

## **Dr. P. SUBASH BABU Ph.D**

**Post Doctoral Researcher & Asst. Professor**  
**Molecular Biology Research Lab -Nanobiotechnology unit**  
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### **Objective**

A career, that is challenging and interesting. A job that gives me an opportunity to work at the leading edge of technologies, innovate and feel the satisfaction of success.

### **Areas of**

### **Specialization**

Life science, Molecular biology, Pharmacology, Cardio Vascular Biology, Drug development, and Biochemistry.

### **Education**

**Ph.D. BIOCHEMISTRY 2004 – 2009**

Thesis title: **Antidiabetic potential of *Nymphaea stellata* (Willd.) and *Abelmoschus esculentus* (Linn.).**

**M.Phil. BIOCHEMISTRY 2002 - 2004**

Thesis title: **Effect of hyponidd, an ayurvedic herbomineral formulation in normal and streptozotocin induced diabetic wistar rats.**

**M.Sc. BIOCHEMISTRY 2000 - 2002**

**B.Sc. BIOCHEMISTRY 1997 - 2000**

### **Post Doctoral**

### **Research Experience**

**2009 to till date**, Working as a Post doctoral Researcher in Molecular Biology Research Lab, King Saud University, Riyadh, KSA.

- **Working as a project researcher in the area of “MicroRNA expression profiling of human mesenchymal stem cell adipogenesis and peptide mediated silencing by MPG nanoparticle - In Vitro” at King saud University, Riyadh, KSA.**
  - **Working as a Project fellow (KACST) in “ In-vitro screening of carcinogenic nano food particles”- from-Aug’ 2010- till date.**
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## Teaching Experience

Working at King Saud University, Riyadh, KSA.

Subject handled in King Saud University, Riyadh.

**Clinical Nutrition, Basic Science – PG Students**

**Inborn Errors of metabolism - PG Women Students**

Worked as a lecturer in Department of Biotechnology, Loyola College, University of Madras, Chennai from **November 2007 to Sep 2009**.

Subject handled in King Saud University, Riyadh.

**Nutrition and metabolism, Enzymology, Immunology, Basic Sciences and Clinical biochemistry- for PG Students**

## Industrial Experience

Worked as a project manager in India diabetes research foundation, in a project entitled “Screening of IGT and Diabetics in south Indian population” from Feb’ 2009 to Dec’ 2009

## Awards & Honors

**Senior Research Fellowship (February 2006 to January 2008)**, awarded by Indian Council of Medical Research, New Delhi, India.

## Patent

- ✓ S. Ignacimuthu and **P. Subash-Babu** (2007). A process for preparation of a novel compound, Nymphayol [17-(hexan-2-yl)-10,13-dimethylhexadecahydro-1*H*-cyclopenta[*a*]phenanthren-3-ol] from *Nymphaea stellata* Willd. Flower with antidiabetic property. The patent office journal, 1567/CHE/2007 A.

## Publications

- ✓ Amal Al-Hazzani, Vaiyapuri Periyasamy, **Pandurangan Subash-Babu**, Ali A. Alshatwi. 2012. Formulation of cashew nut shell liquid (CSNL) nanoemulsion, a potent inhibitor of human MCF-7 breast cancer cell proliferation. Med Chem Res. Volume 21, Issue 7, pp 1384-1388.
- ✓ **P. Subash-Babu** and Ali A Alshatwi. (2012) Aloe-emodin inhibits adipocyte differentiation and maturation during in vitro human mesenchymal stem cell adipogenesis. Journal Biochemical and molecular Toxicology. J Biochem Mol Toxicol. 2012 Aug;26(8):291-300. doi: 10.1002/jbt.21415.

- ✓ Periasamy, V.S., **Subash-Babu, P.**, Muthukumaran, V.R. Akbarsha, M.A. Alshatwi, A.A. 2012. *In Vitro* Cytotoxic Effect of Formulated Semecarpus Ghee Nanoemulsion on Human Cervical Cancer (SiHa) Cells Advanced Science letters. Volume 6 2012 , pp. 75-79(5)
- ✓ Alshatwi AA, Ramesh E, Periasamy VS, **Subash-Babu P.** The apoptotic effect of hesperetin on human cervical cancer cells is mediated through cell cycle arrest, death receptor, and mitochondrial pathways. Fundam Clin Pharmacol. 2012 Jun 29. doi: 10.1111/j.1472-8206.2012.01061.x.
- ✓ **P. Subash-Babu**, Ali A Alshatwi, S. Ignacimuthu. (2012) Protection of pancreatic  $\beta$ -islets by cinnamaldehyde isolated from *Cinnamomum zeylanicum* Blume. Journal of Clinical Biochemistry Nutrition (Accepted)
- ✓ **P. Subash-Babu**, P. Antoni samy, Ali A Alshatwi, S. Ignacimuthu (2012) Anti-nociceptive, immunomodulatory and antipyretic activity of nymphyol isolated from *Nymphaea stellata* (Willd.) flowers. Behavioural Pharmacology (Accepted).
- ✓ Muniappan Ayyanar, **Pandurangan Subash-Babu**. 2012. Syzygium cumini (L.) Skeels: A review of its phytochemical constituents and traditional uses. Asian Pacific Journal of Tropical Biomedicine, 240-246
- ✓ **P. Subash-Babu**, Savarimuthu Ignacimuthu, Paul Agastian, Babu Varghese, Partial regeneration of beta-cells in the islets of Langerhans by Nymphyol a sterol isolated from Nymphaea stellata (Willd.) flowers. **Bioorganic & Medicinal Chemistry** 17 (2009) 2864–2870.
- ✓ **P. Subash Babu**, P. Prabuseenivasan, S. Ignacimuthu., 2007. Cinnamaldehyde- A potential antidiabetic agent. *Phytomedicine*. 14, 15–22.
- ✓ **P. Subash-Babu**, S. Ignacimuthu, P. Agastian., 2008. Insulin Secretagogue effect of *Ichnocarpus frutescence* leaf extract in experimental diabetes: A dose-dependent study. *Chemico- Biological interactions*. 152, 171-179
- ✓ **P. Subash-Babu** and S. Ignacimuthu, 2008. Antihyperlipidemic and Antioxidant effect of Hyponidd in the brain of streptozotocin induced diabetic rat. *International Journal of Biological Chemistry*. 1(4), 196-204.
- ✓ **P.Subash-Babu**, S. Ignacimuthu and P.S. M. Prince, 2007. Restoration of altered carbohydrate and lipid metabolism by Hyponidd, a herbomineral formulation in streptozotocin induced diabetic rats. *Asian Journal of Biochemistry*. 3(2), 90-98.

- ✓ **P. Subash Babu** and P.Stanely Mainzen Prince. 2004. Antihyperglycemic and antioxidant effect of hyponidd, an ayurvedic herbomineral formulation in streptozotocin induced diabetic rats. *Journal of Pharmacy and Pharmacology*. 56(11):1435-1442.

## Hands on Training

ICMR and DST sponsored ten days hand-on Training and workshop “**National workshop on ‘Gene Expression Analysis’**” held at Department of Endocrinology, PGIBMS, University of Madras. January 19-28, 2006,

- UGC Sponsored National Workshop On “**Herbal drug standardization**” 19<sup>th</sup> & 20<sup>th</sup> February, 2005. Department of Pharmacy, Annamalai University, Chidambaram, Tamil Nadu, India.

## Molecular Biology Techniques

- Microarray-Nucleic acid and Protein array
- FACS
- DNA, RNA extraction and purification (chromosomal and extra chromosomal)
- DNA and RNA quantification-Nanodrop
- PCR based gene amplification
- RT-PCR
- Western blotting analysis

### Hands-on Experience in Techniques

- Restriction digestion analysis
- Ligation and transformation
- Selection of the clones using antibiotic markers
- Conformation of the clones using PCR and REA
- IPTG induction for the expression and purification

## Biochemical Techniques

- Isolation of cytosolic and nuclear fractions from tissue samples/cells.
- RIA for Peptide and Steroid hormone assay
- Hormone receptor study
- Herbal drug standardization
- HPLC
- GCMS
- ELISA
- SDS-PAGE

## In vitro Cell Culture Techniques

- Human Mesenchymal Stem Cell: proliferation and differentiation.
- Cell culture maintenance for *in vitro* studies (Skin fibroblast, Detroit 573, Vero cells, Chang liver cells, Hep G2, COLO 320M, Adipocytes and Myocytes)
- Antiobesity study- *In vitro* antiadipogenic effects using 3T3 L1 preadipocyte cell line
- Cytotoxicity assay (MTT Assay)

- Microbial culture
- Trypan Blue assay
- Cell counting

## Prizes

### International conference

**Best Oral Presentation Prize** was awarded on of Indo-Canada Sponsored International Conference on Medicinal plants and functional foods on Diabetes, Obesity, Cardiovascular diseases organized by Federation of Indian Herbal Industry and Government college of Pharmacy, Aurangabad (March, 2008).

### National Conference

**Best oral presentation** was declared on National conference on current trends in Medicinal plants research and herbal technology Sponsored by National Medicinal Plant Board, Govt. of India, New Delhi (Feb, 2008).

## Computer Skills

- MS Office
- SPSS 14.0 for Statistical analysis
- Internet surfing
- Database searching in related web sites
- Basic hardware knowledge

## In Conferences

- ✓ Saudi medicare, medical forum April 2010, 13<sup>th</sup> International forum for hospital equipments and medical devices.
- ✓ 1<sup>st</sup> International conference on biomarker research, organized by king saud University, January 2011.
- ✓ 4<sup>TH</sup> International conference on biomarker research for cardiovascular research and diabetes, All Kozama hotel, organized by King saud university. (April 2010)
- ✓ **P. Subash-Babu**, P. Agastian and S. Ignacimuthu, 2008. Antidiabetic of terpenoid rich fraction from *Abelmoschus esculentus* seeds methanolic extract fraction. Medicinal plants research and herbal technology Sponsored by National Medicinal Plant Board, Govt. of India, New Delhi (Feb, 2008).
- ✓ **P.Subash-Babu**, P.Agastian and S. Ignacimuthu, 2008. A novel Pancreatic beta cell regenerating agent, Nymphayol isolated from *Nymphaea stellata*. Flower. Indo-Canada Sponsored International Conference on Medicinal plants and functional foods on Diabetes, Obesity, Cardiovascular diseases organized by Federation of Indian Herbal Industry and Government college of Pharmacy, Aurangabad (March, 2008).
- ✓ **P.Subash Babu** and P. Stanely Mainzen Prince. Medicinal plants in India and their Antidiabetic potential. National level seminar on

prospects in Biotechnology. Biotechnofest-2003 held on 13<sup>th</sup> December, 2003 at Vandavasi, Tamilnadu, India.

- ✓ **P.Subash Babu**, M. Rajadurai and P.Stanely Mainzen Prince: Screening of Medicinal plants for glycemic control in normal and streptozotocin- induced diabetic rats. Society of Biological Chemists (India), Annamalainagar Chapter, XIII Annual Scientific Meet, held on February 22, 2003 at Annamalainagar, Tamilnadu, India.
- ✓ **P. Subash-Babu** and S. Ignacimuthu, 2006. Antidiabetic potential of terpenoid rich faction (II) from *Abelmoschus esculentus*. Seeds. XIIth annual meeting for society for atherosclerosis and cardiovascular diseases research. Held at University of Madras, Guindy campus, Chennai (April, 2006).
- ✓ 94<sup>th</sup> Indian Science Congress Association, Held at Annamalai University, Annamalainagar, India (Jan, 2007).
- ✓ The first Indian congress on alternative to the use of animals in Research, Testing & Education, International conference Organize by Sri Ramachandra University and I-CARE, January, 2007.
- ✓ Young Scientists' conference on Environment, Health & Food. Organized by PG Research Department of Advanced Zoology and Biotechnology, Loyola College, Chennai. December, 2007.

## Memberships

- Junior Red cross society of Loyola College, Chennai, Tamil Nadu
- Society for Free Radical Research (SFRR), India
- Society for Biological Chemist (SBC), Indian Science Congress, India
- Society for Cardiovascular research and Functional foods research (India), Chennai, Tamil Nadu
- Peer Educator HIV/AIDS, Chennai, Tamil Nadu
- Eco-friendly and Environmental society (EES), Loyola college, Chennai, Tamil Nadu
- National Service Scheme (NSS) of Loyola college, Chennai, Tamil Nadu

## Demographic Profile

**Date of Birth:** 31<sup>st</sup> July, 1980

**Gender:** Male

**Father's Name:** P. Pandurangan

**Marital Status:** Married

**Nationality:** Indian

**Languages** *English (Read, write and speak)*

**Known:** Tamil (Read, write and speak)

Hindi (Read and write)

***Permanent address:***

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**References**

**1) Alshatwi AA.**

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**2) Fr. Dr. S. Ignacimuthu s.j.**

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**3) Dr. K.V. Pugalendi**

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