Whether called A.T. Still University of Health Sciences, the American School of Osteopathy, Kirksville College of Osteopathy and Surgery, or Kirksville College of Osteopathic Medicine, A.T. Still University (ATSU) has a long history in scientific research. A primary mission of the University has been and continues to be the attainment of new knowledge through research. Therefore, to understand the research currently underway at ATSU, it is important to understand its research heritage.

THE EARLY YEARS

The research history of ATSU begins with Dr. Andrew Taylor Still. While hunting squirrels as a young man, he studied the muscles, veins, and nerves of the animals. By utilizing the principles of the scientific method, Dr. Still made observations which led to predictions that suggested specific investigations designed to reach a definite conclusion. This adherence to scientific methodology led to the development of the osteopathic profession which focused on the body as a machine that required all its components in place and working together to promote wellness. Subsequently, the American School of Osteopathy (ASO) was founded in 1892, and Dr. Still strongly encouraged his students to pursue new knowledge both in and beyond the classroom.

In his book *Osteopathy Research and Practice*, A.T. Still wrote, “it is my hope and wish that every osteopath will go on and on in search of scientific facts as they relate to the human mechanism and health, and to an ever-extended unfolding of Nature’s truths and law.”

In 1898, ASO faculty member and osteopathic medical student John Littlejohn began the first organized research in the osteopathic profession by studying the effect of stimulation and inhibition from the manipulation of the canine spine. A year later, equipment was ordered for a dedicated research laboratory space. Another student doctor, John Deason, studied the bulbar respiratory impulses in the spinal cord. In 1911, this research was published in the *American Journal of Physiology*, making Dr. Deason the first osteopathic physician to have research results published in a non-osteopathic science journal.
Other early researchers were Dr. Michael Lane, who garnered an international reputation in biological research and showed a correlation between the spleen and immunology; Dr. Virgil Halladay, who pioneered instructions for the flexible spine and wrote a book, *Applied Anatomy of the Spine*, which became a standard for the study of the human spine; and Dr. William Sutherland, who pioneered the field of cranial manipulation.

**COMMITMENT TO RESEARCH**

In 1938, the school president, Dr. George Laughlin, made a financial commitment to promote research. That same year, Dr. J. S. Denslow joined the faculty and ushered in the modern era of research at ATSU. Dr. Denslow believed that in order to validate the benefits of osteopathic medicine researchers had to adhere to the rigorous methodological standards required by prestigious scientific publications; this included asking limited, testable research questions. Therefore, his first study used electromyography (EMG), which converts the electrical activity of skeletal muscle into a visual or sound record, to measure the contraction characteristics of paravertebral muscle. His results indicated objective, measurable EMG changes localized to areas of somatic dysfunction and provided evidence of the efficacy of osteopathic medicine. This study was published in the *Journal of Neurophysiology* in 1941 and marks a significant shift in osteopathic research. Dr. Denslow’s adherence to scientific rigor also resulted in the University receiving its first federally funded grant in 1947.

With the success of Dr. Denslow’s research program, the University began to recruit non-osteopathic scientists. Dr. Irvin Korr joined the faculty in 1945 and initially collaborated with Dr. Denslow. However, he was soon pursuing his own research into the role of the peripheral nervous system in health and disease, which eventually resulted in a publication in the prestigious journal, *Science*, in 1967. Dr. Price Thomas studied various aspects of somatic dysfunction as well as the effects on nervous tissue of sustained stimulation of various neural pathways. Dr. Elliot Hix was very active in kidney physiology and transplantation and was one of the first doctors to successfully transplant kidneys in dogs. Dr. Harry Wright studied the autonomic nervous system and cutaneous circulation. In the early 1960s, two separate endowment funds were established to continue the research momentum; one endowment directly contributed to the construction of the Timken-Burnett research building.

**THE NEXT ERA**

The 1970s saw a new name, Kirksville College of Osteopathic Medicine (KCOM), and a renewed commitment to research. This commitment and new researchers created one of the strongest research programs among the nation’s osteopathic colleges. Most researchers were funded by private or federal agencies and repeatedly published results in prestigious, peer-reviewed journals. Researchers, such as Dr. Michael Patterson, Dr. Krishnakant Pandya, Dr. Richard Cenedella, and Dr. Michael Kuchera, received national and international recognition for their work.
For instance, Dr. Cenedella has received more than thirty consecutive years of funding from the National Institutes of Health for his research on the ocular lens and cataract formation. Contemporary researchers have continued in the ATSU tradition with dedication and enthusiasm for their respective research projects.

THE A.T. STILL RESEARCH INSTITUTE

In 2001, the A.T. Still Research Institute (SRI) was established by President James McGovern, Ph.D., with two initial Centers of Excellence – the Still Osteopathic Research Center and the Center for Healthy Aging Research. The SRI is located at the founding college of osteopathic medicine (KCOM) and is one of only two osteopathic research facilities nationwide that prioritizes research in the field of osteopathic manipulation. The two original centers within the Institute have achieved significant successes.

MISSION

The A.T. Still Research Institute’s mission is to advance patient care and wellness through the development and support of premier osteopathic research.

GOALS

The overall goal of the A.T. Still Research Institute is to contribute to the development of a valid research base for the advancement of the science and art of osteopathic medicine — locally, nationally, and internationally — and to assist, mentor, and nurture students, faculty, and clinicians in applying for and conducting sponsored research projects both intra- and extramurally, thus facilitating a stronger research environment throughout A.T. Still University and the international osteopathic medical community.

The Still Osteopathic Research Center, directed by Dr. Brian Degenhardt, was designated to evaluate and report on the effects of osteopathic diagnostic and therapeutic palpation. Significant advances have been achieved in this research area, developing novel methodologies using the latest technologies to establish reliable, objective, and valid methods to evaluate palpation. Through collaboration with the Department of Orthopedics at Kansas University Medical Center, the evaluation of the relationship of palpatory diagnosis and osteopathic manipulative treatment (OMT) to bone mineral density has been initiated. The first international osteopathic research study was started within this Center, evaluating the reliability of palpation performed by students. A publication in the premier international journal, the Journal of Neuropharmacology, was also achieved through identifying the impact of OMT on levels of circulatory endocannabinoids in humans.
The Center for Healthy Aging Research, under the leadership of geriatrician Dr. Donald Noll, initiated the profession’s most extensive and best supported multicenter osteopathic manipulation study on the elderly, hospitalized pneumonia patient. This project, the Multicenter Osteopathic Pneumonia Study in the Elderly (MOPSE), is nearing completion and will undoubtedly influence osteopathic research and care for years.

Recently, two new centers have been established within the Institute – the Center for Mechanistic Studies and the Center for Research Education. Collaborative efforts with several basic scientists within KCOM have made this expansion possible.

MSc-PhD GRADUATE PROGRAM IN OSTEOPATHIC CLINICAL RESEARCH

In September 2006, the ATSU Board of Trustees approved Dr. John Heard’s proposal for a dual-degree graduate program in osteopathic clinical research. As a leader for research development at ATSU, Dr. Heard is an active proponent in the development and enrichment of the research culture of the University.

With this new graduate program, which will offer a Master of Science degree and a doctoral degree in osteopathic clinical research, the research capabilities of osteopathic physicians worldwide will be expanded as students in this program learn the concepts and practice of clinical research. A further benefit to both the students and ATSU will be the worldwide establishment of external centers of research excellence in selected areas of osteopathic medicine, such as aging and development. By contributing to the global development of competent and respected osteopathic researchers, ATSU will have an essential role in expanding the influence of the osteopathic profession nationally and internationally. Current plans are underway to receive approval for these two degrees from the North Central Association.