Bringing Discovery to Life

CHRISTOPHER P. PHENIX, PHD.

Scientist
Email: phenixc@tbh.net

Education:

- Ph.D. Chemistry, University of Saskatchewan, 2006.
- B.Sc. Dual Major, Chemistry and Biochemistry, University of Regina, 2000

Appointments and Affiliations:

- Adjunct Professor of Chemistry, Lakehead University, Thunder Bay, ON

Research Areas of Focus:

Positron emission tomography (PET) is a powerful nuclear-based imaging technique that allows the functional, quantitative, kinetic and tomographic (3D) visualization of physiological and biochemical processes. The technique relies on the injection of a radiopharmaceutical probe that is designed to interact with a specific biomolecule identified to play an important role in a disease process (these biomolecules are known as biomarkers).

The ability to visualize the presence and function of a specific biomarker can provide scientists and physicians with information vital for the diagnosing, characterization, staging, and treatment of that disease. Given the recent progress made by molecular biologists in identifying new biomarkers coupled with the world shortage of medical isotopes, a high demand now exists for the development of new generation PET imaging agents.

The nature of Dr. Phenix's work is to develop novel PET imaging agents that will enable the functional and diagnostic imaging of disease with a primary focus on cancer. His research laboratory will consist of two main themes:

1) to design small molecule probes that specifically interact with enzymatic biomarkers associated with cancer

2) to develop chemical and chemo-enzymatic methods to conveniently and specifically incorporate radioisotopes into biomolecules that are to be used as tracers for PET imaging.

Members of his laboratory will receive interdisciplinary training in molecular biology, enzymology, synthetic chemistry, radiochemistry, bioconjugation chemistry, animal biodistribution studies and PET imaging.