A Pathway to Excellence

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Published by University of Rochester Press

Smoller, Bruce R.
A Pathway to Excellence: The First 100 Years of Pathology and Laboratory Medicine at the University of Rochester School of Medicine and Dentistry, 1921-2020.
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1990s

The decade was characterized by a continued move toward the importance of diagnostic cytopathology, surgical pathology, and clinical pathology, with fewer departmental resources available for extramurally funded research programs. Toward the end of the decade, senior leadership made a concerted effort to move the department back to a heavy focus on research. Dr. Jay Stein, the CEO of the medical center, put much effort into the construction of the Kornberg Research Building and was eager to fill it with extramurally funded investigators.

Cost of a loaf of bread: $0.70
President of the USA: George H. W. Bush
World series winner: Minnesota Twins
Cost of a gallon of gas: $1.14
1992: First hepatitis A vaccine
1996: “Dolly the Sheep” becomes first clone

Chair

In July 1990, Dr. Thomas Bonfiglio was named the fourth chair of the Department of Pathology (see figure 30). Dr. Bonfiglio had an international reputation as a cytopathologist, serving as the president and member of the Executive Committee of the American Society of Cytology and as president of the American Society of Clinical Pathology. Following upon the heels of Dr. Patten, Dr. Bonfiglio’s appointment as chair allowed the department to retain its national reputation for leadership in the field of cytopathology. Dr. Bonfiglio remained as the chair until 1997. He was a very popular and friendly chair, known for socializing with the junior members of the cytopathology unit and for his off-time fishing and coaching his children’s
soccer teams. Dr. Dean Arvan was named the associate chair for clinical affairs and also served as the coordinator of outpatient laboratory services. Dr. Arvan, always a gentleman, could often be seen smoking his pipe in his office as he busily assembled the beginnings of the clinical laboratories empire. Drs. Arvan and Bonfiglio worked with great synergism and collegiality as they represented the department in all interactions with the hospital and the medical school.

Dr. Dean Arvan assumed the title of acting chair in May 1997 (see figure 31). He had spent the previous twenty years as the director of the clinical laboratories. He oversaw huge projects in automation, consolidation, and growth of the laboratories. Dr. Arvan was devoted to his grandchildren, with whom most of his time away from the office was spent. He became the senior associate dean for faculty affairs in 1998 when the dean selected a new chair for the Department of Pathology and Laboratory Medicine.

The end of the decade saw Dr. Steven Spitalnik, who did his residency training in the department, return from the
University of Pennsylvania. In 1998, he became the fifth chair of the department (see figure 32). Dr. Spitalnik was the vice-chair of the Pathology Department in Pennsylvania and came to URMC having built a robust career in transfusion medicine and apheresis. His research interests centered around the immunology of cellular proteins. He was viewed as a charismatic chair and had made many friends during his residency at URMC. Many members of the department remembered him fondly from his days as a resident and were pleased and excited when he arrived as chair. He was charged by the upper administration of the medical center with augmenting the research profile of the department, which had become almost exclusively a clinically oriented department by this time.

Ms. Cheryl Breitenbuecher operated as the department administrator during this time, serving as the chief departmental administrator in charge of the medical school functions. Ms. Sue Vanthof continued in her role as the administrative assistant to the chair and to the department’s
central administration. Mr. Jay Marchwinski was hired by Dr. Arvan to oversee the administration of the clinical laboratories. In this role, he largely took over the administrative responsibilities that Jim Salvatore had been performing for decades, bringing more of a financial bias to the program. Working with Dr. Arvan, Mr. Marchwinski played a pivotal role in the pronounced expansion of the clinical laboratory operations and helped to develop the network of patient service centers. This groundbreaking work changed the complexion of the department in ways that persist up to the present. He was succeeded by Mr. Robert (Bob) Johnson, who remained in this position as the administrator of the clinical laboratories for several years. Mr. Johnson had served in a similar role at the highly successful Genesee Hospital laboratories for many years and became available when that hospital shuttered. As the department’s mission continued to evolve, Mr. Johnson would ultimately assume the role of program administrator, assuming financial and administrative oversight for the clinical, education, and research programs.
Faculty

In 1991, the department boasted a faculty consisting of eight professors, five emeritus professors, ten associate professors, and ten assistant professors. There were twelve additional members of the faculty who had secondary appointments in pathology and thirty-three clinical and adjunct faculty.

The year 1991 was a major one for faculty retirements and symbolically marked the end of an era and the beginning of a new one. Dr. Richter became professor emeritus. Dr. Schenk retired. Dr. Lapham announced his retirement, but continued on while a search for his replacement in neuropathology proceeded. Dr. Eskin also left the department to become the director of neuropathology at the University of Florida.

In 1991, after a short stint at the University of Connecticut, Dr. David Wilbur returned to URMC to serve as the director of cytopathology. He remained in that position until 1998, at which point he relocated to Massachusetts General Hospital for a similar position. His wife, Dr. Margaret Fallon, a member of the department’s surgical pathology faculty, relocated along with him. Dr. Lisa Teot became the director of the cytopathology service in 1998 and remained as such until she left for a similar position at Boston Children’s Hospital in 2001.

Dr. Bonfiglio remained as the director of surgical pathology until he replaced Dr. Patten as chair in 1990, at which point Dr. di Sant’Agnese was named as the new division director. Dr. Joshua Sickel, who had trained in the department, and Dr. David Hicks, who had gone to medical school at URMC and did his pathology training at the University of Pennsylvania, joined the faculty. At this point in his career, Dr. Hicks was devoting most of his professional efforts to understanding and diagnosing aspects of bone pathology. Dr. Andrea Dawson, an expert in breast pathology, also joined the team. Dr. Clara Mesonero became a member of the surgical pathology faculty, as the department strove to keep up with the increasing service workload. Further additions to the faculty in surgical pathology and cytopathology included Drs. Carl McCary, John Kalmar, and Fadi Hatem.
As the clinical pathology services expanded, so did the need for subspecialty experts. Dr. Ray Felgar was hired to oversee the hematopathology service. Dr. Beerelli Seshi joined his division. Dr. Scott Kirkley joined the division of transfusion medicine, providing some relief for Dr. Blumberg, who was the sole member of the division for the previous ten years.

Drs. Listinsky and Dvoretsky left the department during this period.

Dr. Lapham remained as the director of the neuropathology division until his retirement in 1992. Dr. Jim Powers was recruited from Columbia University to assume the role as the director of neuropathology. In 1994, Dr. Powers was named the associate chair for education and Dr. Charles Sparks the associate chair for research. Dr. Arvan was named the associate chair for clinical affairs. When Dr. Arvan became the acting chair in 1997, Dr. Dan Ryan stepped in as the director of the clinical laboratories. In 1999, Dr. Panner announced his retirement. However, due to departmental needs on the renal pathology service, he was convinced to continue his work in the department on a part-time basis, a situation that persisted for the next seventeen years!

Dr. Chawnshang Chang (see figure 33) was recruited as the George Hoyt Whipple Professor of Pathology, expanding the departmental research profile. Dr. Chang was a nationally renowned researcher with interests in the molecular aspects of prostatic carcinogenesis. He was recruited from the University of Wisconsin with the expectation that he would

Figure 33. Chawnshang Chang, the Whipple Professor of Pathology (1995–present)
significantly augment the national profile of departmental research. Dr. Chang brought with him a large contingent of research fellows and negotiated for an increase in the number of PhD students admitted to the departmental program. Dr. Penney retired from the research division during this same year.

In 1997, the department listed eleven professors (including one emeritus), nine associate professors, nine assistant professors, and three clinical assistant professors amongst its ranks. An additional twenty physicians and scientists had secondary appointments in the department. Thirty-nine more physicians had adjunct and clinical appointments as the department spread its affiliations across the region. While the number of adjunct and secondary appointments continued to expand, the number of full-time faculty members remained largely stable throughout the decade, despite the increase in both volume and scope of pathology services being offered.

Dr. Brendan Boyce was recruited to the department toward the end of the decade, bringing with him expertise in anatomic pathology, as well as a large, extramurally funded research program. He had built an international reputation in bone disease at the University of Texas at San Antonio.

Dr. Eric Schenk died suddenly in 1993. He was a beloved member of the faculty for thirty years. In his honor, the department created an annual faculty teaching award that is still awarded to this day.

Space

In 1991–92, the autopsy suite was completely renovated. A high-risk infectious case room with negative pressure ventilation was installed. A shower was added to the suite during this time. Another part of the renovation project included the installation of an elevator in the morgue. This was done at the behest of the CEO, Dr. Jay Stein, who thought it improper for
funeral homes to transport deceased patients to their outside facilities through the main hallway of the hospital.

During this decade, there were significant renovations made to the offices and laboratory space on the first floor near the original dean’s office. This was largely prompted by the recruitment of Dr. Chang; however, the department also saw a major renovation of the neuropathology research laboratory, the S-wing offices, and laboratories.

The chair’s office suite was relocated to its current location in the second floor of the 2100 wing in 1997. Many of the surgical pathology faculty members also moved to this wing at the same time, remaining there until the new surgical pathology suite was constructed several years later.

In 1991, the flow cytometry laboratory was physically separated from the hematology laboratory and moved into the space it currently occupies on the second floor of the 3600 space. Several years thereafter, the molecular pathology unit moved away from the hematology laboratory to the first floor of the 2100 wing, which it occupied until it moved to its current Bailey Road location in 2019.

The departmental spaces on the ground and first floors of the 2100 area were remodeled into state-of-the-art research spaces as part of the plan to enhance the department’s research programs. Drs. Sims’s and Spitalnik’s research programs were the first occupants of the newly designed space. By the end of the decade, Dr. Boyce’s laboratory was also to occupy this space and, later, Drs. Mooney and Lianping Xing would move into this space.

In the latter years of the decade, the hospital invested in a significant renovation of the blood bank, chemistry, and hematology laboratories located on the ground floor.

Clinical

By the start of the 1990s, the organizational structure began to look similar to the one currently in place. Faculty members resided primarily within the divisions of anatomic or clinical
pathology. Within anatomic pathology, there was an autopsy division, a cytopathology division, an anatomic pathology immunopathology laboratory, and a surgical pathology division. Within surgical pathology, there were units allocated to diagnostic electron microscopy, histology, immunohistochemistry, and a special stains laboratory. The neuropathology unit was further subdivided into a section of muscle cytochemistry (which resided in the Department of Neurology). There was also an ophthalmic pathology laboratory peripherally within the department, under the direction of Dr. Steven Searl. The surgical pathology workload grew and became substantially more complex, in part due to a contract with the Lattimore Surgicenter and the start of a liver transplantation service at Strong Memorial Hospital.

Within clinical pathology, there were sections of phlebotomy, a computer facility, specimen receiving, transfusion medicine, hematology, endocrinology, cytogenetics, nephrology, microbiology, clinical chemistry, immunoserology, and reproductive endocrinology. Chemistry was further subdivided into general chemistry, radioimmunoassay, a protein laboratory, and toxicology/drug analysis. Dr. Dan Ryan was named the acting laboratory director when Dr. Arvan moved into the chair’s office. The chemistry and hematology laboratories were combined into a single unit, allowing for improved efficiencies. When the two laboratories were combined, Dr. Charles Sparks was appointed as the medical director. The department also had a cell sorting facility that was overseen by Dr. James F. Leary. In 1991, the department bought its first flow cytometer, greatly expanding its capabilities in hematopathology. In 1994, the blood bank became computerized with the purchase of a Meditech system. This allowed for increased efficiencies, as the laboratory continued to expand with no increase in personnel.

Other laboratories such as cytogenetics, dermatopathology, endocrinology, eye pathology, HLA/tissue typing, immunology, microbiology, nephrology, neuromuscular, and reproductive medicine were still operating primarily in departments other than the Department of Pathology and
Laboratory Medicine and were designated as satellite laboratories. Many of these laboratories would come under the control of the department during Dr. Spitalnik’s time as chair at the end of the decade and extending into the next.

The clinical laboratories developed outreach programs in phlebotomy (what are currently known as patient service centers) and a drug testing program for several regional employers. In 1986, Dr. Kwong had been selected by the American Association of Clinical Chemistry to work on a federal panel regarding drug screening for federal employees. He used this experience to build the pre-employment drug testing program that the department was to oversee for the next fifteen years.

Throughout the decade, the department continued to expand its phlebotomy outreach program to include new blood drawing stations and nursing homes. By 1995, the clinical laboratories were processing 1.8 million tests. The outreach volume increased by 25 percent in 1995–96 alone as this became a major source of the clinical workload and significant revenue stream for the department.

The newly created molecular laboratory consisted of two technologists, and oversight was shared by Drs. Arvan and Ryan. Their main assays were T and B cell gene rearrangement studies. This laboratory functioned as a diagnostic clinical laboratory that also served to augment and support the research endeavors of its medical directors.

The surgical pathology volume had grown to 22,000 cases by 1993. There was a dramatic rise in the 1980s, but the numbers leveled off during much of the 1990s. In 1994, Dr. Bonfiglio hired Ms. Laurie Baxter as the department’s first pathologists’ assistant. Her work helping with specimen preparation and grossing would become invaluable with the explosion in specimen volumes over the next decades. In 1997, the histology laboratory added evening and night shifts.

Autopsy numbers dropped precipitously during this decade. While this was a national trend, it may have been further exacerbated by a highly publicized malpractice suit at
another local hospital in which autopsy findings were blamed for the outcome of the legal settlement. The department continued to have a strong working relationship with the Monroe County Medical Examiner’s Office. Dr. Nicholas Forbes, who was primarily employed by Monroe County, participated in the department’s autopsy service, which was led by Dr. James Powers. This arrangement was especially helpful for the residency training program, which by this time required that residents receive some training in forensic pathology. This relationship continues to the present. There is currently a jointly sponsored ACGME-accredited fellowship training program in forensic pathology.

Cytopathology volumes actually decreased from 90,000 cases in 1993 down to 75,500 by 1995. It was during this era that the cytopathology division participated in an outreach program, providing diagnostic services to the hospitals in the “southern tier” of New York, including Nicholas Noyes, Jones Memorial, and St. James Mercy Hospitals. This program was briefly overseen by Dr. Maureen Lowe, who was one of the cytopathology fellows during this era. Mr. Mike Facik was named the chief supervisor in the division in 1997, a position he held for two decades until his retirement in 2017.

By the early 1990s, the department had a greatly expanded list of clinical and adjunct faculty. More than thirty physicians who populated the American Red Cross, Genesee Hospital, Highland Hospital, the Monroe County Medical Examiner’s Office, Park Ridge Hospital, Rochester General Hospital, and Saint Mary’s Hospital held these appointments as the department expanded its affiliations and influences within the region. The department signed a formal contract to provide pathology services to St. James Mercy Hospital in 1992. Members of the faculty also covered pathology services at Nicholas Noyes Hospital on an ad hoc basis.

The year 1997 saw the arrival of a new clinical information system that provided a major upgrade to clinical pathology services.
Research

Early in the decade, Dr. Leon Wheeless was named as the interim director of a new division of experimental, cellular, and molecular pathology. Drs. Wheeless, Robert Mooney, and Harold Smith had NIH grant support. The NIH funding levels were markedly diminished at this point, due to major funding reductions in the national organization. During the two years from 1989–91, the departmental faculty was responsible for 215 publications and 185 presentations at national meetings. The research extramural funding level for 1990–91 was $964,745.

Mid-decade, the department developed a committee on program and faculty development, headed by Dr. Charles Sparks, who was given the title of associate chair for research. This committee was designed to initiate and promote faculty research throughout the department. A small amount of departmental money was used to fund pilot studies for departmental researchers. Dr. Chang brought a huge program in molecular oncology from Wisconsin and provided the impetus for the expansion and updating of research facilities within the department. His presence greatly increased the departmental research footprint and NIH grant ranking.

This decade saw a continuous increase in extramural funding, annually exceeding one million dollars. In 1997, the department saw a 14 percent increase in this number on account of the recruitment of Dr. Chang into the George Hoyt Whipple Professorship.

Departmental research concentrations included Dr. Chang’s work with molecular mechanisms of prostate cancer, Dr. Hicks’s work on the effects of lead and radiation on bone, Dr. Carl McGary’s work in the biochemical and genetic bases of tumor metastasis, and Janet Sparks’s studies on insulin and Apo B biogenesis in obese rats. Dr. Harold Smith was chosen to chair the first Gordon Research Conference on RNA editing in 1995. Dr. David Penney garnered significant NIH support for his work in lung injury and fibrosis.
Dr. James Leary oversaw large research programs in cell analysis and sorting and the molecular characterization of metastatic breast cells. Dr. Leary was a member of the department from 1978–94, during which time he played a critical role in the development of high-speed flow cytometry. He later moved to the University of Texas at Galveston and then to an endowed professor position at Purdue University.

Dr. Brendan Boyce joined the faculty at the very end of the decade and brought with him a large, extramurally funded research program. His work in osteoclasts blended in well with the nationally renowned program at the Musculoskeletal Research Center. He brought Dr. Lianping Xing along as a research professor. She would later become an independently funded principal investigator. This research collaboration forged a strong relationship between the department and the world-renowned Musculoskeletal Research Center.

Education

Dr. James Powers served as the associate chair for education beginning early in the 1990s. Dr. Leon Metlay became director of the general pathology course for second-year medical students and Dr. Dean Arvan became the residency director. Dr. Arvan served in this role from 1990 to 1994. Thereafter, Dr. Powers assumed this role. Of note is the concern at that time that there was a steadily decreasing interest in pathology as a specialty for American-trained medical graduates. The lack of significant exposure to medical students with the new curriculum was blamed for much of this diminished interest. The requirement for a fifth year of residency training further exacerbated the problem. Realizing the problem, the American Board of Pathology soon reversed the requirement for five years of training in order to be eligible to take the certification exam in pathology in hopes of increasing the numbers of medical students entering the field.

The department had seventeen residents in 1990 and these trainees were recruited from medical schools throughout the
1990s

country and beyond. In 1992, the residency program was officially enlarged from eighteen to twenty-one residents in order to reflect the rapid expansion in specimen volumes. This included two residents who were assigned to the Genesee Hospital, one in anatomic pathology and one in clinical pathology. The department continued to have fifteen to twenty-one residents per year, graduating eight trainees in 1995. Amongst the residents from 1996 to 2000 was Dr. Charles LeVea, who currently serves as the chair of the Department of Pathology at Roswell Park Cancer Center in Buffalo, another of the many URMC faculty and residents who would attain national leadership positions. Dr. Ritu Nayar was one of the cytopathology fellows to train in the program during the 1990s. She would go on to serve as the president of the American Society of Cytopathology and a leader in the field.

The department continued with its strong participation in Dr. Whipple’s year-out program for medical students. Two or three year-out medical student fellows were part of the team for each year throughout most of the decade. Due to gradually diminishing financial support from the medical school, the number of year-out fellows gradually diminished. By the end of the decade and moving forward, the standard became one such fellow per year.

Two clinical post-residency fellowships were established in 1991, both in honor of Dr. Stanley Patten. One was in surgical pathology/cytopathology and the other in transfusion medicine. The department did not seek ACGME accreditation for either of these programs.

The graduate student training program was reorganized under the newly created experimental pathology division. There were seven students in the PhD program in 1990. Over the course of this decade and under the leadership of Dr. Harold Smith, the graduate program grew from seven to twelve students. In 1995, four students received PhDs from the department and another four received master’s degrees. With the arrival of Dr. Chang, the program again nearly doubled in 1997.
New Developments/Achievements

The departments at Strong Memorial Hospital and Highland Hospital were merged into a single administrative entity under the University of Rochester Department of Pathology and Laboratory Medicine in the mid-1990s. This structural change occurred concurrently with the intimate affiliation of the two hospitals at the highest levels. Dr. Bonfiglio and his successors now had responsibility for overseeing the anatomic and clinical pathology laboratories at Highland Hospital, with local medical directorship remaining intact. This created some logistical hurdles but also allowed for improved laboratory standardization.

The Dr. Stanley Patten, Jr. Fellowship Fund was established when Dr. Patten retired. It was used to support post-residency fellowship training programs.

A regional toxicology program was initiated in 1990 under the direction of Dr. Tai Kwong. The coagulation laboratory became fully automated in 1994. Flow cytometry and comprehensive immunohistochemistry were added to the testing platforms offered by the department.

In 1995, the department offered its first molecular T-cell gene rearrangement assays and bcr/abl assays for assisting in the diagnosis of lymphomas and leukemias.

It was during the 1990s that the electron microscopy unit became the first “core laboratory” facility at URMC.