

# UHN Biospecimen Services: Leading Change and Driving Excellence in Innovation to Create A Healthier World



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## BACKGROUND

University Health Network (UHN) is a public research and teaching hospital network in Toronto, Ontario, Canada. It is the largest health research organization in North America and has been named Canada's top research hospital by *Research Infosource*.



With over 4,500 employees and over 3,000 high-impact research publications last year alone, UHN research received \$400 million in funding for innovative research in cancer, cardiac health, stem cells, and other areas in 2019.

## RESULTS

As such, a collaborative group of world-renowned experts in biospecimen management and processing, regulatory compliance, quality assurance (QA), technology, pathology and research joined forces in early 2020, to launch **UHN Biospecimen Services**.

Leveraging over 20 years of combined expertise, this centralized service provides biospecimen and data management, centralized biospecimen storage, biofluid processing, digital pathology services and more, to maximize the use of resources and expand our capacities as a biorepository.

A governance structure was developed, including representatives of the key stakeholders, such as: Ethics, Pathology, IT, various disease sites as well as patient representative(s). A Chief Medical Officer and Head of Operations were also designated.

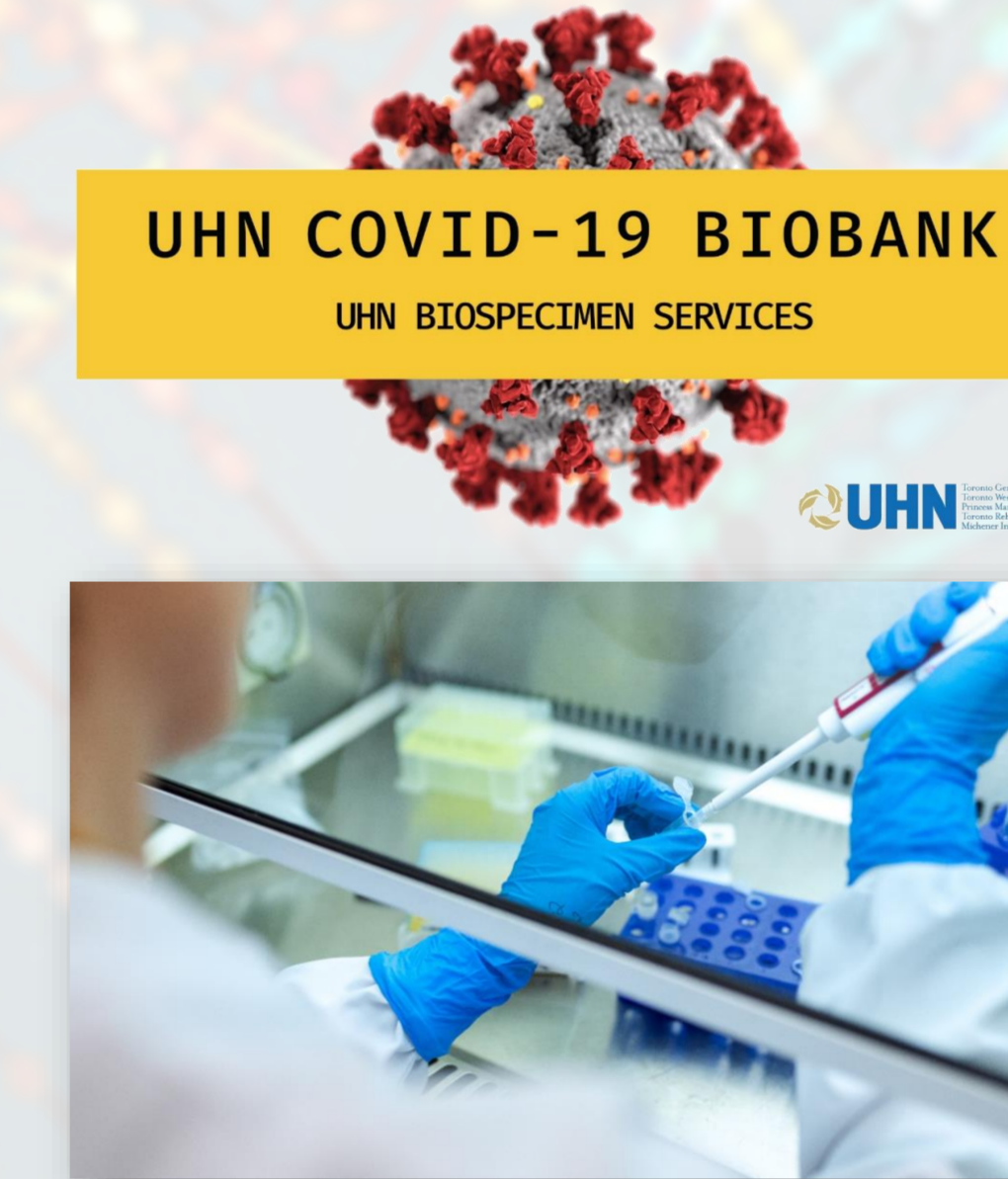


## DISCUSSION

By centralizing certain aspects such as: biospecimen storage and shipping, the Biospecimen Information Management System (BIMS), as well as implementing automation of certain processes, UHN Biospecimen Services is able to significantly cut down costs, use current resources efficiently, and optimize the allocation of space and personnel, with the added benefit of streamlining operations.

Additional strategies were implemented, in an effort to provide an opportunity to cost-recover, while improving our return on investment amidst the COVID-19 pandemic. Some of these include:

- A COVID-19 Biobank has been setup with >400 participants consented and >18,000 derivatives available to researchers for analysis.
- Staff were re-deployed within the organization to essential areas.
- The COVID-19 processing lab, a state of the art CBL2 facility, has been expanded to outsource and provide services to third-party collaborators.



## OUR SERVICES

- Protocol Based Collections
- Surgical Resection & Biopsy tissue
- Study Directed Banking
- Biospecimen Processing
- COVID-19 Biobank
- Digital Pathology
- TMA Construction
- Laser Capture Microdissection
- Cryostorage (Short and Long Term)
- Research Support
- Database Management
- Consulting

## PROBLEM

UHN propels its community to strive for excellence in ground-breaking research by setting new industry standards and working collaboratively towards discovery and innovation to create A Healthier World.

**With the continuous evolution of the medical world and a constantly changing demand in the healthcare industry, the need for improvement arises for institutions to remain cost-effective, fit-for-purpose, sustainable, and avoid redundancies without comprising research.**

## FUTURE DIRECTIONS

- Enhance marketing strategies (aligned with business plan) to increase the organization's visibility, market value and potential for collaborations, while simultaneously impacting its market share and potential to cost-recover.
- Increase partnerships with other teams and departments at UHN to share costs (where possible), for example, regarding equipment calibration and maintenance to allow for more efficient distribution of resources and drive sustainability.
- Implement universal consent/e-consent for all of UHN's biobanks.
- Fuel collaborations with academic and non-academic researchers, to drive novel research and the improvement of patient care.

## CONCLUSION

UHN Biospecimen Services has been the results of an elaborate multi-disciplinary effort, and is now the core service that offers services to sister institutions and various biobanks both regionally and nationally in Canada, including the UHN Biobank and the McCain GU BioBank,, as well as other groups and disease sites, including: the arthritis biobank, living biobank, and others.

UHN Biospecimen Services has set forth a targeted plan to bring progressive ideas forward to better streamline operations while being cost-effective for the institution. The goal of this central service is to leverage the work of researchers collaboratively and generate more groundbreaking and innovative research.

## ACKNOWLEDGEMENTS

The authors would like to acknowledge the contribution of all patients who have contributed their time and samples to this work.

In addition, we would like to thank:

- McCain GU BioBank (MGB) Team
- UHN Biobank Team
- UHN COVID-19 Biobank Team

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