

## **INCORPORATION OF DIOXIN SELECTIVE PEPTIDES TO A POLYANILINE**

**MATRIX,** Edikan Archibong<sup>1</sup>, Ling Wang<sup>1</sup>, Nelly Mateeva<sup>1</sup>, Ivan Ivanov<sup>2</sup>, <sup>1</sup>Department of Chemistry, Florida A&M University, 1530 S. Martin Luther King, Jr. Blvd., Tallahassee, FL 32307, <sup>2</sup>Department of Veterinary Physiology and Pharmacology, Texas A&M University, Mail Stop 4466 College Station, TX 77843

Dioxins and PCB's are highly stable thereby persist in the environment, in addition to accumulating in the bodies of animals and humans. Although sensitive detection platforms are available there is an unmet need for technologies to extract and concentrate PCB's from complex sample matrices. The presented research investigated the binding and stability of a chemosensor consisting of PCBs and dioxin binding selective pentapeptides incorporated into the polyaniline matrix via a) glutaraldehyde as a linker, or b) via polymerization of aniline in presence of the corresponding peptides.

The composition and stability of the chemosensors have been investigated by elemental analysis, XPS, UV/Vis and emission spectroscopy. PCA analysis of the UV/Vis data was performed in order to elucidate the type of bonding between the components of the chemosensor.