

# Gene Probe Lab new Dal project

by Lori Cook

The recent establishment of a Gene Probe Laboratory at Dalhousie could gain Nova Scotia world leadership in the application of advanced genetic engineering technology to fisheries and aquaculture.

The techniques are based on the fact that the genetic component of an animal's individuality, sex, growth, development and behaviour patterns are all encoded in long molecules of DNA. The lab will use a new molecular biological technique called gene, or DNA, probes to identify specific qualities of individuals and populations of marine species.

To make a probe, the lab labels a DNA molecule by making it radioactive. The probe is then mixed with random fragments from some other organism, where it finds and then binds to its complementary molecule. The pair of molecules can then be isolated for further study.

The Dalhousie Gene Probe Lab will be generally concerned with applications to fisheries industry and aquaculture. Probes will be developed for fish and shellfish to provide genetic tags for families and individuals. They will permit the use of new and powerful selection and hybridization procedures in aquaculture. They will also allow aquatic seedstock producers to mark and identify them to

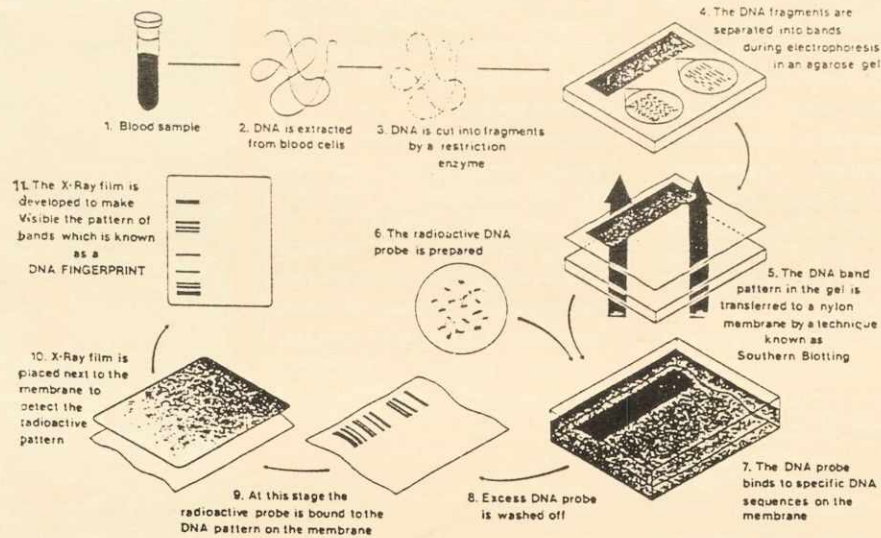
protect their proprietary breeders' rights. This could also lead to the resolution of some inshore / off-shore fisheries disputes through an improved ability to identify certain stocks.

material to determine sex, pedigree and migration patterns.

Investigators involved in cases of murder, rape, or disputed paternity have been able to march DNA fragments from minute

The RCMP have expressed an interest in the Gene Probe Lab. Wright said he has had "a number of conversations with people who work at the Crime Lab."

THE DNA FINGERPRINTING PROCESS



Other uses of the gene probe technique have been developed in North America and Britain. The process of developing probes that bind to the unique sequences of DNA carried by bacteria and viruses in host tissue is also the basis for new procedures for detecting the presence of the AIDS virus.

During the international protest against whale hunts, Japan claimed its hunts were necessary for scientific research. With the gene probe techniques, slaughter is unnecessary. A biopsy of skin, usually obtained by bow and arrow, contains sufficient genetic

quantities of physical evidence such as blood, semen, or hair. "Such evidence has been used successfully as the basis of convictions in Britain and the United States," said Jonathan Wright, a microbiologist with Dalhousie who will be involved in the running of the Gene Probe Lab. "DNA could even be taken out of the mummies in Egypt and used to determine whether incest was a regular practice of the Pharaohs." The genetic material of DNA is very stable. Samples can be used days, weeks, or years after they are taken.

A core group of three Biology faculty members will be responsible for supervising the operation of the Lab. Dr. Roger Doyle, who set out the proposal for the Lab, will head the group including Wright and Eleutherios Zouros. There are "all sorts of levels of players" involved in the project, said Wright.

The laboratory involves a substantial investment in equipment: ultracentrifuges and electrophoretic apparatus for

separating fragments of DNA, synthesizing and sequencing equipment for reading and manufacturing probes and target molecules, materials and equipment for dealing with radioactivity. The rooms for the Lab are already set aside in the Life Sciences Building, and some of the experiments have already begun.

The funds for this project are coming from a variety of sources. The province of Nova Scotia has recently awarded \$2.8 million, to be distributed to the Gene Probe Lab over four years under its Centres for Excellence Program. The requirement, which the Lab meets, was that the research be transferable to industry. Also on this basis of Technology Transfer, the project is under consideration for funds from the federal Networks of Centres of Excellence program.

According to Robert Fournier, Vice-President of Research at Dalhousie, the program involves universities, institutions, and industries across Canada and has approximately \$240 million available from which to grant funds. Dalhousie is applying for \$25 - 35 million for technological research in cooperation with a group of universities called OPEN (Ocean Production Enhancement Network). The Gene Probe Lab will be part of this initiative for enhancement of ocean production.

## Discrimination at UBC?

# Gay Games refused

by Laura J. May

VANCOUVER (CUP) — The University of British Columbia's Board of Governors is refusing to allow the 1990 international gay athletic games on campus.

"(It's) an issue of the community identifying (homosexuality) with the University of British Columbia. Even the United Church can't come to grips with it. One doesn't want to have an informal identity with an issue of such controversy," said UBC President David Strangway.

Strangway said he doesn't understand why gay games are necessary when sports are open to anyone regardless of sexual orientation.

"If it's a political statement they're trying to make, I don't think the university is the place to make political statements," he said.

"Why would one not participate in the normal men's athletics and the normal women's athletics? Why should we become involved in a third variant of

activities?"

Kenneth Smith, the director of Celebration '90: Gay Games III and Cultural Festival, refused comment.

The first two gay games were held in San Francisco in 1982 and 1984. Organizers first requested — and were denied — use of UBC facilities in December 1986. Officials expect 8000 spectators and 5000 athletes from around the world to take part in over 20 sports for the 1990 edition.

In a letter to the student council earlier this month, Smith said "this situation appears to be nothing more than discrimination. We consider this extremely serious."

But Strangway denies UBC is discriminating against homosexuals.

"UBC is in no way a discriminatory institution; everyone's admitted. I am not against gays and lesbians. If anyone came to me and said they could not get into (UBC's) activities because they're gay and lesbian, I'd be

very angry. We'd make sure they did get in."

Strangway added that even if UBC agreed to provide facilities for the games, the conference centre is too small.

Student Board of Governors representative Bob Seeman denied space was an important part of the decision.

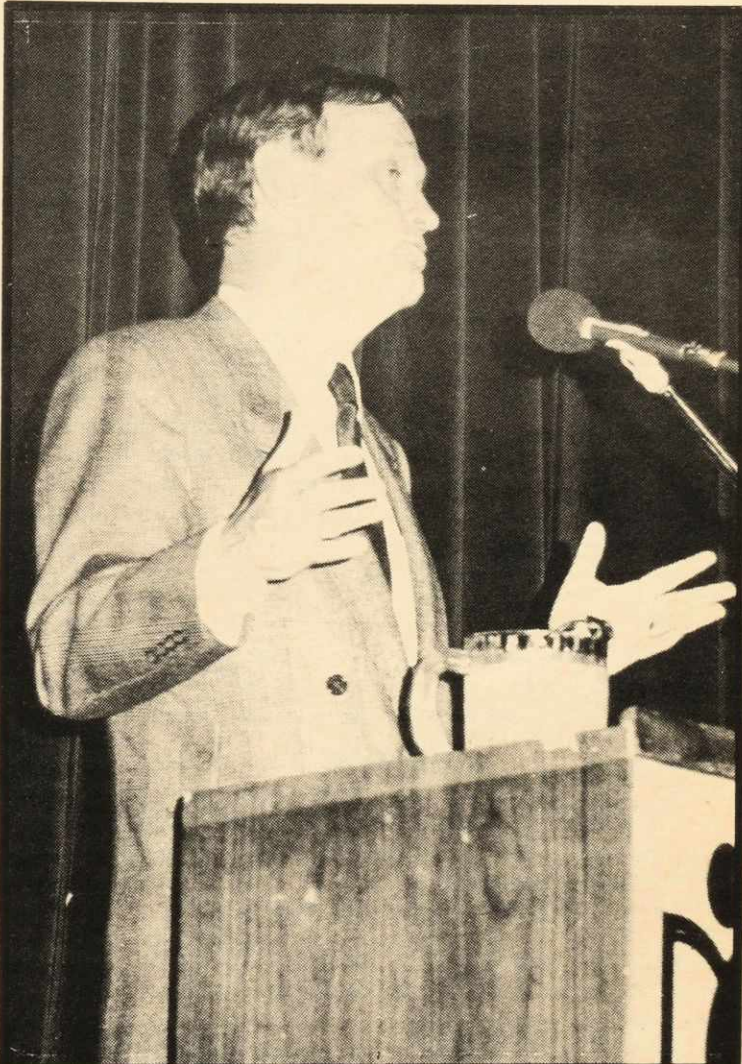
He said some members were concerned about how the community would react.

"Allowing the gay games on campus will no doubt change the opinion of some towards UBC. For some, the change will be positive, and for some, negative," Seeman said.

"UBC wants to become a world-class university. By deciding to have the gay games, it will attract forward-thinking people to help achieve that end."

He said some board members were concerned people "may not want to go to UBC, and would not support increased funding for UBC" if campus facilities were used.

Ian Mardon: Dal Photo



Jean Chretien, former Liberal cabinet minister and first of the DSU's "Magnificent six" speaker series, appealed to his audience to become aware of the important decisions facing Canada and to oppose the free trade and Meech Lake accords.