Medical Isotopes from Light

Canadian Isotope Innovations (CII)

Medical isotopes save lives. Canadian Isotope Innovations Corp. (CII) produces high-quality, safe medical isotopes used by physicians for diagnosis and treatment of disease (such as cancer & cardiovascular disease). The reliable supply for these critical medical isotopes is challenged by unexpected and extended shutdowns of reactor and processing facilities.

CII experts have created an innovative, cleaner and safer medical isotope production platform that produces high quality Tc-99m from molybdenum-100 (Mo-100) using a linear accelerator (linac), at significantly reduced production costs and with no nuclear waste.

The Innovation

A Linac dedicated to the production of medical isotopes was installed at the Canadian Light Source, the first of its kind in the world. This facility was funded by the Natural Resources Canada Non-reactor-based Isotope Supply Program (NISP) and the Government of Saskatchewan. In November 2014, the facility made its first shipment of medical isotopes produced from the dedicated linear accelerator. Since then, the facility has been used to refine the process for eventual sale in North America, pending regulatory approvals.

The Technique

CII has developed a world-class solution to a shortage of medical isotopes that is threatening over 18 million diagnostic procedures each year in North America. Unlike the traditional production method, CII uses a Linac-based method that does not produce radioactive waste and does not use enriched uranium.

Leading the Way

- World’s first commercial Linac Mo-99/Tc99m production platform
- World-class team of experts
- No long-lasting nuclear waste products
- Produce more environmentally friendly isotopes at a cost equal to or below other methods
- CII’s medical isotopes are just as pure and effective as conventional reactor radioisotopes