

Source: NMSU faces research funding squeeze as competition rises, federal funds decrease

LAS CRUCES — Jeff Arterburn is working to develop a new class of drugs to combat breast cancer.

The New Mexico State University professor's research could lead to drugs for women who don't respond to treatment or if their cancer returns.

Or, if the National Institutes of Health doesn't renew the project's federal funding, the research could stop.

"It's tough times right now. The funding rates for applications going in are at historic low levels," Arterburn said. "It's very, very competitive."

Research and development funds have decreased more than 16 percent at NMSU as federal funding has decreased and nationwide competition for grants and contracts has increased.

For fiscal year 2010, the peak of federal stimulus initiatives, NMSU's sponsored awards expenditures — research and development spending funded by institutions like state or federal agencies — were \$163 million.

The next year, expenditures dropped to \$157 million. It dropped further still in fiscal year 2012 to \$136 million.

Falling federal funds

More than 85 percent of NMSU's research funds comes from federal agencies.

Most universities average close to 70 percent, Vice President for Research Vimal Chaitanya said.

As federal agencies are decreasing funds, NMSU is seeing fewer research expenditures.

"Most universities that I know of are suffering in terms of research dollars," Chaitanya said.

Agriculture funds have especially taken a hit as state and

federal appropriations for the industry's research have "disappeared," Chaitanya said, significantly impacting one of the university's most prominent departments.

Shifting priorities

A shift in federal priorities has also affected research funding at NMSU, Arterburn said.

The National Institutes of Health has funded his research for many years. But the agency has recently shifted its focus to research done at the end of drug development, like clinical trials, rather than the beginning, like testing with cell cultures. That beginning research is termed "basic," Arterburn said.

"Many of the basic research project institutions like NMSU had previously large numbers of grants in the basic sciences, and there's fewer of those being funded now," Arterburn said. "... We are set up more to contribute to the basic side of things."

Arterburn is in the process of re-applying for NIH funding for the project, done jointly with University of New Mexico's Eric Prossnitz. Arterburn's two proposals for his half of the research are \$847,000 each.

"I feel confident that we're advancing the best science, ... but it's a very challenging time," he said. "I know of labs shutting down because of money."

Increased competition

Faculty proposals to request research funds are also down at NMSU, from more than 800 in fiscal year 2010 to about 660 in fiscal year 2012.

Some grants established new rules limiting how many research proposals can come from one university, Chaitanya said. That leads to a university vetting process before the proposals even reach the funding organizations, he said.

The amount proposals requested has also dropped, from more than \$300 million in fiscal year 2011 to \$225 million in fiscal year 2012.

Meanwhile, nationwide, more people are applying for research funds, NMSU officials said.

"The competition has gotten stiffer, and that's impacted every university," new Provost Dan Howard said. "That's an environment that's not going to change."

Improving NMSU's research profile is one of his primary goals.

"The research enterprise (is) not as strong as it used to be, and we need to make it stronger," he said.

Some of NMSU's peer institutions have seen research expenditures rise in the past few years.

The University of New Mexico spent \$134.2 million in fiscal year 2011, up from about \$120 million in 2010 and \$115 million in 2009.

Texas Tech University's funds have increased from \$85.9 million in fiscal year 2009 to \$142.7 million in fiscal year 2011.

Both universities are larger than NMSU, however, and have medical schools.

"This institution has had more success in that area (of research) than any I can think of," former Interim President Manuel Pacheco said in May.

NMSU has been described as a "research university on steroids," he said.

Diversifying funds

So far, NMSU isn't falling in research proposals for the fiscal 2013 year, Chaitanya said.

The university can look to industry funding, group proposals or international collaboration to replace its declining research dollars, NMSU officials say.

"We have to be more nimble," Howard said. "We need to expand the funding base of the institution."

Industry-funded research in pharmaceuticals has raised concerns of conflicts of interest, but Chaitanya and Arterburn said such funding at the university wouldn't present those same conflicts.

NMSU carefully examines funding and grants, both men said, meaning faculty work wouldn't be open for influence by industries.

"There's very little way that that could have a negative influence," Arterburn said.

Some grants and contracts require matching from the state or university. No match means no proposals, requiring a prioritization of research, Chaitanya told the regents in December.

Building state-of-the-art research facilities and implementing incentives for faculty to submit research proposals could also help turn the tide, Chaitanya said.

NMSU could also encourage departments that aren't traditionally research-focused, like the College of Education, to increase their research focus, he said.

"I think we will ride out this bad patch," Chaitanya said. "In the next two to three years, with consistent leadership at the top and a research focus,

I think we can get there (to 2010 levels). It's going to take a lot of thinking, a lot of hard work, a lot of self analysis."

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Research expenditures at NMSU

NMSU's sponsored award expenditures

Fiscal year 2012: \$136 million

FY 2011: \$156 million

FY 2010: \$163 million

FY 2009: \$155 million

FY 2008: \$141 million