



Ontario Research and
Innovation Optical Network

Réseau optique de recherche
et d'innovation de l'Ontario

ORION 2016 Higher Education Leadership Award Winner

About Alla Reznik

As a Canada Research Chair in Physics of Molecular Imaging, Dr. Alla Reznik leads the development and execution of a medical imaging research program. This requires a broad range of integration and collaboration with interdisciplinary academia and industry – from physics to engineering to commercialization.

Dr. Reznik is also a senior scientist at the Thunder Bay Regional Research Institute, where she leads a research program in biomedical imaging. At Lakehead University, she is an associate professor in physics, where she leads the research team who invented Positron Emission Mammography (PEM). PEM is a ground-breaking, solid-state technology for molecular breast imaging.

In order to create the PEM detector technology, Dr. Reznik uses ORION's network to quickly analyze a massive amount of image-based data through the high performance computing facility SHARCNET. The potential of PEM can significantly improve breast cancer diagnosis, reduce the need for breast biopsy and better women's health and breast cancer survival.

Furthermore, the PEM system has been commercialized to be manufactured and sold by Radialis Medical. The benefits of this are twofold: Thunder Bay's region can then offer women access to clinical trials at the Thunder Bay Regional Health Sciences Centre. Secondly, the commercialization of PEM can extend cancer research, employment and training opportunities to professionals and students in Thunder Bay, adding to the economic strength of the region.