

VP says research underestimated

U of A research 'world-class'

by Bill Doskoch

The university is making world class contributions in various high technology endeavors, but its ability to continue will depend on a strong commitment to fundamental research and scholarship.

This is the view of Dr. J.G. Kaplan, VP Research for the University.

Kaplan prefers the term "Advanced Technology" which he defines as "the application of very advanced techniques of physics, chemistry, engineering and the biosciences to problems of production."

He says telecommunications (specifically fibre optics), microelectronics, certain biotechnologies in medicine and agriculture, and forest genetics are some areas in which the University is performing world class research.

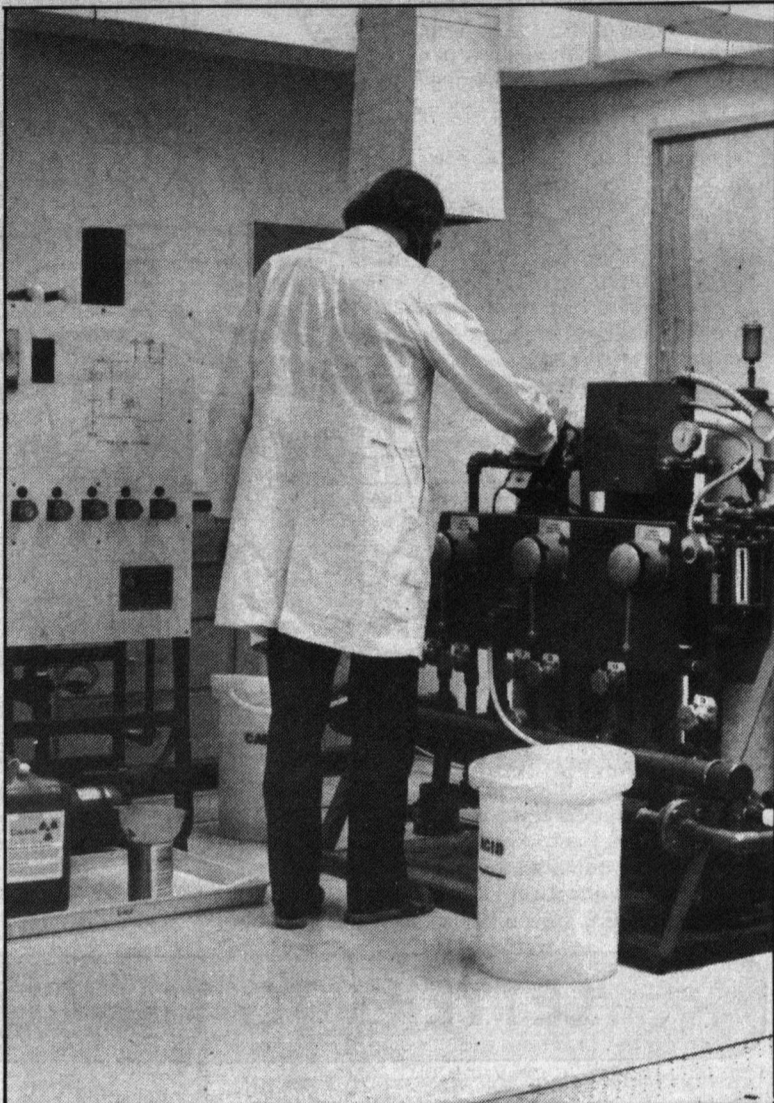
Companies such as Bell Northern Research located in Edmonton because of the University, and several high tech companies in the city have been formed and staffed by U of A trained scientists, said Kaplan.

When asked about the impact of research on the education of undergraduates, Kaplan said most undergrads "tragically underestimate the importance of research to their own futures."

He said, "I was aghast at the suggestion of the SU official who suggested publically a few weeks ago that the university should channel more resources into teaching by cutting back on its research activity. That is a sure recipe for suicide."

To improve undergrad education Kaplan stated "no student should leave this place with a diploma unless he has personal experience in carrying out some independent scholarly activity or research."

Kaplan added "the best way to insure undergrads are being taught state of the art courses, in the humanities as well as the sciences, is by having scholars who are active themselves."



Research at the Slowpoke reactor is one area that could benefit from a stronger university commitment to fundamental research and scholarships.

He felt that two problems which could become serious in the near future were the "greying" of the academic staff and inadequate funds to hire bright young scholars and teachers.

According to Kaplan, if the University's proposal for two new Alberta Heritage Foundations to fund research in the sciences and humanities are enacted by the provincial government, then the latter problem would be solved.

With regards to the linkage of employment opportunities and research, Kaplan said "the reputation of the University, which is what gets jobs for its graduates, depends to a very large extent on its research reputation," and added that "undergraduates better wake up to this and fast."

Armit said that contractual agreements with over 50 organizations ranging from National Defence Canada to the Dene Nation have been established.

U improves tech transfer

by Bill Doskoch

Can you say in two words or less what keeps a university from becoming a "ivory tower"?

The answer is technology transfer. Technology transfer can be defined in two ways.

One is when a business uses technology generated outside the business for economic benefit.

From the University's standpoint, it is the movement of technology off campus and into industry and government, often through intermediaries such as the Alberta Research Council.

Converting the latter definition into action is the job of Bob Armit, Director of the Office of Research Services.

To understand the problems involved, Armit said one must understand the five basic stages involved in developing a technology.

They are: 1. Basic research, 2. Applied research, 3. Design and engineering, 4. Commercialization and 5. Actual production and marketing of a product.

The University's strengths are in the first two areas Armit said. The private sector usually takes over at stage three.

However, there is usually a lag time between the applied research stage and the design and commercialization stages and it is this problem the University is concentrating on.

Some of the ways the University is working to reduce the lag include the publication of research results, joint ventures with com-

panies, research centres or institutes (such as the Alberta Microelectronics Center), guest companies, research contracts and so on.

He also pointed out that "one of our most important methods of technology transfer is through our students and graduates."

Math wits matched

by Suzette C. Chan

Undergraduate math whizzes will have the opportunity to flaunt their integrals tomorrow in the Undergraduate Mathematics Contest sponsored by the Department of Mathematics

Professor Murray Klamkin says he started the contest when he began teaching at the U of A in 1976 "to encourage interest in mathematics."

Klamkin has organized similar contests at Waterloo and Brooklyn Polytechnical.

While the contest is open to all undergrads, students wishing to join the U of A math team competition for U.S. and Canadian post-secondary institutions must write the U of A contest as trial.

"Putnam gives cash prizes like \$500 for each top five finishers and \$300 for each student in the next five and so on," Klamkin says. "In

addition, the student's department also gets prizes for \$5000, \$3000 or \$1000.

He says, "if you do well at Putnam, you have a good shot at a scholarship."

Klamkin says the U of A team generally scores well. "Last year we came in 12th out of 200-odd teams."

Prizes for tomorrow's contest will be more modest than those given out at Putnam, but the competition will be designed to challenge the most brilliant undergraduate math mind. Samples of the problems given in the contest are posted on the Mathematics Contest Bulletin Board on the 6th floor of CAB.

There is no deadline for registration, but participants must be regularly enrolled undergraduates.

For more information contact Dr. Klamkin at 697 CAB, 432-4786.



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