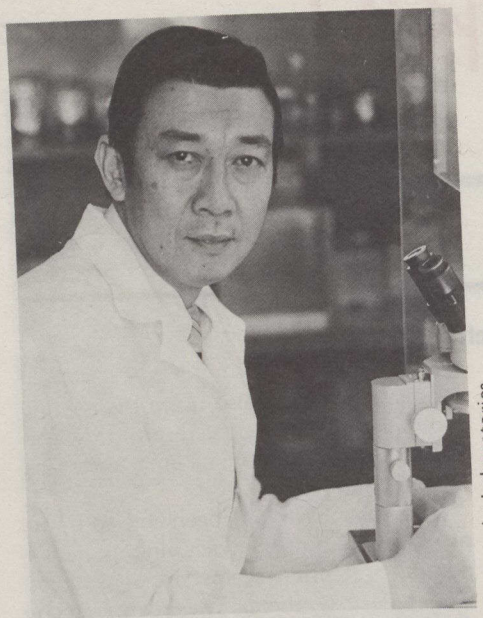

Connaught Laboratories

Dr. Anthony Sun, discoverer of the plastic-coated animal cells that do the work of a healthy, insulin-producing pancreas.

form – feats "so fine-tuned and naturally beautiful" – that he doubts they will ever be duplicated in the test tube.

Connaught Laboratories, partly owned by the federal government through the Canada Development Corporation, plans to spend about $50 million in the next few years stepping up research and cell production so that human trials of coated cells can begin as soon as possible.

Specialists say the implications of the plastic cell work could be staggering. Not only could North America's five million diabetics be freed from needles and the complications associated with insulin injections, but the breakthrough could mean relief for millions of people with kidney and liver disease.

"I hate the words breakthrough and cure," says Dr. William Cochrane, the company chairman, "but this work is extremely exciting.... I would have to say it is one of the most significant things Connaught has done since the early work on insulin."

Fredrick Banting and Charles Best, who worked at Connaught when it was still a branch of the University of Toronto, shared the 1923 Nobel Prize in medicine for discovering insulin, the essential hormone produced in the pancreas that controls sugar absorption in the body.

Thanks to Charles Best, with whom he rubbed shoulders at the University of Toronto in the 1960s, Dr. Sun became obsessed with finding a cure for diabetes, caused when pancreatic cells break down.

New experimental drug

In trials at London, Ontario's University Hospital, last year, 16 of 30 newly diagnosed victims of the most serious form of diabetes have been able to stop taking insulin after beginning daily oral doses of the drug cyclosporine.

Results of the project were released recently at a meeting of the Association for the Study of Diabetes in Switzerland by Dr. Cal Stiller, a transplant researcher at the hospital and the University of Western Ontario in London.

Dr. Stiller said the study showed that 60 per cent of the diabetics, all of whom began treatment within six weeks of diagnosis of their disease, gradually required less insulin treatment. Over time, the 16 were able to eliminate the need for daily insulin injections.

Dr. Stiller's research team said this did not mean the disease had been cured, but that it may have been arrested to the point that patients' bodies were able to resume adequate production of insulin to control blood-sugar levels. Most of the remaining 14 patients still require low-dose insulin treatment.

The study produced markedly better results than an earlier one in which only two of 11 patients were able to stop insulin treatment. That group, however, involved patients who did not begin cyclosporine treatments until between two and 11 months after diagnosis of their disease.

Dr. Stiller said a larger trial involving up to 200 newly diagnosed patients is needed to see if similar results can be produced and his group has applied for money from the Medical Research Council of Canada to start such a trial involving patients and medical teams in Vancouver, Calgary, Saskatoon, Winnipeg, Montreal, Halifax and London. He said it would probably take ten to 15 years to determine what effect the drug had.

Canapress

Sandra Grant of London, Ontario with her son Lee, a victim of a serious form of diabetes. Lee no longer requires daily insulin shots thanks to the revolutionary new drug cyclosporine.

Severe diabetics have a shortened life expectancy as well as complications ranging from blindness to heart and kidney disease.

Cyclosporine is a fungus-based drug which has been used with a high degree of success at the London hospital during the last four years on patients receiving transplants.

Dr. Stiller said the main objective is to prove if the drug can arrest the process of diabetes in which islets of Langerhans, which produce insulin in the pancreas, are destroyed.

He said diabetes caused the same kind of damage to that part of the body as is seen in a transplanted organ being rejected by the recipient's body.

Cause a mystery

The exact cause of diabetes remains a mystery, the researchers said, but there is a theory it is started by a virus and it may also be a so-called auto-immune disease in which the body begins to reject its own natural tissues as if they were foreign.

If the process of islet destruction in diabetes can be arrested, the drug could have profound implications in treating other auto-immune diseases such as multiple sclerosis and certain kidney and blood diseases, according to Dr. Stiller. His group is using the drug on a small number of multiple sclerosis patients, but it is too early to tell how successful the program is.

Promotion in Pacific Rim

A Calgary-based company has reached an agreement with a firm in Hong Kong to promote sales of energy technology and services in Pacific Rim countries.

Bob Watson, president of Asiatic and Pacific Trading Co. Ltd. of Calgary, says Wang Tak Engineering and Shipbuilding Co. Ltd. of Hong Kong will join a consortium of Canadian companies exploring business opportunities in the Pacific Rim.

The consortium plans to concentrate on China but also hopes to do business in Hong Kong, Singapore, Indonesia, Australia and Japan.