

Omkaram Gangisetty, Ph.D.
Curriculum Vitae

Research Associate
Endocrine Research Facility
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EDUCATION:

Ph.D. 1995 Microbiology, University of Madras, Chennai, India.
MSc. 1988 Microbiology, SK University, Anantapur, India.
BSc. 1986 Biology, SV University, Tirupati, India.

EXPERIENCE

2017-present	Research Associate	Department of Animal Sciences, Endocrine Research Facility, Rutgers University, New Brunswick, NJ. Supervisor: Dr. Dipak K Sarkar
2012-2016:	Post-Doctoral Associate,	Department of Animal Sciences, Endocrine Research Facility, Rutgers University, New Brunswick, NJ. Supervisor: Dr. Dipak K Sarkar
2008-2011:	Post-Doctoral Fellow,	Department of Neuroscience and Experimental Therapeutics, College of Medicine, Texas A&M Health Science Center, College station, TX. Supervisor: Dr. Doodipala Samba Reddy
2004-2007:	Research Affiliate,	Department of Pharmacology and Therapeutics, Roswell Park Cancer Institute, Buffalo, NY. Supervisor: Dr. Adam R. Karpf
2001-2004:	Research Affiliate,	Department of Cancer Genetics, Roswell Park Cancer Institute, Buffalo, NY. Supervisor: Dr. Ivan H Still
1998-2001:	Post-Doctoral Fellow	Laboratory of Molecular and Cellular Biology, NIDDK, National Institute of Health, Bethesda, MD. Supervisor: Dr. Nancy G. Nossal
1994-1998:	Lecturer	Department of Microbiology, SRM Arts and Science College, Chennai, India.

HONORS OR AWARDS:

- 2016 Gallo award, The Annual Retreat on Cancer Research in New Jersey.
Rutgers Robert Wood Johnson Medical School, Piscataway, NJ
- 2014 Gallo award, The Annual Retreat on Cancer Research in New Jersey.
Rutgers Robert Wood Johnson Medical School, Piscataway, NJ
- 2010 Travel award, Society for Neuroscience (SFN) local chapter at Texas A&M
University, College station, TX.
- 1991 Best poster award, National Conference Association of Microbiologists, India.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

- 2008-2012 Society for Neuroscience.
- 2002-2007 American Association for Cancer Research.
- 1990-1996 Association of Microbiologists, India.

TEACHING AND RESEARCH SUPERVISION

Research Supervisor

- 2015 Ms. Puloma Sen, High School Student, Endocrine Research Facility, Department
(Summer research of Animal Sciences, Rutgers University,
program) New Brunswick, NJ.
- 2010 Ms. Varsha Pawate, Under Graduate Department of Neuroscience and
Ms. Nazia Students Experimental Therapeutics, Texas
A&M Health Science Center,
College station, TX.
- 2005 Ms. Jennifer Alonso, Under Graduate Department of Pharmacology and
Student Experimental Therapeutics, Roswell Park
Cancer Institute, Buffalo, NY.
- 2002 Ms. Zeenath Jaisani, Graduate Student, Department of Cancer Genetics, Roswell
Park Cancer Institute, Buffalo, NY.

Teaching

- 1994-1998 Lecturer Under Graduates, Department of Microbiology, SRM Arts and
Post Graduates. Science College, Chennai, India.

SCIENTIFIC PRESENTATIONS

- 1) Gangisetty O, May 26, 2016. Fetal alcohol exposure induces MicroRNA Mir-9 and alters Dopamine 2 receptor expression by targeting its 3' UTR in the pituitary gland. Annual

- Retreat on Cancer Research in New Jersey. Rutgers Robert Wood Johnson Medical School. Piscataway, NJ.
- 2) Gangisetty O, May 21, 2014. Fetal alcohol epigenetically programs the lactotropic cell growth regulatory mechanism and increases the susceptibility to tumor growth in the pituitary gland. Annual Retreat on Cancer Research in New Jersey. Rutgers Robert Wood Johnson Medical School. Piscataway, NJ.
 - 3) Gangisetty O, November 23, 2010. Molecular mechanism for seizure susceptibility in catamenial epilepsy. Department of Neuroscience and Experimental Therapeutics seminar series. Texas A&M Health Science Center, College station, TX.
 - 4) Gangisetty O, November 7, 2006. Epigenetic regulation of X-linked cancer germ line antigen (CG-X) gene expression in human colon cancer cell lines. Department of Pharmacology and Therapeutics seminar series. Roswell Park Cancer Institute, Buffalo, NY.
 - 5) Gangisetty O, December 7, 2005. Molecular interactions of DNA and Histone methyl transferases. DNA damage society, Roswell Park Cancer Institute, Buffalo, NY.
 - 6) Gangisetty O, June 2, 2003. Molecular interactions of transformation acidic coiled coil (TACC) proteins. Department of Cancer Genetics seminar series, Roswell Park Cancer Institute, Buffalo, NY.
 - 7) Gangisetty O, May 2001. The 5'-3' exonuclease activity of T4 Rnase-H activity is stimulated by T4 single stranded DNA binding protein and clamp protein. Laboratory of Molecular and Cellular Biology seminar series. NIDDK, National Institute of Health, Bethesda, MD.

CONFERENCE ABSTRACTS AND POSTERS

- 1) **Gangisetty O**, Murugan S, Cabrera M, Chastain L, Sarkar DK. (2017). Binge-like alcohol produces long-lasting epigenetic marks on the proopiomelanocortin gene and the stress axis only during the prenatal to prepubertal period but not after puberty. 47th Annual meeting of Society for Neuroscience, Nov. 11-15, Washington DC.
- 2) **Gangisetty O**, Cabrera MA, Sarkar DK. (2017) Prenatal alcohol exposure induced MicroRNA Mir-384 alter POMC gene expression in mouse hypothalamus. 40th Annual RSA Scientific meeting, June 24-28. Denver, CO.
- 3) Chastain LG, Jabbar S, **Gangisetty O**, Cabrera, MA, Sochacki K, Sarkar DK. (2016). Preconception alcohol increases offspring vulnerability to stress. 46th Annual meeting of Society for Neuroscience. Nov. 12-16. San Diego, CA.
- 4) **Gangisetty O**, Sarkar DK. (2016). Fetal alcohol exposure induced MicroRNA Mir-9 alter Dopamine 2 receptor expression by targeting its 3' UTR in the pituitary gland. 39th Annual RSA Scientific meeting. June 25-29. New Orleans, LA.
- 5) **Gangisetty O.**, Jabbar S., Sarkar DK. (2015). Fetal alcohol exposure increases MicroRNA Mir-9 levels to alter Dopamine 2 receptor expression and prolactin synthesis in the pituitary gland. 38th Annual RSA Scientific meeting. June 20-24. San Antonio, TX.
- 6) **Gangisetty O.**, Jabbar S., Sarkar DK. (2015). Fetal alcohol exposure increases dopamine 2 receptor gene methylation via epigenetic mechanisms to enhance prolactin production and prolactin producing tumor growth in pituitary gland. 38th Annual RSA Scientific meeting. June 20-24. San Antonio, TX.

- 7) **Gangisetty O.**, Jabbar S., Sarkar DK. (2015). Fetal alcohol exposure increases MicroRNA Mir-9 levels to alter Dopamine 2 receptor expression and prolactin synthesis in the pituitary gland. The 2015 Annual Retreat on Cancer Research in New Jersey. May 20, 2015. Rutgers Robert Wood Johnson Medical School. Piscataway, NJ.
- 8) **Gangisetty O.**, Govorko D., Zhang C., Sarkar DK. (2014). Fetal alcohol exposure suppress POMC gene expression via increasing methyl CpG binding protein levels in the hypothalamus. 37th Annual RSA Scientific meeting. June 21-25. Seattle, WA.
- 9) **Gangisetty O.**, Wynne O., Radl DB., Maglakelidze G., Sarkar DK.(2013). Fetal alcohol epigenetically programs the lactotropic cell growth regulatory mechanism and increases the susceptibility to tumor growth in the pituitary gland. 36th Annual RSA Scientific meeting. June 22-26. Orlando, FL.
- 10) Reddy DS., Carver CM., **Gangisetty O.**, and Wu X. (2012). Perimenstrual neurosteroid withdrawal induces upregulation of neurosteroid-sensitive δ -containing GABA-A receptors in the hippocampus subfields. 42nd Annual meeting of Society for Neuroscience. Oct. 13-17. New Orleans, LA.
- 11) **Gangisetty O.**, Carver CM., Wu X., and Reddy DS. (2012). Menstrual cycle regulation of extrasynaptic δ -containing GABA-A receptor plasticity and tonic inhibition in the hippocampus subfields. 42nd Annual meeting of Society for Neuroscience. Oct. 13-17. New Orleans, LA.
- 12) Reddy D.S., **Gangisetty O.**, and Wu X. (2011). Ovarian cycle-related changes in expression and function of extrasynaptic GABA-A receptors in the hippocampus subfields. 41st Annual meeting of Society for Neuroscience. Nov. 12-16, 2011. Washington DC.
- 13) **Gangisetty O.**, Reddy, DS. (2011). Ovarian cycle related neurosteroid regulation of GABA-A receptor subunit plasticity in the hippocampus subfields. FASEB J. April 2011; 25: Ib410. (Meeting abstract supplement).
- 14) **Gangisetty O.**, Reddy, DS. (2010). Neurosteroid withdrawal upregulates GABA-A receptor α 4-subunit expression by activation of EGR3 pathway. 40th Annual meeting of the Society for Neuroscience. Nov. 13-17, 2010, San Diego, CA.
- 15) **Gangisetty O.**, Reddy, D.S. (2009). Role of progesterone receptors in neurosteroid withdrawal induced upregulation of GABA-A receptor α -4 subunit expression in the hippocampus. 39th Annual meeting of Society for Neuroscience. Oct. 17-21, 2009, Chicago, IL.
- 16) Reddy, D.S, **Gangisetty O.** (2008). Taqman RT-PCR assay for rapid profiling of hippocampal GABA-A receptor subunit expression. 38th Annual meeting of Society for Neuroscience. Nov. 15-19, 2008, Washington, DC.
- 17) **Gangisetty O.**, Link, P.A., James. S.R., and Karpf, A.R. (2006). Cooperative regulation of X-linked cancer/germ-line antigen gene expression by DNA methyl transferases and histone methyltransferases G9a. 97th Annual meeting of American Association of Cancer Research, April 1-5, Washington, DC.
- 18) **Gangisetty O.**, Sondarva, G., Vettaikorumakankauv, A., Jaisani, Z., Lauffart, B. and Still, I.H. (2003). The transforming acidic coiled coil proteins are components of multiple protein complexes. *American Association of Cancer Research Annual Meeting*. Washington, DC.

- 19) **G. Omkaram** and P.N. Raju. (1992). Electron donor specificity of nitrate reductase of *Citrobacter freundii*. *Association of Microbiologists of India Annual conference*. Goa, India.
- 20) **G. Omkaram** and P.N. Raju. (1991). Nitrate reduction by diazotrophic bacteria. *Association of Microbiologists of India Annual meeting*. Madurai, TN, India.
- 21) Chitta Sriram., **G. Omkaram** and P.N. Raju. (1991). Dissimilatory nitrate reduction by Diazotrophic bacteria. *Association of Microbiologists of India Annual conference*. Coimbatore, TN, India.

PUBLICATIONS

- 1) **Gangisetty O**, Jabbar S, Wynne O, Sarkar DK. (2017) MicroRNA-9 regulates fetal alcohol-induced changes in D2 receptor to promote prolactin production. *J. Endocrinology*, 235 (1): 1-14.
- 2) Reddy DS, **Gangisetty O**, Wu X (2017) PR-independent neurosteroid regulation of $\alpha 2$ -GABA-A receptors mRNA in the hippocampus subfields. *Brain Research* 1659: 142-47.
- 3) Jabbar S, Chastain LG, **Gangisetty O**, Cabrera MA, Sochacki K, Sarkar DK (2016). Preconception alcohol increases offspring's vulnerability to stress and anxiety problems. *Neuropsychopharmacology* 41(11): 2782-93.
- 4) **Gangisetty O.**, Wynne O., Jabbar S., Nasello C., Sarkar DK. (2015) Fetal alcohol exposure reduces dopamine receptor D2 and increases pituitary weight and prolactin production via epigenetic mechanisms. *Plos One*, 10 (10), e0140699.
- 5) **Gangisetty O.**, Bekdash R., Maglakelidze G., Sarkar DK. (2014) Fetal Alcohol Exposure Alters Proopiomelanocortin Gene Expression and Hypothalamic-Pituitary-Adrenal Axis Function via Increasing MeCP2 Expression in the Hypothalamus. *Plos One*, 9(11), e113228.
- 6) Carver CM, Wu X, **Gangisetty O**, Reddy DS. (2014) Perimenstrual-Like Hormonal Regulation of Extrasynaptic δ -Containing GABA_A Receptors Mediating Tonic Inhibition and Neurosteroid Sensitivity. *J Neurosci*. 34(43): 14181-97.
- 7) Wu X, **Gangisetty O**, Carver C, Reddy DS. (2013) Estrous cycle regulation of extrasynaptic Delta-containing GABA-A receptor mediated tonic inhibition and limbic epileptogenesis in mice. *J Pharmacol Exp Ther*. 346 (1): 146-60.
- 8) Reddy DS, Gould J, **Gangisetty O**. (2012) A mouse kindling model of perimenstrual catamenial epilepsy. *J Pharmacol Exp Ther*. 341 (3): 784-93.
- 9) Reddy DS., **Gangisetty O** and Briyal S. (2010) Disease modifying effect of progesterone in the hippocampus kindling model of epileptogenesis. *Neuropharmacology* 59 (7-8): 573-81.
- 10) **Gangisetty O**, Reddy DS. (2010) Neurosteroid withdrawal regulates GABA-A receptor $\alpha 4$ -subunit expression and seizure susceptibility by activation of PR independent EGR3 pathway. *Neuroscience* 170 (3):865-80.
- 11) **Gangisetty, O.**, Reddy, D.S. (2009). The optimization of Taqman real-time RT-PCR assay for transcriptional profiling of GABA-A receptor subunit plasticity. *J Neurosci Methods* 181: 58-66.
- 12) Link P.A., **Gangisetty, O.**, James S.R., Woloszynska-Read, A., Tachibana, M., Shinkai, Y., Karpf, A.R. (2009). Distinct roles for Histone Methyltransferases G9a and GLP in

- Cancer Germ-Line antigen gene regulation in human cancer cells and murine embryonic stem cells. *Mol Cancer Res.* 7 (6): 851-862.
- 13) Vettaikkorumkankauv AK, Lauffart B, **Gangisetty O**, Cincotta, MA, Hawthorne LA, Cowell JK, Still IH. (2008) The TACC proteins are coregulators of the Retinoid X Receptor β . *Cancer Therapy.* 6: 805-816.
 - 14) Lauffart B, **Gangisetty O**, Still IH. (2007) Evolutionary conserved interaction of TACC2/TACC3 with BARD1 and BRCA1: potential implications of DNA damage response in breast and ovarian cancer. *Cancer Therapy* 5: 409-416.
 - 15) Lauffart B, Sondarva GV, **Gangisetty O**, Cincotta M, Still IH. (2007) Interaction of TACC proteins with the FHL family : implications for ERK signaling. *J. Cell Commun Signal.* 1 (1): 5-15.
 - 16) Esteve, P.O., Chin, H.G., Smallwood, A., **Gangisetty, O.**, Karpf, A., Carey, M.F., Pradhan, S. (2006). Direct interaction between DNMT1 and G9a coordinates DNA and Histone methylation during replication. *Genes and Development* 20: 3089-3103.
 - 17) **Gangisetty O**, Jones CE, Bhagwat M, Nossal, NG. (2005). Maturation of Bacteriophage T4 lagging strand fragments depends on interaction of T4 RnaseH with T4 32 proteins rather than the T4 gene 45 clamp. *J. Biol. Chem.* 280 (13): 12876-87.
 - 18) **Gangisetty O**, Lauffart B, Sondarva GV, Chelsea DM, and Still IH (2004). The transforming acidic coiled coil proteins interact with nuclear histone acetyltransferases. *Oncogene* 23: 2559-63.
 - 19) Lauffart, B, **Gangisetty, O**, and Still IH. (2003). Molecular cloning, Genomic structure and Interactions of the Putative breast tumor suppressor TACC2. *Genomics* 81: 192-201.
 - 20) **G.Omkaram** and P.N.Raju 1998. Purification and characterisation of nitrate reductase from Diazotrophic *Citrobacter freundii* AS6. *Indian J. Exp. Biol.* 36: 325-327.
 - 21) **G.Omkaram** and P.N. Raju 1996. Simultaneous occurrence of Assimilatory and Dissimilatory Nitrate reduction in Diazotrophic Enterobacteria. *Indian J. Microbiol.* 36: 209-212.

BOOK CHAPTERS

1. **Gangisetty O** (2016) Epigenetic modifications in Parkinson's disease: Implications in the treatment. In Essa MM, Vasagam M, Thenmozhi J, Khan MAS (eds.), Food and Parkinson's Disease. (pp.77-93). Nova Science Publishers, USA.
2. **Gangisetty O**, Murugan S (2016) Epigenetic modifications in neurological diseases : Natural products as epigenetic modulators a treatment strategy. In Essa MM, Akbar M, Guillemin G (eds.), The benefits of natural products for neurodegenerative diseases. Advances in Neurobiology 12:1-25. Springer publishers, USA.
3. **Gangisetty O.**, Cabrera M., 2015. Role of epigenetic modifications in liver diseases. In S.Rajagopal, S. Murugan (eds.), Hepatotoxicity Symptoms, Management and Health Implications. (pp. 211-228). Nova Science Publishers Inc, New York, NY.