Located in UBC Village at the University of British Columbia, Canadian Blood Services’ netCAD Blood4Research Facility plays a unique role in improving Canada’s blood system. The presentation will briefly outline the structure and function of the facility on how it links research, development, and innovation. Besides operating mainly within the Canadian Blood Services, it also provides blood and blood products to external research groups.

The facility has become the ‘jewel’ in the Canadian Blood Services’s research and development crown and has grown into a ‘playground’ for improving our understanding of blood and blood products provided to Canadian patients, continuously improve the safety and quality of those products, and work to develop next generation products and processing technologies. I will present two examples of projects in the innovation and development space, respectively. To reduce discard of blood products held to expiry as mandated by our quality control (QC) regulations, we developed a system for non-destructive quality control testing based on removing only an aliquot from the product earmarked for QC testing and releasing the remaining product for transfusion. Lastly, development work for the reintroduction of now leukoreduced whole blood as a transfusion product has several advantages over massive transfusion protocols. Production of such a product and its in vitro quality will be outlined.