

Naveena Janakiram, Ph.D

Assistant Professor



SECTION: Hematology/Oncology

EDUCATION: Ph.D

ADDRESS: 975 NE. 10th St. BRC west, R # 1205
Oklahoma City, OK 73014

OFFICE PHONE: 405-271-8000 Etn:32525
FAX: 405-271-3225
E-MAIL: njanakir@ouhsc.edu

RESEARCH INTERESTS:

Molecular Mechanisms in early stage cancer development

Our research aims to understand the molecular changes that occur during formation and stepwise progression of cancer and to identify specific genes and microRNAs as promising targets for drug development to delay/inhibit/prevent tumor growth. Major focus of our laboratory aims in the translational research applying rodent models of colon and pancreatic cancers. Some of the important genes identified belong to hormone receptors and their responsive genes with respect to stromal cells in colon tumor development are under experimentation. Furthermore, currently my focus is also on evaluating the immune mechanisms related to T cells and NK cells in colon and pancreatic carcinogenesis to modulate their effects using combinations of preventive vaccines and effective chemopreventive and therapeutic drugs. The mechanistic basis of these cancer preventive functions is being explored in rodent models of colon and pancreas. These studies help in understanding and identifying targets and in developing targeted drugs and preventive vaccines for high risk individuals for colon and pancreatic cancers. Works in the lab is funded by an Alumni grant from Dept. Medicine and COBRE pilot project, a NIH Center of Biomedical Research Excellence (CoBRE) grant.

Selected Publications:

1. Naveena B. Janakiram, Altaf Mohammed, Li Qian, Chang-in-Choi, Vernon E. Steele and Chinthalapally V. Rao. (2012) Chemopreventive effects of RXR selective rexinoid bexarotene on intestinal neoplasia of Apc^{Min+/-} mice. *Neoplasia*, Vol 14, Issue 2.
2. Naveena B. Janakiram, Altaf Mohammed, Michael S. Bronze and Chinthalapally V. Rao Prophylactic vaccine approach for colon and pancreatic cancers: Present and Future. (2012) *Current Medicinal Chemistry* Vol, 19: 3664-3678.
3. A. Mohammed, Naveena .B. Janakiram, S. Lightfoot, H. Gali, A. Vibhudutta and C.V. Rao. Early Detection and Prevention of Pancreatic Cancer: Use of Genetically Engineered Mouse Models and advanced Imaging Technologies (2012) *Current Medicinal Chemistry*, 19: 3701-3713.
4. Altaf Mohammed, Li Qian, Naveena B. Janakiram, Stan Lightfoot, Vernon E. Steele and Chinthalapally V. Rao. (2012) Atorvastatin delays progression of pancreatic lesions to carcinoma by regulating PI3/AKT signaling in p48Cre/+ LSL-Kras^{G12D} mice. *International Journal of cancer*, DOI: 10.1002/ijc.27456. ([Cover Page High Light](#))
5. Rao C.V., Altaf Mohammed, Naveena B. Janakiram, Qian Li, Rebekah L. Ritchie, Stan Lightfoot, Awasthi Vibhudutta and Vernon E. Steele. (2012). Inhibition of pancreatic intraepithelial neoplasia (PanIN) progression to carcinoma by nitric oxide-releasing aspirin in p48Cre/+LSL-Kras^{G12D/+} mice. *Neoplasia*, Vol 14, N 9, 778-787. ([Cover Page High Light](#))
6. Suh N, Reddy BS, Decastro A, Paul S, Lee HJ, Smolarek AK, So JY, Simi B, Wang CX, Naveena B. Janakiram, Steele VE, Rao CV. (2011). Combination of atorvastatin with sulindac or naproxen profoundly inhibits colonic adenocarcinoma by suppressing the p65/beta-catenin/cyclin D1 signaling pathway in rats. *Cancer Prevention Research*, Nov;4(11):1895-902.
7. Naveena B. Janakiram, Altaf Mohammed, Rao C.V. (2011). Role of lipoxins, resolvins and other bioactive lipids in colon and pancreatic cancer. *Cancer Metastasis Reviews*. Dec;30(3-4):507-23

8. Altaf Mohammed, Naveena B. Janakiram, Li Qian, Chang In Choi, Yuting Zhang, Vernon E. Steele, and Chinthalapally V. Rao. (2011) Chemoprevention of Colon and SI Tumorigenesis in APCMin/+ mice by Licofelone, A Novel Dual 5-LOX/COX Inhibitor: Potential Implications for Human Colon Cancer Prevention. *Cancer Prev Res*; Dec;4(12):2015-26
9. Altaf Mohammed, Naveena B. Janakiram, Qian Li, madka V, Ely M, Lightfoot Stan, Crawford H, Steele VE, Rao C.V. (2010). The Epidermal Growth Factor Receptor Inhibitor Gefitinib in a Conditional LSL-KrasG12D/+ Transgenic Mouse Model Prevents the Progression of Pancreatic Lesions to Carcinoma. *Cancer Prev Res*;3:1417-1426.
10. Joyner PM, Waters AL, Williams RB, Powell DR, Naveena B. Janakiram, Rao CV, Cichewicz RH. Briarane diterpenes diminish COX-2 expression in human colon adenocarcinoma cells. *Journal of Natural Products*, 2011 Apr 25;74(4):857-61.
11. Altaf Mohammed, Naveena B. Janakiram, Qian Li, madka V, Ely M, Lightfoot Stan, Crawford H, Steele VE, Rao C.V. (2010). The Epidermal Growth Factor Receptor Inhibitor Gefitinib in a Conditional LSL-KrasG12D/+ Transgenic Mouse Model Prevents the Progression of Pancreatic Lesions to Carcinoma. *Cancer Prevention Research*, 3:1417-1426.
12. Naveena B Janakiram, Altaf Md, Zhang Y, Choi C, Woodward C, Collin P, Steele V E and Rao CV. (2010) Chemopreventive effects of Frondanol A5, a cucumaria frondosa extract, against rat colon carcinogenesis and inhibition of human colon cancer cell growth. *Cancer Prevention Research*, 1: 82-91.
13. Naveena B Janakiram., Steele V E. and Rao. C.V. (2009). Estrogen receptor- β as a potential target for colon cancer prevention: Chemoprevention of azoxymethane-induced colon carcinogenesis by raloxifene in F344 Rats. *Cancer Prevention Research* 2(1): 52 – 59. [\(Cover Page High Light\)](#) [\(Also selected for Annual AACR meeting cover page high light-illustration\)](#)
14. Naveena B Janakiram. and Rao. C.V. (2009). Role of lipoxins and resolvins as anti-inflammatory and proresolving mediators in colon cancer. *Current Molecular Medicine*, 9: 565-79.