

BIOCHEMISTRY DEPARTMENT

SOUTHWESTERN MEDICAL COLLEGE OF THE
SOUTHWESTERN MEDICAL FOUNDATION

and

THE SOUTHWESTERN MEDICAL SCHOOL OF
THE UNIVERSITY OF TEXAS

1943-1960

H. C. TIDWELL

The history of this Department really began with the decision in 1942 to move the Baylor Medical College from Dallas to Houston. Dr. C. R. Treadwell and I were urged to remain on the staff of the Biochemistry Department of Baylor, but we chose to accept appointments in the newly formed Southwestern Medical College of the Southwestern Medical Foundation in Dallas.

World War II was in progress and unforeseen difficulties lay ahead for the new medical school which came into being in June 1943. All medical schools had agreed to operate on a twelve-month schedule during the war. Baylor had moved all departmental laboratory equipment, including plumbing and light fixtures, to a temporary location in Houston, so we were starting a new medical school without a building or the laboratory equipment required for the official recognition of the school.

After much consideration the new school opened in June, utilizing a public school building which was available during the summer and a hastily constructed prefabricated building for those classes which could be started with readily available equipment. Biochemistry, physiology and similar courses of the first two years were delayed until necessary laboratories and equipment could be acquired. There were no such handicaps for the clinical programs since the same hospital facilities as before were still available.

The priorities of war time and the need for haste in acquiring equipment resulted in the decision that I visit supply

firms in St. Louis and Chicago to enlist their aid. Mr. Norris Brown, then a representative of E. H. Sargent and Co., accompanied me and rendered valuable assistance to the school. This company greatly aided us by allowing us to collect equipment during the nighttime hours in order to bypass orders being handled in routine fashion. Soon we ran into difficulties because of war time regulations. At first, with no priority to buy equipment containing any metal and this associated with a regulation that all moving vans must carry a minimum weight load, we were unable to move three van loads of the light weight equipment purchased except as small fractions of a van load. Fortunately, the school soon acquired the priority to buy equipment containing metals, and we were able to ship the purchases. In many cases other priority regulations limited our purchases of much needed special equipment to second hand items. Several firms aided greatly by selling us "demonstrators"- at the price of new equipment, of course. These were so called because they were allowed to stand on the sales room floor for a short time, and thus eliminate the need for the priority required for new equipment.

This haste was occasioned not only by the need of the equipment in teaching but also for accreditation to be listed as a first class medical school. This recognition by the accrediting bodies was necessary to prevent our students from being drafted into the Services. Accreditation was quickly acquired for the third and fourth year classes and Southwestern became a first class medical school by approval of the first two years before the end

of the first year. Full recognition of Southwestern came quickly, largely because all but five of the Baylor faculty remained with the new school and the Southwestern Medical Foundation had erected a group of prefabricated buildings back of the then Parkland Hospital sufficient to house the medical school and the purchased equipment.

Although the maximum class size had been set at 64 students, only about 24 students, largely draft deferables and young ladies, were included in our first biochemistry class that spring. Our temporary buildings served amazingly well, and no unsurmountable difficulties were encountered in spite of some handicaps, such as the lack of water during periods of below freezing temperatures and the danger of the floor sagging if too many students congregated in one spot of the building.

The Department functioned smoothly during the first year after we were settled in our new quarters. Getting the department off to a good start was greatly aided by the cooperation of the administration, the small class, and the excellent assistance of Dr. Treadwell. A research program initiated at Baylor, involving studies on carbohydrate metabolism and lipotropic substances, was continued.

Then came a change in the administration and an innovation in the teaching of the basic science departments was undertaken. Under this plan, the staff of these departments was to be gradually

depleted and the courses were to be taught largely by members of the clinical staffs assigned for that duty. Discouraged by this development, Dr. Treadwell resigned in 1945 to accept a position in the George Washington University where he now serves as Chairman of the Biochemistry Department. Having been induced to return to my native state and urged to accept a position in the new medical school, I decided to face the storm and hope. Not allowed to add new staff members, I was left the only member of the department for two years - to be assisted by members recruited from other departments. No research was possible under these conditions.

Fortunately, the next several administrations allowed a gradual rebuilding of the Department. Dr. Max Huffman and James Ashmore were added to the staff in 1948 and aided in the departmental teaching with appointments as Professor and Assistant in Biochemistry until 1950. They previously, without a position on the teaching staff, had been allowed space in the Department for endocrine research sponsored by a pharmaceutical company. Dr. Huffman resigned to be associated with the Oklahoma Medical Institute. I am pleased to note that James Ashmore's interest was sufficiently stimulated by his experience with us that he left us to work for his Ph.D. with Dr. Doisy at St. Louis University. Later he went to Harvard with Dr. Baird Hastings and now is an Associate Professor in Biochemistry at the University of Indiana. Following the development of such fine young men is one of the

special rewards of our profession.

Dr. H. W. Marlow served the department from 1947 to 1950. His major interest were teaching and research on endocrine secretions. After his resignation, Dr. William W. Burr, Jr. and Dr. R. C. Gilmore became members of the Department as Assistant Professors and James C. McPherson as Research Assistant. Since Dr. Burr was unable to report for duty until April, Mrs. Mary E. Nagler was appointed to an instructorship in the department to aid temporarily in teaching and research, and served well in that capacity from 1950 to 1952. In 1952 Dr. Gilmore resigned to become a full time medical student. This was a time of change from the rather stable staff in Baylor through a period involving many rather short periods of service in the Department. Nevertheless, some improvements were made in the teaching program and a total of about 25 research publications were credited to the Department during this first ten year period (1943-1952).

However, 1949, when we became a Department of the Southwestern Medical School of the University of Texas, really marked the time of an increasing stability of the School administration and of the Department. Starting with the appointment of Dr. Burr, the Department has gradually acquired a competent staff of outstanding young men which would be a credit to any medical school. Dr. Burr has gained in stature and in value to the school to such an extent that he has been advanced gradually through the ranks to a full professorship. His initiation of the use of radioisotopes in

our laboratories, and his assistance in acquiring research grants to buy the needed equipment, marked the beginning of a new era in Departmental research and teaching. His stature is evidenced by the request of the Atomic Energy Commission for his assistance for two years while on leave from the Department. His services will be greatly missed during that period.

Dr. Herbert W. Rumsfeld, Jr., a student of Dr. Bauman at Wisconsin, also came to us in September 1953. Although appointed at about the same time, Dr. Donald S. Wiggans was unable to report for duty until early 1954, after spending nearly two years with Dr. Fruton at Yale. Both he and Dr. Burr were former students of Dr. Rose at Illinois. The present staff was then completed by the addition of Dr. John M. Johnston in 1955 and Dr. Joseph LoSpalluto in 1958. Dr. Johnston was a student of Dr. Mackenzie at Colorado and acquired two years research experience at the Walter Reed Institute of Research before coming with us. Dr. LoSpalluto studied under Dr. Cannan for his doctorate at New York University College of Medicine and served five years there as an Instructor before he came to Southwestern on research grants for study of arthritic and rheumatoid diseases. The regular staff has received valuable part time teaching assistance from three young men associated with the nearby Veterans' Hospital. These included Dr. Dale A. Clark (1954-59), Dr. Ernest Byers (1959--) and Dr. Alfred Schram (1959--).

Each and every one of the above staff members really deserves

individual credit for his valuable contributions to the teaching, research, and administrative functions of the Department. Nevertheless for our purpose in writing this, it seems wise to sum up all of these contributions toward the general interest of the Department, realizing that the progress made would not have been possible without the united effort and wholehearted cooperation of each member of the Department. All have merited advances in rank and, with the exception of Dr. Clark, are still with us. Drs. Burr and McPherson have broadened their horizons by acquiring M.D. degrees, while Dr. Rumsfeld, is busily engaged in securing one at this time.

I wish it were possible with the limitations of this article to name and to express my appreciation individually of a long list of young people, who have served the Department exceedingly well, as secretaries, secretary-technicians, and technicians. Not in the least belittling all others, two will be named for outstanding service in the earlier days when the Department was so small in numbers that one person served as both secretary and technician. Mary Tamsitt came with us from Baylor, serving during the difficult time of acquiring equipment and getting started in new quarters. Many of the original file cards on equipment which she prepared, are still in our files. She as well as Anne Miller (at a later date) assumed duties over and beyond the call of duty. Although neither had previous training in chemistry, each acquired certain techniques which aided greatly in our research. Anne of

her own accord prepared a bible of all departmental procedures for her and later secretaries use. She also, without suggestion, kept a list of all birthdays and anniversaries for the convenience of the staff members - a practice continued to the present day. They set a pattern for others to follow and improve upon with the passing of time. We could not have accomplished nearly so much without the enthusiastic and sometimes long-suffering efforts of this group, including our present outstanding secretary.

Departmental advances made since becoming a part of the University of Texas may be listed under several headings, such as (1) medical teaching program, (2) graduate student program, (3) grant assistance and (4) progress in research.

Medical teaching program. A gradually increasing staff of well trained young men who are enthusiastic in their desire to offer the best possible course in biochemistry to medical students has been a major factor in the advances made in our teaching program. The whole hearted support of the Department by the School administration made possible the acquisition of such a staff.

A better attitude and an improved morale of the students seemed to have been promoted by the change in quarters from the dilapidated prefabricated buildings to the modern, air-conditioned lecture rooms and laboratories. This even led to the students wearing white shirts and ties instead of the sloppy attire of ~~many~~

many college students of this day. Perhaps the more personal attention of the enlarged staff along with the gradual accumulation of better laboratory equipment and facilities also aided in this change of attitude of the student.

Year by year, the class lectures have been revised to keep abreast of important advances made in the field of biochemistry. The staff has been sufficiently interested in a job well done that the entire staff attends each lecture and the group as a whole considers the presentation and material presented in hopes of improving the course the following year. Similarly, the entire laboratory manual has been completely revised several times after yearly removal of experiments which could be replaced with ones that seem better suited to developing a clearer understanding of biochemical principles. Two grants from the Atomic Energy Commission have provided about \$20,000 worth of additional special equipment in order that the newer techniques involving radioisotopes could be taught in both the undergraduate and graduate courses in biochemistry.

Graduate student program. Up until the early '50s, no graduate courses had been offered due to lack of facilities and sufficient personnel. James McPherson, now on the staff as Research Scientist, met the requirements for the first Master's degree awarded in biochemistry in the new medical school in the fall of 1954. Soon thereafter departmental approval was received from the Graduate School of the University of Texas, which

permitted us to accept worthy students, without prior University approval, as candidates for the Masters of Arts degree. Gradually, with increasing facilities and laboratory equipment, additional graduate courses have been offered. Our graduate program has developed rapidly during the last few years. A number of students now in residence have proved to be well qualified and numerous inquiries have been received from others who wish to commence graduate studies. Students with no graduate training may spend some time on the Austin campus in order to qualify in related fields of chemistry prior to their attendance at the Southwestern Medical School. All required courses in biochemistry and the dissertations can be completed here. The Master's degree is offered in its entirety at Southwestern. Some of our last graduate courses have had as many as a dozen in attendance.

Grant assistance. Grants from numerous sources in gradually increasing numbers have enabled the purchase of equipment necessary for modern day research and teaching. These sources have included the Atlas Powder Company, Atomic Energy Commission, Public Health and Welfare, Williams-Waterman, U. S. Army, Lipotropic Research Foundation, and last but not least, the Robert A. Welch Foundation. These grants or their renewals have provided about \$235,000 during the last five years for laboratory equipment, and some technical assistance. With very little assistance from state funds, we have all of the basic modern equipment needed for the studies on which we are engaged.

Progress in research. Starting with little or no equipment and a changing and very small staff, progress was indeed slow for a time. Newly appointed staff members necessarily have varying periods of delay in their chemical research since new chemicals, special equipment, and the like must be obtained for each project. Approximately 40 papers and abstracts have been published from this Department during this second period (1952-60). The quality of the research has been well attested to by the excellent financial support of the numerous granting agencies, both governmental and private, on which nationally known investigators serve in advisory capacities. The election of members of the Department to national societies requiring rather strict qualifications, such as the American Society for Biological Chemists, the American Institute of Nutrition, and the Society for Experimental Biology and Medicine, also supports the quality of the research completed. Numerous presentations of the departmental research have been made before national societies and several at the restricted Gordon Research Conferences, by invitation, and one by Dr. Johnston at and International Congress on Lipids. With our research programs well underway, excellent laboratory facilities and equipment along with the increasing assistance of graduate students, progress in our research should be made at a steadily increasing pace.

One important factor to be considered in the progress made in research is that of the assistance rendered by the medical students who have worked with us each year during the summer. We

have been most fortunate in securing the assistance of an outstanding group of students who desired the research experience to be gained by serving during the summer as research assistants in this Department. They and their accomplishments deserve listing individually but the limitations of this review prevent. It is already evident that this small taste of research has given them a better understanding of research in their chosen profession and has moved a few to continue in this field.

One cannot resist a glow of pride as we look back at our progress from the meager beginnings to the well-balanced, well-staffed Department of today. As pleased as we are with the rate of progress so far, one can always dream. Our dream for the future is of an endowed professorship of sufficient means to bring to the school, for short terms, outstanding men who can provide inspiration and stimulation not only for the Department but for the entire School. Efforts in this direction have been unsuccessful thus far.

It is hoped that this brief review of the trials and tribulations of the Biochemistry Department during the early days of a new medical school may prove useful to someone sometime in the future. Such difficulties, we trust, will never be experienced in the future, since, certainly in the recent past, no medical school had been started with classes for all four years and during the middle of a World War. If the present staff of young men can be kept intact, the future of the Department appears very bright.