87-94, March-April, 1944.
- Hageman, P. O., Martin, S. P. & Wood, W. B., Jr. Penicillin: Clinical study of its therapeutic effectiveness. (Abstract of paper given at Central Society for Clinical Research, Nov. 5, 1943) *J.A.M.A.*, 124: 798, March 18, 1944.
- Hansel, F. K. Allergy in otolaryngology and ophthalmology. A review of the recent current literature. *Ann. Allergy*, 2: 165-172, 185, March-April, 1944.
- Harford, C. G. Properties of penicillin as a chemotherapeutic agent and its use in the treatment of infections in internal medicine. *Weekly Bull. St. Louis M. Soc.*, 38: 216-217, Feb. 25, 1944.



- Hartmann, A. F. The use of penicillin in the treatment of acute bacterial infections in childhood. *Weekly Bull. St. Louis M. Soc.*, 38: 219, Feb. 25, 1944.
- Hartmann, A. F., Lawler, H. J. & Meeker, C. S. Studies of amino acid administration. II. Clinical uses of an enzymatic digest of casein. *J. Pediat.*, 24: 371-386, April, 1944.
- Hershey, A. D., Kalmanson, G. M. & Bronfenbrenner, J. J. Coordinate effects of electrolyte and antibody on the infectivity of bacteriophage. *J. Immunol.*, 48: 221-239, April, 1944.
- Johnson, M. C., Alexander, H. L., Robinson, R. & Alexander, J. H. A quantitative method for measurement of precipitin reactions. *J. Allergy*, 15: 83-88, March, 1944.
- Jostes, F. A. Manipulation of the spine. Glasser, Otto, ed., *Medical physics*, Yearbook Pub. 1944, 696-700.
- Julianelle, L. A. Trachoma. Bercovitz, Z. T., ed., *Clinical Tropical Medicine*, Hoeber, 474-481, 1943.
- Julianelle, L. A., Bierbaum, O. S., & Moore, C. V. Studies on infectious mononucleosis. *Ann. Int. Med.*, 20: 281-292, Feb., 1944.
- Kalckar, H. M. Adenylpyrophosphatase and myoginase. *J. Biol. Chem.*, 153: 355-367, May, 1944.
- Kent, E. M., Blades, B. B., Valle, A. R. & Graham, E. A. Intrathoracic neurogenic tumors. *J. Thoracic Surg.*, 13: 116-161, April, 1944.
- Key, J. A. Amputation for chronic osteomyelitis. *J. Bone & Joint Surg.*, 26: 350-355, April, 1944.
- Key, J. A. The treatment of infantile paralysis. *J. Missouri M. A.* 41: 70-73, April, 1944.
- Kountz, W. B. & Wright, S. T. Comparison of total vibrations obtained from a normal, rapidly dying, human heart with those obtained in chronic myocardial disease. *Am. Heart J.* 27: 396-408, March, 1944.
- Lanier, V. S., McKnight, H. E. & Trotter, M. Caudal analgesia: an experimental and anatomical study. *Am. J. Obst. & Gynec.*, 47: 633-641, May, 1944.
- Letterman, G. S. & Trotter, M. Variations of the male sacrum. Their significance in caudal analgesia. *Surg., Gynec. & Obst.*, 78: 551-555, May, 1944.
- Loeb, L., Blumenthal, H. T. & Kirtz, M. M. The effectiveness of ovarian and hypophysial grafts in the production of mammary carcinoma in mice. *Science*, 99: 230-232, March 24, 1944.
- MacBryde, C. M. Introduction. Symposium on the analysis and interpretation of symptoms. *Clinics*, 2: 1343-1345, April, 1944.
- MacBryde, C. M. Obesity. *Clinics*, 2: 1620-1638, April, 1944.
- Moore, M. Diseases caused by yeasts and fungi. Bercovitz, Z. T., ed., *Clinical Tropical Medicine*, Hoeber, 643-746, 1943.
- Morris, M. C. Analogy between the effect of complement of sensitized *E. typhosa* and the effect of tissue individuality of sensitized virus. *J. Immunol.*, 48: 17-24, Jan., 1944.
- Olmsted, W. H. The do's and don'ts of diabetes. *Weekly Bull. of St. Louis M. Soc.*, 38: 290-291, March 31, 1944.
- Olmsted, W. H., Harford, C. G. & Hampton, S. F., with the technical assistance of Marjorie Jorgenson. Use of a synthetic diet for food allergy and typhoid. *Arch. Int. Med.*, 73: 341-348, April, 1944.
- Probst, J. G. & Diamond, J. Diaphragmatic hernia in infancy. Report of a successfully operated case. *J. Missouri M. A.*, 41: 95-97, May, 1944.
- Reller, H. C. & Cooper, Z. K. Mitotic incidence in the first 48 hours of methylcholanthrene epidermal carcinogenesis. *Cancer Research*, 4: 236-240, April, 1944.
- Richman, E. E. & Salmon, G. W. Serum diatase in the newborn infant. *J. Pediat.*, 24: 310-311, March, 1944.

- Rose, D. K. Cystometry. Glasser, Otto, ed. Medical Physics. Yearbook Pub. 295-300, 1944.
- Rose, D. K. Hematuria, its diagnosis and treatment. Weekly Bull. St. Louis M. Soc., 38: 308-309, April 7, 1944.
- Seelig, M. G., Verda, D. J., & Kidd, F. H., Jr. The talcum problem in surgery and its solution. Proc. of the Internat. Assembly of the Inter-State Post Graduate Medical Association of North America. 205-208, 1943.
- Senturia, H. R. & Senturia, B. D. Congenital absence of the patellae associated with arthropyplasia of the elbows and dystrophy of the nails. A hereditary syndrome. Am. J. Roentgenol., 51: 352-358, March, 1944.
- Skilling, D. M., Jr. The differential diagnosis of the conditions which produce cough and hemoptysis. Clinics, 2: 1460-1510, April, 1944.
- Smith, J. R. Thoracic pain. Clinics, 2: 1427-1459, April, 1944.
- Smith, J. R. & Wilson, K. S. Studies on the production and maintenance of experimental auricular fibrillation. Am. Heart J., 27: 176-185, Feb., 1944.
- Smolik, E. A. Observations on the intracisternal injection of potassium phosphate in the dog. Surgery, 15: 460-464, March, 1944.
- Sooy, F. A. A homemade camera for kodachrome laryngeal photography. Ann. Otol., Rhinol. & Laryng., 53: 163-167, March, 1944.
- Strauss, A. E. Do's and don'ts in medicine. Cardiac emergencies. Weekly Bull. St. Louis M. Soc., 38: 274-277, March 24, 1944.
- Sulkin, S. E. & Willett, J. C. An evaluation of the blood-dye diluent for the transportation of material from gonococcal infections. Vener. Dis. Inform., 25: 138-143, May, 1944.
- Suntzeff, V. & Carruthers, C. Potassium and calcium in epidermal carcinogenesis induced by methylcholanthrene. J. Biol. Chem., 153: 521-527, May, 1944.
- Taussig, A. E. On the persistence of falsely positive serologic tests for syphilis in nonsyphilitic infections. J. Lab. & Clin. Med., 29: 473-477, May, 1944.
- Trotter, M. & Letterman, G. S. Variations of the female sacrum. Their significance in continuous caudal anesthesia. Surg., Gynec. & Obst., 78: 419-424, April 1944.
- Urban, F., & Goldman, M. L. A method for the determination of thiamine in the urine. J. Biol. Chem. 152: 329-337, Feb., 1944.
- Valle, A. R. Thoracoplasty for tuberculosis. Late results. J. Thoracic Surg., 13: 36-39, Feb., 1944.
- Van Dyke, J. H. Behavior of ultimobranchial tissue in the postnatal thyroid gland; the origin of thyroid cystadenomata in the rat. Anat. Rec., 88: 369-391, April, 1944.
- Walsh, T. E. Treatment of laryngotracheobronchitis. Laryngoscope. 54: 87-92, Feb., 1944.
- Walton, F. E. On the management of burns. Surgery, 15: 547-552, April, 1944.
- Wilhelmi, O. J. Management of recurrent giant ureteral calculi. Urol. & Cutan. Rev., 48: 187-192, April, 1944.
- Womack, N. A. Shock. Weekly Bull. St. Louis M. Soc., 38: 294-297, March 31, 1944.
- Womack, N. A. & Haffner, H. Cholesterolosis: its significance in the badly damaged gallbladder. Am. Surg., 119: 391-410, March, 1944.
- Wood, W. B., Jr., Glassberg, B. Y., Tsuchiya, H., et al. Visceral Leishmaniasis (*Leishmania donovani* present in smears from spleen, liver and bone marrow and cultured from the spleen); rupture of the spleen; hemoperitoneum; splenomegaly, (2,280 grams); hepatomegaly (2,470 grams); acute purulent leptomeningitis. (*Neisseria intracelularis*). (Barnes case 46) J. Missouri M. A. 41: 100-103, May, 1944.

## News from the Medical School and Affiliated Hospitals

The Chancellor announced the following gifts to the School of Medicine between April 1 and June 30, 1944: from The Rockefeller Foundation, a promise of continuing support up to \$125,000 for the Department of Neuropsychiatry for the period July 1, 1944 to June 30, 1947; from The Rockefeller Foundation, \$5,000 to the Department of Pharmacology in continued support of researches in carbohydrates under the direction of Dr. Cori; from The John and Mary R. Markle Foundation, \$4,000 annually for two years in support of Dr. H. L. Alexander's studies in the Department of Medicine on circulating antigen and antibodies in patients with hay fever; from The John and Mary R. Markle Foundation, \$2,000 in support of Dr. William P. Callahan's studies in the Department of Pathology on the incidence of toxoplasmosis; from Dr. Victor Hunkel, \$500 to establish a fund in honor of his son, Philipp L. Hunkel, to be used for continuation of research in hematology in the Department of Internal Medicine; from The Commonwealth Fund, \$20,000 for support of the Department of Public Health during the two-year period beginning July 1, 1944 or thereafter; from Dr. Kiyoshi Inouye, an alumnus of the School, a contribution of \$500 for 1944.

---

New appointments to the staff include: Dr. Luis Leloir as Research Associate in Biological Chemistry; Dr. Marion Jacobsen as Instructor in Psychology in the Department of Neuropsychiatry.

---

Leaves of absence for duty in the armed forces have been granted to the following: Dr. Heinz Haffner, Instructor in Clinical Surgery; Dr. Harold Eisele, Assistant in Surgery; Dr. Mordant Peck, Assistant in Surgery.

---

Dr. Arthur Sonnenberg, Research Assistant in Medicine, resigned from the staff effective April 1, 1944.

---

The following doctors entered the armed forces July 7, and are at present stationed at Carlisle Barracks, Pennsylvania. Dr. Charles Eckert, Assistant Surgeon. Dr. James H. Growdon, Assistant Resident in Surgery; Dr. Samuel Martin, Assistant Resident in Medicine; Dr. L. Wayland McFarlane, Resident in Medicine (Ward Service); and Dr. Howard McKnight, Assistant Resident in Gynecology.

A Symposium on Degenerative Disease was held at the St. Louis City Infirmary and Washington University School of Medicine on March 24th and 25th, 1944. Dr. W. C. Hueper, Assistant Director, Warner Institute for Therapeutic Research, New York City, presented a paper on the relationship between the etiology and morphology in degenerative and sclerosing arterial diseases. Dr. Irvine H. Page, Director of Clinical Research, Eli Lilly and Company, Indianapolis, Ind., discussed the relationship between experimental and clinical arteriosclerosis. Dr. Lester R. Dragstedt, Professor of Surgery, University of Chicago, discussed the role of the pancreas in arteriosclerosis. Dr. Albert Kuntz, Professor of Anatomy, St. Louis University School of Medicine, discussed the effect of aging on the sympathetic ganglia and such influences on the vascular system. Dr. Edward J. Stieglitz, formerly with the Public Health Service, Washington, D. C. discussed the difficulties of clinical recognition of degenerative disease. A paper by Dr. William J. Kerr, Professor of Medicine, University of California, indicated that changes in the posture of the human body as it grows older produces a detrimental effect. A paper by Dr. John A. Saxton, Assistant Professor of Pathology, Washington University School of Medicine, called attention to the influence of nutrition and growth on longevity in rats. The work was done in association with Dr. C. M. McCay. Dr. Leo Loeb, Professor Emeritus of Pathology, Washington University School of Medicine, discussed the relationship of some hormone actions and the aging processes of the body. Dr. Alfred S. Schwartz and Dr. J. V. Cooke, from the Department of Pediatrics, Washington University, demonstrated a patient with progeria, and discussed two others. Mrs. Lilli Hofstatter demonstrated the relation of glucose tolerance to the utilization of food in patients with degenerative disease. Dr. Arthur Sonnenberg demonstrated the relationship of blood cholesterol to the state of dehydration in the aged. Speakers at a dinner meeting, held at the Missouri Athletic Club, Friday, March 24th, consisted of Chancellor Throop of the University; Dr. Frank Freemont-Smith, Medical Director, Josiah Macy Jr. Foundation, New York; and Dr. William deB. MacNider, Kenan Research Professor of Pharmacology, University of North Carolina, who spoke on "Age. Change and Adjustment." Members of the Research Unit consist of Lilli Hofstatter, Dr. William B. Kountz, Dr. Arthur Sonnenberg, and Dr. Homer A. Sweetman. The Committee of the Faculty on Degenerative Diseases consists of Dr. Willard M. Allen, Dr. E. V. Cowdry, Dr. Wm. B. Kountz, Dr. Robert A. Moore, and Dr. W. Barry Wood, Jr.

---

Instruction in embryology regularly is given in two departments: Anatomy and Obstetrics and Gynecology—an arrangement which must be con-

tinued for it is essential to both. However, Dr. John H. Van Dyke of the Department of Anatomy has formulated a plan, now being placed in operation, whereby materials for instruction are made more readily available to both departments and Dr. Willard Allen, Professor of Obstetrics and Gynecology gives five lectures to first year medical students at intervals when they will be of the greatest service.

---

Dr. E. V. Cowdry returned on March 14 from a visit to the Pacific Coast made in order to give the Portland Academy of Medicine lectures on precancerous lesions and the problem of ageing. He also spoke before the Biological Seminar at Stanford University, the Tumor Clinic and the Department of Medicine Journal Club at the University of California School of Medicine, the Society of Sigma Xi at the University of California in Los Angeles and the Los Angeles Academy of Medicine.

---

It is with regret that the Quarterly announces the death of Dr. Albert Taussig. A resolution has been inscribed on the minutes of the Executive Faculty.

Albert Ernst Taussig was born May 6, 1871, in St. Louis and died on January 16, 1944, at the age of 73. He graduated from Harvard University in 1891 and from Washington University Medical School in 1894. Following an internship at the St. Louis City Hospital, he spent the following year at the University of Berlin, where he returned in 1912 for further post-graduate studies. He served as Associate Professor of Clinical Medicine at Washington University from 1913 to 1931, then as Professor and finally as Professor Emeritus. He held membership in various medical societies, including the Association of American Physicians; was on the staff of Barnes Hospital and for many years he was Chief of Staff of the Jewish Hospital. His interest in internal medicine was broad, to which his numerous publications testify.

A formal presentation of Albert Taussig's biography fails to reveal his intensely inquisitive mind which led to a remarkable erudition. In his earlier years he acquired a knowledge of music and became a skilled pianist. He was a student of the classics which he enjoyed reading in their original languages. Various phases of science attracted him, especially astronomy to which his knowledge of physics gave him insight. He was a nature lover, and delighted in the out-of-doors.

Dr. Taussig was a liberal in a broad social and political sense, as well as in his process of thinking. This reflected itself in his respect for the opinions of others. He was kindly, generous, and modest to a fault. He was a distinguished man.

The faculty of Washington University hereby records its sense of profound loss with the passing of Albert Taussig from its ranks.

---

Drs. Cyril M. MacBryde, Robert Reiss, and Harold K. Roberts of the Department of Medicine presented a scientific exhibit in the Section on Experimental Medicine, at the A.M.A. held recently in Chicago, Illinois. The subject of the exhibit was "Modified Protamine Zinc Insulin." Illustrations were shown to illustrate the comparative action of various types of modified insulin, including standard protamine insulin, histone insulin, globin insulin, clear protamine zinc insulin; and a special modified protamine zinc insulin with which the results are superior to those obtained with any of the other modifications. Reports were given of cast studies on individual diabetic patients and summaries on results of groups of patients.

---

Dr. Duff Allen spoke at Tulsa, Oklahoma at the State Medical Convention on April 24, 1944. The subject of his discussion was "Hypothyroidism in the Aged."

---

Drs. Gordon F. Moore, D. K. Rose, and Carl A. Wattenberg presented a lantern demonstration at the Symposium on the Treatment of Cancer of the Prostate Gland, as part of the A.M.A. Conference in Chicago, Illinois. The title of their discussion was "Breast Changes Due to *Diethylstilbestrol* During Treatment of Cancer of the Prostate Gland."

---

At a Panel Discussion on Penicillin in the Treatment of Syphilis held at the A.M.A. Dr. W. Barry Wood Jr., participated in the discussion of the subject "The Preliminary Results of Penicillin Therapy in Early Syphilis in Human Beings with Varying Schemes of Treatment."

---

At the A.M.A. Convention held in Chicago, Drs. Howard E. McKnight, Virginia Singleton Lanier, Gordon S. Letterman, and Mildred Trotter, of the Department of Anatomy presented an exhibit from Monday, June 12 through Friday, June 16. Their booth was in the Scientific Exhibit on Anesthesiology. The subject of the exhibit was "Continuous Caudal Analgesia; Pertinent Anatomic Features." A large series of sacra demonstrating both normal and variant features, as well as charts illustrating levels reached by injections into the epidural space through the sacral hiatus were presented. Specimens were prepared to show the relationship between the dural sac and the apex of the sacral hiatus. This research was aided by a grant from the United States Public Health Service. The exhibit was awarded honorable mention.

Dr. Ernest Sachs spoke to the medical officers at Jefferson Barracks on March 1st on "Gunshot Wounds of the Head."

---

Dr. Marion Jacobson has been appointed Assistant Psychologist in Neuropsychiatry to Barnes and McMillan Hospitals.

---

Dr. Jerry Bond was appointed Resident in Dentistry to Barnes Hospital effective May 1, 1944, through September 30, 1944, to replace Dr. Kubitschek who entered the Navy.

---

Dr. Alfred M. Large, Assistant Surgeon entered the armed forces in May, 1944.

---

New appointments to the Washington University School of Nursing include: Gladys Gunness, Instructor in Nursing and Ruth H. Fischer, Assistant in Nursing.

---

At the Missouri State Medical Association's 87th Annual Session, held in Kansas City, Missouri, Dr. Peter Heinbecker spoke on the "Etiology of Hypertension," Dr. Dew Luten spoke on "The Heart in Hypertension," and Dr. Edward Massie spoke on "The Management of the Hypertensive Patient."

---

Dr. Edward Massie spoke to the American Federation for Clinical Research, June 12, on "The Effect of Digitalis Administration on the Coagulability of Human Blood. The meeting was held in Chicago, Illinois.

---

Captain E. Bryan Quarles formerly Assistant Superintendent of the Barnes Hospital recently visited St. Louis while enroute from Miami Beach, Florida, to Denver, Colorado. His present address is: Headquarters AAF WTTC, 1108 15th Street, Denver, Colorado.

---

Dr. Carl V. Moore has been appointed editor of the Journal of Laboratory and Clinical Medicine.

## News of Alumni



*1913 Class Reunion held at the home of Dr. Otto Schwarz, 4397 Westminster Pl., St. Louis, Mo., on October 9, 1943. Minutes of the meeting included in Alumni News. Those present, from left to right, are: W. L. Hanson, G. D. Kettlekamp, G. Hourn, F. O. Kettlekamp, R. J. Joseph, W. Wagenbach, S. McKelvey, R. Payne, F. Perrings, H. Goodrich, Joseph W. Larimore, O. Sevin, O. Schwarz, L. R. Sante, L. D. Darner.*

1891

Dr. John T. Soraghan's new address is: 7105 Lindell Blvd., St. Louis 5, Mo.

1894

Dr. T. A. Hopkins, 4411 Forest Park, St. Louis, Mo., recently visited the Alumni Office. He stated that his classmates from the old Missouri Medical College celebrated their fiftieth anniversary, but due to transportation facilities, only two of the men, namely, himself and Dr. Louis Behrens, met for a reunion. They had an enjoyable evening reminiscing about lectures,

clinics, faculty, and classmates. The living members of this class include: C. W. Beasley, Lyndon, Kansas; L. H. Behrens, St. Louis; J. D. Brazeel, Okmulgee, Okla.; J. D. Dameron, Stockton, Calif.; R. G. Epperly, Huntsville, Mo.; T. A. Hopkins, St. Louis; B. B. Kirby, Dadeville, Mo.; Wm. J. Kress, Spokane, Wash.; R. H. Main, Barry, Ill.; H. E. Ruff, Little Rock, Ark.; James U. Scott, Harrisonville, Mo.; Guthrie E. Scrutchfield, Akron, Ohio; J. S. Stults, Altus, Okla.; J. B. Vaughn, Castelwood, S. D.; H. C. Werner, Meta, Mo.; E. J. Wolff, Waukomis, Okla.



1897

Dr. O. E. Lademan has a new address: Room 712, 735 North Water, Milwaukee 2, Wisconsin.

1896

Meyer Wiener, nationally known eye surgeon of St. Louis, has been asked by the Surgeon General of the Navy to submit recommendations for a program to rehabilitate war-blind service men.

1903

Dr. Albert H. Myerdick's new address is: 4167 Olive Street, St. Louis 8, Missouri.

1907

Dr. H. P. Poston's new address is: 33 South Main Street, Bonne Terre, Missouri.

Dr. William M. O'Reilly has a new address: 536 Clarence Avenue, Oak Park, Illinois.

Dr. Michael Shadid, of Elk City, Oklahoma, through many years of work, has established a Cooperative Community Hospital. It is financed by a pre-paid group medicine plan. The hospital is manned by six physicians trained in modern medicine and surgery. Member families pay approximately \$54.00 per year, which sum entitles them to all physical examinations and medical care. For a more detailed account of Dr. Shadid's work, and growth of his community hospital, read "Cooperative Health Harvest" in the September, 1943, issue of the "Reader's Digest."

Recently Dr. Shadid participated in an open forum broadcast over a St. Louis station. The subject under discussion was "How Can We Provide Medical Care for Everyone?"

1908

Dr. Grover C. Black's new address is: I.B.A. Hill, Topeka, Kansas.

1909

Lieutenant Colonel Charles R. Cast-

len is commanding officer of a station hospital in New Guinea which was built by doctors, dentists, nurses and others attached to the unit.

1910

Dr. C. E. Morrison has a new address: Bay City, Oregon.

1911

Dr. William D. Petit's new address: P.O. Box 885, Presidio, Texas.

Dr. W. H. Fickel's new address is: 773 Josephine Street, Denver 6, Colorado.

1913

*Dr. William Ludwig Hanson, 417 Missouri, East St. Louis, Ill., Class Secretary.*

The annual meeting of the class of 1913 took place in the home of Dr. Otto Schwarz, 4397 Westminster Place, St. Louis, Missouri, on October 9, 1943. The class assembled about 7:00 P. M. and were ushered into Otto's rathskeller where his hospitality was dispensed to the fullest extent. At 8:00 P. M. the group enjoyed a buffet dinner (steak and all the trimmings). During the dinner the class was privileged to meet Otto's third son, Ensign Otto E. Schwarz, a boy who will undoubtedly be a credit to his father and the Navy.

After the dinner the alumni adjourned to the rathskeller and president Wm. Wagenbach called the meeting to order. The first order of business was to stand and observe an interval of silence in respect and memory of their departed classmates who now numbered four (Bell, Thompson, Johnson, Gibbs). Later letters were read which had been sent by classmates who were unable to attend the reunion, viz: Killian, Horst, Koppenbrink, Biggs, Rodenheiser, Kopelowitz and Slocumb.

Sante suggested that the last page of the "Messenger", class bulletin, carry the last known addresses of the

members. Darner requested to be relieved of the responsibility of looking after the class films. This was done and McKelvey was appointed custodian for the ensuing five years. A photograph of the class was made. Joseph invited the class to meet with him in his home next year.

The next order of business was the election of officers and Goodrich was elected president, Joseph, vice-president, Hanson, secretary and treasurer. Members present were: Darner, Sante, Sevin, Larimore, Schwarz, Goodrich, Perrings, Payne, McKelvey, F. O. Kettlekamp, Geo. Hourn, Geo. Kettlekamp, Hanson, Joseph, and Wagenbach.

This highly successful meeting adjourned at midnight. Everyone being "most grateful to the host and hostess for a most pleasant evening."

1917

Captain C. J. Brown has a new address: Navy No. 814, c/o Fleet Postmaster, New York, N. Y.

1919

Lieutenant Colonel Edward H. Hashinger arrived in Cleveland, Ohio, in February to assume duty as Chief of Medical Service of the new U. S. Army General Hospital soon to be opened in Parma Heights, Cleveland, Ohio. He has served 18 months overseas in North Africa and Sicily.

1920

*Hiram S. Liggett*, Beaumont Bldg., St. Louis, Mo., Class Secretary.

Lieutenant Commander Frederick A. Jostes recently spent a week's leave visiting his family and friends in St. Louis. For outstanding service he has received a commendation from the Chief of Naval Operations. He assisted in the design and arrangement of the hospital facilities during the conversion of a ship, formerly a luxury liner, into a transport with accommodations for 3000 patients without prejudice to

the troop carrying capacity. The order praised him "for inculcating and maintaining such a humanitarian spirit as to render a great aid to morale and healing." The ship was equipped with a loud-speaker system that carried music, and on Sundays religious services to every part of the ship. There were three fine libraries and all sorts of recreational facilities. The stretcher cases were taken to the sun deck for daily outings, and whenever a man was able, he was encouraged to be up and about. The desire on the part of the men to be able to walk down the gang-plank upon arrival in the United States was a vital aid to medical treatment, Captain Jostes stated. Once in San Francisco, when civilians criticized officers for allowing seriously handicapped boys to hobble down from the deck, Captain Jostes stopped one of the soldiers and asked him how he was supposed to leave the ship.

"On a stretcher, sir," he answered.

"Then why are you walking?"

"The lieutenant gave me permission," the boy replied, smiling as he struggled to keep his balance.

Lieutenant Commander Jostes, now in Washington, recently wrote: "My new duty is quite different from that of the past. It will take some time for readjustment. I am now in the Bureau of Medicine and Surgery in Washington, D.C., embarked on the plans for rehabilitation of our men returning from the various war centers. This job should be interesting, but its enormity is overpowering."

1922

*Richard Paddock*, 4500 Olive St., St. Louis, Mo., Class Secretary.

Captain John F. Krumm's new address is: A.P.O. 548, c/o P.M., New York.

A dispatch from the Mediterranean theater told of the work in North Af-

rica of the Seventieth General Hospital, executive officer of which is Lt. Colonel Curtis H. Lohr. This hospital has the special task of directing the convalescent training of all the patients in the general and station hospitals that make up the hospital center, centralized to provide the soldier with the most expert medical care. This is the final phase before the soldier returns to duty.

## 1923

Major Dudley R. Smith is Chief of the Officers' and Women's Section at Winter General Hospital, Topeka, Kansas. Called to active duty May 6, 1943, Major Smith was sent to Carlisle Barracks, Pennsylvania, for six weeks of field service and on June 22, 1943, received his orders to report to Winter General Hospital. Mrs. Smith and their three sons, sixteen, fourteen and eleven, make their home in Topeka with him.

Lt. Commander Ronald W. Stuebner has a new address: Navy 134, F.P.O., San Francisco, California.

Dr. Juel E. Trowbridge writes to Rogers Deakin: "How are you, Deak? We are fine, and I am in the Army. I have a new girl, born February 4—this makes four girls and one boy. Best wishes to you."

Dr. Ben D. Senturia writes: "Greetings from far, far away! Censorship regulations prohibit me at present from indicating my location. In my travels I saw Louis Tureen '27, who was recuperating from an attack of T. Saginata. He had lost a little weight, but he looked happy and contented and is fascinated by his work. I had not seen him for almost two years. Recently I was entertained royally by Curt Lohr, Vic Scherman, Louie Kohler, Don Weir, Hy Goldman, and many of the others in the St. Louis Unit. The unit is doing excellent work and St. Louis should be justly proud of it.

## 1924

*T. K. Brown*, 630 South Kingshighway, St. Louis, Mo., Class Secretary.

Dr. Duncan C. Feemster, Jr., has a new address: 400 Jefferson Street, Tupelo, Miss.

Dr. John A. Wood's present address is: U.S.N. Mob. Hosp. Five, F.P.O., San Francisco, California.

The Class of 1924 recently received recognition in Oklahoma. Dr. Charles Rountree, Professor of Orthopedic Surgery at the University of Oklahoma, was installed as President of the Oklahoma State Medical Association.

Major Herman M. Gunn has a new address: A.P.O. 9302, c/o P.M., New York, N. Y.

## 1925

*Myron Davis*, 3720 Washington, St. Louis, Mo., Class Secretary.

George L. Drennan recently was elevated to Commander and is at present Executive Medical Officer at Naval Aviation Technical Training Command at Norman, Oklahoma.

Dr. Charles G. McCormack's new address is: U. S. Naval Hospital, Bremerton, Washington.

Dr. Wm. G. Hamm's new address is: 39 W. Wesley Road, N.W., Atlanta, Ga.

Lt. Commander George Nesche has a new address: 28 Los Cascadic, Orinda, Calif.

Lt. Colonel F. B. Zener's new address is: A.P.O. 455, c/o P.M., San Francisco, Calif.

Dr. Myron received the following letter from Major Roland Slater, A.P.O. 488, c/o P. M., New York, N. Y.: "I entered the service in August, 1942, after being commissioned a captain July 15, 1942. I spent some months at O'Reilly General Hospital at Springfield, Mo., two months in tropical medicine in Army Medical School at Washington, D. C., and then was assigned to the

22nd Field Hospital. I spent a few months at Camp White, Oregon, and sailed from East Coast May 10, 1942. I had a wonderful trip and spent some months in India and came to China September 15, 1943. I was promoted in December and became commanding officer of a 100 bed hospital in the field for four months. When the army we served moved out, my unit was broken down into a portable surgical unit and young officers and men sent to "rugged" duty and the rest of us were assigned to our other two units. I am now head of medical service in an evacuation hospital and in charge of dispensary, etc. We see all sorts of battle casualties and a wide variety of medical cases.

Tell the gang hello when you see any of them. Paul is a major and in India and we have hopes of getting to see each other. Our life is rugged—we work over half our nights as casualties seem to arrive after dark. Hope you are well and practice goes fine."

H. M. F. Behneman, 700 North Palm Canyon Drive, Palm Springs, California, writes: "After practicing internal medicine in San Francisco from 1927 to 1943, I moved my offices to the above address where I am in the same specialty from October 1 to June 1. During the summer months I return to the management of my ranch in the mountains of Sonoma County near Healdsburg, California. I have a daughter graduating July 2, 1944, from Stanford University, a son in high school, and a young daughter, aged ten. I thoroughly enjoy and avidly read every issue of the Quarterly. I wish more of the boys of my class would write in."

1926

*Alvah G. Heideman*, Metropolitan Bldg., St. Louis, Mo., Class Secretary.

News concerning Max Deutch: "My

Life in the Army—I. Battalion Surgeon with the Infantry in Hawaii, Guadalcanal. II. Regimental Surgeon, still with the infantry, in New Georgia. Biggest thrill: watching the Seabees put the Munda airfield back into shape, with the shooting still going on. III. Executive Officer of a Medical Battalion—and still I'm with the infantry—more or less. I am enjoying the "Quarterly," especially the clinics."

Lt. Commander Charles G. Johnston's address is: U.S.S. Relief, c/o F.P.O., San Francisco, California.

Captain Karl Dietrich is now at Border General Hospital, Chickasha, Oklahoma, and has been designated to carry on the work with penicillin in that Hospital. Recently he spoke before the Academy of Medicine of Oklahoma City.

Commander W. Bartlett, Jr., writes: "After coming on active duty in March, 1942, I had practically two years of shore duty in Southern California, first at the Naval Hospital, San Diego, in surgery, then at the Receiving Station, Terminal Island (in Los Angeles Harbor) where I was sent to start a surgical service for the metropolitan Los Angeles and San Pedro-Long Beach areas pending the commissioning of the Naval Hospital in Long Beach. I had 22 months on that station and a most interesting experience in every way. Not every surgeon has been fortunate enough to have been able to do surgery in reasonable volume throughout that long a period in this, as in the last war. Once I had the good fortune of being able to have Mrs. Bartlett and my little boys with me during that time. Got home for ten days in June of 1943 and spent one night in St. Louis to say farewell to my parents after receipt of my orders to this ship. The Navy flew me most of the way out here and it so happens that this was my first flight. Quite an in-

roduction! I've crossed the Atlantic a dozen times but this Pacific Ocean seems to have room for half-a-dozen Atlantics.

Bobby Bartlett, my brother, made Lieutenant Colonel just before I made Commander. Found myself Chief of Surgery here on arrival, so it looks as though somebody was trying to put us to work! I am certainly most fortunate to have fine shipmates and colleagues. Only wish somebody would change the climate."

Captain Arthur C. Fortney has a new address: 822 Ave. E., Bismarck, North Dakota.

The Annual George Dock Lecture was held in Los Angeles, Thursday, April 6, 1944. Dr. W. F. Norwold, Associate Professor of the History of Medicine and Dean of the Los Angeles Division of the College of Medical Evangelists gave the address entitled: "Medical Education Goes Westward."

Dr. C. K. Higgins has a new address: 2612 Clifton Avenue, St. Louis, Mo.

## 1928

Joel T. Woodburn's new address is: A.P.O. 9359, c/o P.M., New York, N. Y.

Captain Edward H. Schaller has been stationed with the Army in Newfoundland since January, 1943, and is in charge of the neuropsychiatric work in a base hospital there.

W. F. Ossenfort's address is: 7311 Bradley Blvd., Bethesda, Md.

Lt. Colonel Earl L. Mills has a new address: 381 Sunrise Highway, Lynbrook, New York.

## 1929

*L. C. Drews*, Metropolitan Bldg., St. Louis, Mo., Class Secretary.

Dr. Burchard S. Pruett's new address is: P. O. Box 726, Avondale, Arizona. He is employed in industrial medicine at the Goodyear Aircraft Co.

Dr. Lawrence C. Ball's new address

is: 116th Evacuation Hospital, Camp Forrest, Tenn.

Commander Craig B. Johnson was recently awarded the Legion of Merit by Vice Admiral H. K. Hewitt "for meritorious conduct as medical officer on the staff of a major task group commander prior to and during the amphibious assault on the mainland of Italy."

Major Walton C. Finn has a new address: Hdq. 152nd Med. Td. Bn., Ft. Lewis, Washington.

Dr. J. W. Eschenbrenner's address is: Station Hospital, A.A.F., Woodward, Oklahoma.

## 1930

*Clyde E. Kane*, 706 Walton Ave., St. Louis, Mo., Class Secretary.

Dr. James E. Pittman's new address is: 3220 Binz, Houston 4, Texas.

Major Frederick Lee Liebolt, A.A.F. Regional Hospital No. 1, Coral Gables 34, Florida, writes: "I was sent to this 1800 bed hospital in 1943 but I have never gotten around to changing my address. This is a very fine Air Corps Rehabilitation and Convalescent Center for oversea personnel. Being the former Miami-Biltmore Hotel, it is admirably suited for such with its beautiful golf course and two swimming pools. Overseas casualties are flown in almost daily and there is a large amount of interesting work to do."

Dr. Bettie Simon's new address is: 5647 Waterman, St. Louis, Missouri.

Captain Joseph Gitt, A.P.O. 690, c/o P.M., New York, N. Y., writes: "Please do me a favor and give Parker my address and "hello." Hope you men are keeping the ball rolling and that we may help upon our return some future day. Regards to Sachs, Carr, Jones, and the others."

## 1931

*Sam Bassett*, 1200 Big Bend Road, Richmond Heights, Mo., Class Secretary.

Dr. Max Magnes has a new address: 7th Service Command, Winter General Hospital, Topeka, Kansas.

Dr. Henry Kee Tom has a new address: 51st Officers Class, Carlisle Barracks, Pa.

1932

Major Leo Gottlieb has a new address: 225 Front Street, Park Hill, N. Little Rock, Arkansas.

Dr. Benjamin I. Allen has a new address: State Hospital, Fort Jackson, S. C.

Major Donald M. Paton has a new address: A.P.O. 503, San Francisco, Calif.

Dr. Robert W. Lambuth has a new address: 2922 Puesta Del Sol, Santa Barbara, Calif.

Major Edwin K. Chunghoon's address is: Tripler General Hospital, A.P.O. 958, c/o P.M., San Francisco, Calif.

Dr. J. K. Mack has a new address: Hq. A.A.F. A.F.T.A.S. Pentagon Bldg., Washington, D. C.

1933

Captain M. Hurst's address is: 7 Fountain Bleu Drive, New Orleans, La.

Dr. Truman G. Drake writes: "The work is hard and there aren't many diversions, but no one seems to mind. That almost incessant distant rumble and the white flashes in the sky at night to the north are constant reminders that we're playing this game for keeps. I'm proud of my quarters now—they are completely blacked out at night so that when there is an air raid I can keep the light on and go right on working or writing. It is a nuisance to have to stop work anywhere from five minutes to two hours, although when things start popping there is a tendency to want to go outside and see the fireworks. Right now I am hungry for a movie—we haven't had any for over a month—but I hear

rumors that there may be one tomorrow evening. We all wonder what exiles have always wondered, I suppose. Have things changed much at home—changes are hard to feel or realize from mere descriptions."

Dr. John R. Haslem is in England with a General Hospital.

Lt. James W. Bagby's address is: Cub 2, c/o F.P.O., San Francisco, Calif.

Dr. J. D. Maddox new address is: 160 Grammercy Place, Los Angeles, Calif.

1934

*Stanley M. Leydig*, 1652 South Grand, St. Louis, Mo., Class Secretary.

Dr. Roy F. Culbertson's address is: Station Hospital, Oversburg, Tenn.

Dr. Robert N. Williams has a new address: Fleet Training Base, San Clemente Island, Calif.

Dr. Katherine S. Brown's new address is: 758 G.H.Q.T. Bn., Ft. Huachuca, Ariz.

Captain Karl V. McKinstry has served for the past two years with a general hospital in the Southwest Pacific.

Lt. Everett S. Caldemeyer's address is: U.S.N. Mobile Hospital No. 7, San Francisco, Calif.

Dr. Arnold J. Gumper's new address is: Reynolds, N. D.

Dr. Carl Peter Birk is now stationed at Carlisle Barracks, Carlisle, Pa.

1935

Major Burt Bullington, Fort Benjamin Harrison, Indiana, recently visited the Alumni Office. He is Assistant Chief of the Medical Service at Billings General Hospital. He feels fortunate that 85 per cent of his work is in his professional field. He states that Major E. H. Burford '34 is also at this hospital and is chief of the Urological Service. Major Bullington interned at Johns Hopkins Hospital, and was assistant resident and resident in medi-

cine at the University of Michigan in Ann Arbor. Following this training he was instructor in medicine at the same University for three years.

Major Elmer G. Graul, A.P.O. 923, c/o P.M., San Francisco, Calif., writes: "I am happy to say that I find many Australian doctors whom I have met here acutely conscious of the existence of Washington University Medical School and are surprisingly aware of the quality of the work that emanates from there, the calibre of its men of science, faculty, teaching staff and the students they graduate as doctors of medicine. I hope that our school will always enjoy and maintain a prominent place among the leading schools of medical science as it does today, and has in the past. I find that Dr. Evarts Graham, my old chief, is particularly well known and remembered over here since his visit some years ago. We should do more such missionary work, but then perhaps some of us "cubs" are doing just that for there is quite a representative group of alumni whom I have seen and heard of in this part of the world.

As for myself, after quite a varied experience, I was assigned to this overseas Officer Candidate School medical staff some time ago. Quite recently I received my majority and was appointed the Surgeon of the school. Lt. Col. A. S. Miller '34 heads the medical administrative section of the academic department here. I truly admire the tremendous effort that the men left in the controlling positions of our school have had to make to reorganize the entire school both as to curriculum and time schedules in addition to overcoming the loss of staff difficulties."

Lt. A. R. Bortnick's address is: School of Aviation Medicine, Randolph Field, Texas.

Dr. Robert J. Budke was recently

commissioned a Lieutenant in the Navy Medical Corps. He is stationed at Corpus Christi, Texas.

Dr. and Mrs. Edward Massie are proud to announce the arrival of a new son, Barry Michael, born May 23.

Dr. Kenneth M. Amlin writes: "I am now a member of the Alsup Clinic of Honolulu. I would like to see any of my classmates passing this way."

Major Sam W. Downing's address is: A.P.O. 708, c/o P.M., San Francisco, Calif.

Lt. Col. Kenneth V. Larsen's new address is: A.P.O. 91, c/o P.M., New York, N. Y.

Dr. Allan B. Phillips has a new address: Naval Hospital, Corona, Calif.

1936

Lt. Irl Richard Long's address is: A.P.O. 4925, c/o P.M., New York, N. Y.

Dr. George M. Klingerner's new address is: A.P.O. 9641, c/o P. M. San Francisco, California.

Captain James D. Morrison's address is: A.P.O. 502, c/o P.M., San Francisco, Calif.

Lt. W. E. Allen's address is: Rt. 1, Box 573, Los Altos, Calif.

Dr. Henry W. Edmonds is pathologist at the Children's Orthopedic Hospital, the Maynard Hospital, and the New Doctors' Hospital in Seattle, Wash.

Captain Robert C. Kingsland is at Camp Phillips, Kansas.

1937

Major John M. Dougall is with a General Hospital unit in Italy. The hospital is set up in buildings that had housed an Italian civilian hospital.

Dr. John R. Connell has a new address: 952 8th Street, Des Moines 14, Iowa.

Dr. George W. Ittner, Jr., has a new address: 5062 Westminster Place, St. Louis, Missouri.

Captain J. Russell Vaughan, A.P.O. 629, c/o P.M., New York, N. Y., writes:

"After training in the United States in the fall of 1943, our company disembarked 'somewhere in India.' There followed a period of travel through the country by varied and interesting modes of transportation. At last we reached our prescribed destination and for the past month have been active in setting up. We have an adequate dispensary, well equipped for minor surgery, and a ground forces hospital nearby. A great deal of the medical officer's time is concerned with sanitation and tropical disease. Although we reached India during the winter we have slept under mosquito bars every night. We have seen no tropical diseases in our own group but the rainy season has not started and we expect a considerable number of cases of insect-borne diseases. Our quarters are comfortable and except for natural homesickness that affects us all from time to time we are as well off as in the United States."

"Many officers who have served here for a long time seem very optimistic about the duration of the war in this theatre. Everyone admits, however, that there are tremendous difficulties to overcome. The political and economic setup, together with the lack of many kinds of needed facilities are barriers not encountered in the States. In addition, the tremendously long supply route is something no one can adequately visualize unless he has seen it himself. However, the cooperation with the British and Indian governments (including "reverse lendlease") seems to be on a high level and the supplies keep rolling in. Outside of the problem of sanitation the greatest difficulty with the troops themselves is the maintenance of morale. The outlets for energy in off-duty hours are few; the weather is depressing; the comforts minimal; the constant vigilance against disease is wearing. As a

consequence the spirits of the men are often at low ebb. Although I had, of course, heard of the desire of the men for news from home I never really appreciated the need until I had felt and seen it myself. Letters, packages, and magazines are a real necessity. The mail is handled very well and it usually requires only 15-20 days in either direction. An additional factor in maintaining this elusive thing called morale is the showing of American movies to all troops in the theatre except the troops actually in combat. Ordinarily these are exhibited three times a week and give everyone something to look forward to and something to talk about besides the chance to escape into the old familiar world for a few hours."

"The incidence of neuropsychiatric problems increases with the length of service in this theatre and many men who have seen an appreciable number of cases agree that troops should be returned to the States as soon after 24 months as possible. This ideal cannot always be realized due to the tremendous effort involved in transporting them."

"In spite of these few hindrances to maximum efficiency, a tremendous amount of work is being done by relatively few troops. The desire to speed the end is an incentive that drives us always. Best regards to all those who are carrying on at home amidst shortages, politics, strikes, and all the benefits of civilization."

John J. Pontier, 2500 Bissell Avenue, Richmond, California, recently spent a vacation in St. Louis visiting old acquaintances and faculty members. He enjoyed attending clinics and visiting the medical school and hospital. Dr. Pontier has two children, a girl aged one year, and a boy, aged 4 years.

1938

*Captain John R. Lionberger,*



Station Hospital, Patterson Field,  
Class Secretary.

Capt. Alexander A. Mueller writes: "I have been in the Medical Corps of the Army Air Forces since September, 1942. At present I am assigned as Ward Surgeon on the Medical Service of Fort George Wright Army Air Force Convalescent Center, Spokane, Wash.

Captain Howard A. Steiner writes: "I was very pleased to receive the "Quarterly." It is not difficult to understand that when one is isolated on a South Pacific island, news from home is held in high esteem. I note that my address appeared in a recent issue. However, in view of the fact that the address is no longer correct, and in order to enhance the possibility of "meeting up" with some alumni members who might be in this area, I would appreciate a correction of the address in a subsequent issue. My new address is: A.P.O. 708, c/o P.M., San Francisco, Calif. I am in the Department of Roentgenology. Our hospital is in the midst of a large cocoanut grove, where cocoanuts are so plentiful that one runs the constant danger of being "crowned."

Captain Malvern T. Bryan's new address is: A.P.O. 403, c/o P.M., New York, N. Y.

Dr. H. L. Barnett's address is: P.O. Box 1662, Santa Fe, New Mexico.

Dr. Warren F. Smith's address is: U. S. Naval Hospital, Newport, R. I.

Dr. Dorothy Gill is an associate in internal medicine at the Mason Clinic in Seattle, Washington. She and her husband, Henry Edmonds are the parents of two small girls, Nancy and Amy.

Lt. Louis P. Kietz, Jr., has a new address: 7174½ Hawthorne, Los Angeles, Calif.

Dr. James L. Doenges has a new address: Apt. 605, Miami, Fla.

Dr. C. C. Hetzel, Jr., is now a Major

in the Army. His address is: A.P.O. 706, c/o P.M., San Francisco, Calif.

Captain Paul T. Hartman's address is: Induction Station, Fort Snelling, Minn.

Major Harry Mantz has a new address: Office of the Surgeon, Headquarters of the Army Air Forces Training Center, No. 1, Miami Beach, Fla.

Lt. C. S. Meeker, 45th N.C.B., 1st Detachment, F.P.O. San Francisco, California, writes: "Certainly my saga is not one for a book in the armed forces. I have had a tour of duty which has consisted of considerable travelling by air and ship at the Navy's expense through areas considered to be as close to top notch in scenic grandeur as we have on the globe. I am assigned to the Naval Construction Battalions in the Northern sector. I have spent time at Anchorage and Kodiak. Other stations are censorable. On the light side it has been very fascinating to participate in hunting and fishing in a comparative paradise for that sort of thing. I have climbed a lot of mountains, but none higher than 3,000 feet. At the present base it has been enjoyable to make regular trips to outposts by small boat on areas of water exposed to the open sea. This is pretty rugged travelling. On these trips I have seen whales, schools of seals and one family of sea lions. At the remote outposts deer are plentiful and during the snowy season they come down out of the mountains around the camps and strangely enough appear on the barracks menu at times."

"My work consists of industrial medicine and surgery. It is a novel experience for me to put on casts, replace dislocations, sew cuts, and last but not least try to figure out what makes a back ache and what to do for it when it does. We have had extremely little venereal infection. I had a bladder tumor case, several renal colic and lithi-

asis cases, a perfectly huge suddenly-developing subdiaphragmatic abscess, and lastly a Banti's.—Best regards to all the alumni."

1939

The work of Major Vilray P. Blair, plastic surgeon, in restoring the features of a soldier wounded in action, was told in an Army dispatch received recently from Italy. Major Blair, whose father also is a plastic surgeon, made it possible with the aid of dental specialists, for Pvt. Donald E. Coleman of Elmira, N. Y., to rejoin his unit for the drive northward from the Anzio beachhead, after Coleman suffered shrapnel wounds which destroyed the greater part of his face.

Dr. O. F. Foseid's new address is: Warren Robins Field, Ga.

Captain Morton D. Ritter's new address is: A.P.O. 230 c/o P.M., New York, N. Y.

Dr. Roscoe Ackerly's new address is: 221 Grace Avenue, Pueblo, Colorado.

Captain John E. Helm is at 504 Pass A Grille Way, Pass A Grille Beach, Fla.

Dr. M. J. Brockbank is at Barnes General Hospital, Vancouver, Wash.

Lt. Heinz E. Cron's new address is: A.P.O. 505, c/o P.M., New York, N. Y.

Dr. Leonard W. Nuttall recently visited Barnes Hospital, and renewed old acquaintances. He is now resident in surgery at St. Luke's Hospital, Denver, Colorado.

Dr. Wm. F. Melick writes: "I would like to have my address changed to Station Hospital, A.P.O. 722, c/o P. M., Minneapolis, Minn. - This is not a change of station, but merely a change of address, and I am still in Canada, although things are changing so fast around here we do not know from day to day whether we will stay or not. It seems rather peculiar to start on an A.P.O. and end up in Canada, of all places. Sorry I can't give you more

details about the North Country, but I am stationed in a civilized part. Have been most fortunate in being made Chief of G.U. section at our hospital and have been doing a fair amount of urology."

Dr. Arnold D. Welch is professor of Pharmacology and Director of the Department at Western Reserve University School of Medicine, Cleveland 6, Ohio.

1940

Lt. Robert Koch's address is: 17th Bomb. Maint. Sq., 40th Bomb. Co., Pratt, Kansas.

Dr. Mary McFayden Bishop writes: "My husband, Captain Marion Dale Bishop, has just been transferred after two and one-half years at Camp Grant, to the surgical service of the 156th General Hospital, temporarily stationed at Camp McCoy. Just before he left our baby daughter was born. During most of the past year I was resident at the Municipal Tuberculosis Sanatorium here in Rockford. The little girl and I will return to St. Louis soon to stay for the duration.—Also Margaret Huntington Sloan recently had a baby daughter (Capt. Ruell Sloan)."

Dr. John H. Savory has a new address: 1211½ North 3rd, Atchison, Kansas.

Dr. Margaret Sloan's new address is: 2738 Arlington Ave., New York 63, N. Y.

Dr. Leabert R. Fernandez has a new address: Pepeekeo Hospital, Pepeekeo, Hawaii.

Lt. (j. g.) Robert M. Smith, 2nd Beach Bn., c/o F.P.O., New York, N. Y., writes: "I have been overseas for a year, having been in on the Mediterranean fracas. While in Africa I had a fine time reuniting with the 21st General Hospital. At present I am stationed somewhere in England."

Captain R. R. Cross, Jr., has a new

address: A.P.O. 758 c/o P. M., New York.

Captain Harry William Sawyer, Jr., notifies us of his address: 101 A.A.A. Brigade, 256 Montgomery, San Francisco, Calif.

Lt. Henry T. Freedman's address is: Reception Center No. 1773, Ft. Leavenworth, Kansas.

Lt. Commander Seymour Brown recently visited the Alumni Office while on leave enroute to his new address: U. S. Naval Hospital, Mare Island, California, where he will be in the Department of Anesthesia. He is proud to announce that he has a new son, Alvin Richard, born February 27.

Lt. R. L. Landau's address is: A.P.O. 40, c/o P.M., San Francisco, Calif.

Lt. Frank L. Davis, Jr., has a new address: A.P.O. 515, c/o P.M., New York, N. Y. He is an orthopedic surgeon at a base hospital.

Dr. J. H. Growdon's address is: Ellis Fischel State Cancer Hospital, Columbia, Missouri.

Lt. Charles E. Galt, Jr., A.P.O. 28, c/o P.M., New York, N. Y., writes: "So far here in the British Isles, I've encountered Lt. Col. George Wulff, who commands the 12th Field Hospital, to which we evacuated our patients for a while last fall, and Lt. Col. Bricker, who is Senior Consultant in plastic surgery for E.T.O. So you see, the Alumni Quarterly really "hits the spot" with news of the Scott Avenue "gang."

Dr. Robert H. Young's new address is: 1014 10th Street, Fargo, N. Dakota.

In a broadcast from London by Albert Maisel over WABC (CBS) on Monday, June 12, 1944, 9:00 A. M., New York EWT, the following news was received concerning Lt. Frank L. Davis "I have just returned from the beachheads around Vierville with a hundred seriously wounded men and with three doctors and with twenty

Navy and Army corpsmen who overnight have been transformed from scared, inexperienced amateurs into battle-hardened, skillful medical veterans. Our ship had moved up, from the rear of our convoy to within a mile of the shore, and soon the crew's quarters were filled with stretcher cases brought from the beach. Every mess table had a man on it and in between there were other men on stretchers on the floor. Forward on the tank deck Dr. Frank Davis, our Army surgeon, was already operating. The operating room was a crowded platform at the rear of the tank deck with a wooden operation table the doctors had built themselves. It was a little shy of chromium fittings but otherwise it was just as good as the fanciest ones I have seen in a big city hospital. They had screened this platform off from the rest of the tank deck with canvas screens and it was only in the middle of his first operation that Davis realized that our lights were casting shadows on the screens so that all the wounded could watch our work in silhouette as they lay on their stretchers in the racks that jutted out from the walls of the tank deck. The Doctor got so worried about it that he sent me down to see how the men were taking the sight, but the men weren't worried at all. It made them feel good, they said, to see that they were getting all this care and being fussed over. By the second night when we had unloaded the cannon company we had brought over, we had taken on 102 patients. Some were slightly injured, about half had serious wounds, fractures, deep shrapnel gashes and at least seven were borderline cases, men who would have died but for Dr. Davis, Dr. Henderson, and Dr. Selleo and the sweating kids that we call corpsmen. But always between plasma, first class first aid on

the beach, and skillful surgery every last one of them pulled through. We didn't have a single death on the ship."

"By the time we raised anchor and made up in convoy, the doctors and corpsmen had been working 48 hours without a real stop. Then just when they began to think of resting up for a while on the way home, our only unwounded patient started acting up. He was a boy of about nineteen who had been sent back from the beach with what looked like an appendix case. He had waited around, feeling out of place and ashamed among all the injured men, and to make matters worse for him his pains stopped for a while and made him seem like a complete false alarm. But in the end he vindicated himself by getting a real hot belly and Davis decided to operate. It was midnight before we got him all cropped and under ether and then just as the Doctor reached for his scalpel the bell started to ring for general quarters and we could hear men rushing to their gun posts topside. Only three days before every man in that room would have dropped everything and started to reach for his life-belt but now all they did was look up once, all of them, and then Davis said "Aw, nuts" and his scalpel drew a clean, sharp line over the patient's abdomen and all the corpsmen went back to work handing over instruments and nobody seemed to care whether it was planes or subs or E boats that were attacking us. After that everything was anticlimax."

Since receiving the above information, we have been notified that the ship Lt. Davis was aboard struck a mine. Many of the men were killed and Dr. Davis is in an Army Hospital being treated for a fractured back and shrapnel wounds.

1941

Captain John P. Lee, A.P.O. 41, San

Francisco, California, writes: "I am again leading a jungle life. Also, I was recently married to an Australian nurse, Sister Laura Maynard of Brisbane, Australia. I'm looking forward to the next Bulletin."

Captain Alex Ellman is overseas with a station hospital.

Captain Frank J. Pickett's address is: A.P.O. 634, c/o P.M., New York, N. Y.

Lt. Robert J. Cook, A.P.O. 550, c/o P.M., New York, N. Y., writes: "In reply to your letter I might say that my son just celebrated his first birthday recently but otherwise there is no personal news. . . . Compared with the Middle East, Sicily is indeed a beautiful, civilized country. There are orange and lemon groves, numerous vineyards, fig, pine and palm trees, wheat and rice fields, majestic mountains and green pasture land bedecked with cows, sheep and goats—altogether a refreshing contrast to the lands of desert, sandstorm and unreasonable temperatures. It has been my privilege to attend several operas, "Tosca" and "Rigoletto," in a magnificent opera house. The scenery, costuming and orchestral music were very beautiful. The singing was in Italian but the program in English enabled one to gather an idea of the story. A curious local custom is that of the farmers who drive their cows and goats into the city each morning where the customer selects and milks the animal he desires."

Lt. William L. Topp's address is: 1006 Washington Ave., Chehalis, Wash.

Captain Julius M. Shier is at Camp San Luis Obispo, Calif., 321st Med. Batt., A.P.O. 96.

1942

Captain Elbert H. Cason's address is: A.P.O. 654, c/o P.M., New York, N. Y.

Dr. Joseph L. Ponka's address is: Station Hospital, Fort McClelland, Ala.

Lt. (j. g.) Chester A. McAfee's address is: 1st Corps Medical Battalion, Co. A, 1st M.A.C. c/o Fleet P.O., San Francisco, Calif.

Captain Glenn O. Turner, A.P.O. 709, c/o P.M., San Francisco, Calif, writes: "Your letter of January of this year has followed me through a number of changes of address, making almost a trip around the world, so it certainly rates a reply and my payment of dues. After leaving Barnes July 1, 1943, I took two months training at Camp Grant, Illinois, following which my assignment to my present organization, a station hospital of 250 bed capacity, was made. After a period of desert training and more basic military review, we came overseas in January of this year. I am now serving on the medical service of a station hospital in the South Pacific. This has proved to be a very satisfactory position. I hope to hear more of those in St. Louis, and of those away from there in the 'Quarterly.'"

Captain Ewald W. Busse is in the Medical Corps at McCloskey General Hospital, Temple, Texas.

Lt. (j. g.) Edward Henry Jones has a new address: U.S.S. Dickerson, A.P.D. 21, c/o Fleet P.O., San Francisco, Calif.

Lt. Abraham G. White is stationed at O'Reilly General Hospital, Springfield, Mo.

Captain Irvin A. Kotner's address is: Med. Det., Hdqs. Co., 21st Corps, A.P.O. 101, Camp Polk, La.

Lt. (j. g.) Robert K. Royce's address is: A.P.O. 9359, c/o P.M., New York.

Dr. Walter W. Tillman, Jr., has a new address: 860 So. Pickwick, Springfield, Mo.

Dr. Robert B. Stortz's address is: 4305 Murphey, Nashville, Tenn.

Lt. Royal Lee Brown's address is: Cal-Aero Academy, 2nd A.A.F.F.T.D., Ontario, Calif.

Lt. Dyar Burttram Hobson's address is: 53rd Field Hospital, Fort Bragg, N. C.

Dr. Edwin E. Devereux's new address is: Station Hospital, S.A.A.A.B., Santa Ana, Calif.

Lt. William G. Reese's address is: A.P.O. 510, c/o P.M., New York, N. Y.

Captain Walter P. Graul's new address is: A.P.O. 91, Co. D, 316 Medical Bn., Camp Adair, Oregon.

March, 1943

Lt. G. Russell Auferheide's address is: Med. Det. 55th A.I.B., Camp Cooke, Calif.

Lt. Stanley S. Kahn is at Ft. Knox, Kentucky.

Lt. Edward H. Dunn is stationed at LaGarde General Hospital, New Orleans, La.

Lt. David M. Freeman is at Schick General Hospital, Clinton, Iowa.

Dr. Albert Lemoine, Jr., is at Massachusetts Eye and Infirmary Hospital, Boston, Mass.

Lt. Ernest S. Rosenstein's address is: Borden General Hospital, Chicasha, Okla.

Dr. C. M. Fullendwider is an Assistant Resident at Cleveland City Hospital, Cleveland, Ohio.

Lt. (j. g.) Irvin H. Mattick is at National Naval Medical Center, Bethesda, Maryland.

Harry Albert Whittler is in the Officers' Reserve Pool, Letterman General Hospital, San Francisco, Calif.

Lt. Wilbur F. Haines is stationed at Ream General Hospital, Palm Beach, Fla.

Lt. Roberts B. Pappenfort's address is: Station Hospital, Camp Anza, Arlington, Calif.

Lt. I. W. Leibner's address is: 155 General Hospital, Nichols Hospital, Louisville, Ky.

Lt. Edward H. Dunn's address is: Station Hospital, Ft. Leonard Wood, Mo.

# Washington University Medical Alumni Association

## Minutes of Annual Meeting

A called meeting of the Washington University Medical Alumni Association was held Friday evening, May 26, 1944, in the Medical School Auditorium, at 8:00 P. M. Dr. Charles A. Stone, President, presided. Attendance was about 25. The acting secretary read the minutes of the last Executive Committee Meeting:

The Executive Committee of the Washington University Medical School Alumni Association met at the University Club for lunch on Wednesday, March 10th, with the following present: Doctors Stone (President), Becke, Jorstad, Brookes, Woodruff, Lohr, Blair, and Deakin (acting Secretary).

Dr. Stone presented the following action of the University as the reason for the meeting and asked for discussion.

### Alumni Directors

There shall be four Alumni Directors representing four Alumni Associations of the University, namely:

- The Alumni Association of Arts and Sciences
- The Alumni Association of Law
- The Alumni Association of Medicine
- The Alumni Association of Dentistry

Each of these associations shall elect one of their members as an Alumni Director of the Board, subject to the approval of the Board, to serve for one year.

The first Alumni Directors shall serve until October 1, 1944. Thereafter the term of office shall be from October 1st until September 30. No alumnus shall serve for more than three consecutive terms.

Alumni Directors shall enjoy the privileges of regular Board members with the exception that their votes cannot be recorded as official votes of the Board, because of the limitation of our Charter.

It was decided to nominate Doctors Woodruff and Jorstad as candidates for the position and to submit their names to the membership for balloting.

Meeting adjourned.

*Rogers Deakin*  
Acting Secretary-Treasurer

Dr. Louis Jorstad, who will soon complete his year as the first Alumni Director from the Association on the Corporation of the University, read a statement reporting in a general way on the functions and responsibilities of the director:

"As Alumni of Washington University School of Medicine we are mainly interested in the affairs of the Medical School that relate to us as Alumni. In this relationship is embodied the relative standing of the Medical School among similar institutions, the relative standing of the affiliated hospitals to other hospitals, and the role which we as Alumni should play, not only as graduates but also as citizens of the community in which our Medical School is located. Many of us may have an additional interest in that our children have been, are, or will be members of the academic or professional student body. Perhaps the graduate school or the research facilities in the academic or professional departments should demand some of our interest."

"As an Alumni Director of the Washington University Corporation during the past year it has been my privilege to observe more directly the problems, attainments and needs of Washington University. I shall endeavor to impart to you a bird's-eye view of this composite picture."

"It should be emphasized that the proper perspective of the financial and scholastic conditions of the Medical School cannot be weighed without due consideration of all departments of the University. It is true, I believe, that not only should the arts and sciences be continued as preparation for the professions and as a foundation for the lives of the great majority of those who go to college or university, but to enhance their role adds to or maintains the prestige of the whole institution itself. Chancellor Throop has pointed out that Chicago, Columbia, Harvard, Princeton, Yale, and Stanford are institutions which have reached a position of national importance. The development of arts and sciences in these institutions preceded the development of professional types of education and a high level of academic teaching has been maintained. He feels that no institution can be of first rate importance if its development is too one-sided and that no school can justly lay claim to national importance on the basis of a professional school alone."

"During the past year I have gained a clearer picture of the financial status and requirements of Washington University as a whole, and the School of Medicine in particular. It is a function of the Corporation through its officers, Executive Committee, and Board of Directors to administer the finances so that not only is proper interdepartmental relationship maintained, but that needs of the various schools are made known. The needs of each school, whether it be medicine or any of the other twelve schools in the University, must originate from the Dean or Director. His information is gained through the Executive Committee of the School, the head of each department being responsible for making known the needs and possibilities of that department."

"It may interest you that perhaps the most important development in the University during the past year has been in the School of Engineering. A large number of firms have contributed generously towards this program. It is a general program of development which will add to the prestige of the school and will enable it to carry on special research and perform services of direct and specific value to the organizations themselves. In other words, the plans are for the development of facilities of the School of Engineering to a degree which will enable it to perform for industry in the St. Louis area the services of a technologic character which are a necessary function of a present day school of this type. This impresses me as a most wholesome alumni, community, and school relationship."

"I have stated these factors because I am certain they reflect the character of the endowment calendar of Washington University. As of June 30, 1943, there are held and administered 159 individual endowments. Only 13 of these, representing approximately ten per cent in value, are without restrictions as to use of income. There has been a definite decrease in rate of return on these endowments because of the prevailing decrease in interest rates. This decrease in rate of return on endowment is, of course, assumed to be permanent. The increase in tuition rates has offset this, but it is quite likely that the level of tuitions charged has reached its maximum. It is anticipated by good authority that interest rates may be three per cent in the not too distant future. Thus, in a large investment calendar the decrease in income is a real item."

"The demands of the armed services have caused a decrease in civilian enrollment in other universities and colleges from ten to thirty per cent. The increase of two per cent for the year 1942-1943 at Washington University is extraordinary. However, there will be a decrease for the year 1943-1944. The University is an Army designate school, and in the Schools of Medicine and Dentistry the Navy has a unit. The total in the entire training program runs somewhat over two thousand. The financial situation has been assisted to a considerable degree by the accelerated program because of the increased total tuitions over the twelve month period."

"Despite the greater burden placed on the decreased personnel, developments in the Medical School have been carried out. The organization of the Department of Internal Medicine and Neuropsychiatry, the completion of the McMillan

Eye, Ear, Nose and Throat Hospital, and the progress made in the organization of the Department of Public Health are steps toward completion of the setup in the School of Medicine. The Washington University Clinics have been incorporated under an independent Board of Managers. It is probably sound not to consider the Clinics as a burden of the University. It should have a separate endowment. It certainly should not be self-sustaining because that would involve the question of the clinics engaging in the practice of medicine for profit."

Dr. Ernst moved that Dr. Jorstad's report be accepted and filed. Motion seconded by Dr. Abel and approved unanimously.

Dr. Stone then presented a letter from Dana O. Jensen, Acting Alumni Representative, which stated that a proposal had been made for the organization of a Washington University Alumni Council. The proposed plan is presented herewith, and it was decided that the new president of the association and Dr. Jorstad should attend a luncheon at which representatives from the existing alumni associations would discuss the proposal further.

### **Organization: Washington University Alumni Council**

The following proposal for a University-wide Alumni organization considers the current need for an effective, workable method for maintaining proper, relationship and contact between the University and its graduates regardless of school or professional affiliation.

In keeping with the recent decision of the administration of the University to place alumni-elected directors on the Board of the Corporation, this proposal for a unified Alumni organization is intended to benefit mutually the University and its graduates by permitting closer and more direct alumni contact with University affairs.

There is no intention in this proposal of disturbing the activities of the various school alumni groups. It merely provides for the participation of all Washington University graduates and ex-students in a coordinated alumni plan. This coordinated plan would include:

- 1) The establishment of an Alumni Council, consisting of elected representatives of each school alumni group, the regular University Alumni Representative, and the Chairman of the Alumni Fund.

The Alumni Council shall coordinate and direct activity of general Alumni interest such as Homecoming, participation in Commencement Week, and similar functions. Contact between the University and all Alumni Groups shall be through the Council.

- 2) The representation on the Alumni Council of all organized school alumni groups would at present involve representation for the Schools of Architecture, Business and Public Administration, College of Liberal Arts, Dentistry, Engineering, Fine Arts, Law, Medicine, Nursing, and the degree conferring departments of University College, when such groups are organized.

- 3) An all-inclusive single solicitation of funds and dues from all Alumni should be devised. The "community fund" form of contribution would simplify payment of alumni dues and assessment. Operating funds for the individual groups would thus be assured.

A prompt consideration and approval of this basic alumni organization plan is being requested of all currently organized School alumni groups so as to permit submittal of the proposal in detail to the University authorities at the earliest possible moment.

The acting treasurer then presented a financial report covering the periods July 1, 1942 to April 30, 1944. This report was accepted by the action of the members present.



**ALUMNI ASSOCIATION**  
**of the**  
**WASHINGTON UNIVERSITY MEDICAL SCHOOL**

**July 1, 1942 - December 31, 1943**

Cash in First National Bank, July 1, 1942 .....			\$1,890.01
Expenses: (to December 31, 1942)			
Printing of banquet tickets .....	\$ 14.00		
Advance (L. Hunt) (has been paid) .....	25.00		
Petty cash .....	5.00		
A.M.A. Directory .....	18.00		
Auditor's charge .....	60.00		
Washington U. (Share of Alumni Room expenses) .....	675.00		
	797.00		1,093.01
Deposits (to December 31, 1942) .....	259.86	259.86	1,352.87
Cash in First National Bank, January 1, 1943 .....			1,352.87
Expenses: (to December 31, 1943)			
Bank service charges .....	4.88		
Student Loan .....	125.00		
Addressograph Plates .....	22.18		
Eden Publishing House .....	201.36		
Washington University (Fiscal Balance Sheet for Year) .....	770.00		
Addressograph Plates .....	5.42		
Typewriter repair .....	13.50		
Petty Cash (Postage on Alumni letters, car fare, stencils, office supplies, re- print of laboratory pictures, etc.) .....	35.00		
	1,177.34		175.53
Deposits and collections .....		1,769.97	\$1,945.50
Cash in First National Bank, January 1, 1944 .....			\$1,945.50

**January 1, 1944 - April 30, 1944**

Cash in First National Bank, January 1, 1944 .....				\$1,945.50
Expenses:				
Eden Publishing House .....	\$	112.29		
Petty Cash (Postage on alumni letters, carfare, etc.) .....		10.00		
Addressograph Company .....		16.32		
Bank charges .....		5.31		
		<hr/>		
	\$	143.92		\$1,801.58
Deposits (Dues) .....	\$	1,479.65		
Gifts .....		77.00		
	\$	1,556.65	\$1,556.65	\$3,358.23
Cash in First National Bank, April 30, 1944 .....				\$3,358.23

A nominating committee report was then presented by Dr. Oliver Abel, chairman, as follows: President, Dr. J. W. Thompson, '23, Vice-President, Dr. Charles Duden, '26, Vice-President, Dr. Carl Harford, '33, Sec.-Treas., Dr. Rogers Deakin, '22. Executive Committee: Term Expires 1945—Dr. V. P. Blair, '93, Dr. Lee B. Harrison, '27 Dr. Theodore Hanser, '22, Dr. Louis H. Jorstad, '24, Term Expires 1946—Dr. Charles Stone, '08, Dr. Frank McNalley, '17, Dr. Frank Bradley, '28, Dr. Robert Mueller, '17, Term Expires 1947—Dr. Franz Arzt, '26, Dr. George W. Ittner, Jr., '37, Dr. Glover H. Copher, '18, Dr. Louis Aitken, '27.

It was moved and seconded that the report of the committee be accepted, that the nominations be closed and that the secretary be instructed to cast the unanimous ballot for the nominees. Motion carried.

The status of the student loan fund was discussed and it was the consensus that this information should be included in these minutes and published in the "Quarterly." The material was not available at the meeting inasmuch as it had been given to Dr. Frederick Woodruff, chairman of the loan committee, who was unable to attend the meeting.

## Schedule of Notes Receivable

	<i>Date of Note</i>	<i>Balance 5-1-39</i>	<i>New Notes</i>	<i>Collections</i>	<i>Balance 4-1-43</i>
1	-----	\$ 225.00	\$	\$ 225.00	\$
2	-----	60.00		60.00	
3	-----	10.00		10.00	
4	-----	26.00		26.00	
5	-----	90.00		90.00	
6	-----	50.00		50.00	
7	1- 1-1929	50.00			50.00
8	3-11-1931	40.00			40.00
9	3- 1-1937	100.00		20.00	80.00
10	9-28-1938	75.00			75.00
11	2- 1-1938	125.00			125.00
12	1-31-1939	200.00			200.00
13	9-26-1939	200.00			200.00
14	9-24-1940	200.00			200.00
15	9-23-1940		50.00		50.00
16	10-31-1940		50.00		50.00
17	2-21-1942		100.00		100.00
18	6-11-1942		150.00		150.00
19	9-27-1939		200.00	100.00	100.00
20	2- 9-1940		100.00	100.00	
21	2- 5-1940		100.00	100.00	
22	1-23-1941		250.00		250.00
23	9-23-1941		264.00		264.00
24	9-26-1939		200.00	200.00	
25	3-30-1943		125.00		125.00
Balance April 30, 1944		\$1,451.00			
New Notes			\$1,589.00		
Repayments				\$ 981.00	
Balance April 30, 1944					\$2,059.00

Dr. Louis Jorstad was re-elected unanimously as the Association's representative on the Board of Directors of the Corporation for the following year. The meeting adjourned at 9:30 P. M.

*Dr. Rogers Deakin*, Secretary-Treasurer

# WASHINGTON UNIVERSITY

---

George R. Throop, Ph.D., LL.D., Bridge Chancellor

---

- The College of Liberal Arts  
William G. Bowling, A.M., Dean
- The School of Engineering  
Alexander S. Langsdorf, M.M.E., Dean
- The School of Architecture  
Alexander S. Langsdorf, M.M.E., Dean
- The School of Business and Public Administration  
William H. Stead, Ph.D., Dean
- The Henry Shaw School of Botany  
George T. Moore, Ph.D., Director
- The School of Graduate Studies  
Richard F. Jones, Ph.D., Dean
- The School of Law  
Warner Fuller, B.S., LL.B., Acting Dean
- The School of Medicine  
Philip A. Shaffer, Ph.D., Dean
- The School of Dentistry  
Benno E. Lischer, D.M.D., Dean
- The School of Nursing  
Louise Knapp, R.N., B.S., A.M., Director
- The School of Fine Arts  
Kenneth E. Hudson, B.F.A., Dean
- The University College  
Willis H. Reals, Ph.D., Acting Dean
- The Summer School  
Frank L. Wright, A.M., Ed.D., Director

Mary Institute, a preparatory school for girls, located at Ladue and Warson Roads, is also conducted under the charter of the University.

---

**Note:** Those desiring information concerning any of the divisions listed above should write to the Dean or Director concerned.