# Green Biobanking
## Impact Analysis

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| **Project Duration** | Fourteen months. |
| **Number of McGill Faculties Engaged** | Two. |
| **Number of McGill Departments Engaged** | Eleven. |
| **Economics/Energy** | Determined that the laboratory refrigerators and freezers in the McIntyre and Bellini buildings consume approximately 27,107 kWh and $65,000 annually. By eliminating 20% of each the refrigerators, -20°C freezers, and -80°C freezers, McGill could save approximately $15,000 annually for these two buildings. By storing biological samples at ambient temperature, which we have demonstrated to be a reliable option, this could easily be achieved. |
| **Policy/Action Plans** | Will collaborate with McGill Procurement Services in the near future to establish new policies on recommendations of which freezers should be bought for research purposes based on energy consumption in a laboratory setting. |
| **Community** | Held two events in 2012:<br>• Freezer Clean Up Day was an inter-laboratory competition to encourage labs in the Faculties of Medicine and Science to clean out their freezers, thereby increasing their efficiencies. Companies with sustainable initiatives participated by donating prizes to the best cleaners, thereby advertising their environmentally friendly products to the laboratories. |

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| | • Held a Symposium on Environmentally Friendly Research Practices at McGill. The symposium included guests and six guest speakers from across North America. Speakers discussed sustainable options for doing research. Companies were also invited to showcase their environmentally friendly products to attendees.<br><br>Others:<br><br>• Displayed and advertised our work at the sustainability fair organized by the SPF.<br>• Collaborated with McGill Energy Project to help them develop applied student research projects in a laboratory environment.<br>• Collaborated with the Green Committee in the department of pharmacology to organize and spread awareness for the Freezer Clean Up Day.<br>• Began an ambient temperature storage pilot program with two laboratories in the Faculty of Medicine. Currently expanding the pilot project to another lab in the Genome building. This involves testing the integrity of samples stored at ambient temperature, and training lab members on how to use this technology. |
| **Curriculum** | Engaged undergraduate teaching labs to teach the methodology of ambient temperature storage of DNA. This reduces the need for freezers in teaching labs and increases awareness among the researchers of tomorrow. |
| **Media** | • Conducted a radio interview while participating in the Sustainability Fair.<br>• Created a promotional/informative SPF video of our project and posted it on YouTube. Video can be seen at https://www.youtube.com/watch?v=qsnIInVFHHA. |
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| **Chance That the Project Will Continue Once Initial Project Leaders and Funding is Gone** | The project will continue in the following ways:<br><br>• Three labs have been trained on the use of ambient temperature storage of biological specimens. It is our hope and is highly likely that these labs continue using this technology when our pilot program concludes.<br>• Policies will soon be in place on the recommendations of energy efficient freezers. Our work will then continue via the policies that are made based on our findings.<br>• For the first time at McGill University, undergraduate students will be educated on the use of ambient temperature storage. Therefore, awareness will be consistently and widely spread long after our project concludes.<br>• We will begin a pilot project to encourage -80oC freezer clean-up in the McIntyre in February 2013. By providing a portable -40oC freezer for temporary use, we hope to enable researchers to clean them on a regular basis thus using them more efficiently. |