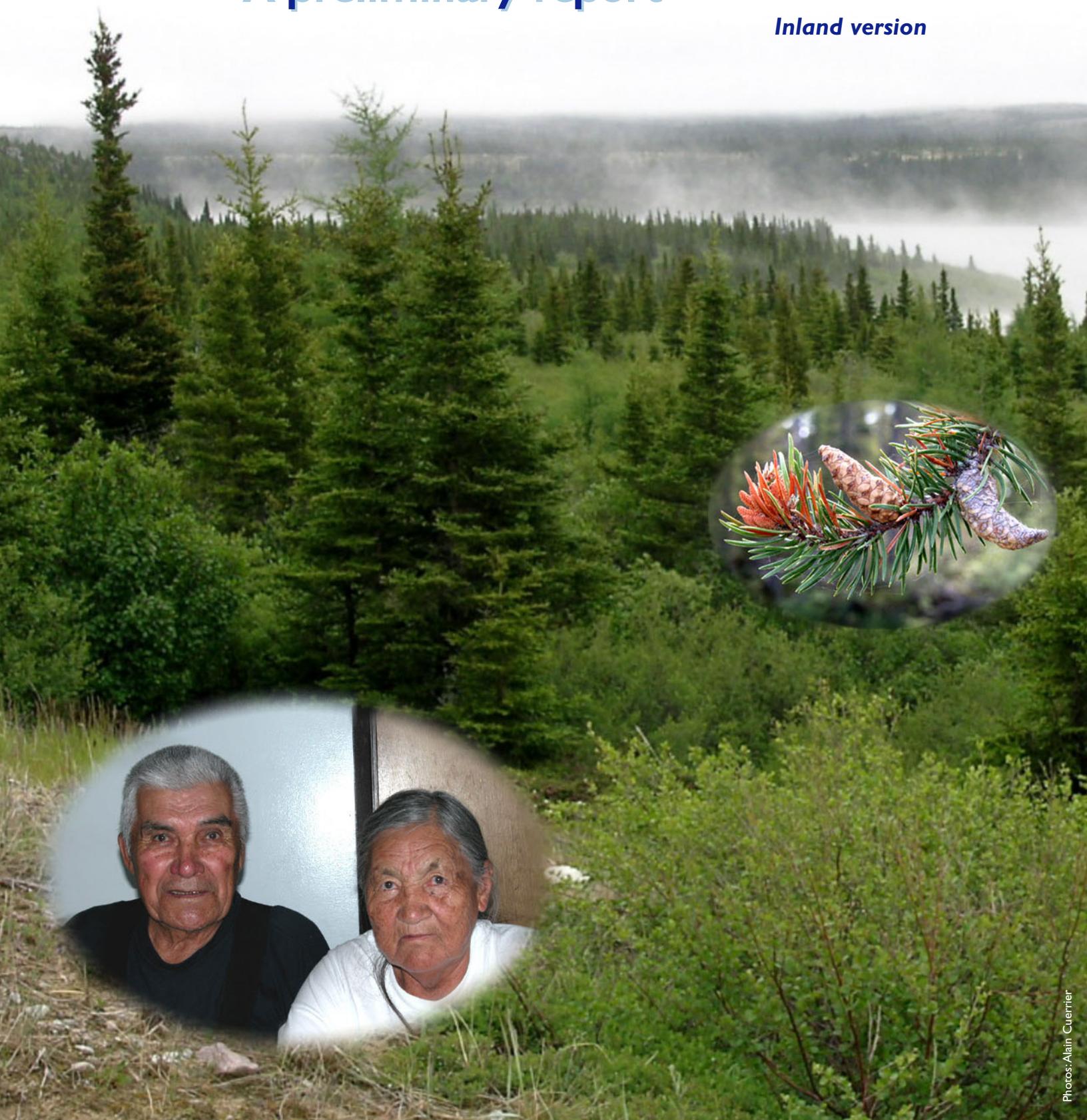


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Diabetes and traditional medicine: A preliminary report

Inland version





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DIABETES & TRADITIONAL MEDICINE: A preliminary report

The aim of this pamphlet is to share with the Cree people, the results of a project that was carried out with the help of two Eeyou communities.

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Cree Board of Health and Social Services of James Bay

ISBN-13: 978-2-550-47579-8 ISBN-10: 2-550-47579-8

| legal deposit: 3rd trimester 2006

Legal deposit: 3rd trimester 2000
Bibliothèque Nationale du Québec. National Library of Canada

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July 2006



•հւե՞ Հ.Շին

Sam's mission on Earth is done and the Creator called him home. Two of Sam's teachings were always do your best and all things are possible. His memory and teachings will always be in our hearts and minds.

Sol Awashish



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Introduction

In the Canadian population almost 5 people out of 100 have diabetes.

In some Canadian First Nations populations up to 20 people out of 100 have diabetes. The causes are thought to be a sedentary lifestyle, non-traditional diet and genetic predisposition.

This project aims to study the use of Eeyou traditional plant medicines in the treatment of Type II diabetes, an approach that would be more in harmony with the Cree culture and lifestyle.

So far, the communities of Mistissini and Whapmagoostui are participating in the project.

First step: interviews with Elders and Healers

Charles Leduc and Alain Cuerrier presented the project to the Elders and the community of Mistissini in June 2003, and then conducted interviews with 34 Elders from 23 households between July and August. The following 18 plants were mentioned in connection with 15 symptoms linked to diabetes.

*the most promising plants selected for laboratory experiments



In July 2004, Alain Cuerrier and Marie-Hélène Fraser presented the project to the Elders of Whapmagoostui. Between July and September, their interviews with 31 Healers and Elders in 25 households showed that 31 plants are used to treat the same 15 symptoms. In decreasing order of use, 18 of the plants or plant parts mentioned most often are as follows:



Also, a study by Sonia Grandi of the general population of Mistissini showed that the use of traditional medicines to treat the symptoms of diabetes almost doubled in older community members.





It is important to test the selected plants in order to 1) identify the compounds that might be useful in treating diabetes, 2) determine how much plant material is needed for safe, effective treatment, and 3) evaluate side-effects related to dosage and long-term use.

Through Andrew Burt and Cory Harris, John T. Arnason's lab is responsible for preparing the plants for experimental use and for identifying the compounds. Similar plant material preparations were carried out in Tim John's lab.



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Different experiments for different health problems

Glucose (sugar) increases the stress on cells, tissues and organs and causes many health problems. Therefore, it was decided to look at different aspects of Type II diabetes, using different approaches.

Antioxidants

The study examines the antioxidant potential of the plants because antioxidants have been shown to be helpful in treating many disorders connected with Type II diabetes. Preliminary results show that many of the chosen plants have good potential.

Nerve problems

Diabetes can also create nerve problems. Testing will assess the selected plants for their ability to protect nerve cells against the effects of high glucose levels.

Cell studies

Studies to assess the anti-diabetic potential of plants will be done on living cells grown in the laboratory. Positive results will then need to be confirmed in animal studies before a plant can be recommended for use.

The experiments are being conducted in Pierre Haddad's laboratory and in Marc Prentki's laboratory by Louis Martineau, Erik Joly, Danielle Spoor, Charles Leduc and Ali Benhaddou.



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Digitized by srujanika@gmail.com

The preliminary results are exciting

All the plants tested show some degree of anti-diabetic potential. They all help glucose to enter muscle or fat cells, and therefore help to lower blood glucose levels. Further experiments will look at whether the plants have a beneficial effect on the liver and whether they can help protect nerve cells against the damages caused by high blood glucose levels.

As mentioned earlier, it is important to carry out further testing of promising plant material on animals; such studies have just begun, starting with *Mushkuminanatikw* and *Ayigadash*.

The next steps

The next experiment will look at Kachichepukw. If the studies confirm that some plants have anti-diabetic effects in animals, we will then conduct clinical trials in volunteers from Mistissini as soon as possible.

We will also begin a similar analysis of the remaining 8 plants which include the 4 named plants from Whapmagoostui. Nutritional studies need to be assessed in more depth, and more surveys will be done with the new participating Cree communities as the project evolves.



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General highlights of the nutritional survey

- 127 (73.4%) participants would use traditional medicines more often if they were more available in the community
- 106 (61.3%) participants think that the clinic should be providing TMs, as well as modern medicines
- 49 (28.3%) participants think the medicines should be kept in their original form (i.e. original Cree preparation), 38 (22.0%) participants think they should be kept in their original form and be administered by Elders and 8 (4.6%) participants think they would be acceptable in pill format
- 118 (68.2%) participants think a program involving the use of medicinal plants would be helpful for the Cree community
- 83 (48.0%) participants believe the general health of the Cree is below average and 33 (19.1%) believe it is average
- 109 participants (63.0%) think that the transmission of traditional knowledge in the community has decreased over the years

