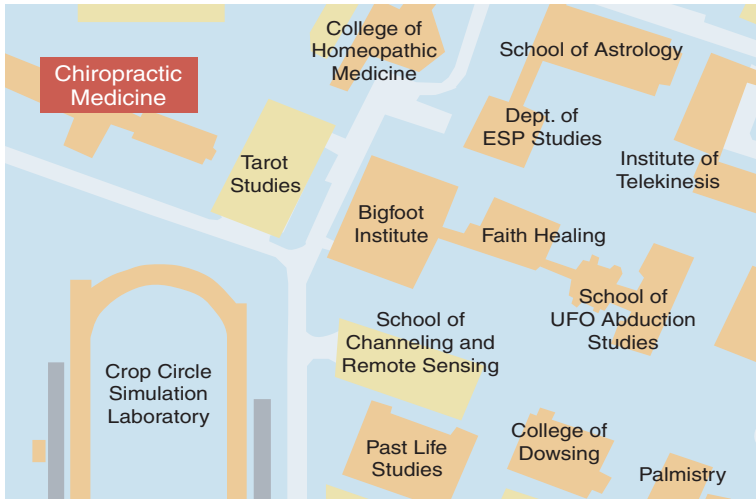
ACADEMIC AFFAIRS

Plan for Chiropractic School Riles Florida Faculty

Faculty members are questioning a plan to make Florida State University (FSU) in Tallahassee the first public U.S. university with a chiropractic medicine school. This week the faculty's graduate policy committee voted to examine the proposal amid concerns that implementing it would sully the university's reputation. But FSU administrators say such a graduate program, if ultimately adopted, would be a valuable addition to health care education and could benefit millions of Americans who suffer from back pain.



Realignment. This fictitious map of FSU's main campus, by chemist Albert Stiegman, has helped rally faculty opposition to a chiropractic school.

"There's a very good reason why no public university offers a degree in chiropractic medicine," says Raymond Bellamy, director of orthopedic surgery at FSU's Pensacola campus and leader of the opposition campaign. "It's because having a chiropractic program would seriously undermine the scientific tradition of any institution." Not so, says FSU provost Larry Abele, an invertebrate morphologist: "A graduate education and research program aimed at moving chiropractic medicine into a scientific and evidence-based realm is certainly worth exploring." The flap is reminiscent of a dispute at York University in Toronto, Canada, when faculty members blocked a plan to offer an undergraduate degree program that would have been affiliated with the Canadian Memorial Chiropractic College (*Science*, 19 February 1999, p. 1099).

Last March, at the urging of a state senator who's also a chiropractor, the Florida legislature authorized $9 million per year to establish such a school. FSU administrators conducted a feasibility study and drew up a proposal for a College of Complementary and Integrative Health that would offer a 5-year Doctor of Chiropractic degree. That proposal, which cited studies that it claimed showed "why more than 15 million Americans use chiropractic care," was to be presented this week to the university's board of trustees and 2 weeks later to the state Board of Governors.

Abele says chiropractic medicine is a legitimate field of study that deserves a place in the academic mainstream. He also says the university will not implement the proposal unless it has the support of the faculty: "The legislation simply authorizes funds for setting up the school. It does not require that we do so." Even so, FSU officials advertised in November for the position of dean of the proposed school.

Richard Nahin, a senior adviser at the National Center for Complementary and Alternative Medicine at the National Institutes of Health, says the popularity of chiropractic care among Americans makes it important to understand whether "chiropractic works, what conditions it may work for, and how it may work. Having a state chiropractic school could be of benefit to the field," he adds, "as that school would probably educate chiropractors using the same scientific, evidence-based approach used to train medical doctors."

None of those arguments is enough to convince neuroscientist Marc Freeman, one of 40 FSU professors—including Nobel Prize–winning chemist Harry Kroto and physicist J. Robert Schrieffer—who have signed a petition against the proposal. Apart from the lack of a scientific basis, he says, the chiropractic school is a threat to FSU's academic independence. "We cannot have the legislature forcing a program on a public university," he says.

–YUDHIJIT BHATTACHARJEE

DEVELOPMENTAL BIOLOGY

Bird Wings Really Are Like Dinosaurs' Hands

Molecular studies have smoothed a wrinkle in the assumption that modern birds had dinosaur ancestors. After tracing the expression of two genes important in the development of digits in wings and other limbs, researchers have concluded that the three digits in bird wings correspond to the three digits in dinosaurs' forelimbs. For years, most embryologists had considered them different. "This may settle a long-standing controversy and will strengthen the therapod [dinosaur]–bird link," says Sankar Chatterjee, a paleontologist at the Museum of Texas Tech University in Lubbock.

Over the past decade, new fossils and phylogenetic analyses have convinced most paleontologists that birds are dinosaurs. A few researchers have refused to accept this evolutionary pathway, and one tenet of their argument has to do with how to count fingers.

Telltale tracers. The initial digits in developing wings arise where *Hoxd13* is expressed (right, dark stain) and *Hoxd12* isn't (left, dark stain).

Terrestrial vertebrates typically have five fingers, numbered 1 to 5. In both dinosaur fossils and birds, just three of these digits are fully developed, a trait that at first glance supports a dinosaur-bird connection.

But dinosaur forelimbs have the first three digits, with stubs for the last two. In contrast, going by some embryological evidence, birds appear to have retained the middle three fingers. In 1997, for example, ornithologist Alan Feduccia, a noted critic of the bird-dinosaur link at the University of North Carolina, Chapel Hill, and a colleague tracked digit ▶

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