



ity forms so that physicians are not forced to determine whether a patient is eligible for disability or other benefits. The association said this would “place responsibility for determining eligibility where it should lie — with the institution providing the benefits.”

To breed or not to breed? Health Canada faces a monkey dilemma

Fourteen years ago Health Canada's Animal Resources Division established a colony for 1000 cynomolgus monkeys from the Philippines, 1 of 3 countries where the long-tailed macaques, which are used for medical research, originate.

Initially the monkeys were used to test polio vaccine, and today about 130 are part of experiments involving AIDS vaccines and the effect of exposure to PCBs, heavy metals such as lead and mercury, and pesticides. A few monkeys have also been used in diagnostic activities involving shellfish poisoning and botulism.

The animals and the facility that houses them are rare, says Health Canada, because researchers have 2 generations' worth of the monkeys' genetic history and because the macaques are free of the herpes virus, which plagues nonhuman primates used for medical research in other labs throughout North America. Two Health Canada units, the Food Directorate and Therapeutic Products Directorate, are the main employers of the colony for research purposes.

Beyond the 130 test monkeys, the remaining 620 are used for breeding. According to the Health Protection Branch, which runs the colony through its Laboratory Animal Science and Medicine Program, this has become a costly exercise. The annual bill for the breeding colony is about \$900 000, or more than \$11 million since Health Canada got into the monkey business.

As a result, Health Canada asked the Royal Society of Canada to appoint an expert panel to determine whether the government should continue running a primate breeding colony. The 5-member panel, which includes 3 research scientists and 2 social scientists with backgrounds in philosophy and ethics, is expected to complete its report by this month.

In August, Health Canada said it and the panel “welcome comments from all parties, including animal-rights groups.” Advocacy groups like Animal Action want the monkeys kept and bred by anyone but Health Canada — it claims the macaques' current housing, in which animals are kept separately in small cages, has led to acts of self-mutilation because of boredom and isolation.

A potential home may be found through a sanctuary in San Antonio, Texas. Primary Primates Inc. is already home to about 450 apes and their cousins that have been retired from research labs and circuses. However, its offer comes with a condition attached: the federal government would have to help pay to purchase land, build facilities and maintain the Canadian macaques for the rest of their lives. — © *Christopher Guly*

MDs: review CPR knowledge, encourage patients to take course

Although cardiopulmonary resuscitation (CPR) has become a familiar term in Canada, new evidence indicates that nearly half of Canadians aged 45 or older would not know what to do if there is a cardiac emergency.

In a random survey of 800 Canadians, the Heart and Stroke Foundation of Canada found that 46% of respondents did not feel confident they would know what to do if they suspected someone was having a heart attack. The survey also found that the

higher respondents' ages, the lower their level of confidence in dealing with a cardiac emergency.

The survey also indicated that only 57.7% of respondents would respond to one or more signs of a heart attack by dialling 911. About 10% of respondents said they would simply lie down and wait until they felt better. Others would respond by seeing their family doctor, taking ASA or removing their false teeth.

Since November is CPR Awareness Month, the foundation is working with the Canadian Red Cross, Canadian Ski Patrol, St. John Ambulance and the Lifesaving Society to raise public awareness of heart-attack warning signs and ways to act during an emergency. In the latter case, the person should call for emergency assistance and start CPR if necessary. The campaign targets men and women aged 45 or older who have at least 1 major risk factor for heart disease.

The foundation hopes physicians will help spread the CPR message by encouraging high-risk patients and their families to learn heart-attack warning signs. Because more than 70% of attacks occur in the home, family members must be able to recognize and respond to emergency situations by taking a CPR course or watching a training video. This should provide the knowledge and confidence needed to deal with an emergency.

November is also an opportune time for physicians to review their own knowledge of CPR by taking a refresher course or an advanced cardiac life support (ACLS) course. The revised ACLS text includes new information on the treatment of acute stroke.

Further information about CPR Awareness Month and CPR courses is available at the foundation's Web site, www.hsf.ca, or by calling 1-888-hsf-info.

Roughly 22 000 Canadians die of heart attacks every year, with about half of the deaths occurring before



the person reaches hospital. — *Sonia Toews*, Heart and Stroke Foundation

Women reminded of heart disease's heavy toll

Last September, the Tai Kwon Do lessons, therapeutic massage, tips on surfing the Internet, blood pressure testing and instructions on giving up

smoking made the Ottawa Congress Centre look a little like a freshers' fair during initiation week. But the crowd milling around the 52 booths were there for their health, not their social lives. At the first-ever "Hug Your Heart" day, close to 300 women were taught about cardiovascular disease and ways to prevent it. More sessions will follow in other parts of the country.

In Canada, 7 times more women die of heart disease than breast cancer, but most women aren't aware of this, the risk factors in their own lives, or heart attack symptoms. What's more, physicians are more likely to miss the warning signs among women than men. "We want to do for heart disease what the pink-ribbon campaign has done for breast cancer," said Barbara

Queen's researcher honoured for breakthroughs in cardiology

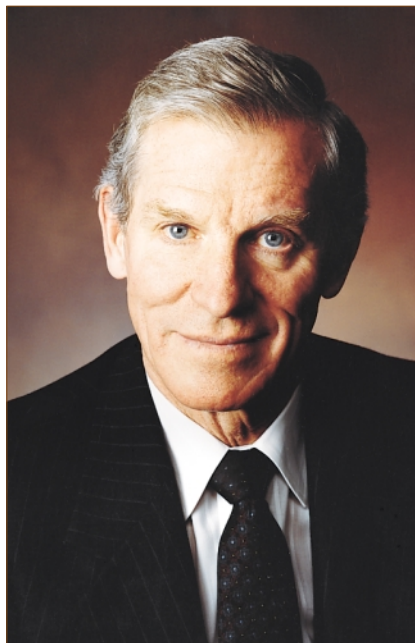
Dr. John Parker, one of the first Canadians trained in the techniques of cardiac catheterization and a central figure in the evolving story of nitroglycerin tolerance, was honoured recently for his contributions to research involving nitrates. Parker, who has retired from the Kingston General Hospital and Queen's University in Kingston, Ont., continues his research in cardiology and maintains a consulting practice at the Kingston General.

Parker, a Queen's graduate who began his clinical practice in Kingston in 1961, was named director of the cardiovascular laboratory at Queen's a few years later. "In 1963 we started doing coronary angiography," he said. "We were the second centre in Canada to develop that technique — the Toronto General had done 30 or 40 patients when we initiated our program." He also helped establish a busy angiography training program.

His research endeavours initially focused on cardiac changes associated with angina. Using newly developed catheter techniques he was able to demonstrate that left ventricular function was markedly impaired during periods of induced angina. If sublingual nitroglycerin was given before the onset of anginal pain, left ventricular function remained normal and anginal pain was prevented.

Fifteen years ago he decided to

study nitrates taken orally because "there was a lot of controversy as to whether they were absorbed enough, remained active after they were absorbed, or whether there was any clinical effect." He found that, initially, a single morning dose of isosorbide dinitrate (ISDN), the



Dr. John Parker: an impressive career

most commonly used nitrate at that time, was effective in improving exercise tolerance for 8 hours. However, after 2 weeks of 4 daily doses the efficacy was reduced by about 50%, and no clinical effect could be demonstrated after 2 hours.

"We saw that each dose [as high

as 120 mg] was effective for 8 hours, but after the short period of sustained therapy the doses had the same diminished effect, indicating tolerance." It was later discovered that if the evening dose was eliminated, the pattern of response to ISDN improved significantly. "That laid the groundwork for a change in prescription pattern to reduce the magnitude of the tolerance problem," said Parker.

In the 1980s transdermal nitroglycerin patches, which were designed to be worn continuously, were introduced. "Many of us, knowing that tolerance developed with continuous oral ISDN, were sceptical," he said. In fact, in a treadmill study he showed that continuous-patch therapy was no better than placebo after 2 weeks. Intermittent therapy with a 12-hour-on and 12-hour-off period seemed to be the answer.

In a clinical trial with 240 patients, Parker demonstrated that a 12-hour patch application improved exercise tolerance even after 28 days of therapy. The pattern of response was stable for dosages from 0.2 to 0.8 mg per hour, and no problems were encountered during the period drug levels were low. This study led to the standard practice of using intermittent dosing for transdermal nitroglycerin to prevent tolerance. — © *Wendy Wilson*