

## Dr. Govindaraj, Vijaykumar

**PhD Institution and Year :** UNIVERSITY OF WUERZBURG, GERMANY in the year 2009

**Date of Joining IISc :** April, 2010

**Area(s) of Research :** REPRODUCTION, CARDIOVASCULAR DISEASE

**Name of the Post-doctoral Fellowship :**

**Laboratory where currently working :** Prof. G. Mugesh

**Department :** Inorganic and Physical Chemistry

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**Topic(s) of Research :** OVARIAN AGING, ENDOTHELIAL DYSFUNCTION

### Research Publications in IISc (provide full citation information :

1. Vijayakumar Govindaraj, Harshini Krishnagiri, Payal Chakraborty, Madavan Vasudevan and A.J. Rao. Age-related changes in gene expression patterns of immature and aged rat primordial follicles. (Systems Biology in Reproductive Medicine – Published online on 3rd Jan 2017).
2. Vijayakumar Govindaraj, Harshini Krishnagiri, Manmohan Singh Chauhan and A.J. Rao. BRCA-1 gene expression and comparative proteomic profile of primordial follicles from young and adult water buffalo (*Bubalus bubalis*) ovaries. *Animal Biotechnology*- 2016; 23:1-10.
3. Vijayakumar Govindaraj and Rao, A. J., Identification of SPTAN1 as a differentially expressed protein in the pre-optic area of neonatally estradiol-17 $\beta$  treated female adult rat. *Hormone Molecular Biology and Clinical Investigation*, 2016; 26(3):165-72.
4. Radhika Nagamangalam Shridharan, Harshini Krishnagiri, Vijayakumar Govindaraj\*, SitiKantha Sarangi , Addicam Jagannadha Rao. Neonatal exposure to estradiol-17 $\beta$  modulates tumour necrosis factor alpha and cyclooxygenase-2 expression in brain and also in ovaries of adult female rats. *Hormone Molecular Biology and Clinical Investigation*, 2016; 25(2):149-156.
5. Vijayakumar Govindaraj and Rao A. J., Ovarian Aging: Possible Molecular Mechanisms with Special Emphasis on DNA Repair Gene BRCA1. *Women Health International*, 2016; 2(1): 112.
6. Vijayakumar Govindaraj and Rao, A. J., Comparative proteomic analysis of rat primordial follicles from ovaries of immature and aged rats. *Systems Biology in Reproductive Medicine*, 2015; 61(6):367-75.
7. Radhika N S, Vijayakumar Govindaraj, S. K. Sarangi, A.J.Rao. Neonatal exposure to 17 $\beta$ -estradiol down-regulates the expression of synaptogenesis related genes in selected brain regions of adult female rats. *Life Sciences*, 2015; 15;141:1-7.

8. Vijayakumar Govindaraj, Rajani K.B., Rao A.J. Changes in the expression of DNA double strand break repair genes in primordial follicles from immature and aged rats. *Reproductive BioMedicine Online*, Volume 30, Issue 3, March 2015, Pages 303–310.
9. Vijayakumar Govindaraj, Swathy V. Arya, A. J. Rao. Differential Action of Glycoprotein Hormones: Significance in Cancer Progression. *Hormones and Cancer*, 2014,5(1):1-10.
10. Sidarthan, N.P., Vijayakumar Govindaraj, Sarkar, M.N., and Rao, A. Effect of silencing SLPI gene expression on differentiation of BeWo cells. *Cell Biology*, 2013, 1(1): 1-8.
11. Vijaykumar Govindaraj, Yaduvanshi, N.S., Krishnamachar, H., and Rao, A.J. Expression of thyroid-stimulating hormone receptor, octamer-binding transcription factor 4, and intracisternal A particle-promoted polypeptide in human breast cancer tissues. *Hormone Molecular Biology and Clinical Investigation*, 2012; 9, 173-178.

**Book/Book Chapters:**

1. Vijaykumar Govindaraj and A. J. Rao. *Androgens: Biosynthesis and its Regulation, Source and Blood Levels, Metabolism, Biological Actions and Clinical Aspects*. Textbook Of Biochemistry, Biotechnology, Allied And Molecular Medicine, Editors: G. P. Talwar, L. M. (4th Edition, Prentice Hall of India, Published on 01-01-2015 ISBN: 978-81-203-5125-7).
2. Nirmala Singh Yaduvanshi, Shayu N Deshpande, Vijayakumar Govindaraj, A J Rao., Regulation of growth and function of epididymides (Chapter 7). In: *Mammalian Endocrinology and Male Reproductive Biology*. CRC Press, Taylor & Francis group, Florida. Published on 4th September 2015. ISBN 9781498727358.
3. Vijayakumar Govindaraj. *Estrogen on Impaired Cardiac Glucose Uptake in Cardiac Hypertrophy*. Scholars' Press, VDM Publishing, Germany. Published on 2014/4/30. ISBN-10:639714679, ISBN-13:9783639714678

**Other accomplishments and recognition while in IISc :**

Nominated for 17th Royan International Research Award. Govindaraj V, Decline in BRCA1 Expression; Significance in Ovarian Aging (P-92), abstract presented at 17th Congress on Reproductive Biomedicine and 10th Royan Nursing and Midwifery Seminar in Tehran, Islamic Republic of Iran) which was subsequently published in *Int J Fertil Steril*, Vol 10, Suppl 1, Summer 2016.

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