

CURRICULUM VITAE

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Educational Qualifications:

Ph.D., Biochemistry 1994-1998. Department of Biochemistry and Molecular Biology, University of Madras, Chennai. Tamil Nadu, India.

Ph.D. Thesis: Biochemical studies on experimental diabetic rats to establish the antidiabetic potency of sodium tungstate.

Current Work: Presently I'm working on Lupus Disease in NZB mouse model (Gender & Age matched).

Most recent work at Emory University: I have been worked on the development of an optimal tumor vaccine by modifying tumors with combinations of membrane-anchored immunostimulatory molecules (B7.1, IL-2 and IL-12). This project aims to study the effects of expressing GPI-anchored molecules on the surface of murine mammary tumor cells (4T07) and melanoma tumor cells (S91M3) as a model for human breast and melanoma cancer vaccine. I have prepared plasmids from bacterial culture and established tumor cell transfectants. Then these tumor transfectants were used as vaccines to determine the potential complementary effects of coexpression on antitumor immune response. Mice were directly challenged with transfected, immunostimulatory molecule-expressing tumor cells or wild-type tumor cells, and tumor development has been monitored. Mice immunized with the transfected tumor cells then subsequently challenged with WT tumor cells and also confirmed immune response of T cell experiment. The results from the vaccination and tumor challenge studies have shown the breast and melanoma cancer cells modified with immunostimulatory molecules can be used as vaccines to stimulate an antitumor immune response.

Professional Experience:

Postdoctoral Associate - July-2004 to feb-2006, Dept of Pathology, Emory University

Postdoctoral Fellow- Jan-2003 to June-2004, Division of Biotechnology and Pharmaceutical Research, National Health Research Institutes, Taiwan.

To establish high fat diet induced in type II diabetes or insulin resistance in animal models, and to study the insulin-sensitizing effects of novel **PPAR γ** -compounds in reversal of diabetes or obesity. This model is important tool for studying the path physiology of type 2diabetes and insulin resistance.

Research Associate -from- 2002 Jan to Dec-2002 Biophotonic Lab, Department of Physics, Anna University, Chennai-600025.

Research Associate -from 1998 April to Dec-2001.Department of Biochemistry and Molecular Biology, University of Madras. Chemopreventive effect of flavonoid on DMBA induced oral cancer.

Research Skills:

Animal models Experiment:

Diabetes -High fat diet induced diabetes in various animal models like- Golden Syrian hamster and C57BL/6J and db/db mice (10% 40% and 60% diet). Streptozotocin & Nicotinamide induced type2 diabetes in BALB/c mouse. Type I diabetes used Wister rats.

Cancer-Golden Syrian hamster used oral cancer chemoprevention; BALB/c mice, Breast cancer vaccine and DBA mice used melanoma cancer vaccine experiment.

Biochemical technique:

Enzyme assays, Expression and purification of recombinant proteins and monoclonal antibodies, affinity chromatography, gel filtration, electrophoresis, dual luciferase assay, fluorescence spectroscopy, and Protein transfer.

Molecular Biology:

Performing PCR genotyping of mouse, RT PCR, Isolation of RNA. Isolation and purification of DNA, transformation and transfection (eg: cytokine-IL2, IL12 and B7.1 either single or double transfections).

Cell culture methods:

Culturing and maintenance of cancer cells like Breast cancer-4TO7, Melanoma S91M3 and, B-Lymphoma A20, Erythroleukemia K562, CHOK1 Saos-2 (human) AKR2b cells for various experiments.

Hybridoma culture - 3G8, CLB, anti CD59 (10G10), Anti-MIL2 (S4b6), anti-mIL12 (C17.8), CD80(1G10),anti-hIL12(20C2),anti-mICAM1(YN1.7.4),anti-mIL12-C15.1-C15.6 PSRM.3,MHC Class(M1/42), heat shock Protein (M1/69). Cell separation and sorting by Panning and Magnetic bead method.

Immunological technique

Purification of antibodies, Immunoprecipitation analysis, ELISA and Western blot analysis. Flow cytometry (FACS), CTL assay, Spleen T cell B cells and dendritic cell isolation.

List of publications

1. **Ravichandran, P., R. Shashidharamurthy and Periasamy Selvaraj.** Induction of antitumor immunity by GPI-Anchored molecules expressed on murine melanoma cells: Implications for cancer vaccine development by protein transfer (**Manuscript in Preparation**).

2. **Ravichandran, P.**, R. Shashidharamurthy and Periasamy Selvaraj., The competition of soluble CD16A Ig dimer with the cell surface receptors depends on the avidity of FcγR-IgG interaction. (**Manuscript in Preparation**).
3. **Ravichandran, P.**, and Govindasamy, S., (2000). Insulin like effect of sodium tungstate on cathepsin D, activity in experimental diabetic rats. *J. Clin. Biochem. Nutr.*, **32**, 87-93.
4. **Ravichandran, P.**, Karthikeyan, K. and Govindasamy, S. (1999). Erythrocyte membrane lipid peroxidation and antioxidant status in tungstate treated diabetic rats *Med.Sci.Res.* **29**, 321-325.
5. Karthikeyan, K., **Ravichandran, P.**, and Govindasamy, S (1999). Chemopreventive effect of Ocimum sanctum on DMBA-induced hamster buccal pouch carcinogenesis. *Oral.Oncol.Eur.J.cancer*, **35**, 112-119.
6. Palnival, R., **Ravichandran, P.**, and Govindasamy, S (1998). Biochemical studies on lipid per oxidation in ammonium para-tungstate treated diabetic rats. *Med. Sic. Res.*, **26**, 759-762.
7. Palnival, R., **Ravichandran, P.**, and Govindasamy, S., (1998). Insulin like effect of ammonium para - tungstate on glycoprotein metabolism in STZ diabetic rats. *Med. Sci. Res.*, **26**, 541-544.
8. **Ravichandran, P.**, Elangovan, V., and Govindasamy, S. (1997). Chemo preventive effect of quercetin in sarcoma-180 induced mice. *J. Clin. Biochem. Nutr.* **22**, 149-154
9. **Ravichandran, P.**, Bhuvaragamurthy, V. and Govindasamy, S., (1996). Status of circulating lipid profile in human uterine cervical carcinoma, before and after therapy. *J Clin. Biochem. Nutr.*, **21**, 111-118.

Conference Presentations:

- **FASEB Meeting on San Diego, CA, April -2-6-2005 132.** “The competition of soluble CD16A Ig dimer with the cell surface receptors depends on the avidity of FcγR-IgG interaction.” Poster presented: **Panchanathan Ravichandran^a**, R. Shashidharamurthy^a, Tamilselvi Ravichandran^a, Nimita H. Fifadara^a, Christopher Sinotte^b, Cheng Zhuh^b, and Periasamy Selvaraja^a. ^aDepartment of Pathology and laboratory Medicine, Emory University, Atlanta, GA 30322 and ^bDepartment of Mechanical Engineering and Biomedical Engineering, Georgia Institute of Technology, Atlanta, GA 30322.
- **National conference** National Health Research Institutes, Taiwan **Oct-2003**. Poster presented. Ravichandran C.T. Chen. Antioxidant status in sodium tungstate treated type II diabetic hamster
- 19th Annual Conference, IABMS, Mangalore University, **October -29-31, 1998**. Poster presented: **Ravichandran, P.** and Govindasamy, S. Insulin like effect of sodium tungstate on cathepsin 'D activity in STZ diabetic rats.
- National Conference on Molecular diagnosis, Department of Biochemistry, Kerala University Trivandrum, **June 27 - 29, 1998** Poster presented: **Ravichandran, P.** and Govindasamy, S. Erythrocyte membrane lipid per oxidation and antioxidant status in tungstate treated diabetic rats.

Other Personal info: Sex: Male; Visa status: J1; Citizenship: India

References:

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