

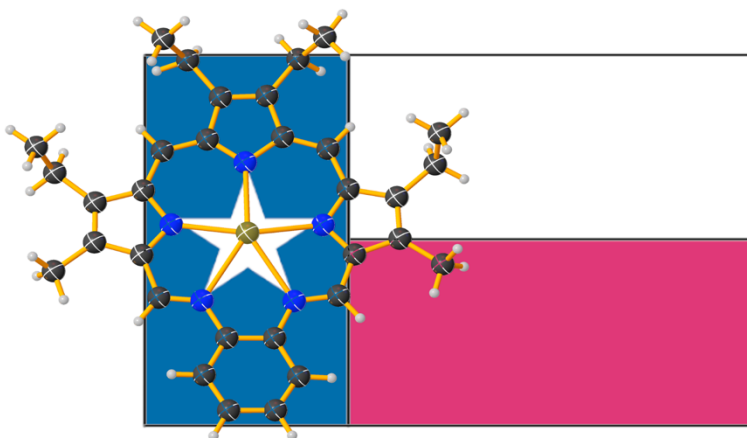


Texaphyrin Chemistry and Biomedical Applications

Texaphyrin Chemistry

Texaphyrins are a class of expanded porphyrins that form stable complexes with metal cations. The chemical versatility of texaphyrins offers several sites for chemical modification and functionalization which has garnered considerable interest for the development of various biomedical applications.

Invented by Professor Jonathan Sessler PhD at the University of Texas, texaphyrins were named for their chemical structure that can superimpose onto the points of the star featured on the state flag of Texas. The center ring includes five nitrogen atoms which leads to an internal core that is approximately 20% larger than that of the naturally occurring porphyrins the red color in our blood and the green pigment in plants. This increase in size enables texaphyrins to coordinate or capture large metals and target specific tumor sites.



Biomedical Applications

Since discovery, next generation texaphyrins continue to be developed for various applications in the biomedical field, including chemo- and radiotherapeutics, metal-based magnetic nanoparticles, thermal theranostic agents and as potential carrier systems for targeted payload delivery. Texaphyrin-metal complexes possess anticancer activity and were shown to be MRI-detectable, localize to solid tumors, and limit toxic side effects from traditional chemotherapy. In previous studies, texaphyrin was used to strongly localize to both primary and metastatic tumor sites with reported ratios up to 70:1 to non-tumor tissue.

InnoVOTEX Inc. is a pharmaceutical company developing texaphyrin based tumor localizing therapeutics to treat multiple solid tumor indications. Company objectives are to develop its lead clinical candidate OxaliTEX and expand the platform to identify the next generation of therapeutic innovation for cancer treatment.