

Artificial kidneys a boon for patients world-wide

The Ottawa *Citizen* reports that "medical companies around the world are racing to use Canadian-designed 'artificial cells' to produce \$50 replacements for faulty human kidneys".

Dr. Thomas Chang of Montreal's McGill University, said that a Montreal-based firm has joined eight foreign companies producing artificial kidneys with the techniques his research group developed at McGill.

Clinical trials of the kidneys — tubes about 38 centimetres long — are underway in Japan and Europe and have begun in Montreal.

If all goes as planned renal patients in Canada could be using the artificial kidneys within a few years, said Dr. Chang.

Attachments to wrist

The devices, which would not be put into the body but attached to veins and arteries in the wrist when needed, have

thousands of the "artificial cells" which Chang programmed to copy the blood-purification process performed by healthy human kidneys.

The cells, with nylon membranes, absorb toxins in the blood that would normally be trapped by the kidneys and excreted in urine, Dr. Chang told the Canadian Science Writers at their annual meeting recently.

Today, most patients with kidney failure must undergo dialysis two or three times a week. Dialysis treatment, in which blood is filtered through a sophisticated machine, usually lasts about six hours.

If the artificial kidneys work as well in humans as they have in animal trials, Dr. Chang said that patients would have to use the device for only two-and-a-half hours about three times a week.

But he said the biggest advantage of the artificial kidneys is that the treatment

would cost a fraction of what it does now. The artificial kidneys can be produced for about \$50 each while a dialysis machine costs about \$5 000.

Another application of the artificial cells is already used in hospitals in many parts of the world in the detoxification of patients with drug overdoses. The cells packed into tubes operate on much the same principle as artificial kidneys.

Dr. Chang and his research team are now trying to produce artificial versions of human liver cells that help filter the blood and synthesize various compounds. The job promises to be tricky because researchers have yet to identify all the functions of the liver.

Eventually, he said, it may be possible to insert such artificial cells into the body to replace faulty organs and cells.

Marine traffic system for Hong Kong

A contract has been signed by the Hong Kong Marine Department and Canadian Commercial Corporation for the system definition phase of a vessel traffic management system (VTMS) valued at approximately \$2 million. The work will be undertaken by the Canadian Coast Guard and Leigh Instruments Limited.

The contract was awarded as the first phase of a total design, procurement and construction package including the training of Hong Kong operators. The VTMS will give the Port of Hong Kong an effective means of controlling ships in its congested waters thereby increasing the safety and efficiency of marine traffic.

Leigh Instruments Limited of Ottawa, one of Canada's leading high technology firms, has been instrumental in the design and implementation of similar systems in Canada and has employed technology in the building and supply of domestic air traffic control systems.

Federal Trade Minister Edward Lumley originally discussed the Hong Kong project with Governor Murray MacLehose during his visit there in 1980. He noted that the award of this contract was an excellent illustration of the way in which public sector resources can be used to support Canadian companies to meet advanced technological requirements of foreign governments.

The work began last month and is to be completed within a period of 21 months. Canadian Commercial Corporation contracts with foreign governments and international agencies on behalf of Canadian suppliers of goods and services.

Natives model colourful fashions across the country

Native groups from as far as the Yukon and Northwest Territories gathered earlier this year in Ottawa to display their delicate and colourful handicrafts and art works.

Stars of the large gathering were a group of young natives from Edmonton, models from Sundance Modelling Limited, the first native modelling agency in Canada. Director Bernadette Pagett

brought 11 adults and four children to Ottawa to show off the native fashions produced across the country.

"I had never heard of an agency for native girls," the former advertising executive admits, "but when Woodward's (a western department store chain) showed an interest in a native fashion show in Edmonton, I thought, why not? I knew nothing about modelling agencies, but I knew I had a good idea."

Established a year ago, Sundance now represents 50 models, most of whom appear in catalogues, posters and fashion shows in western Canada. The show in Ottawa was the first eastern Canadian venture for Pagett who hoped to attract attention from advertisers and marketing executives.

Gary Oker, a 21-year-old former construction worker, wore a maroon split cowhide vest and matching head band that he designed for the show. The young native from Fort St. John, British Columbia hopes to make his future in the fashion world.

Another new venture for Pagett is a newly formed company called Kee-Ano, meaning "Our", which will provide native talent for films and commercials. She has already been approached by several TV producers interested in using her personnel for commercials.



Leah Crier, one of the models.

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