Driving Progress and Innovation Through Research
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The Lake Erie College of Osteopathic Medicine (LECOM) has grown to become the largest medical school in the United States. Central to LECOM’s mission\(^1\) are enhanced quality of life and improved health for all of humanity through programs of excellence in education, research, clinical care, and community service. Evidence-based medicine is an integral component of the curricula at LECOM, with emphasis on best practices in patient care and health care delivery, as well as training future health care professionals to critically evaluate and make informed decisions. Toward that goal, students are encouraged to engage in basic science, clinical, or educational research. Research experience prepares students to think critically, hone analytical skills, and develop lifelong, self-directed, and problem-based learning skills. These skills prepare students not only to provide the best patient care, but also to assume leadership roles in future systems of health care that will integrate osteopathic principles.

Faculty research at LECOM spans osteopathic medicine, the basic sciences, and education, highlighting the depth and breadth of research within the osteopathic medical profession. In our contribution to the Engage Initiative in this issue of *The Journal of the American Osteopathic Association (JAOA)*,\(^2\) LECOM faculty describe their research. One study evaluates the role of osteopathic manipulative treatment (OMT) as an adjunctive therapy for respiratory conditions. Chin et al\(^3\) performed a prospective pilot study at 2 hospitals and found that rib-raising was well tolerated in hospitalized patients with asthma, pneumonia, chronic obstructive pulmonary disease, or congestive heart failure.

Polycystic ovary syndrome (PCOS) affects 1 in 10 women of child-bearing age and significantly affects quality of life. Davis et al\(^4\) investigated the role of OMT as a potential therapy because of the role of sympathetic activity in PCOS pathogenesis. Women with PCOS are known to exhibit physiologic signs of sympathetic hyperactivity, and osteopathic structural assessment may allow its early detection before clinical manifestations. Davis et al\(^4\) report on osteopathic indicators of increased sympathetic activity in women with PCOS and speculate on potential therapeutic targets for women with this common hormone disorder.

Although pharmacologic therapy is the standard therapy for women with PCOS, nonpharmacologic therapies may provide improvements. In the review by Speelman,\(^5\) the evidence for lifestyle modification, obesity management, nutritional supplementation, and other nonpharmacologic approaches to the management of symptoms associated with PCOS are presented.

One of the key tenets of osteopathic medicine is the interrelationship between structure and function. For example, in autism spectrum disorder (ASD), understanding the neuroanatomy of the brains of afflicted individuals may provide insights into some of the symptoms that are characteristic of the disorder, such as deafness and hyperacusis. In the review by Smith et al,\(^6\) the evidence implicating auditory dysfunction and structural abnormalities in ASD are evaluated, and the utility of auditory testing to screen for ASD is presented.

LECOM’s emphasis on excellence in education includes a commitment to innovation in medical education. Today’s medical students are largely technologically advanced and prefer digital means of communication and learning.\(^7\) In the study by Hudder et al,\(^8\) the first year of using a web- and mobile application–based learning platform with first- and second-year medical students across the 3 LECOM campuses was evaluated.

In the final installment of the “Still Relevant?” series, Quinn\(^9\) highlights the contributions and career of Jeanette ”Nettie” Bolles, DO, the first female osteopathic physician.
The students and faculty at LECOM are engaged in a broad spectrum of research activities that are integral to its mission to prepare the next generation of successful osteopathic physicians, pharmacists, and dentists. We appreciate the opportunity to share our scholarly work as part of JAOA’s Engage Initiative. (doi:10.7556/jaoa.2019.001)

References


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