The Protection of Indigenous Medical Knowledge : The example of the Cree Diabetes Project

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Presentation

1. International Context
2. Canadian framework
3. Example of a contractual agreement on ABS: Anti-diabetic Cree plant project
4. Conclusion

1. INTERNATIONAL CONTEXT

- U.N. Convention on Biological Diversity
- Nagoya Protocol
- UNDRIP
- WIPO
- WHO

U.N. Convention on Biological Diversity

- Preserve indigenous knowledge and practices
- Promote wider application with approval of the holders of knowledge
- Equitable sharing of the benefits
- Access on mutually agreed terms (MAT) and be subject to prior informed consent (PIC)
- Canada is a Party

Nagoya Protocol

- The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity
- Genetic resources includes plants and associated TK
- EIF 2014 – over 80 parties
- Canada not a party

Nagoya Protocol

- States must implement legislation to ensure access to GR is with PIC of Indigenous communities and MAT
- Take into account indigenous customary laws, protocols
- States must inform users of rights of IP: PIC and fair and equitable benefit sharing
- Also applies to intra-State use

Nagoya Protocol

Has been criticized

- Vague language
- Lack of Binding Minimum Requirements
- But, more awareness, models, best practices
- Will depend on Canada's willingness to implement substantially
- Importance of including Indigenous Peoples
- Negotiations will still depend on good faith and respective power in negotiations

United Nations Declaration on the Rights of Indigenous Peoples

- Declaration of the UN General Assembly
- Canada voted against in 2007 (1 of 4 states)
- Approved in 2011, with reservation
- « full support » in 2016

UNDRIP

- Right to TM and practices (art. 24)
- Right to lands and resources (art. 25, 26)
- Right to TK, sciences, technologies, including human and genetic resources, seeds medicines, … intellectual property (art. 31)

WIPO: World Intellectual Property Organization

- IGC on IP and Genetic Resources, Traditional Knowledge and Folklore
- Three instruments(in development):

1. traditional knowledge (TK)
2. traditional cultural expressions (TCEs)
3. genetic resources (GRs) (mandatory disclosure of source of patent)

Canada obstructing process

WHO: World Health Organization

- The WHO adopted a new Traditional Medicine Strategy (2014-2023)
- It recognizes the importance of TM, its developments, but the policies and regulations must be established by national authorities
- Resolution WHA67.18 (World Health Assembly):
  - 3. REQUESTS the Director-General:

    (...)

    (3) to continue to promote international cooperation and collaboration in the area of traditional and complementary medicine in order to share evidence-based information, taking into account the traditions and customs of indigenous peoples and communities

2. CANADIAN FRAMEWORK

- Little legal protection for IMK
- - patents (not novel, collective guardianship, limited duration)
- - copyright (expression of idea, not idea iteself, author not known..)

Also, healers in Québec can face prosecution for « illegal pratice of medicine » (which could be countered with a defence of Aboriginal right)

Canadian framework

- Tri-Council Policy Statement: Chapter 9 on Aboriginal Persons (SSHRC, NSHRC, CIHR)
- Ethical Guidelines from the Canadian Institutes of Health Research
- Indigenous Community Protocols (ex. AFNQL)
- Research Agreements: contractual remedies

3. CREE ANTI-DIABETIC PLANTS PROJECT

- Project funded by CIHR for 8 years (2003-11)
- 3 Universities, 1 Hospital
- 4 Cree communities, CBHSSJB, (GGCEI), elders (in northern Québec)
- Objective: Measure effectiveness of traditional plants on symptoms of diabetes and interaction between medicines and plants
- Long term: Improve services offered by CBHSSJB

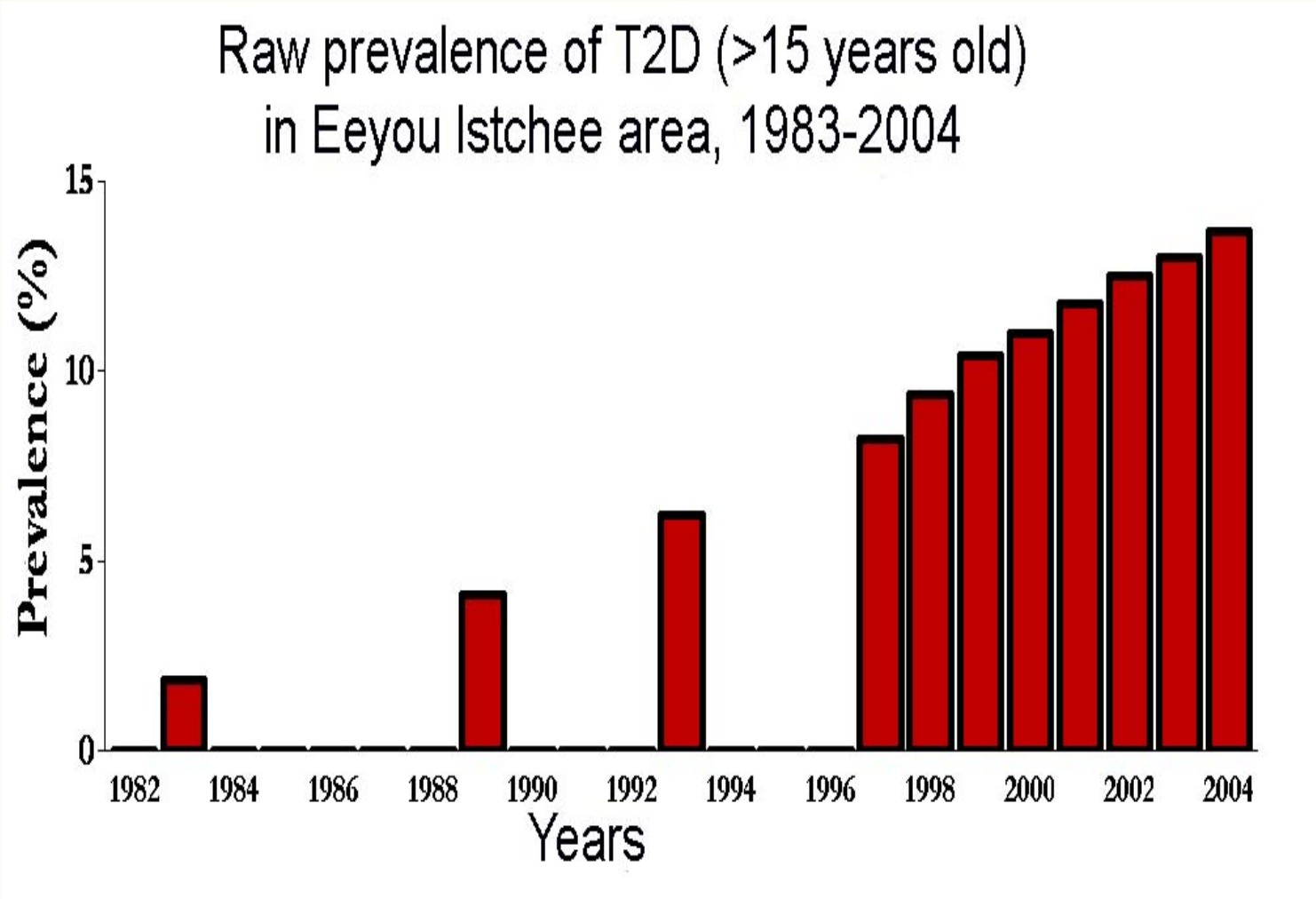
a) Origin of the research project

1) The reduced use of Cree healing practices and practitioners from the 1950s or so
2) The sudden rise of the diabetes ‘epidemic’ from the 1990s

The near abandonment of Eeyou medicine

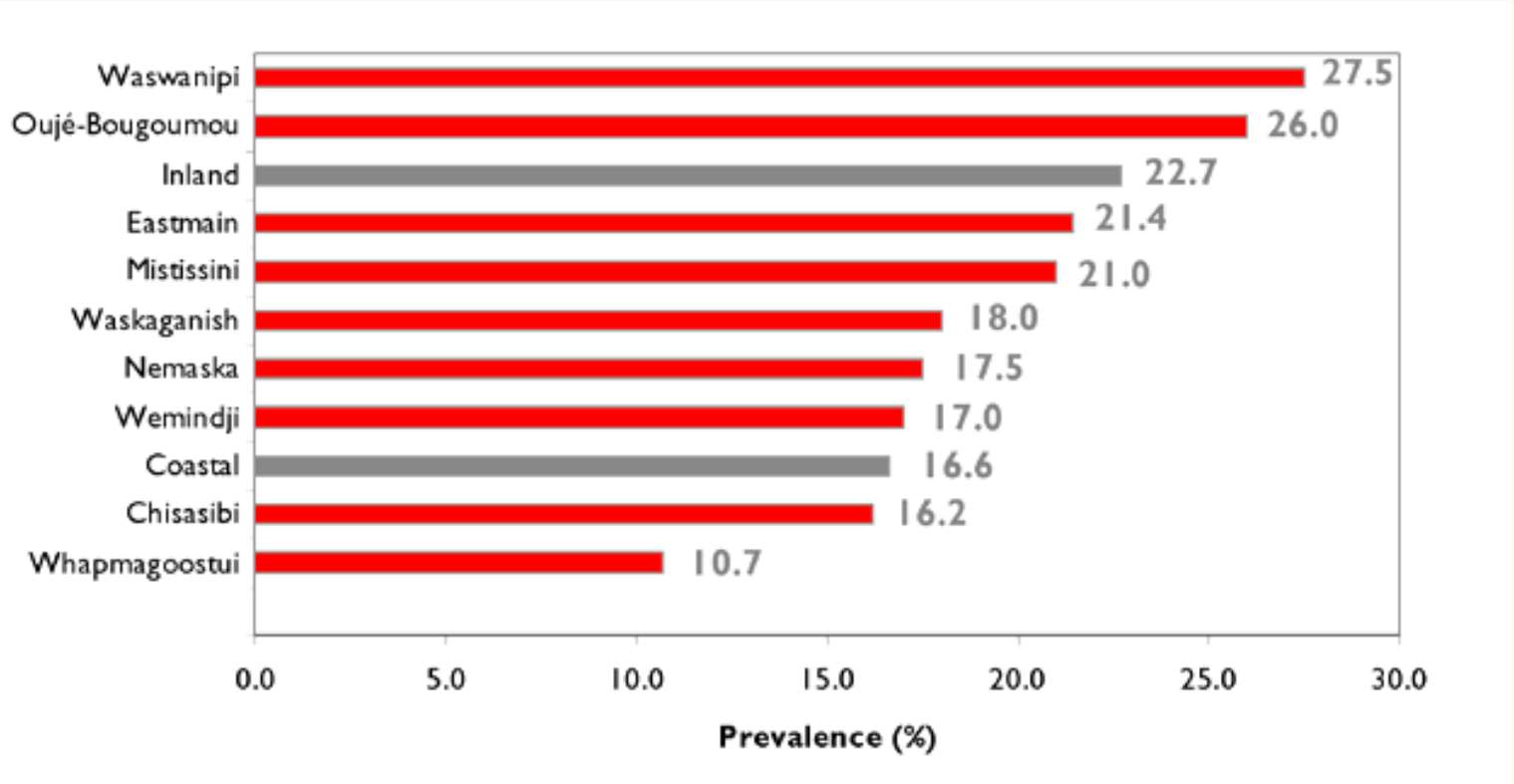
- Allopathic medical care arrived gradually in the region from the 1930s. By the 1960s, all existing communities had a nursing station or clinic.
- Cree Board of Health & Social Services of James Bay became responsible for all services after 1978.
- No official recognition of any type of Eeyou (Cree) medicine or healing practices.

The rise of the diabetes 'epidemic'



Cree Board of Health and Social Services of James Bay - CBHSSJB (2005)

Diabetes prevalence by region and community, Cree population 20 years old and older, Iiyiyiu Aschii, July 1, 2007



Source:*Cree Diabetes Information System (CDIS) 2007 Annual report (2008).* Kuzmina, E, Lejeune P, Dannenbaum D, Torrie J. *Public Health Report Series 3 on diabetes. Cree Board of Health and Social Services of James Bay.* Québec. ISNN:1712-9249.

b) Type of research carried out

- Explore plants traditionally used by the Crees to target symptoms related to diabetes
- Goal: Identify anti-diabetic plants which can be used by the community to help treat diabetes
- How? Collaborative Multidisciplinary Approach
  - Cree traditional knowledge
  - Ethnobotany
  - Phytochemistry
  - Pharmacology
  - Nutrition
  - Endocrinology

CIHR Team in Aboriginal Antidiabetic Medicines (2003-2006) 2006-2011

CIHR Team in Aboriginal Anti-Diabetic Medicines
Équipe IRSC sur les médecines autochtones antidiabétiques

Education/ Integration

(CBHSSJB)

Conseil Cri de la santé et des services sociaux de la Baie James
Cree Board of Health and Social Services of James Bay

Ethnobotany

(U de Montréal)

Institut de recherche en biologie végétale IRBV
Jardin botanique de Montréal
Université de Montréal

Clinical/ Observational Trials

(U de Montréal, McGill U)

Phytochemistry

(Ottawa U)

Cree Nations

Medicinal plants

Traditional Knowledge

Nutrition

(McGill U)

Pharmacology

(UdeMontréal)

Toxicology

(Ottawa U)

Top 8 Mistissini plants screened

Rhododendron groenlandicum
Labrador Tea
Kachichepukw
(Leaves)

Larix laracenia
Tamarack
Watnagan
(Inner bark)

Abies balsamea
Balsam fir
Inaasht
(Inner bark)

Picea mariana
Black spruce
Inaahtkw
(Cones)

Sorbus decora
Mountain ash
Muskuannanatuk
(Inner bark)

Alnus incana
Speckled alder
Atushpi
(Inner bark)

Sarracenia purpurea
Pitcher plant
Ayigadash
(Whole plant)

Pinus banksiana
Jack pine
Ushchishk
(Cones)

Leduc et al., J. Ethnopharmacol. 2006; 105(1-2):55-63

	Biological Activity	**Wishishimna** Mountain cranberry *Vaccinium vitis idea*	**Waatinaakan** Tamarack *Larix laricinia*	**Mash-mitush** Balsam poplar *Populus balsamifera*	**Maskumanaatikw** Mountain ash *Sorbus decora*	**Kaachepukw** Labrador tea *Rhododendron groenlandicum*	**Aygadash** Pitcher plant *Sarraenia purpurea*
SIV rank		12	3	16	7	2	13
Primary actions against diabetes	Decrease blood glucose in animals	☺	☺	☺	☺	?	?
	Reduce body weight in animals	☺	☺	☺	NO	?	?
	Move glucose into muscle cells	☺	☺	NO	☺	☺	☺
	Favour good fat	☺	☺	NO	NO	☺	NO
	Decrease glucose absorbed from food	☺	Moderately	NO	NO	☺	☺
Complications	Safe to mix with drugs	☺	Moderately	☺	Moderately	Moderately	☺
	Protect nerves	NO	NO	☺	☺	NO	☺
	Fight bad oxygen, bad glucose	NO	NO	NO	NO	NO	NO

Specific concerns of Elders, communities, Grand Council of the Cree and Cree Board of Health concerning this project

- Safety issues in using traditional medicines for diabetes care
- Use of Iiyuu knowledge without consent, especially commercialization
- Ownership of intellectual property
- Question of partnership between Elders and Researchers
- Misuse of medicines by others (health concern)

History of Agreement

- Project started before the agreement
- Took 5 years of negotiations for Interim Agreement (2008), Final (2009)
- Led to better agreement
- All parties acted as if agreement was in force
- Poor legal environment in support for PIC and MAT, Joint ownership

Eeyou anti-diabetic plants Research Agreement

Cree Board Health & Social Services of James Bay

3 Universities (Montréal, McGill, Ottawa)

2 Cree (Eeyou) communities (with 2 additional)

1 University hospital (CHUM)

Parties

c) Important principles of agreement

- Confidentiality and Eeyou control over IK
- Process for review of publications
- Collaborative research
- Joint ownership of intellectual property
- Benefit-sharing

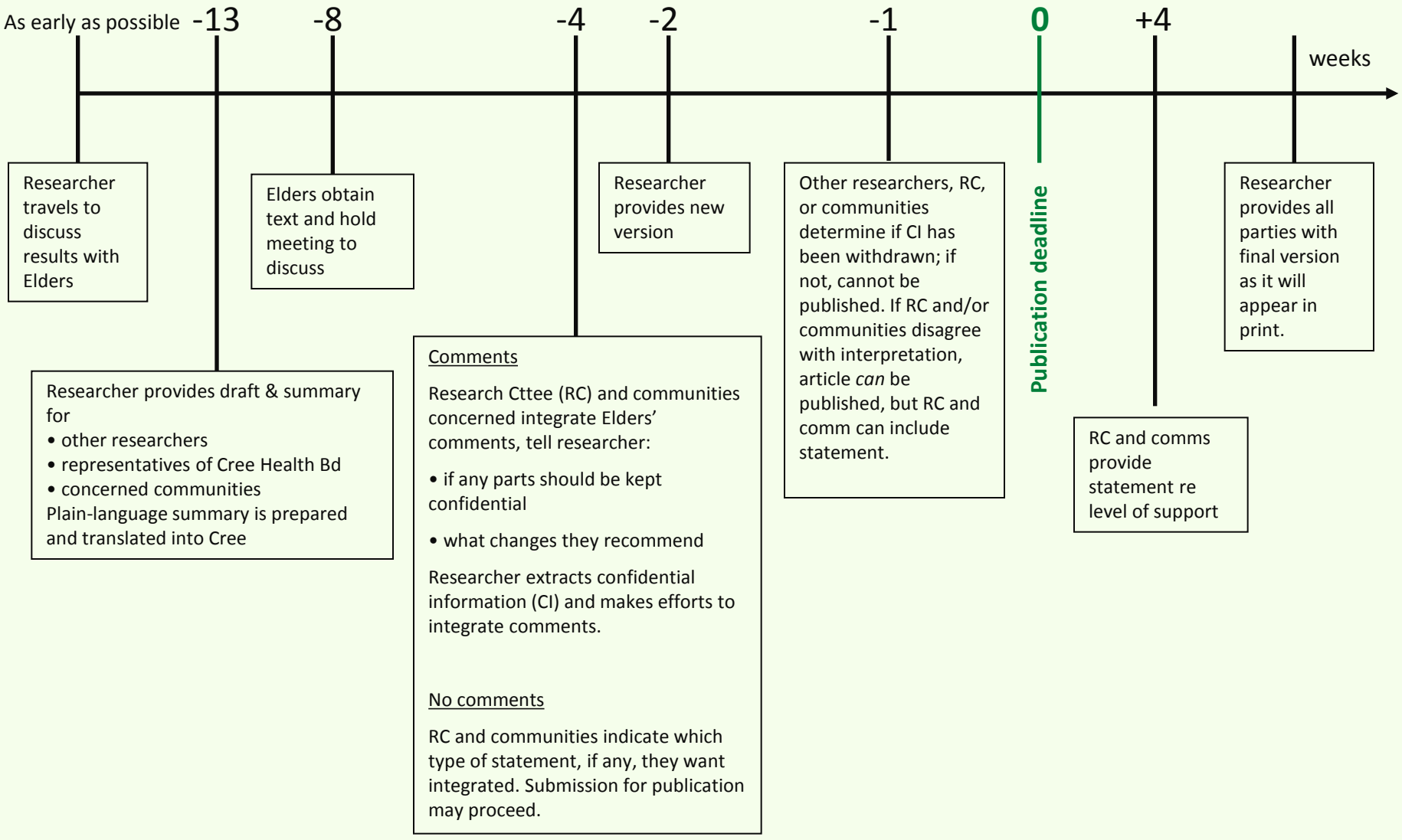
i) Confidentiality of IK and Eeyou control over use

- Eeyou medicinal knowledge is confidential
- Prior informed consent must be obtained from Band Council, Elders and individual participant
- Consent of Elders and communities is necessary to publish or transfer
- Can only be used for specific research; consent necessary to change/expand project

ii) Review of publications

- Very important part of scientific research
- Risk that IK is disclosed
- Summary and translation into Cree
- Elders and communities review publications prior to it being sent to editor
- Comments and extraction of IK if necessary

Working Procedure for Review of Publication and Similar Documents



iii) Collaborative research

- Initially not enough feed-back, not enough collaboration
- Regular meetings
- Planification stage
- Review of publications
- Reports to communities

- Acknowledgement of Elders in publications
- Involved in all stages

iv) Joint ownership of intellectual property

- Results and IP are jointly owned
- Co-authors, depending on contribution
- Patenting: consent of Researchers and Universities, communities (with consultation of Elders)
- 51% ownership for the Cree entities, 49% Universities
- Patent was a possibility. Communities and Elders had provided consent concerning initial steps for one invention but didn't go forward for other reasons

v. Benefit sharing

- Sharing of scientific knowledge
- Jobs (1 full-time and occasional)
- Herbaria, other materials
- Training, scholarship (in progress)
- If commercialisation, % profits (51% Cree ownership)

4. CONCLUSION

- Unique agreement in the world, real partnership, not only ABS
- Was possible due to perseverance of the Cree and good faith of researchers
- Would be easier for future agreements protecting IMK if stronger protection in international and national legislation

Conclusion …

Status quo in Canada:

- Intellectual property laws unchanged
- Nagoya Protocol not acceded to
- WIPO GR: Canada obstructing
- Little official protection for healers

- More supportive national legal environment would help for protection of Indigenous Medical knowledge and practices