CURRICULUM VITAE

Jayarama Bhat Gunaje

Address: South Dakota State University School of Pharmacy
Avera Health and Science Center
Department of Pharmaceutical Sciences
Box 2202C
Brookings, SD 57007
Tel: (605) 688-4090
Cell: (206) 280-9990
E-mail: Jayarama.gunaje@sdstate.edu

Education:

Institution	Degree	Year	Field
Mysore University, Mysore, India	B.S.	1980	Biology
Mangalore University, India	M.S.	1982	Biosciences
Indian Institute of Science, India	Ph.D.	1989	

Honors/Awards:

1989

Extramural Funded Grant Support:

1994-96 Principal Investigator, American Heart Association (AHA)-PA affiliate Grant-In-Aid
to-oncogenes by Angiotensin
Total award: $70,000

1996-99 Principal Investigator, AHA (National) Grant-In-
transcription factor Stat92 by Angiotensin

1997-99 Principal Investigator, AHA PA affiliate Grant-In-
transcription factors by -thrombin in vascular smooth muscle
$70,000.

2000-03 -6-

Publications:

1. Dwarki, V.J., Francis, V.S.N.K., **Bhat, G.J**. and Padmanaban, G. (1987). Regulation of cytochrome P-450 mRNA and apoprotein levels by heme. J. Biol. Chem. 262, 16958-16962.

2. **Bhat, G.J.**, Rangarajan, P.N. and Padmanaban, G. (1987). Differential effects of cycloheximide on rat liver cytochrome P-450 gene transcription in the whole animal and hepatoma cell culture. Biochem. Biophys. Res. Comm. 148, 1118-1123.

3. **Bhat, G.J**. and Padmanaban, G. (1988). Heme regulates cytochrome P-450 gene transcription elongation. Biochem. Biophys. Res. Comm. 151, 737-742.

4. **Bhat, G.J**. and Padmanaban, G. (1988). Heme is a positive regulator of cytochrome P-450 gene transcription. Arc. Biochem. Biophys. 264, 584-590.

5. **Bhat, G.J**., Koslowsky, D.J., Feagin, J.E., Smiley, B.L. and Stuart, K. (1990). An extensively edited mitochondrial transcript in kinetoplastids encodes a protein homologous to ATPase subunit 6. Cell 61, 885-894.

6. Koslowsky, D.J., **Bhat, G.J**., Perrolaz, A.L. Feagin, J.E. and Stuart, K. (1991). The MURF3 gene of T. Brucei contains multiple domains of extensive RNA editing and is homologous to a subunit of NADH dehydrogenase. Cell 62, 901-911.

7. **Bhat, G.J**., Lodes, M.J., Myler, P.J. and Stuart, K. (1991). A simple method for cloning blunt ended DNA fragments. Nucl Acids Res. 19, 398.

25. **Bhat, G.J.**, Samikkannu, T., Thomas, J.J. and Thekkumkara, T.J. (2004). Alpha Thrombin rapidly induces tyrosine phosphorylation of a novel, 74-78 kDa stress response protein(s) in lung fibroblast cells. J. Biol. Chem. 279, 48915-48922.

26. Yang, T., Roder, K.E., **Bhat, G.J**., Thekkumkara, T.J. and Abbruscato, T.J. (2006). Protein Kinase C family members as a target for regulation of blood brain barrier Na, K, 2Cl-co-transporter during in vitro stroke conditions and nicotine exposure. Pharmaceutical Research. 23, 291-302.

27. Samikkannu, T., Thomas, J.J., **Bhat, G.J**

14. Dachineni, R., Ai, G., Tummala, H. and

7. Cyclin A2 and CDK2 as Novel Targets of Aspirin and Salicylic acid: A Potential Role in Cancer Prevention. Department of Chemistry and Biochemistry, South Dakota State University (September 23rd 2015).

8. Molecular Targets of Aspirin and Cancer Prevention. 20th World Congress on Advances in Oncology and 18th international symposium on molecular medicine. (8-10 October 2015, Metropolitan Hotel, Athens, Greece; presentation on October 10th).

9. Cyclin A2 and CDK2 as Novel Targets of Aspirin and Salicylic acid: A Potential Role in Cancer Prevention. 3rd Annual Sanford Health-SDSU Biomedical Research Symposium, November 10, 2015. Sanford Research Center; Sioux Falls, SD.

10. Novel molecular targets of aspirin and Cancer prevention. Minnesota Chemoprevention Consortium MC^2 meeting. Hormel Institute, Austin, MN. January 19th, 2016.

11. Aspirin and Cancer Prevention: A New Use for an old Drug. Sewrey colloquium, South Dakota State University, February 16th 2016.

12. Novel Molecular Targets of Aspirin in Cancer Prevention. Friday Seminar Series, Department of Pharmaceutical Sciences, South Dakota State University, March 18th 2016.

Graduate Students and Postdoctoral fellows Mentored at Texas Tech University Health Sciences Center School of Pharmacy, Amarillo, TX

Major Advisor

Lloyd F. Alfonso, Ph.D. Student (joined my laboratory in 2006; successfully defended

Project II: Novel Non-Acetylation Targets of Aspirin, or its Primary Metabolite, Salicylic Acid as contributors to Aspirin's Chemo-preventive Actions: We hypothesize that aspirin or its primary metabolite, salicylic acid interacts with cellular proteins to modulate their function and contribute to anti-cancer effects. It is known from literature that one known target is the transcription factor, NF- B, which is involved in inflammatory responses. Inhibition of the NF- B, therefore, would cause a decrease in cancer risk by suppressing inflammatory responses in epithelial tissues. We believe that there are other targets of salicylic acid besides NF- B, and our goal in this project is to identify these novel targets.

Which tumor promoting proteins would be so important and potentially are inhibited by aspirin or salicylic acid? We hypothesized that aspirin or salicylic acid may inhibit the levels of proto-oncogene products such as c-MYC. c-MYC is an oncogene and a transcription factor, and its activity is highly regulated in normal cells. Being a transcription factor, it controls nearly 15% of all genes. c-MYC is mutated and constitutively activated in many cancers including colon cancer which contributes to the uncontrolled cell proliferation. Therefore, it is highly desirable to identify drugs that decrease the levels of c-MYC as a strategy to arrest cancer growth. Studies carried out in my laboratory in last 6 months has demonstrated that exposure of cancer cells to aspirin or salicylic acid decreases the c-

Texas Tech Graduate School of Biomedical Sciences Courses (Ph.D) (2004-2011):

1. Pharmaceutical Sciences Research Design and Analysis (GPSC 5390) (**Team Member**) Fall 2004 and 2005. (6 lectures, each lecture in this course was 90 min).

2. **Pharmaceutical Sciences Research Design and Analysis** (GPSC 5390) (**Team Leader**) Fall 2006, 2007, 2008 and 2009 and 2010. (12 lectures, each lecture in this course was 90 min).

3. Advanced Principles of Disease (GPSC 5356) (**Team Member**) Spring 2005, 2006, 2007 and 2008. (4 lectures, each 100 min).

4. Advanced Biochemistry (GPSC 5610) (**Team Member)** Fall 2005. (7 lectures, each session was 60 min).

5. Biotechnology (GPSC 5370) (**Team Member**) Spring 2005 (3 lectures; each session was 75 min).

6. Cancer Biology (GPSC 5301) (**Team Member**) Spring 2007, 2008, 2009 and 2010 (5 lectures; each session was 90 min).

Courses taught at the SDSU College of Pharmacy (Pharm.D) (2011-present):

1. **Biomedical Sciences I: (Cell Biology, Molecular Biology and Immunology:** (PHA 324; 4 credit course) (**Team Leader and Member**) Spring 2012, Spring 2013, Spring 2014, Spring 2015, Spring 2016 (56 lectures each 50 min).

1.