

RESEARCH

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list of complaints to Chancellor James Moeser and other top administrators.

The memo, titled "White Paper from Faculty Entrepreneurs at UNC-Chapel Hill," was co-authored by 12 of UNC-CH's most prominent researchers.

It comprised 18 suggested improvements for UNC-CH's method of technology transfer and economic development.

Among the points the white paper made, it suggested:

- establishing a faculty committee on economic development and technology transfer;

- improving direct communications between faculty and the technology development office;

- decreasing significantly the time it takes to complete a licensing agreement with the University.

The review and points brought up by the faculty highlighted inefficiencies in the process that have grown gradually since 1995, they said.

Along the way, the process has changed, but much of the significant change is coming only now.

On Tuesday, Tony Waldrop, vice chancellor for research and economic development, disclosed the creation of the Office of Economic and Business Development.

The new office is designed to provide the commercial industry

with an entry point into campus, he said by telephone from Washington, D.C.

Also, two new economic development committees are in the works and one, the Advisory Committee for the Office of Technology Development, includes three members who co-authored the white paper along with outside consultants.

On April 1, Jesse White, an adjunct professor at UNC-CH and former Clinton administration official, was given the reins of the new office.

Its creation was news to many because the office wasn't slated to be announced for several weeks.

Moeser, also in a telephone interview from Washington, said it was an important step in the transformation of Waldrop's office.

White said he will focus on providing North Carolina communities and businesses with the resources that they need to flourish.

"We'll certainly work closely with the technology development office," he said. "Tech commercialization is a very important part of the economic development."

"My office will be dealing with much broader things than that, helping communities do strategic planning to extend our reach out into the region."

Waldrop noted that the increased dialogue about potential

changes was underway when the white paper was submitted.

Crowell said that he reviewed the paper and agrees with about half of its suggestions but that his office lacks the resources to institute some of them successfully.

"There are some things on there — for example that we should have more funding to file patents. ... That's a resources question, and I think that's true," he said.

Waldrop said that fostering a culture of economic development takes more than just the technology development office.

"This is something that can't be done just by Mark Crowell and OTD and myself," he said. "It needs to be done with the help of faculty on campus."

Faculty Discontent

Joseph DeSimone, one of the leading researchers at UNC-CH, was the catalyst for the white paper and is the most vocal critic of the process and of the technology development culture on campus.

The co-founder of Micell Technologies and BioStent, DeSimone said it has become increasingly difficult to get his technology out of the University.

As a result, DeSimone decided to take all of his medical device research to Synecor, a company specializing in technology transfer.

"They're a very effective team," he said. "The speed of business today

in this field is extraordinary, and I'm not so sure that the University can operate at that speed."

Richard Mailman, co-founder of DarPharma and a co-author of the white paper said meeting with other inventors was the first opportunity to exchange ideas. They all voiced similar frustrations.

Although he hasn't taken the drastic step that DeSimone has in doing research independently of UNC-CH, Mailman said, he's thought about it.

"It's been sometimes frustrating to have things (not) happen as quickly and efficiently as I thought possible," he said. "It certainly would, in many ways, be easier if I didn't have to deal with the University."

But much of the process that created his pharmaceutical company, DarPharma, went through Purdue University since Mailman worked alongside a professor from that school in doing his research.

He said they could have gone through either school to license the technology, but Purdue was more willing to file the patent applications.

Ed Chaney, co-founder of Morphormics, said that when his research spawned a startup company, the technology development office was helpful. Nevertheless, he noted several shortcomings.

"I can only praise the support and assistance we got through OTD," he said. "At the same time, I

don't want to be negative, but because UNC-CH is a late-comer to technology spin-off, we don't have the experience or the internal resources that match other schools like N.C. State (University)."

Steps in the Right Direction

Despite past criticisms, some faculty members are looking optimistically forward at the improvements the changes will make.

Dhiren Thakker, a UNC-CH professor in the School of Pharmacy, now serves on the OTD advisory committee and said he is pleased that administrators took the constructive criticisms that he and the other co-authors offered.

"I feel very comfortable that Vice Chancellor Waldrop and Mark Crowell certainly have taken to heart the suggestions, and they are certainly very serious about maximizing and enhancing the activities of the OTD," he said.

Thakker said the committee only met once before the white paper was submitted and has met two times in the past three months.

He said that while a faculty committee on the subject would still be beneficial, the advisory committee is fulfilling the needs mentioned in the white paper.

"More than a committee, what we really need is faculty entrepreneurs who are really active (to meet with administrators)," he said.

DeSimone said he hopes the

new office and the faculty voice on the advisory committee will rejuvenate the process and set it in the right direction.

"Those are very positive things, and I think they are absolutely in the right direction, and I applaud them," he said.

Ryszard Kole, is another member of the advisory committee who co-authored the white paper and launched a startup company.

He said the document was effective in creating change, which helped clear the air about the office's role.

"The OTD is truly trying to show entrepreneurial spirit and to go out of its way to make it as easy as possible for the faculty and members of the committee to maximize their intellectual property," Kole said.

"The perception among the faculty was that they are not helpful, but they are actually an obstacle, and it clearly seems it's a matter of miscommunication."

Kole said that the lack of resources is still a problem, one that needs to be corrected given the increase in UNC-CH intellectual property.

"Activities are increasing on this campus, but the funding and the staffing for OTD is behind," he said.

"We can be unhappy with things, but there's only so much they can do."

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UNC VENTURES

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\$959 million from the commercialization of technologies developed by faculty and students during the 2002 fiscal year, according to the latest report of the Association of University Technology Managers.

One of the premier institutions in this group, Columbia University in New York, collected \$155 million on its own.

At UNC, the Office of Technology Development functions as the gatekeeper between the business world and the research innovations born at the University every day.

Reflecting a national trend, the office's importance has increased as UNC has emphasized research revenue from grants as a means to reduce the impact of repeated cuts to its state funding.

Last year, the University received \$537 million in federal

funding for various research projects. If this year's grants remain on track, they could top \$600 million, said Tony Waldrop, vice chancellor for research and economic development.

Yet, as the office's importance has grown, so has scrutiny of the processes and results associated with licensing UNC research to the private sector.

Some of the top research faculty submitted a formal list of complaints to Chancellor James Moeser and Waldrop in August.

On Tuesday, Waldrop disclosed plans for a new office that would help ease the process of getting the technology to businesses in North Carolina.

A risky business

Faculty researchers present their innovations to the technology development office in a report of invention or a blueprint for the technology.

The office doesn't file a patent application for just any invention because they can cost anywhere from \$6,000 to \$20,000. An application is filed only if the technology shows commercial potential, said Mark Crowell, director of the technology development office.

The University files about 80 applications per year at a cost of about \$1.5 million annually.

"The OTD has to be very entrepreneurial," said Fran Meyer, former director of the office. "It has to act as a business inside the University, to decide which patents to choose, which to aggressively market."

The patents are then shopped out to private businesses, such as pharmaceutical powerhouse GlaxoSmithKline, who might pay the University to license the technology and put it to use.

Or the University creates a licensee by forming a startup company and taking a stake of usually 5 percent to 12 percent in lieu of a payment.

UNC negotiates about 50 to 70 licenses per year, and averages three to four startup companies.

Crowell said he favors licensing the technology to a North Carolina business or locating the startup in the state as a way to create jobs.

When a new approach to treat diseases such as cancer came across his desk, Crowell's first inclination was to license the technology to a major pharmaceutical company.

His office was within days of licensing the technology to an interested company when the researching professor asked for the University to form the startup Ercole Biotech Inc.

The office didn't bring in as much money as it could have, Crowell said, but it kept the technology in the state and formed a viable small company.

The decision emphasizes the mission of the University and its obligation to the state. "Most of the (research) money comes from the federal government," Meyer said.

"Therefore, all of this activity should be in the best interest of the public good."

But starting a new company can be costly.

"If we were about maximizing revenues, we probably wouldn't do all these startup companies," Crowell said. "Most years we don't bring in as much money as we spend."

Crowell also acknowledged that starting businesses from scratch can be a risky enterprise. "These can flame out really fast," he said. "These are high risk ventures."

UNC startup Oriel Therapeutics, which is trying to develop a platform to deliver medicines more effectively through inhalers, recently hit hard times.

Company officials, who met with the chancellor last fall, were in desperate need of cash to fund operations before an expected venture capital deal. They attempted to secure a short-term loan, using the University's patents as collateral.

If Oriel failed to pay back the loan under such an arrangement, the lender would have owned the University's patents. "We don't ever give up ownership" of UNC's patents, Crowell said.

After initial negotiations failed, a UNC professor with a special interest in Oriel pressured University officials and they came to a complex agreement allowing the loan.

Even though the costs associated with filing patent applications and starting new companies aren't fully covered by the returns, Crowell said they are still worthwhile.

"Money's on the list, but it's not the No. 1 goal," he said. "We want to make sure we are good stewards of the technology."

But with a few solid success stories, UNC could compete with other universities with more developed programs.

"All it takes is one Gatorade."

Contact the Projects Team Editor at jbfrank@unc.edu.

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