



McGill



Canada Excellence  
Research Chairs  
Chaires d'excellence  
en recherche du Canada

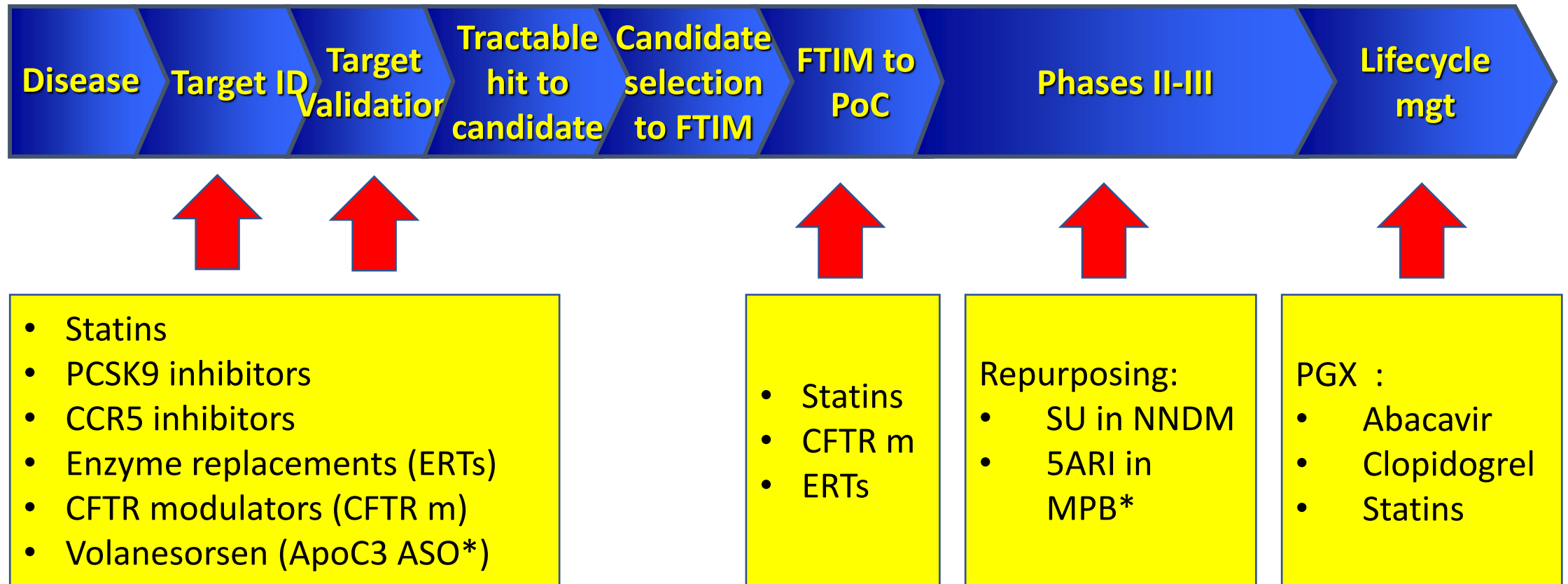
# Contribution of Large-Scale Genomics to Drug Discovery and Development

SECONDE ÉDITION

FORUM D'AFFAIRES CANADA-ITALIE  
SUR L'INTELLIGENCE ARTIFICIELLE

Vincent Mooser MD,  
Canada Excellence Research Chair in Genomic Medicine  
November 18<sup>th</sup>, 2020

# Contribution of Genetics to Drug Discovery and Development



\*ASO : antisense oligonucleotide, SU : sulfonyleurea; 5ARI : 5-alpha reductase inhibitor; MPB: Male pattern baldness  
FTIM : First time into man; PGX : pharmacogenetics

# Mission of the CERC

- Contribute to drug discovery and development
- Using genomic medicine

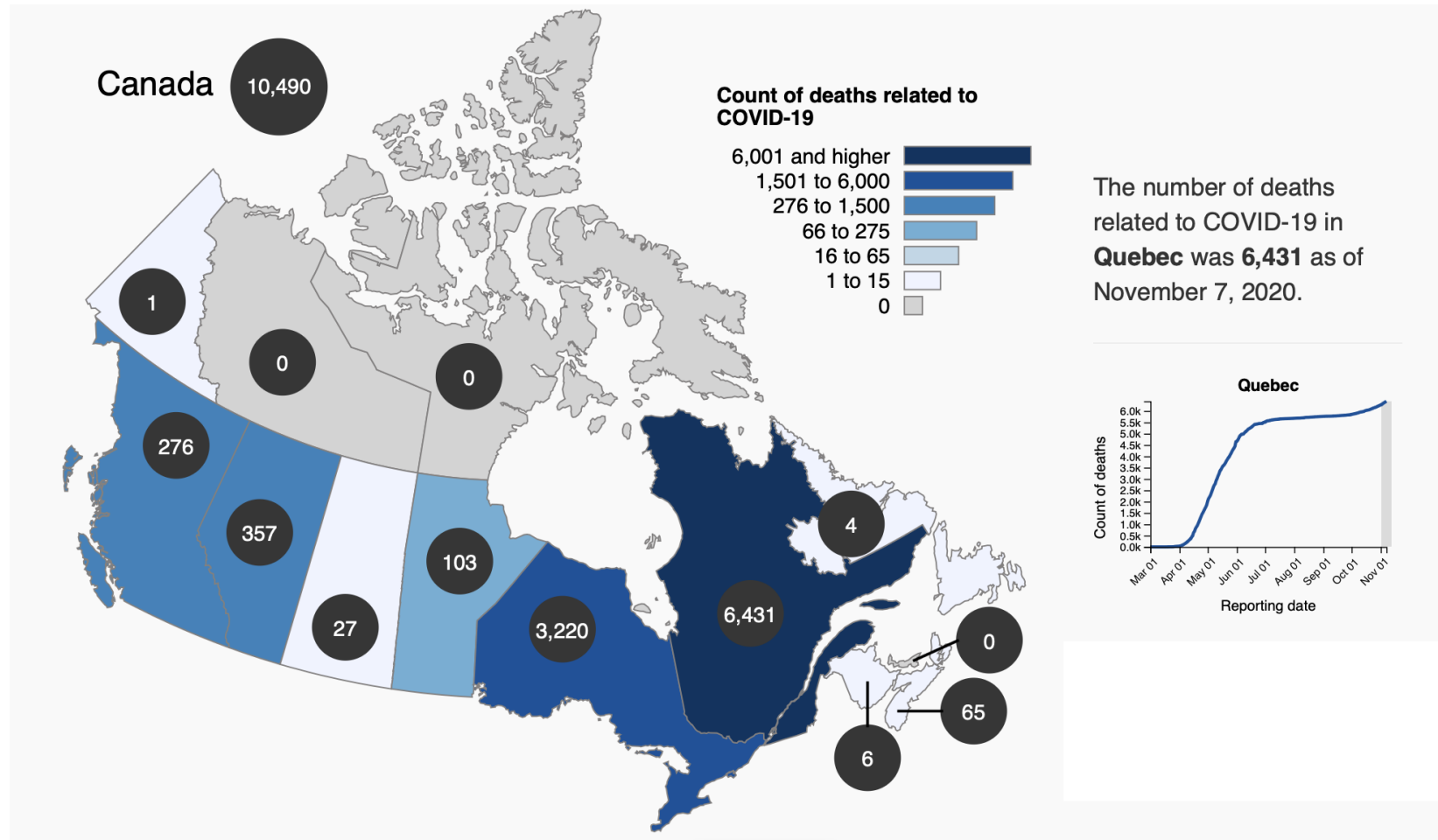
# CERC Vision

- Hub to support primarily target identification, target validation and a new generation of genetically enriched PoC trials
- Capitalize on functional variants, including pLoF
- Capitalize on French-Canadian and cosmopolitan population of Québec

# CERC enabling projects

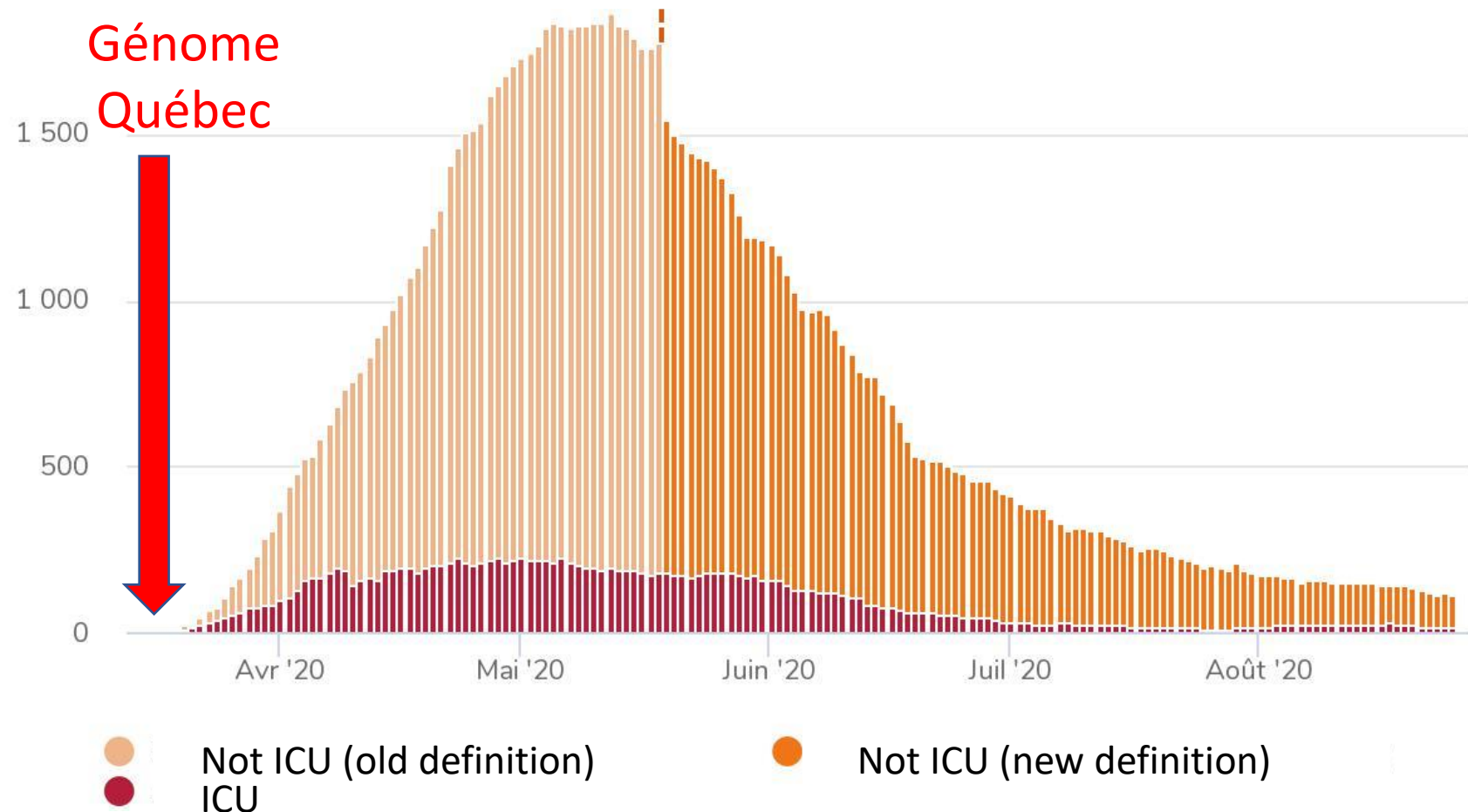
- The Québec COVID-19 Biobank (BQC19)
- Architecture of coding variants in French-Canadians (FC)
- Development of sequencing technology for CERC needs

# COVID-19 Deaths in Canada (Nov 7<sup>th</sup>, 2020)

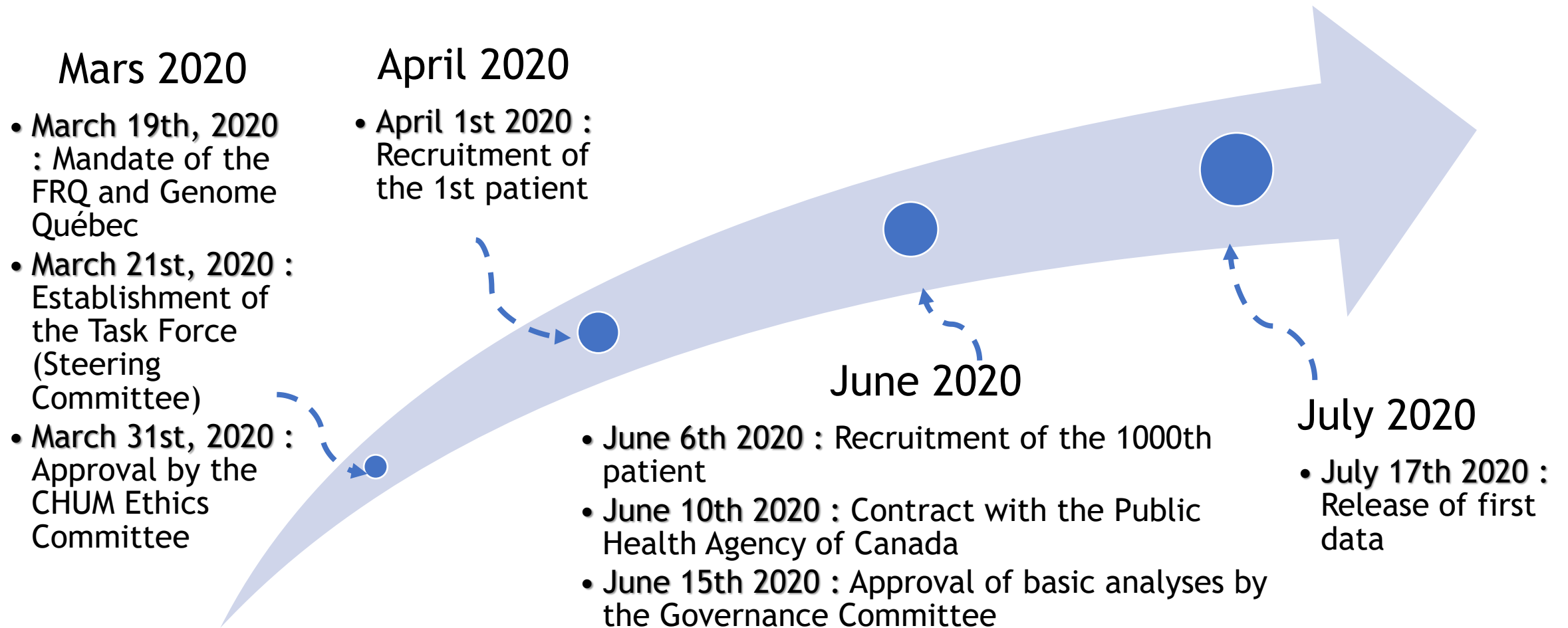


# COVID-19 Hospitalizations in Québec

Mandate by  
FRQS and  
Génome  
Québec

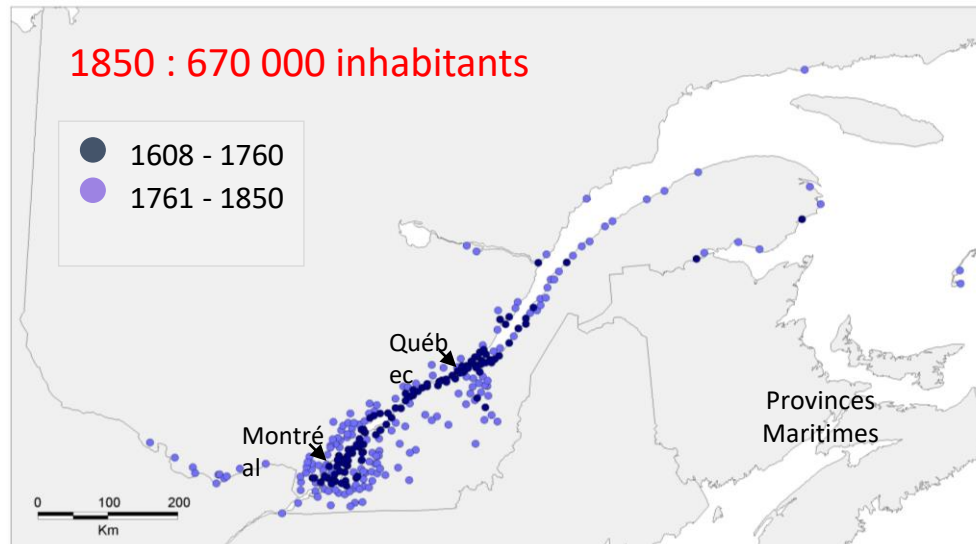
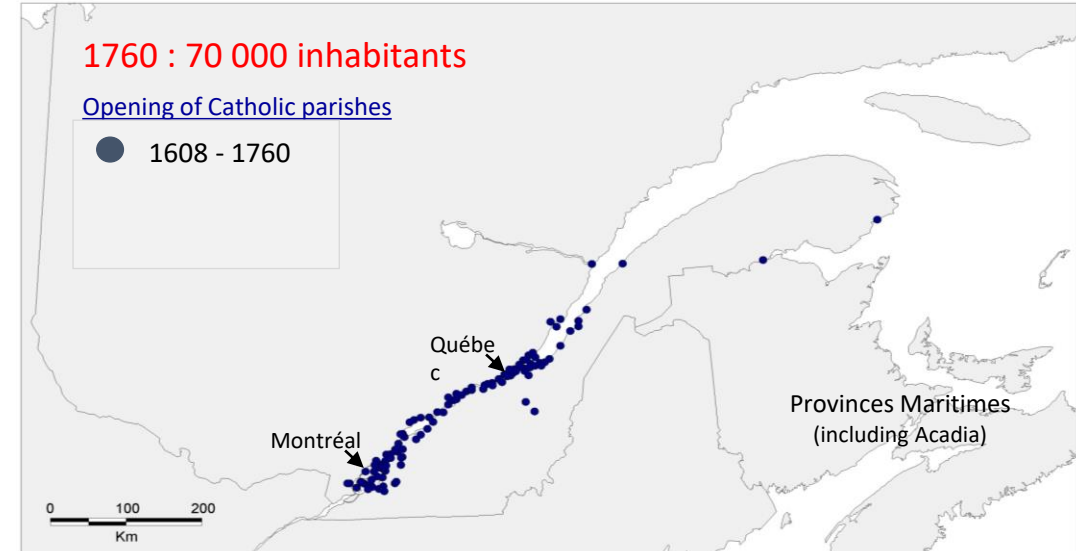
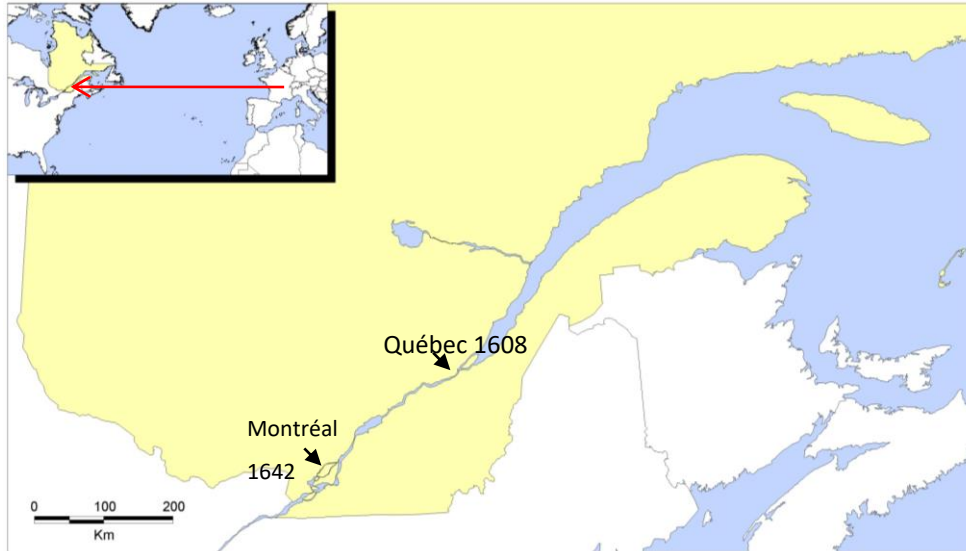


# BQC19 Milestones





# European Settlements in Québec



# French-Canadian exomes are enriched for variants at increased frequency compared to Europeans

