The Laboratory Comes of Age
(1910–1920)

The rapid adoption of methods of precision for medical and surgical diagnosis presents an ever increasing problem to the medical profession. Laboratory examinations have almost transformed the best medical practice in a decade. Clinical diagnosis is equipping a higher class of graduates from our medical colleges. It has been estimated that about one practicing physician in every twenty possesses a microscope. Comparatively few who own them are skilled in their use.

Holman Taylor, MD, in an editorial in the Texas State Journal of Medicine, December 1916

PORFIRIO DIAZ HAD fled Mexico, leaving the revolution behind him. With trouble extending to the Texas border, the United States in March 1911 mobilized an entire American Army division to the state. The dispatch would lead to control of typhoid, the disease that had so devastated troops during the Spanish American War. Vaccination for typhoid had been voluntary since 1909, but it now was made compulsory for the 10,000 men in Texas camps.

Surgeon General George H. Torney expressed astonishment “that among the number of men in the camps at Texas City and Galveston, and among those in the numerous camps along the Mexican border, constantly exposed to infection, not a single case [of typhoid] has occurred.” There was one death—a civilian teamster had refused vaccination.
On September 30, 1911, vaccination became compulsory for the entire Army, and by the end of 1911, 85 percent of all personnel had been vaccinated. By 1913, there were only 0.004 cases per thousand in the Army. 

Optimism about conquering another disease—syphilis—also was high. The Wassermann test had been developed in 1906, then along came Paul Ehrlich's report on salvarsan, or "606," in 1910. The combination of the two intrigued Dr. B. F. Stout, who reportedly performed the first Wassermann test and administered the first dose of salvarsan in Texas. 

In January 1911, the Texas State Journal of Medicine announced that Dr. J. H. Black of Dallas and Dr. Stout were "prepared to make the test." The next month, the journal reported that others also were ready to administer it: W. G. Cook, MD, and J. D. Covert, MD, Fort Worth; M. W. Colgin, MD, and W. S. Witte, MD, Waco, and Wilson's Sanitarium, Memphis. 

Administering 606 was terrifically painful, Nixon writes, and the preparation and administration of the solution for intravenous use a careful ritual. A general anesthetic often was required. "The unrestrained enthusiasm over '606' could not see beyond to the many failures, a good many fatalities, and the necrotic abscesses in multiple glutei muscles of hopeful patients. But withal, this drug was one of the early steps in the chemo-therapy of syphilis." 

Dr. Stout recalled the era as "one of the most dramatic episodes in medical history... the rapid sequence of events leading to the diagnosis and treatment of syphilis." Fascinated by the combination of Wassermann's test and the new drug salvarsan, he had traveled to Berlin in 1910 to study with two of Ehrlich's associates, Julius Citron and Paul Fleischmann. 

With all the thrills of modern discoveries, such as the antibiotics, I think that nothing can equal the excitement which we in our class of American, British, French, and Polish students experienced in seeing this new drug used in the clinics in Berlin, one year after its discovery. It was Ehrlich's belief that one dose would sterilize the entire body of spirochetes. This dose was given intramuscularly, producing large, extremely painful indurated lumps that not only lasted for weeks but subsequently, in some cases, had to be excised. It became my duty on my return home to administer this remedy, and I can remember yet the agonizing pains these produced and also some humorous features such as seeing a
man having to wear an ice bustle for days at a time to keep the pain and inflammation down.

It was a few years later that the intravenous method was introduced in which 250 cc of the diluted drug was given. I recall that the first time I used this method, I forgot to empty the long rubber tube of air and was somewhat startled when the entire tube full of air gurgled into the vein.

Stout reported that in January 1911, he did the first complement-fixation in Texas and "a notice of the fact was published in the Texas State Journal of Medicine by Ira C. Chase, MD, the editor at that time. The test was soon taken up by others in Texas . . ."

The fees for complement-fixation tests were high because of the few persons qualified to make these tests. At first $25 was charged; that was finally graded down to $10 in the early 1920s.

Dr. Stout also addressed the status of tissue pathology during the era.

In the period of which I speak, we diagnosed with sufficient clinical accuracy the definitely benign and malignant tumors, although great changes have been made as to their behavior and their derivation from the embryonic structures from which they arise. Grading of tumors was made popular by Broders in 1916, but was taught by Von Hansemann as early as 1890. He called the process of de-differentiation, "reversion to embryonic type." In those days we called mixed tumors of the salivary glands, endothelioma. Indeed, the endothelioma group was large and was championed by the late James Ewing up until the time of his death. It is now [1948] considered that these tumors are limited to a small group arising chiefly from vascular structures. We regarded the embryonic carcinomas of the testes as sarcomas. Melanomas we knew as melanotic sarcoma, and one of the mistakes which we all made for many years was the mistaking of adenosis of the breast for cancer, thus causing much useless surgery.

Changes in medical education

IN 1910 IN TEMPLE, Henry Charles Hartman, MD, became the first full-time pathologist at Scott and White, leaving in 1913 to succeed Dr. James J. Terrill as professor of pathology at The University of Texas Medical Department in Galveston. In 1926, he would be-
come dean of the school, leaving in 1928 to practice in San Antonio. Having graduated from the Medical Department in 1907 and serving an internship at John Sealy Hospital, 1908–1909, he also had been assistant State Health Officer between 1911 and 1913.

Anne Brindley writes that he was “a gentle, courteous, and scholarly man, with a quiet, but keen sense of humor, deeply loved, and appreciated by his intimates, but scarcely known by many of his colleagues.”

In 1911, Walter H. Moursund, MD, a 1906 graduate of The University of Texas Medical Department, joined Baylor University College of Medicine in Dallas as an assistant in pathology and bacteriology. In 1912, he reported that the study of pathology at the school included general, special and gross pathology; autopsy methods, clinical pathology, bacteriology, hygiene, sanitation, and preventive medicine. General pathology was a second-year course of 240 hours and special and clinical pathology were third-year courses, totaling 240 hours. Dr. Moursund became professor of pathology and bacteriology in 1913, and his department also performed the tissue work, bacteriology and serology for the Texas Baptist Memorial Hospital, later the Baylor University Hospital. Originally, the hospital had no provision for a central laboratory, and, as they had done from the beginning, interns continued to provide most of the laboratory work.

There were other medical advances in Texas in 1913. The cornerstone for the new city hospital, Parkland, was laid, and the Association of American Medical Colleges elected Baylor University College of Medicine into membership. By the 1913–1914 term, all branches of the curriculum at the school were set and comprised anatomy, physiology and pharmacodynamics, chemistry, pharmacology, pathology, bacteriology and hygiene, medicine, surgery, and gynecology and obstetrics.

Clinical facilities were expanded considerably for Baylor students in 1913 and 1914, when Woodlawn Hospital for tuberculosis patients and the new general hospital, Parkland, were completed.

J. H. Black, MD, who would become a state and national leader in pathology and allergy, was prominent in the context of the Southern Methodist University Medical Department in 1912. A letter of
My dear Doctor:

In reply to yours of recent date I beg to say that you have been elected Professor of Pathology, Bacteriology and Physiology. In preparing the budget for our salaried men the following scheme has been suggested:

Anatomy Professor, $600, First Assistant, $400.00, Second Assistant $200.00. Pathology, Bacteriology and Physiology, $2,000.00, first Assistant, $300, three Student Assistants, $300. Chemistry Professor and Assistants, $1,200.00. Pharmaceutical Professor and Assistants $1,000.00. Professor of Histology and Embryology, $320.00, Mr. Ragsdale, $600.00. Kindly let me know if the appropriation for your department is equitable and satisfactory.

If you can suggest a way to make our Chemistry Laboratory (sic) more efficient (sic) I shall be very much pleased. Would it be possible to put the Department of Chemistry and Pharmacy under one Head Professor? and appropriate $2,200.00 to this work? Do you know a good man for the place? Prof. Laney has resigned and Prof. Schrodrt has been offered the place at $100.00 per month. He is not willing to take charge of the Chemical Laboratory also. Do you think Barkley would be satisfactory for another year? If not, name me another better man.

Kindly reply at your earliest convenience in order that matters will be definitely settled. Am glad to learn that you are having a pleasant Summer.

With kindest regards, I am

Yours truly,

[Signature not shown]

Another letter to Dr. Black included, at his request, a statement of expenditures from June 1911 to the date of the letter, February 22, 1913. This letter was addressed to him at the Medical and Pharmaceutical Departments, Southern Methodist University, Dallas, and signed by the bursar. It listed charges (equipment, $6,022.82; supplies, $1,060.22; improvements, $412.32; insurance and expenses, $3,095.68) and faculty. Dr. Black was at the top of the list at $250 per month.

A letter dated August 25, 1914, to Dr. R. S. Hyer indicated that
Dr. Black declined to take over the duties of the dean due to the "retrenchment policy" on the budget. He did, however, offer to continue "any work you may put upon me. The official responsibility, however, I cannot assume." He was to be required to work within $20,000; after much thought, he proposed $24,000. "I am not able to see how any of the department can be run on less than this estimate allows, yet it is four thousand dollars too high."

On April 14, 1913, N. F. Colwell, Secretary of the Council on Medical Education, wrote to Dr. John O. McReynolds, the dean of the Southern Methodist University Medical Department. He enclosed the statement issued by the Joint Committee on Medical Inspection following its recent visit to the school, noting it was only fair "if we did other than present matters as we see them, with the knowledge we have of medical education throughout this country, and the rapidly increasing tendency of State Medical Licensing Boards to withdraw recognition from other than acceptable medical schools."

The inspection report dated April 8, 1913, on the Southern Methodist University Medical Department—originally the Southwestern University Medical College—called for full-time professors in the laboratory and for additional space for expansion of teaching and research. In addition, it specified a minimum expenditure of $15,000 for salaries for competent full-time teachers, an additional $5,000 for maintenance, and an aggregate annual expenditure of at least $20,000 for the laboratory departments.227

Among photographs published in an SMU brochure about this time were those of Dr. Black, listed as vice dean/professor of pathology, physiology, bacteriology, and biology. Dr. Black had started as a histology lecturer at Southwestern University Medical College in 1907, taught histology and bacteriology in 1908, and had been professor of physiology and bacteriology since 1908. He also was a member of the executive committee, and at the time limited his practice to pathology.228

In 1915, the SMU Board of Trustees closed the medical and pharmaceutical departments, commenting that the "pronounced" expenses would be spent to better advantage in the College of Liberal Arts. Although the medical department had now received a Class A grade from the State Board of Medical Examiners, the trust-
ees felt that the entrance requirements were so rigid that only “a few of the many applicants” would be able to enter classes.229

The struggles of Southern Methodist University to develop a medical school reflected those of Baylor, which faced its own financial challenges during this era, but decided to remain in the medical education business whereas SMU opted to focus on liberal arts.

Houston Pathological Society formed

As Medical Education strove for ever higher standards, private Texas pathologists also sought to promote higher ideals and standards of practice. One way to do that was by forming associations, and on March 11, 1914, a group of Houston pathologists formed the Houston Pathological Society. Its purposes were to promote interest in the study of pathology “in all its phases and relations to medicine;” to promote good fellowship; to bring its members into more “friendly relation” and better mutual understanding, and to cooperate with the Harris County Medical Society in upholding the ideals of the medical profession.

Charter members of the society were Drs. E. M. Arnold, C. M. Aves, C. C. Cody, Jr., E. F. Cooke, E. L. Goar, C. C. Green, A. E. Greer, R. F. Herndon, C. W. Hoeflich, E. H. Lancaster, M. W. McMurrey, H. L. McNeil, J. C. Michael, R. H. Moers, I. E. Pritchett, M. B. Stokes, A. E. White, and Martha A. Wood. The group met at the county medical society meeting hall, and in April 1915, Dr. E. F. Cooke was elected president; Dr. E. M. Arnold, vice-president, and Dr. M. B. Stokes, secretary.

Dr. Cooke would play “a very prominent part in developing the specialty of pathology and bringing to it the recognition it deserved.”230

An unspoken purpose of the Houston Pathological Society, according to William T. Hill, MD, of Houston, was to influence the American College of Surgeons, then establishing criteria for hospital accreditation. The effort, he said, led to formation of the Joint Commission on Accreditation of Hospitals, later the Joint Commission on Accreditation of Healthcare Organizations. The College required that a hospital in which an ACS member performed surgery must have a laboratory director whose specialty and training was in clinical or anatomical pathology, or both. Although hospital accreditation was voluntary, for a surgeon to be a fellow of the ACS
meant that hospitals had to comply for the surgeon to operate in their facilities. The requirements set new standards and established pathology as an important specialty.

Migration and expansion

GRADUALLY, MORE and more pathologists were moving into Texas communities. In 1914, A. E. von Toble, MD, arrived at Scott and White, according to the Temple Daily Telegram. He had graduated from Yale, and "because of defective hearing, chose pathology. Likable and popular with hospital employees, he was a 'wit,'" reports Peterson. "His hearing may have been dull but his vision was keen and he saw much that was funny and kept those about him laughing at his comments."232

In 1916, A. C. Broders, Sr., MD—a man who would join Scott and White Hospital in Temple after retiring from the Mayo Clinic in 1951—developed his widely recognized classification system for tumors. Using the grading of tumors, he attempted to relate the histologic appearance of a neoplasm to longevity or prognosis.233

This year also, during the Galveston meeting of the State Medical Association of Texas, women medical students at The University of Texas invited all the women physicians of Texas to an open house at University Hall. The Texas State Journal of Medicine printed forty-nine names of known women physicians, but acknowledged there could be others in the state. On the list were F. May McAdams, Bryan Hospital, Bryan; Claudia Potter, Temple; Martha Wood, Houston, known to have been involved in the specialty of pathology. Others on the list also may have practiced pathology.235

In April 1916, Daniel's Texas Medical Journal devoted its issue to "a demonstration of what women are doing in the practice of medicine in Texas." The contributors were Mary Harper, of San Antonio; Ethel L. Heard and Violet H. Keiller, of Galveston; Minnie L. Maffett, of Dallas; and Ray K. Daily and Martha A. Wood, of Houston."236 Drs. Keiller and Wood were pathologists.

Texas pathologists must have felt a large measure of satisfaction, spiced with a pinch of wry advice, when they read a December 1916 editorial in the Texas State Journal of Medicine. Under the title, "The Community Pathologist," the editor wrote, "Hundreds of communities are without a man who is master of the standard diagnostic methods. Yet every serious case of illness anywhere demands
either a Widal, or a red cell or a leucocyte count, a hemoglobin or
color index estimation, a microscopic urinalysis, a pus or a sputum
examination, a Wassermann, a spinal fluid cell count, or something
of the kind. Without such helps diagnosis is so imperfect that the
physician is more of a comfort than a help to his patients, treatment
is often misdirected, needed medication or operation overlooked
and prognosis veritable guess-work. Every physician without such
aids feels helpless, oppressed and disgusted at times with medical
practice. These methods are the crowning gifts of human wisdom
for the welfare of man."

Reporting that municipal and private laboratories had “sprung
up in the larger cities,” he observed that they were patronized to an
increasing extent, and “did not and could not” meet the daily needs
of general medical practice. Stating that every practitioner must be­
come proficient in simpler procedures, he nevertheless felt that the
community pathologist was the best solution to remaining prob­
lems. Advising that the physician selected by a community must not
compete in general practice, he said, “He must equip himself and his
laboratory for chemical, microscopic, bacteriologic, serologic and
X-ray work and may in addition give anaesthetics or add some spe­
cialty agreeable to all physicians in the community. There is a good
living for him if he has the proper professional co-operation.”

He then urged every county society not having a local clinical
laboratory to consider the subject during its annual meeting in De­

In 1916, socioeconomic topics portended years of future dis­
cussions by the profession of medicine. On the agenda of the State
Medical Association of Texas was social and health insurance, and
cited were practices in England similar to the “condemned custom”
of contract medicine. Two Texas companies, in Dallas and Waco,
already were selling health insurance, but the Board of Councilors
of the State Medical Association of Texas did not approve of their
methods. The advice at the state meeting was to “go slow and
wait.”

There was good news this year for Baylor University College of
Medicine. In 1916, it received an A rating from the AMA Council on
Medical Education.

Worldwide, however, the conditions were bleak, and on April
6, 1917, the U.S. entered World War I. Texas doctors—791 of
them—were commissioned in the Medical Officers Reserve Corps,
National Guard, Regular Army, and Navy. That equalled 14.5 percent of all licensed physicians of the state and 20 percent of the State Medical Association of Texas membership. Because of the large number of volunteers, there was no necessity for a physician draft during World War I.

At the beginning of the 1916–1917 session, Dr. Moursund, then professor of pathology, registrar, and secretary of the faculty at Baylor University College of Medicine, resigned his latter two positions. Having been a member of the Medical Officers Reserve Corps of the United States Army since 1910, he was ordered to active duty in June 1917. Serving first in Dallas as examiner of officer personnel, he then reported in July to Fort Sam Houston as commanding officer of the Eighth Corps Area Laboratory. Marvin DeWitt Bell, MD, of Dallas, who had worked part-time for Dr. Moursund as a senior medical student, took over the laboratory work for Texas Baptist Memorial Sanitarium in 1917.

Section on Pathology abolished

A STRANGE CURVE was thrown Texas pathologists in May 1917. The State Medical Association of Texas voted to abolish the Section on Pathology, the editor of the Texas State Journal of Medicine observing that a “very interesting discussion” on the topic was contained in the Transactions.

Indeed there was. The Committee on Scientific Work had recommended abolishment of both the Sections on Pathology and on Life Insurance. But, more intriguing, the prominent pathologist, Dr. E. F. Cooke of Houston, was somehow involved. During the discussion, he commented, “One of the reasons we had for supporting the Committee on Scientific Work is that the Section on Pathology is absolutely useless.”

As an alternative to the Committee’s proposal, he suggested the section could be combined with an already proposed conglomerate section. A subchairman in pathology, he said, then might gather papers on pathology and distribute them to sections where they best fit (an interesting foreshadowing of superspecialization many years later). Dr. Ira Chase, the secretary of the State Medical Association of Texas, however, felt that sections should be related to a specialty, and that pathologists deeply interested in their topic would not be interested in a section that combined life insurance and state medicine.
The recommendation of the Committee on Scientific Work was accepted, and the Section on Pathology abolished.

A follow-up article in the June 1916 *Texas State Journal of Medicine* reported that the Committee on Scientific Work had recommended that a Section on Roentgenology or x-ray might be established in place of the pathology section, but left further action up to the specialists in the field.244

In Washington, Surgeon General William C. Gorgas reported that the Army Medical Museum, which had nearly 48,000 specimens, was “one of the largest, most instructive, and valuable collections in existence,”245 important information for the field of pathology. With war bearing down on the country, it also became essential for the Army to “make pathologists in a hurry.”246 Eventually, this production, too, would have an impact on the specialty and on communities everywhere.

The status of pathology in the military services of the time could perhaps be glimpsed through the eyes of Dr. James Ewing of Cornell University Medical School and the father of oncology. As during the Civil War, the Army again requested specimens from physicians in the field, and again they were slow in coming. In 1918, the Army sent Dr. Ewing to obtain the specimens, where “it became apparent that the laboratories had been built, equipped and manned chiefly for clinical microscopy,” and not for anatomic pathology.

“There was always an impressive array of test tubes, Wassermann trays, blood counters, urinometers, etc., and a rather superabundant personnel trained in their use, but I found the pathologist at only one of the seven hospitals visited, and he was busily engaged as admitting officer of the hospital.”247

During the war also, the museum would improve its graphic arts, adding photographic, pictorial and plastic to its repertoire. Also used were animated drawings and “stop-motion pictures.” All of these would become tools for pathologists of the future.

A motion picture film prepared by the museum, “Fit to Fight,” was shown in revised form to civilian audiences.248 Showings planned for September or early October were postponed to November because of the ban on public gatherings arising from the “appalling influenza epidemic” in the country. One such showing was to the Rotary Club in Dallas. W. C. Temple, club secretary, wrote:
The first showing, by invitation only, was made to about one hundred and fifty men. We did this to feel out the local situation, and after those invited had witnessed the film, they were unanimous in their opinion that it should be shown to as many males as possible, so we gave another showing of the picture, giving the matter publicity through the local press, at which time the film was shown to something like two thousand men and boys over fifteen years of age. . . . In my opinion this is just such education work as should be carried on throughout this country.

Among films shown to servicemen during this era were those dealing with insects, "Mosquito Eradication," and "Fighting the Cootie."249

More Texans soon were on their way to war, and on February 19, 1918, the Baylor University Base Hospital Unit, under the command of Major M. F. Lott, received orders to report to Fort McPherson, Georgia, preceding service in France.250

In 1918, the Section on Pathology of the State Medical Association of Texas, following the decision of the latter's House of Delegates in 1917, did not meet.251,252 Nevertheless, pathologists did participate in various sections, presenting several papers.253

Fort Worth University School of Medicine in 1911 had affiliated with Texas Christian University, but announced that it would close after the 1917–1918 session. "The higher requirements for medical education, the endowment long expected but not materialized, the strain of war conditions, and future permanency not satisfactorily assured," writes Moursund, were given as reasons for closing. The school then merged with Baylor University College of Medicine, the last of the surviving medical schools in the Dallas area.254

The concept of suffrage for women, a major topic for some time, was condemned this year by the editor of the Texas State Journal of Medicine. He wrote, "The recent act of our Legislature giving woman the right to vote in primary elections marks another step in our vigorous but experimental government . . . women could be admitted to primaries without constitutional amendment. . . . As to the reason behind this step, to our mind there is none. . . . Women have on the average better education but less business and executive
experience than men, so that in the main woman’s suffrage about duplicates the present low average of voting wisdom.” Nevertheless, the editor prophesied that women’s suffrage would lead to the betterment of public health and education.

“We expect to see larger educational appropriations, better schools, better paid teachers, more playgrounds, more parks, more medical examination of school children, better water, better sanitation, better public hospitals, more sanatoria for the tuberculous, more hospitals for crippled children, better care of lying-in-poor, and a better supported State Board of Health.”

Also in 1918, the Texas Legislature ratified the eighteenth amendment to the U.S. Constitution, to be known as the Prohibition Amendment. It would have a powerful influence on the coming decade.

By 1919, the State Medical Association of Texas reported that 929 Texas doctors were in military service, representing one-third of the members of the association and one-fifth of all Texas physicians.

Medical needs of Texans did not stop during World War I. Dr. B. F. Stout, for example, received a poignant plea from a patient:

for doc B. F. Stout spit from m. Smith suffIng with asthma Bin treated by Doc Brown the doc now what he has to do he has made me some vaccane before i am suffIng very much canot get my win and straining coff taring me up got a aulful wheasing cannot lay down at night fair puty well in dry sunshine days from m. Smith.

Following World War I, the Army Medical Museum focused on raising the number of trained pathologists in the country, noting there were insufficient numbers in the military and in civilian life.

“Pathology,” according to Surgeon General Merritte W. Ireland, “is a subject in which a large experience is acquired slowly, and, in spite of efforts to train additional men by the arrangement of special courses of instruction, the number of qualified pathologists could not be greatly increased during the war.” The museum also became the central exchange for pathology specimens of the American and Canadian Sections of the International Association of Medical Museums, work carried on previously by Dr. Maude E. Abbott of McGill University.
After the war

SLOWLY, PRIVATE LABORATORIES were being installed in Texas hospitals. In Houston, B. F. Smith, MD, made a laboratory available to St. Joseph's Hospital, one of the oldest private hospitals in the state. His equipment included a microscope, Bunsen burner and test tubes. The laboratory, however, had no pathologist and no laboratory personnel. Physicians obtained specimens and did the testing themselves, primarily urinalysis and blood counts. “Between 1912 and 1921,” Sister Coffey writes, “the Laboratory was under the supervision of the resident staff and visiting pathologists, notably E. F. Cooke, MD.”

In 1919, a man of immense future influence in Texas pathology, George T. Caldwell, MD, joined Baylor University College of Medicine as professor of pathology and chairman of the department. He was the first scientifically trained and full-time faculty member at the young institution. Arriving at the school in Dallas, he was taken aback at its sparse facilities, and later commented that he had just returned from his honeymoon somewhat impoverished and was forced, for monetary reasons, to stay in Dallas rather than return to Chicago.

Even later, however, he was to admonish a student, “Young man, marble halls do not make the institution. You could study medicine in a barn if you had the brain to study.”

Dr. Caldwell’s new wife, Janet Caldwell, MD, also a pathologist, assisted him in the laboratory, and became director of the laboratory at Baylor University Hospital.

Born December 18, 1882, of Scotch parents in Cabel, Ohio, a small village near Urbana, Ohio, he worked on the farm, and after graduation from high school, taught school from 1900 to 1902. He then attended Ohio State University, graduating in 1910 with a degree in chemistry. He obtained a master’s degree in chemistry, a PhD in pathology under Dr. H. Gideon Wells, and an MD in 1919 from the University of Chicago.

“When the beginning,” Dr. A. O. Severance writes, “Dr. Caldwell made no compromise with honesty, hard work, exactness and accuracy of scientific endeavors. With students, he was demanding in his requirements yet he furnished them with the means of meeting those demands. His associates learned that he would correct one’s errors but this was always done without offense.”
Although he became a giant in early Texas pathology and a highly respected teacher, he had experienced a few difficulties with his teaching approach when he was younger.

"While teaching in his first position," reports Dr. Severance, "he was considered too lenient by the school board so he was not rehired after one year's experience. The next year he reversed his methods by using an iron hand but again he wasn't asked back to teach, he had been too strict. These experiences probably had a lot to do with his way of merging harsh, sometimes cynical criticism with wit, and good humor, and led to some of his priceless anecdotes and to his lasting impression on his students."

While at the University of Chicago, one of his research projects involved trying to find an aniline dye to combat the tubercle bacillus.

"By the end of the project," said Dr. Severance, "most of Dr. Caldwell's colleagues developed active tuberculosis, but Dr. Caldwell himself escaped with only a small tubercle on his finger. However, this experience with this research project quickly prompted him to protect himself whenever he was performing autopsies."

Dr. Caldwell was also selected by Dr. E. H. LeCount's Pathology Service, "a distinct honor at that time," and his work as a coroner's physician proved of great value. He was about to accept a prized internship at Rush Medical College, when Dr. E. H. Cary of Dallas offered him a teaching position in pathology "based on his degrees, his maturity and his teaching ability. All this in spite of being underweight and having glycosuria. Even with three years of extensive treatment for this condition, he still failed a military draft examination for World War I sometime around 1917 to 1918."

"His medical writings were minimal," Dr. Severance reports. "He published twelve articles and left one unpublished manuscript. At least these are all that were furnished to me by his son-in-law, Dr. Ellis... He was pursued by publishers such as Saunders and others to write a well rounded textbook of pathology. He refused. He wrote a scientific paper only if he had time to do a complete study on a rare condition or a very interesting case. It was teaching that he did best and for which he is long remembered."

Dr. Caldwell also became known for his acerbic "sayings" that would be recalled vividly by his students years later.

For instance, he once was testifying in court about a certain case in which he had emphatically stated the cause of death. The
opposing attorney, however, demanded, “Dr. Caldwell, by whose authority have you made that statement?”

Dr. Caldwell replied, “Young man, I speak from no authority. I am authority within myself. I have more letters after my name than you have in your first or second name and I don’t care to know how long it is, and if you doubt any of my statements, just please dispense the court messenger out to my office and bring back the papers that I have written and the books that I have quoted, and my diplomas to prove them.”

The statement won the jury’s support and the case.

A forceful, demanding teacher, Dr. George Caldwell urged his students on with his witty or curt comments, and also would be fondly remembered for his appropriate poetry quotes—a carryover from his days as a common-school teacher. He often chided those he felt were dallying. “You may leave the laboratory,” he might say, “you are wasting the microscope’s time.”

His wily students, however, held their own, quickly spotting and manipulating one of his nervous mannerisms. Upon entering the classroom, Dr. Caldwell typically kicked aside anything in the doorway. Mischievously, the students began planting tiny articles—a wad of paper, a match, a candy bar wrapping—in the doorway, and wagering among themselves about whether he would kick the item away. He almost never failed to do so.262,263

Often teaching by case discussion, he was known to remark to students responding incorrectly to his question, “If I had wanted to be wrong, that is exactly what I would have said.”

A strong administrator, he also recruited able assistants to the department—even when few were available. He elevated the standard of the medical school, and also maintained a continued interest in nursing education.

“Twice in the history of medicine and the community he played a major role,” Dr. Severance writes, “He became the keystone which held Baylor Medical School together after the first World War. Then, in 1943, when Baylor moved to Houston, he performed the incredible task of organizing a new department at Southwestern Medical College in only a few weeks.”

In the fall of 1919, Dr. W. H. Moursund returned to Baylor from active military service, re-joining the faculty as professor of clinical pathology and as pathologist for the Texas Baptist Memorial
Sanitarium. In 1920, he was appointed acting dean of the school. This year, too, the hospital and the Baylor University School of Nursing became known as the Baylor Hospital.

Medical education standards in Texas also were being raised. The University of Texas Medical Department in Galveston, which in 1919 officially became The University of Texas Medical Branch, had raised admission standards, requiring two years of college.

“The end of the World War unleashed new energies, new tendencies and new problems in the life of Texas,” writes Sam Acheson of The Dallas Morning News, recalling that the immediate, post-war boom climaxed in 1919, with swift deflation in 1920. “But the nation righted itself rapidly, due chiefly to the stabilizing influence of the Federal Reserve Banking System. Then began the near decade of steadily mounting prosperity. . . .”

There also were new issues on the horizon in 1920: the filing of income tax forms began, and an event foreshadowing change in medicine—Congress passed the Sheppard-Towner bill, a bill providing grants to states to develop health services for poor mothers and children. In some minds, its passage marked the beginning of the “socialization” of medicine.

Two “prominent visitors” addressed Bexar County Medical Society in 1920: Dr. George Dock and Dr. G. Frank Lydston. Dr. Dock discussed “in a masterly way the subject of Hodgkin’s Disease and allied conditions. Dr. Lydston, who was an ardent advocate of rejuvenation by gonad transplantation, gave his personal experience with several operations on himself. He testified that after each transplantation he noticed improved physical strength, increased mental vigor and a change of his hair from gray to black!”

Malone Duggan, MD, of San Antonio that year initiated roundtable meetings on physiology and surgical pathology in that city. “These gatherings were well attended and were worthwhile,” said Pat Ireland Nixon, observing that Dr. Duggan’s idea likely precipitated the annual January clinics held by Bexar County. There also were plans to build “up a museum, a room in the basement of a home to be utilized” for a course on surgical pathology, Dr. Stout speaking to the advantages to be obtained from the establishment of a museum. Progress on the idea, however, would move slowly.
The Texas State Journal of Medicine in September 1920 carried a collection of articles on advertising that raised the heckles of some readers. In them, the journal editor discussed the merits of a doctor or the medical profession advertising in the lay press; the advertising of medical laboratories, and honest advertising. In headlines, he asked, “Should Doctors Advertise in the Lay Press?” and “Should the Medical Profession Be Advertised in the Lay Press?”

On advertising medical laboratories, the editor wrote:

Criticism has come to us concerning the character of some of the laboratory advertising accepted by medical journals, even of the highest type. Referring to certain ads recently appearing in leading medical journals, a correspondent suggests the following parallel, requesting to know whether we would sell him half-page space in the Journal for the inclusion of such copy:

“DR. W. E. R. GOOD,
Surgery and Gynecology.
Modern equipment—skilled assistants. 25 years of successful surgery. Patients sent to me given the benefit of my latest and best surgical procedure.
Physicians referring cases are given the most courteous consideration.
Information regarding best procedure for sending your patients to me FREE. Appendectomy and Cholecstomy. [suc]
(Kelly-Goode Operation.)
One fee, $100.
Send for fee list.”

While the case appears to parallel the advertising under criticism, there is an important difference. The laboratory and its development constitutes a problem in itself, entirely aside and apart from the practice of medicine or any of its specialties. It is really a business, but based materially on equipment and professional skill. It is recognized that the practice of medicine is also to some extent a business, and certainly also based on equipment and skill; but we believe the reader will grasp the point we are seeking to call attention to. It is easily possible for a laboratory chief to tell the profession just what equipment he has, including skilled technicians and professional supervisors, but it is not possible for a physician to advertise his personal skill or the personal skill of his assistants. There is a vast difference between the two. The work of the laboratory is of such nature that a uniform fee can be estab-
lished, and that the fee is charged to the physician and not to the patient. If all of our laboratory work had to be done by highly educated physicians, the cost of it would be almost prohibitive. As it is, much of the detail work in any modern laboratory catering to the profession at large, is done by technicians, so-called. We would not be willing to accept the verdict of these technicians in every instance, and it becomes necessary for us to understand that they are under the supervision of a physician who is skilled in laboratory work as well as informed in pathology, chemistry or whatever the line involved. In this connection it does not sound so unethical to say that the "Laboratory is directed by one skilled in modern medicine as well as in technical procedures."

The editor did concede there was "a limit to which even a laboratory should go in advertising itself to the medical profession," and that "good taste" would have to be the criterion and not simply medical ethics.

A followup article appeared in the October 1920 issue of the journal:

**Advertising Medical Laboratories (Encore).**—Our editorial on this subject in the September *Journal* has attracted the attention of at least one reader. An eminent pathologist and clinician, [Dr. E. F. Cooke] who has for a number of years conducted a laboratory of clinical pathology in the State, writes us in absolute and positive disagreement. His letter is of a personal nature and we quote only such portions therefrom as will be of interest to our readers:

"I do not for the life of me see wherein the fact that a physician has devoted himself to the study of the various subjects comprised in the generic term 'clinical pathology,' differs in the slightest degree from the fact that another physician has devoted himself to the various subjects that constitute the science and skill of the surgeon, eye, ear, nose and throat specialist, etc., etc. Why is the physician who conducts a laboratory of clinical pathology any more conducting a business, as distinguished from, say, an eye man who, in addition to his own skill, employs a bookkeeper, an office girl, a nurse and an optician?

"Where is the difference between our supposed laboratory man and a firm of doctors, who, in addition to themselves, employ bookkeepers, P. B. X. girls, nurses, and medical assistants? What about the general practitioner who has a partially trained technician in his offices and who has said technician make laboratory
examinations, not only for himself but other doctors, and who charges his own patients a laboratory fee for the work done in his office? Also, the practitioner who employs a more or less trained nurse who does his dressings for him? I do not agree with you that the fee of the laboratory man is charged to the physician. ** The great majority of my fees are charged to the patient, and I think you will find that it is the custom of practically all laboratories to do this when practicable. Of course, in many cases it is not practicable, or would not be courteous, just as an anaesthetist or assistant at an operation, even a grave and dignified consultant, is not infrequently handed his fee through the physician in charge of the case.

“I do not agree that the problems of the laboratory are in any way different from the problems of the profession at large, and I think that such an editorial is capable of doing a great deal of harm, by practically saying to those who undertake to do such work, ‘Go as far as you like, you are not bound by the same ethical considerations that bind gentlemen of the medical profession.’

“I am of the same mind as the correspondent who sent you the parallel advertisement. The run of advertising of the commercial laboratories accepted by the medical press is abominable and damnable. I personally do not care to be placed in their class. I am of the opinion that the commercial laboratory has no more place in medicine than the commercial physician, surgeon, roentgenologist, etc., and it doesn’t help the argument to say that half the profession at the present time is commercial; nor does it help that under the plea of scientific progress and the great benefit to the public they endeavor to conceal their commercialism.

“Brain is all that doctors ever have to sell; some of them do not have much, some have more, but none of them too much. Skill is only brain translated, and modest men do not call attention to their skill in billiards, football, tennis or business. Then, why should doctors ever be expected to step outside the ranks of the modest gentlemen?”

The editor concluded that “our correspondent” had missed the point of the editorial and misconstrued the discussion. He pointed out that the reference in the editorial was to institutions employing “numerous technicians, operating under the more or less direct supervision of physicians who are themselves trained in laboratory technique. The situation would be different in the case of a physician using a laboratory of clinical pathology for the purpose of mak-
ing diagnoses outright and who poses as a consultant. In such a case the practice of medicine in all of its refinement is involved."

Under some conditions, the editor added, the laboratory came "nearer being a business than the practice of the surgeon or any group of physicians presuming to make diagnoses, prescribe and carry out appropriate treatment, in which the judgment of the individual or group is the principal item involved. It must be admitted that the question is somewhat involved and a bit intricate, and not subject to mathematical solution, but we feel that our position will be clear to most of our readers."

Another pertinent and timely topic was cited in the September 1920 Journal: "A VIndication of Vivisection," referred to a course of lectures on animal experimentation, "delivered by those high in authority in the medical and other professions, under the auspices of the Georgetown University School of Medicine, Washington, D.C., March 28 to May 16, 1920." Among the lecturers was Simon Flexner of the Rockefeller Institute for Medical Research. The article stated, "These lectures are of extreme interest to the medical profession and will serve as helpful material in offsetting the argument of those individuals so frequently encountered who are afflicted with the necessary mental slant to bring them in opposition to this very essential method of medical research."

Texas also had public health problems this year, as two Gulf Coast cities were struck by the long tail of the bubonic plague pandemic that started in China in 1894. Dr. Moise D. Levy of Galveston, an internist—and in the tradition of Osler also a pathologist—published articles in the Texas State Journal of Medicine on the situation in Beaumont and Galveston.

As the decade drew to a close, it was apparent that the specialty of pathology was developing rapidly and "in ferment." There were continuing concerns regarding quality assurance and socioeconomic, and there had been disputes and organizational setbacks. It was a time for unity among pathologists, but no organization existed to bring them together.

A few pathologists, however, attending the State Medical Association of Texas annual meeting in 1920, decided to rectify the situation. They made a commitment for the following year in Dallas.