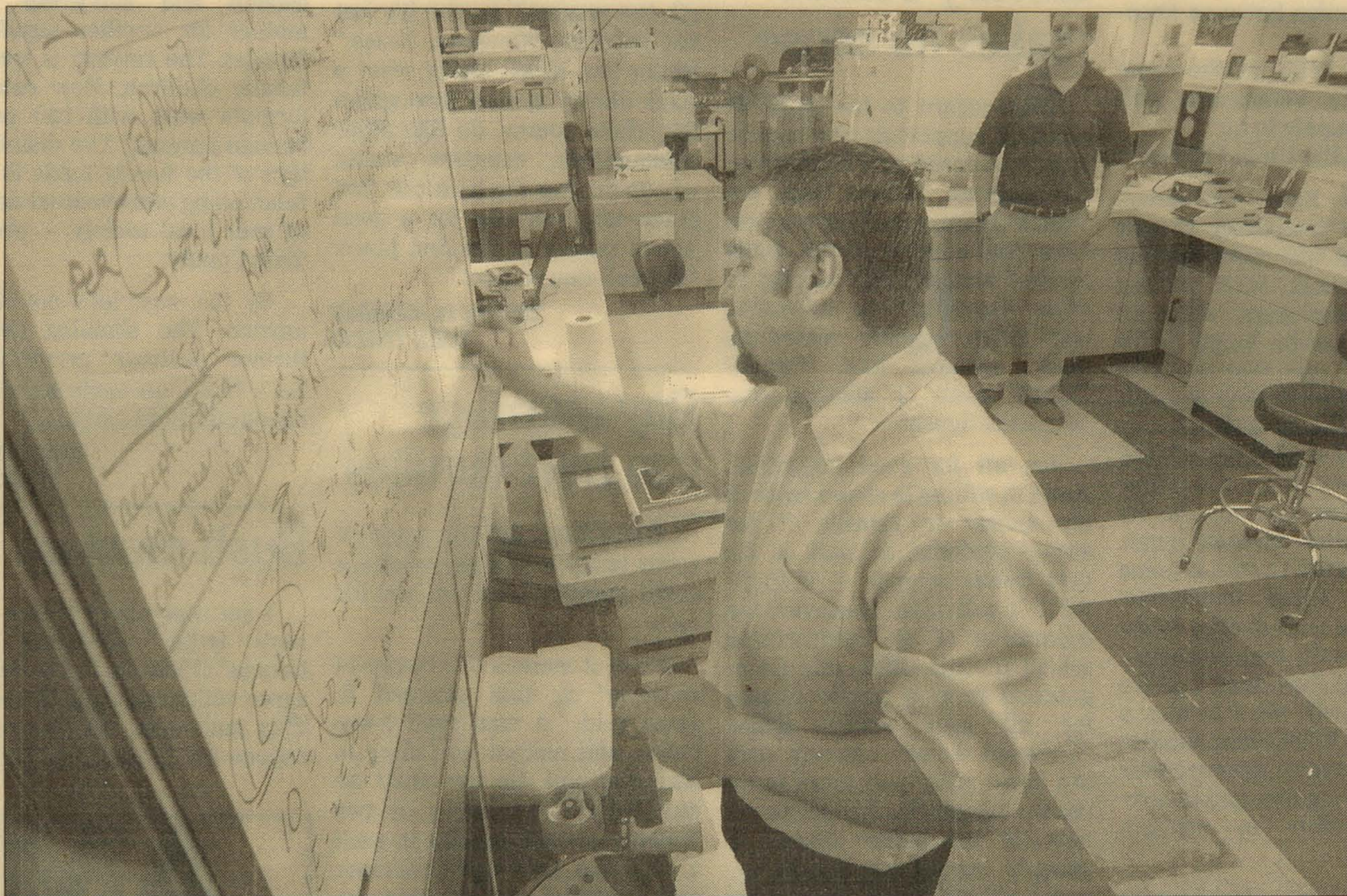


BUSINESS

'On paper it looks brilliant, but we still have to prove it, though, entirely. And if it does work, it would change the way drugs are discovered, literally.'

TOM CALTAGIRONE, PRESIDENT AND FOUNDER, APTAGEN



DAILY RECORD / SUNDAY NEWS — PAUL KUEHNEL

Tom Caltagirone, president and founder of Aptagen, explains that the start-up biotech company's goal is to target stroke and brain cancer.

Forget the test tube

■ **Inconspicuous Jacobus biotech company has a patent pending on a new drug-discovery process.**

By **ANDRÉA MARIA CECIL**
Daily Record/Sunday News

Tom Caltagirone laughed when asked why his company is located in Jacobus.

"This is by no means the biotech corridor," he said. "Normally, for biotech it's either Boston or Maryland or San Diego or the California area."

Aptagen, the company 36-year-old Caltagirone incorporated in October 2004, has its headquarters on North Main Street in a quiet area of southern York County.

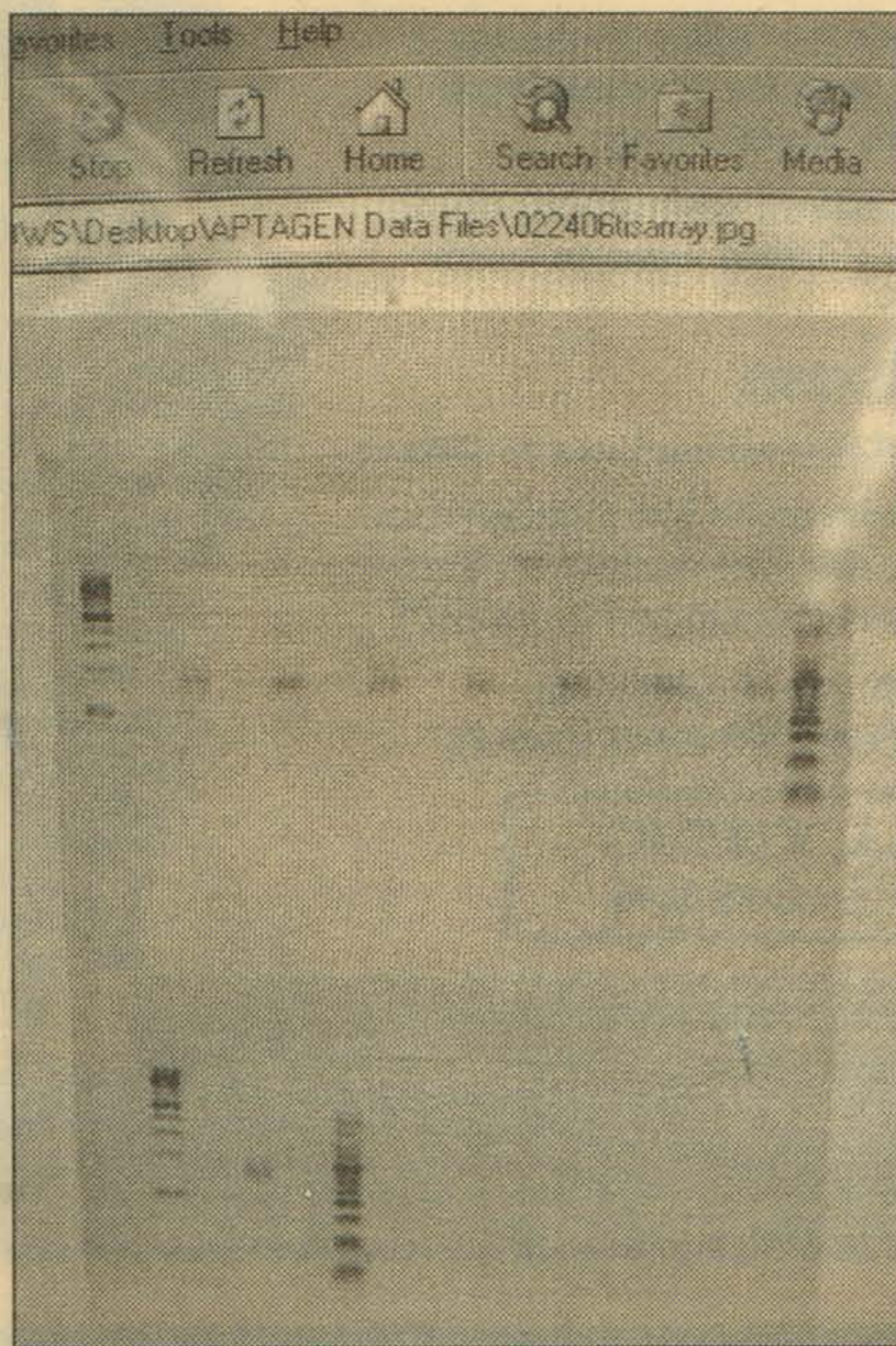
The firm's headquarters take up fewer than 1,000 square feet but contain all the machines one would expect a scientist to have — including a centrifuge, a freezer that gets as cold as 150 degrees below zero Celsius, a DNA sequencer, a chemical fume hood, an incubator, a microscope and a pH meter.

Aptagen is an early-stage biotechnology company that specializes in the development of what it's calling aptabodies.

Aptabodies are similar to antibodies but are a new type of molecule that have a different chemical nature, Caltagirone said.

The firm's goal is to develop promising drugs to fight a variety of diseases, including various forms of cancer, stroke, and bacterial and viral infections.

The aptabodies — and the method



DAILY RECORD / SUNDAY NEWS — PAUL KUEHNEL

Aptagen maps DNA in its drug-discovery process.

to develop them — are patent pending and are a novel idea in biotech, the third-largest industry in the country.

"Normally, everything is done in test tubes and any hits are (then) tested on animals," Caltagirone said. "Our approach is to bypass test tubes and go straight to the (diseased) animal. It eliminates the time and cost associated with drug discovery."

Typically, one in 1,000 drugs make it to human clinical trials, according to Aptagen. The cost of drug discovery is usually about \$1 billion and takes about six years.

"No one has ever done this before, so we're charting new ground here," Caltagirone said. "It's taking the technology one step further than it is right

now in the field. It allows us to develop drugs ... at a much faster pace and less of a cost than the conventional approach."

Once Aptagen comes up with a drug, it can approach large pharmaceutical companies to test the drug in human clinical trials.

It would be roughly five years before Aptagen partners with a pharmaceutical company to test drugs in human clinical trials, he said.

"Normally in this business, it's anywhere from seven to 15 years. I'm confident. I'm actually very confident in this technology, but, with science, you never know until you prove the technology," Caltagirone said. "On paper it looks brilliant, but we still have to prove it, though, entirely. And if it does work, it would change the way drugs are discovered, literally."

Until then, there's no money to be made.

"I'm funding it entirely myself," said the York native. "I am looking for investors to take us to the next step."

He added, with a laugh, "We're in debt."

The Technology Council of Central Pennsylvania is working to get Aptagen partnered with several companies with similar interests, said Kelly Lewis, president and chief executive officer.

"That's kind of how we like to operate — get some information on companies and find out if there's other folks in the region that can help partner with them ... and with Aptagen, help get them some research capabilities, research funding to get them over the goal line to their discovery mode," Lewis said.

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