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Education:

Ph.D. - Gulbarga University, Gulbarga, India (1989).
M.Sc. - Mangalore University, Mangalore, India (1984).
B.Sc. - Andhra University, Waltair, India (1982).

Positions and Honors:

1. Research Associate Professor, Department of Radiation Oncology, Vanderbilt University, Nashville, TN 37232 (2003 – present)
2. Research Assistant Professor, Department of Radiation Oncology, Vanderbilt University, Nashville, TN 37232 (1998 - 2003).
3. Research Instructor, Department of Radiation Oncology, Vanderbilt University, Nashville, TN 37232. (1995-1998).
4. Research Associate, Department of Molecular Physiology & Biophysics, Vanderbilt University, Nashville, TN 37232 (1990-1995).
5. Senior Research Fellow, Department of Chemistry, Gulbarga University, Gulbarga, India (Aug-Dec, 1989).
6. Exchange Scientist, Department of Pharmaceutical Chemistry, University of Sunderland, Sunderland SR2 7EE, U.K. (1989).
7. Graduate Student, Gulbarga University, Gulbarga, India (1984-1989).

Awards and Scholarships:

1. Senior Research Scholarship from University Grants Commission (awarded based on the rank obtained in the National Level Examination in India) (1988-89).
2. Junior and Senior Research Scholarships from Department of Science and Technology, India (1984-1988).
3. State Merit Scholarship awarded by the State of Andhra Pradesh, India (1979).
4. National Merit Scholarship in High School awarded by the State of Andhra Pradesh, India (1977).
5. National Merit Scholarship in Middle School awarded by the State of Andhra Pradesh, India (1974).

Book Chapters:

1. J.L. Weeks II, M.A. Blount, A.B. Rouse, R.Zoraghi, M.K. Thomas, **K.R. Sekhar**, J.D. Corbin, and S.H. Francis. Radiolabeled Ligand Binding to the Catalytic Sites or Allosteric Sites of PDE5 and PDE11. Phosphodiesterase, Methods and Protocols, eds. C. Lugnier, The Humana Press Inc., Towata, NJ, 2005.

2. **K.R. Sekhar**, P. Grondin, S.H. Francis and J.D. Corbin. Design and Synthesis of Xanthine and Cyclic GMP Analogs as Potent Inhibitors of PDE V and PDE I. Phosphodiesterase Inhibitors, Hand Book of Immunopharmacology, eds. C. Schudt, G. Dent and K.F. Rabe, Academic Press, 135-145, 1996.

Review Articles:

1. **K.R. Sekhar** and M.L. Freeman. Regulation of Glutamate Cysteine Ligase. Recent Res. Devel. Biophys. Biochem., 3: 29-43, 2003.

2. S.R. Soltaninassab, **K.R. Sekhar**, M. J. Meredith, and M.L. Freeman. Multi-faceted Regulation of Gamma Glutamylcysteine Synthetase. J. Cell. Physiol. 182: 163-170, 2000.

3. J.D. Corbin, C.C. Woodall, J.L. Colbran, L.M. McAllister, **K.R. Sekhar** and S.H. Francis. Identifying protein Kinases in Crude Extracts that Phosphorylate Cyclic GMP-Binding Cyclic GMP-Specific Phosphodiesterase. New Drugs in Allergy and Asthma, Birkhauser Verlag Basel, 27-33, 1993.

Publications:

1. A. V. Bakin, N.V. Stourman, **K.R. Sekhar**, C. Rinehart, X. Yan, M.J. Meredith, C.L. Arteaga, and M.L. Freeman. Smad3-ATF3 Signaling Mediates TGF-beta Suppression of Genes Encoding Phase II Detoxifying Proteins. Free Radic. Biol. Med. 38: 375-387, 2005.

2. J.L. Weeks, R. Zoraghi, A. Beasley, **K.R. Sekhar** , S.H. Francis, and J.D. Corbin. High biochemical selectivity of tadalafil, sildenafil and vardenafil for human phosphodiesterase 5A1 (PDE5) over PDE11A4 suggests the absence of PDE11A4 cross-reaction in patients. Int. J. Impot. Res. 17: 5-9, 2005.

3. M.A. Blount, A. Beasley, R. Zoraghi, K.R. Sekhar, E.P. Bessay, S.H. Francis, and J.D. Corbin. Binding of tritiated sildenafil, tadalafil, or vardenafil to the phosphodiesterase-5 catalytic site displays potency, specificity, heterogeneity, and cGMP stimulation. Mol. Pharmacol. 66: 144-52, 2004.

4. S.H. Francis, **K.R. Sekhar**, A.B. Rouse, K.A. Grimes, and J.D. Corbin. Single Step Isolation of Sildenafil from Commercially Available Viagra Tablets. Int. J. Impotence Res. 15:369-372, 2003.

5. D. Saha, **K.R. Sekhar**, C. Cao, J.D. Morrow, H. Choy, and M.L. Freeman. The Anti-angiogenic Agent SU5416 Down-Regulates Phorbol Ester-Mediated Induction of Cyclo-oxygenase 2 Expression by Inhibiting Nicotinamide Adenine Dinucleotide Phosphate Oxidase Activity. Cancer Res. 63:6920-6927, 2003.

6. **K.R. Sekhar**, P.A. Crooks, V.N. Sonar, D.B. Friedman, J.Y. Chan, M.J. Meredith, J.H. Starnes, K.R. Kelton, S.R. Summar, S. Sasi, and M.L. Freeman. NADPH oxidase activity is essential for Keap1/Nrf2-mediated induction of GCLC in response to 2-indol-3-yl-methylenequinuclidin-3-ols. Cancer Res. 63:5636-45, 2003.

7. **K.R. Sekhar**, X.X. Yan and M.L. Freeman. Nrf2 degradation by the ubiquitin proteasome pathway is inhibited by KIAA0132, the human homolog to INrf2. Oncogene, 21: 6829-6834, 2002.

8. **K.R. Sekhar**, D.R. Spitz, S. Harris, T.T. Nguyen, M.J. Meredith, J.T. Holt, D. Guis, L.J. Marnett, M.L. Summar, and M.L. Freeman. Redox-Sensitive Interactions Between KIAA0132 And Nrf2 Mediates Indomethacin-Induced Expression of Gamma-Glutamylcysteine Synthetase. Free Rad. Biol. & Med. 32: 650-662, 2002.

9. **K.R. Sekhar**, S.R. Soltaninassab, M.J. Borrelli, Z-Q. Xu, M.J. Meredith, F.E. Domann and M.L. Freeman. Inhibition of the 26S Proteasome Induces Expression of GLCLC, the Catalytic Subunit for gamma-Glutamylcysteine Synthetase. Biochem. Biophys. Res. Comm. 270: 311-317, 2000.

10. **K.R. Sekhar** and M.L. Freeman. Autophosphorylation Inhibits the Activity of gamma-Glutamylcysteine Synthetase. J. Enz. Inhibition. 14: 323-330, 1999.

11 **K.R. Sekhar** and M.L Freeman. Pest Sequences in Proteins Involved in Cyclic Nucleotide Pathways. J. Receptor & Signal Transduction Res. 18: 113-132, 1998.

12. M.J. Meredith, C.L. Cusick, S. Soltaninassab, **K.R. Sekhar**, S. Lu, and M.L. Freeman. Expression of Bcl-2 increases intracellular glutathione by inhibiting methionine-dependent GSH efflux. Biochem. Biophys. Res. Comm. 248: 458-463, 1998.

13. J.D. Corbin, A. Beasley, I.V. Turko, T.L. Haik, K.A. Mangum, J.N. Wells, S.H. Francis and **K.R. Sekhar**. A Photoaffinity Probe Covalently Modifies the Catalytic Site of the cGMP-Binding cGMP-Specific Phosphodiesterase (PDE5). Cell Biochem. Biophys. 29: 145-157, 1998.

14. G.A. Senisterra, S.A. Huntley, M. Escaravage, **K.R. Sekhar**, M.L. Freeman, M. Borrelli, and J.R. Lepock. Destabilization of the Ca2+-ATPase of Sarcoplasmic Reticulum by Thiol-Specific, Heat Shock Inducers Results in Thermal Denaturation at 370 C. Biochemistry, 36, 11002-11011, 1997.

15. **K.R. Sekhar**, M.J. Meredith, K.D. Kerr, S.R. Soltaninassab, D.R. Spitz, Z.Q. Xu and M.L. Freeman. Expression of Glutathione and g-Glutamylcysteine Synthetase mRNA is Jun Dependent. Biochem. Biophys. Res. Comm., 234, 588-593, 1997.

16. **K.R. Sekhar**, M. Summar, Z-Q. Xu, E. Sierra-Rivera, and M.L. Freeman. Expression and Alteration of Transcriptional and Post-Transcriptional Expression of g-Glutamylcysteine Synthetase by Diethyl Maleate. Radiation Research, 147, 592-597, 1997.

17. A.T. McDuffee, G. Senisterra, J.R. Lepock, **K.R. Sekhar**, M.J. Meredith, M.J. Borrelli, J.D. Morrow, and M.L. Freeman. Proteins Containing Non-native Disulfide Bonds Generated by Oxidative Stress may act as signals for the induction of the heat shock response. J. Cell. Physiol., 171, 143-151, 1997.

18. **K.R. Sekhar**, R.J. Hatchett, J.B. Shabb, L. Wolfe, S.H. Francis, J.N. Wells, B. Jastorff, E. Butt, M.M. Chakinala and J.D. Corbin. Relaxation of Pig Coronary Arteries by New and Potent cGMP Analogs that Selectively Activate Type I Compared to Type I cGMP-Dependent Protein Kinase. Mol. Pharmacol., 42, 103-108, 1992.

19. S.P. Hiremath, K. Shivaramaiah, **K.R. Sekhar** and M.G. Purohit. Synthesis of Substituted 2,5-bis(1,3,4-Oxadiazolyl/Thiadiazolyl/1,2,4-Triazolyl)Indoles and Study of Their Biological Activities. Indian J. Chem., 29B, 1118-1124, 1990.

20. S.P. Hiremath, V.N. Sonar, **K.R. Sekhar** and M.G. Purohit. Synthesis of Substituted 5,6-Dihydroindolo[2,1-b][1,3]Diazepines, 1,2,3,4,5,6-Hexahydroindolo[3,2-b][1,4] Diazepin-5-Ones and 5,6,7,12-Tetrahydroindolo[3,2-b][1,5]Benzodiazepin-6-Ones. Proc. Natl. Acad. Sci., India, 60A, 367-376, 1990.

21. S.P. Hiremath, **K.R. Sekhar**, V.N. Sonar and M.G. Purohit. Synthesis of 1,2,4-Triazolo[3,4-f]-1,2,4-Triazino[3,4-a]Indoles. Indian J. Chem., 29B, 372-375, 1990.

22. S.P. Hiremath, V.N. Sonar, **K.R. Sekhar** and M.G. Purohit. Synthesis of Oxadiazolyl-, Thiadiazolyl- and Triazolylindoles and Indolylthiazolidinones. .Indian J. Chem., 28B, 626-630, 1989.

23. S.P. Hiremath, U. Ashok, **K.R. Sekhar** and M.G. Purohit. Synthesis of Various Pyrazole-1-Carbonylindoles. Indian J. Chem., 27B, 758-762, 1988.

24. S.P. Hiremath, **K.R. Sekhar** and M.G. Purohit. Synthesis of Indolylpyrimidinediones and Indolylthiazolidinones. Indian J. Chem., 27B, 678-680, 1988.