

NCI Awards Grant For Photodynamic Therapy Research

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The [National Cancer Institute](#) has awarded Ravi Pandey, PhD, a five-year, \$2.9 million grant to identify multifunctional photosensitizers for image-guided [photodynamic](#) therapy of brain and other tumors.

Dr. Pandey - Distinguished Member, [Photodynamic Therapy Center](#), and Professor of Oncology, [Department of Cell Stress Biology](#), at Roswell Park Cancer Institute (RPCI) - will lead a multidisciplinary research team of colleagues from Roswell Park and the [University at Buffalo](#).

Photodynamic therapy (PDT) is an effective local therapy developed at Roswell Park that is based on a tumor localizing photosensitizer (PS) being activated by light directed at the treatment site. Current photosensitizers demonstrate some tumor selectivity and light can be delivered almost anywhere in the body by thin, flexible optical fibers. However, for small, bulky, or buried tumors, it may be difficult to detect the malignancies and/or properly place the optical fibers to illuminate the full extent of the tumor.

The main objective is research funded by this grant is to develop a "see and treat" approach to targeting [cancers](#) with a PDT agent that can be detected by fluorescence and positron emission tomography (PET) imaging, and then activated with light at an appropriate wavelength to destroy tumors by PDT.

The research will involve the synthesis, characterization and preclinical validation of novel tumor photosensitizers carrying unique, almost infrared, fluorescent dyes and the long half-life ¹²⁴I radionucleotide.

Other key investigators in this funded project from RPCI are Allan Oseroff, MD, PhD, Chair, Department of Dermatology; Janet Morgan, PhD, Department of Dermatology; Youcef Rustum, PhD, Chair, Department of Cancer Biology; Robert Fenstermaker, MD, FACS, Chair, Department of Neurosurgery; and Michael Ciesielski, PhD, Department of Neurosurgery.

Roswell Park Cancer Institute, founded in 1898, is the nation's first cancer research, treatment and education center and is the only National Cancer Institute-designated comprehensive cancer center in Upstate New York. RPCI is a member of the prestigious [National Comprehensive Cancer Network](#), an alliance of the nation's leading cancer centers. Roswell Park has affiliate sites and collaborative programs in New York, Pennsylvania, and in China.