About Chinese Medicine Treating Pancreatic Cancer

The bark of the Amur cork tree (*Phellodendron amurense*) has traveled a centuries-long road with the healing arts. Now it is being put through its paces by science in the fight against pancreatic cancer, with the potential to make inroads against several more.

UT Health Science Center researcher A. Pratap Kumar was already exploring the cork tree extract's promise in treating prostate cancer when his team found that deadly pancreatic cancers share some similar development pathways with prostate tumors.

In a paper published in the journal ***Clinical Cancer Research***, the researchers show that the extract blocks those pathways and inhibits the scarring that thwarts anti-cancer drugs. Dr. Jingjing Gong, currently pursuing post-doctoral studies at Yale University, conducted the study as a graduate student in Dr Kumar's laboratory in the Department of Pharmacology.

"Fibrosis is a process of uncontrolled scarring around the tumor gland," said Dr. Kumar, a professor of urology in the School of Medicine at the Health Science Center and the study's principal investigator. "Once you have fibrotic tissue, the drugs cannot get into the cancer."

Liver and kidney tumors also develop fibrosis and the resulting resistance to drugs, he said, and there are no drugs currently targeting that pathway in those cancers.

The two pathways, or proteins, that contribute to fibrosis in those tumors also encourage Cox-2, an enzyme that causes inflammation, and the cork tree extract appears to suppress that as well, Dr. Kumar said. The complex interrelationship of these substances is "the million-dollar question," he said, and solving that question is one of the next steps in his research.

The potential of natural substances to treat and cure disease has great appeal, but the advantage of cork tree extract, available as a dietary supplement in capsule form, is that it already has been established as safe for use in patients. In a promising prostate cancer clinical study of 22 patients that Dr. Kumar helped spearhead, all the patients tolerated the treatment well, he said. Now researchers are analyzing the results, he said, and with more funding they plan to expand the study to a much larger group of patients.

The dietary supplement is marketed as Nexrutine by Next Pharmaceuticals of Salinas, Calif., which provided a supply of the compound for the studies. **Source: University of Texas Health Science Center at San Antonio – BIOScience Technology – March 3, 2014**