Targeted therapeutics for colon cancer to be presented at AACR meeting

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Anurag Singh, PhD, assistant professor in the Department of Pharmacology and Experimental Therapeutics at Boston University School of Medicine has been invited to present his recent work on targeted therapeutics for colon cancer at the American Association of Cancer Research Annual Meeting in Chicago, IL. Singh's seminar, scheduled for Tuesday April 3rd, will be featured in the "Late-Breaking Abstracts Mini-Symposium". This highlights recent and provocative groundbreaking research in cancer biology.

Over one million cases of colon cancer are diagnosed worldwide each year resulting in approximately 600,000 deaths annually. Disease-causing mutations in the KRAS gene are found in over half of these cases. In the United States, colon cancer patients are routinely genotyped for KRAS gene mutations and those with mutations are excluded from receiving novel "targeted" therapeutic agents due to a lack of clinical benefit. Thus, patients with KRAS gene mutations are faced with very limited therapeutic options and are subsequently given very poor clinical prognoses.

Singh and his colleagues have identified a network of genes that are hyper-activated in KRAS mutant colon cancers. Within this network is a gene called MAP3K7 or TAK1, which plays a very critical role in promoting colon cancer disease progression. Pharmacological inhibition of TAK1 results in strong killing of affected tumor cells, with minimal effects in "normal" non-mutated cells. "These findings raise the possibility that anti-TAK1 agents could provide the basis for

"personalized" medicine in patients with highly aggressive KRAS mutant colon cancers," said Singh. Efforts are now underway to identify clinically efficacious TAK1 inhibitors.

Provided by Boston University Medical Center