# The Department of Chemistry and Biochemistry

# **Seminar Series**

#### Presents a Seminar Titled:

"Essentials of Photodynamic Therapeutic Studies with Non-Transition and Transition Metal Complexes"



## Presented By

### Dr. Alvin Holder

Assistant Professor
Bioinorganic Chemistry
The University of Southern Mississippi

Photodynamic therapy (PDT) is a new treatment for some types of cancer. It may also be used to treat some non-cancerous conditions of the skin or eye. PDT is not yet established as a standard treatment, and research is continuing to find its exact role as a cancer treatment. PDT uses laser, or other light sources, combined with a light sensitive drug (sometimes called a photosensitising agent) to destroy cancer cells. We have developed some promising compounds which have been shown to cleave DNA and to inhibit cell growth of the Barbadian Green Monkey's kidney cells, and more recently, inhibit cancer cells of the colon and melanoma through dark toxicity. Chemotherapeutic and photodynamic therapeutic studies with the use of non-transition and transition metal complexes with unnatural and natural products in the fight against cancer will be discussed in this lecture.

Friday, April 19, 2013 at 3:00 in OCNPS 100