**The Development of a New High-capacity Solid Resin for Use in Mo/Tc-99m Generators**

**Clifford Agyei, Michael Campbell**

**Lakehead University, Ontario, Canada**

Tc-99m is the most widely used radioisotope in nuclear medical imaging accounting for over 76000 scans per day. Currently, all Tc-99m used in Canada are derived from Mo-99/Tc-99 generators where Mo-99 is isolated from the fission of U-235 produced by a limited number of aging reactors. These reactors rely on highly enriched uranium (HEU) as feed stock. There is increasing pressure to move away from uranium sources that requires HEU because of its alternate use in weapons. This presentation will focus on the development of a new high-capacity solid support resin for use in Mo/Tc-99m generators resulting from non-uranium-based processes which to permit higher loading capacity and allow for use with low specific activity Mo-99 such as that produced by linear accelerators and neutron activation.