



# **Strengthening Our Foundations: Redesigning Indigenous Connections to Healthcare Research and Supporting New Directions**

## **Resources and Reflection Questions**

January 29<sup>th</sup>, 2026

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# Chemical, Broad Engineering

[Indigenous engineering in Canada](#)



[Indigenous cultural competency toolkit: Engineering](#)



[Indigenous Futures in Engineering](#)



[Queens Indigenous engineering](#)



[Indigenous Chemical Engineer Inspires Students: From Traditional Wisdom to Modern Science](#)



[Schulich Indigenous Pathways Program](#)



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The Mito Revolution: Mitochondrial Transplantation Transforming Regenerative Medicine—from research to patient care to global impact project is research supported by the Government of Canada's New Frontiers in Research Fund (NFRF)

## Exploring Indigenous Ways of Knowing in Engineering



## Decolonizing and Indigenizing engineering education



**Reflection and discussion:** chemical engineering, alongside engineering as a whole, is noted to have a lack of Indigenous representation and engagement. What opportunities on this project could have interesting applications to Indigenous students, youth, and scholars? What opportunities could be created? How would you encourage Indigenous engagement to prospective engineering students, either as a whole, or for the MitoRevolution project?



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## AI and Bioprocessing

[How AI and Indigenous systems can protect forests ancestral culture. A Q&A with WarĩN K. Flores of the Kara-Kichwa Nations](#)



[AI biotechs launch bioprospecting expeditions with Indigenous groups, agree to share benefits](#)



[Integrating Indigenous Knowledge with AI for Sustainable Farming](#)



[AI threatens Indigenous data sovereignty and digital self-determination](#)



[Indigenous peoples and artificial intelligence: A systematic review and future directions](#)



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[Indigenous Knowledge Meets AI: A Hybrid Mode for Biodiversity Conservation](#)



[Indigenous Knowledge Meets Artificial Intelligence: Bridging Ancient Wisdom and Modern Technology for Ecological Sustainability](#)



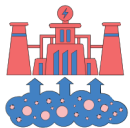
[AI and Indigenous Data Sovereignty: Knowing, Engaging, and Learning in New Data Contexts](#)



[Indigenous Protocol and Artificial Intelligence's people](#)



[AI Can Help Indigenous People Protect Biodiversity](#)



**Reflection and discussion:** AI and bioprocessing likely look different in the MitoRevolution project than others mentioned in these articles. With regard to OCAP, are there any concerns of Indigenous content, voices, and perspectives with AI? How could Indigenous practices guide AI development across this project with regard to bioprocessing outcomes, consent for procedures, and principles in practice?



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# Biomedical Engineering

[Biomedical sciences student supports  
STEM opportunities in urban  
Indigenous communities](#)



[Indigenous engineering in Canada](#)



[Biomedical engineering student is  
impassioned advocate for Indigenous  
people](#)



[Indigenous Engineering Students](#)



[Decolonizing and Indigenizing  
engineering education](#)





**Reflection and discussion:** the above content describes a lack of biomedical engineering and Indigenous representation and emerging supports for increasing representation. In those contexts, what points were made that could apply to your work? Was it a surprise seeing Indigenous biomedical engineering, and do those topics or approaches influence your work? With regard to your proposed and planned ideas for the MitoRevolution work, do you think those principles could apply, or no? Are there other intersections you see could impact your work?



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# Pharmacy

[Indigenous identity and traditional medicine: Pharmacy at the crossroads](#)



[Evidence-Based Medicine Through an Indigenous Lens](#)



[Leading Health Systems Evolution with Empowered Indigenous Pharmacy Professionals](#)



[Traditional medicine has a long history of contributing to conventional medicine and continues to hold promise](#)



[TRADITIONAL MEDICINE FOR CANADA'S FIRST PEOPLES](#)



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**Reflection and discussion:** thanks to Dr. Swidrovich's efforts, Indigenous representation and engagement in the field of pharmacy continues to be explored safely. With regard to pharmaceutical applications, how have some of his recommendations and discussion points influenced your considerations for Indigenous patient engagement and consideration with pharmacy? What do intersections between Indigenous medical, pharmaceutical needs, and the MitoRevolution project look like? What kind of dissemination materials could be developed along the way to increase healthy and helpful outcomes?



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# Pharmacology and Toxicology

[Indigenous Peoples, Decolonization  
and Toxicology](#)



[Toxic Drug Crisis Data](#)



[Effect on Indigenous Peoples](#)



[T̓s̓ilhqot̓'in National Government Toxic  
Drug Crisis](#)



[Cultural Toxicology & Indigenous  
Populations](#)





**Reflections and discussion:** Toxic contamination and toxicology has been a prominent concern in Indigenous communities, both in drug toxicity and environmental crises. Water poisoning, oil spillage, toxic drug crisis are all active, ongoing threats to Indigenous peoples and communities. While these are extreme applications and results of toxicology and pharmacology, how do these impact safe and collaborative development of products with the MitoRevolution project? What meaningful steps could these fields contribute to existing Indigenous communities' concerns? What would those meaningful steps look like for your field?



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# Policy

[Centre for Indigenous Policy & Research](#)



[International Indigenous Policy Journal](#)



[Assembly of First Nations](#)



[United Nations Declaration on the Rights of Indigenous Peoples](#)



[Policy on PLANNING PRACTICE AND RECONCILIATION](#)



[Engagement with Indigenous Knowledge and Content Policy](#)



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[Indigenous Rights: Native Women's Association of Canada](#)



[Indigenous Rights: Policy on preventing discrimination based on creed.](#)



[Navigating policy and infrastructure inequities in Indigenous primary health care: A qualitative comparative policy analysis of Alberta and Ontario](#)



**Reflections:** Policy has upheld colonial restrictions and control of Indigenous communities. In support of Indigenous sovereignty, it becomes important to honour and balance collaboration of policy development and Indigenous communities. When it comes to health and medical development, what do you think Indigenous policy collaboration would look like? What are the steps to safe policy development that could be implemented in this work? How can you ensure it's effective? What would it look like if it was effective?



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