

2008 [that includes an annual payment of \$6.5 million], and we are living up to that contract," says Amgen spokesperson Jeff Richardson. "We're ending our affiliation with them, but if someone were to pay me until 2008, I would think they were still supporting me."

The institute's director, molecular geneticist Tak Mak, says that he's grateful for Amgen's support but that "we are happy to be again on our own, concentrating on the science." Although he says that the settlement "is not consistent" with Amgen's previous level of support, he acknowledges that there's little he can do about it: "If you're the boss, you can call the shots."

The institute is now part of the new Advanced Medical Discovery Institute within Toronto's University Health Network. UHN research vice president Christopher Paige says the settlement buys the university enough "breathing room" between now and 2008 to raise an estimated \$65 million needed to maintain the institute's current level of operations, including a half-dozen or so principal investigators and as many as 90 technicians, students, and support staff. One investigator, Josef Penninger, had previously announced that he was moving his lab to his native Austria.

Both parties agree on one thing: The new setup gives scientists more freedom to pursue their research and disseminate the results. "Having those researchers in a university setting doing proprietary research did not allow them to speak with their colleagues about what they were doing," says Richardson. "Now they have academic freedom, and they really didn't have that before."

Mak says that he's relieved to be shedding 10 years of corporate ties and that having UHN own the intellectual property rights to any discoveries "allows us to be more free in terms of giving away animals and reagents, without six lawyers signing off." Mak has been criticized in the past by colleagues for being unresponsive to such requests (*Science*, 23 June 1995, p. 1715). —WAYNE KONDRÓ
Wayne Kondro writes from Ottawa.

EXOPLANETS

Jupiter's Brother Joins the Family

Last week American astronomers announced the discovery of a new yet familiar-looking planetary system—not "a sibling of the solar system," but "a first cousin." The distant relation made front-page news, but in the hour before the Americans' televised press conference got under way at NASA headquarters, European astronomers were discreetly spreading the word via e-mail that they had uncovered a nearer relation: an

	The Jupiters		
	55 Cancri's	HD 190360's	Jupiter
Minimum mass	4.3 x Jupiter's	1.1 x Jupiter's	1.0
Mean orbital distance	6.0 AU	3.7 AU	5.2 AU
Eccentricity	0.16	less than 0.1	0.05

Do the numbers. When the two Jupiter-like planets are compared, the one orbiting HD 190360 announced this week is closer to Jupiter in mass and orbital eccentricity.

exoplanet that more closely resembles Jupiter in a planetary system far more like our own, "a younger brother" of Jupiter, as one of the discoverers put it. The find marks the true beginning of an expected string of discoveries of planetary systems in which Earth-like planets might be hiding.

Both discoveries came as astronomers searched for telltale stellar wobbling, a sign that the gravity of a massive unseen planet is tugging the parent star back and forth. Before last week, 76 exoplanets had been discovered, but none resembled Jupiter, the solar system's most massive planet. All either were "hot Jupiters" orbiting closer to their stars than Mercury does to the sun or were on wildly elongated orbits.

Last week astronomer Geoffrey Marcy of the University of California, Berkeley, and his colleagues announced their "near analog to our Jupiter" (*Science*, 14 June, p. 1951). It is a body at least 4.3 times the mass of Jupiter. It orbits the star 55 Cancri at a distance of 6.0 times Earth's orbital distance (6.0 astronomical units, or AU). And it is in an orbit "just a little out of round," having an eccentricity of 0.16 (Jupiter's eccentricity is 0.05).

Unfortunately, planet 55 Cancri d hangs out in a distinctly un-Jovian neighborhood. The American team had already found one hot Jupiter orbiting 55 Cancri and announced a second last week. Like all hot Jupiters, these must have formed farther out and drifted inward, driving everything before them into the star and vaporizing any inner, Earth-like planets. "It's not like our solar system," says exoplanet searcher William Cochran of the University of Texas, Austin, "which is what people are looking for."

Now astronomer Michel Mayor of the Geneva Observatory in Sauverny, Switzerland, and his colleagues believe they have discovered a true Jupiter orbiting the star HD 190360. The new planet, which they

formally announced this week at a meeting* in Washington, D.C., has a minimum mass just 1.1 times that of Jupiter and orbits at 3.7 AU. In the solar system, that would put it outside Mars between the asteroid belt and Jupiter. And its eccentricity is less than 0.1, indistinguishable from Jupiter's. Best of all, Mayor's HD 190360 has no hot Jupiters. In

Doppler-shift observations, its planetary system looks nearly identical to what alien observers would see if they looked at ours. Astronomers are welcoming both discoveries as the vanguard of a coming Jupiter bonanza. "I think it's great," says astronomer David Trilling of the University of Pennsylvania in Philadelphia. "In the next few years, there will be dozens and dozens more."

—RICHARD A. KERR

* "Scientific Frontiers in Research on Extrasolar Planets," 18 to 21 June, sponsored by NASA and the Carnegie Institution of Washington.

JAPAN

New Program to Aid Smaller Universities

TOKYO—Like most of Japan's smaller universities, Fukui University doesn't have a big research budget. But a new program to help universities build up strengths in specific areas will give scientists there a chance to compete against the scientific heavyweights at Tokyo, Kyoto, and Tohoku universities for precious government funding.

Last week the Ministry of Education launched its 21st Century Centers of Excellence program and invited all universities, public and private, to compete. The \$160-million-a-year program will concentrate resources, in contrast to Japan's traditional approach of scattering small grants across the academic research enterprise. Another novel wrinkle is that applications must be submitted by the president of the university, rather than by a research group or individual scientist. The idea is to ensure the institution's commitment to the project. "From now on, universities will have to begin thinking strategically," says Yoshihide Akatsuka of the ministry's University Reform Office.

The ministry hopes to fund 20 or so centers in each of five areas: life sciences,