# ***FACULTY PROFILE***

1. **Name: BHARATHI P.SALIMATH**

**2. Designation: PROFESSOR OF BIOTECHNOLOGY**

**3. Email id: salimathuom@gmail.com**

**4. Phone No.:0821 - 2419879**

**5. Qualification: M. Sc., PhD (Germany)**

**6. Area of Specialization: MOLECULAR BIOLOGY OF CANCER**

**7. Awards/Recognitions:**

| | **Name of the Award** | **Year of Award** |
|---|---|---|
| **National** | **Dr.Virendra B.Kamat Award** | 1994 |
| | **Young Scientist award** | 1995 |
| | **Rashtriya Gaurav Award** | 2009 |
| | **Best Citizen of India Award** | 2010 |
| **State** | **Dr. Kalpana Chawla State Award** | 2004 |

**Fellowships Awarded:**

1. Alberta Heritage Foundation for Medical Research Fellowship, Canada
2. Kristen's Weg Research Fellowship/ Germany
3. Department of Biotechnology Associateship/ India
4. Travel Grant-UGC/DST/ India
5. Travel Grant-DAAD/ Germany

**8. Number of projects:**

**i) Completed**

| Sl. No. | Title of the project | Funding Agency | Amount | Year (From-To) |
|---|---|---|---|---|
| 1 | Tumor angiogenesis: A novel target for cancer therapy Mechanism of butyrate induced antiangiogenesis | **DST** | **18, 80,566/-** | **2001 to 2005** |
| 2 | Role of calcium and membrane binding proteins from synovial fluid of patients with Rheumatoid arthritis in pathogenesis of inflammation. | **UGC** | **4, 03, 493/-** | **2002 to 2006** |
| 3 | Development of Radio receptor biding assay for quantitating angiogeneic ligands in sera and effusions of patients with malignant tumors Role in antiangiogenic therapy | **DAE** | **16, 34, 250/-** | **2003 to 2006** |
| 4 | Production of Soluble receptor sFlt-1 and sTie-2 for angiogeneic ligands VEGF and Angiopoietins By expression Cloning: Role in antiangiogenic therapy of cancer. | **DBT** | **26, 87,000/-** | **2003 to 2006** |
| 5. | Bioprospecting of Medicinal plants for antiangiogenic activity. | **DST – WOS A** | **11,05,000/-** | **2007 to 2009** |

| | | | | |
|---|---|---|---|---|
| 6. | Production of human recombinant VEGF 165 in eukaryotic expression system. | **UGC** | **9, 12,600/-** | **2007 to 2010** |

**ii) On-going**

| Sl. No. | Title of the project | Funding Agency | Amount | Date of Commencement | Expected date of completion |
|---|---|---|---|---|---|
| **1** | Isolation and Mechanism-Based Validation of Novel Antiangiogenic Molecules from Medicinal Plants: Role in Cancer Therapy. | **DAE** | **20, 81, 800/-** | **2007** | **2011** |
| **2** | Silencing of MTA1 gene as a strategy to inhibit tumor angiogenesis and metastasis; Role in breast cancer therapy. | **DBT** | **53, 17,000/-** | **2009** | **2012** |
| **3** | Production of scFv for Human sFlt-1 and sTie-2: TRAIL fusion proteins with selective binding and apoptotic potential using Immunoliposomes. | **DBT** | **65,62,000/-** | **2010** | **2013** |

**9. Number of PhD candidates successfully completed: 18**

**10. Number of PhD candidates currently working: 7**

**11. Number of M.Phil candidates successfully completed: None**

**12. Number of M.Phil candidates currently working: None**

**13. <u>Publications</u>: <u>(Last 5 years only- since 2005)</u>**

**i) Books (Authors, Title, Publisher, Year of Publication, Pages)**

**ii) Articles in Journals (Authors, Title, Year, Journal, Volume, Pages)**

1. **D'Souza SS**, Gururaj AE, Raj HM, Roessler J, Salimath BP. Inhibition of Ascites Tumor Growth in vivo by sTie-2 is potentiated by a Combinatorial Therapy with sFLT-1. Journal of Gene medicine, J Gene Med. 2010 Dec; 12(12):968-80.

   **Impact factor: 2.968**

2. Inhibition of metastasis-associated gene 1 expression affects the proliferation and osteogenic differentiation of immortalized human mesenchymal stem cells. Cell Proliferation, Kumar A, Salimath BP, Schieker M, Stark GB, Finkenzeller G. Cell Prolif. 2011 Apr;44(2):128-38.

   **Impact factor: 2.917**

3. Regulation of invasive behavior by vascular endothelial growth factor is HEF1-dependent. Lucas JT Jr, **Bharathi P.Salimath**, Slomiany MG, **Rosenzweig SA. Oncogene.** 2010, 29(31):4449-59.

   **Impact factor: 7.135**

4. Platelet-derived growth factor receptor signaling is not involved in osteogenic differentiation of human mesenchymal stem cells. Akhilesh Kumar; **Bharathi P.Salimath**; Stark Gerhard Björn; Finkenzeller Günter, Tissue engineering. Part A 2010; 16(3):983-93.

   **Impact factor: 5.44**

5. Evaluation of Antiangiogenic and Antiproliferative Potential in Ethanolic Extract of *Dioscoria bulbifera* L. Kaveri K, Yashaswini B, Sheela M L and **Bharathi P.Salimath**. **Current Trends in Biotechnology and Pharmacy** Vol. 4 (3) 801-808 July 2010.

6. Inhibition of tumor growth and angiogenesis by an aqueous extract of *Terminalia bellirica*. Shivakumar.S, Jayashree.K and **Bharathi P.Salimath. Current Trends in Biotechnology and Pharmacy.** 4(1) 535-544, 2010.

7. Targeting Tumor Angiogenesis for Preclinical Validation of Antiangiogenic compounds from medicinal plants. **Bharathi P. Salimath**, Thippeswamy G, Sheela ML, John T, Lucas JR* and Steven A. Rosenzweig Vol 3, Efficacy safety and clinical Compendium of Bioactive Natural Products. 2009

8. Withaferin A suppresses the expression of vascular endothelial growth factor in Ehrlich ascites tumor cells via Sp1 transcription factor. Prasanna Kumar S, Shilpa P and **Bharathi P.Salimath**. **Current Trends in Biotechnology and Pharmacy.** 3(2) 138-148. 2009

9. Antiangiogenic and anti-proliferative effects of substituted – 1, 3, 4 – an oxadiazole derivative is mediated by down regulation of VEGF and inhibition of translocation of HIF-1 α in Ehrlich ascites tumor cells. Akhilesh; D'Souza Saritha S; Gaonkar S L; Rai K M L; **Salimath BP**. **Cancer Chemotherapy and Pharmacology.** 64. 1221-1233. 2009

   **Impact factor: 2.654**

10. Paracrine action of sFLT-1 secreted by stably-transfected Ehrlich ascites tumor cells and therapy using sFLT-1 inhibits ascites tumor growth in vivo. Ramachandra S, D'Souza SS, Gururaj AE, Shaila MS, **Salimath BP**. **J Gene Med**. 11: 422-434. 2009.

    **Impact factor: 2.968**

11. Antiangiogenic and proapoptotic activities of allyl isothiocyanate inhibit ascites tumor growth in vivo. Kumar A, D'Souza SS, Tickoo S, Salimath BP, Singh HB. **Integr Cancer Ther**. 8(1):75-87. 2009

    **Impact factor: 2.264**

12. Evaluation of serum vascular endothelial growth factor (VEGF) and microvessel density (MVD) as prognostic indicators in carcinoma breast. Shivakumar S, Prabhakar BT, Jayashree K, Rajan MG, Salimath BP. **J Cancer Res Clin Oncol.**;135(4):627-36. 2009.

    **Impact factor: 2.261**

13. Octacosanol isolated from Tinospora cordifolia downregulates VEGF gene expression by inhibiting nuclear translocation of NF-<kappa>B and its DNA binding

activity. Thippeswamy G; Sheela M L; **Salimath Bharathi P**. **European journal of pharmacology** 588(2-3):141-50. 2008.

**Impact factor: 2.585**

14. Inhibition of *in vivo* angiogenesis by *Anacardium occidentale* L. involves repression of the cytokine VEGF gene expression. Lingaraju, SM**,** Keshavaiah K, **Salimath BP.** ***Drug Discov Ther****;* 2(4): 234-244. 2008.

**Impact factor:**

15. Butyrate-induced phosphatase regulates VEGF and angiogenesis via Sp1. Prasanna Kumar S; Thippeswamy G; Sheela M L; Prabhakar B T; **Salimath BP Archives of biochemistry and biophysics** 478(1):85-95. 2008.

**Impact factor: 3.046**

16. Growth inhibition and induction of apoptosis in MCF-7 breast cancer cells by a new series of substituted-1, 3, 4-oxadiazole derivatives. Kumar Akhilesh; D'Souza Saritha S; Gaonkar S L; Rai K M L; **Salimath Bharathi P**. **Investigational new drugs** 26(5):425-35. 2008.

**Impact factor: 3.396**

17. Pro-apoptotic activity of imidazole derivatives mediated by up-regulation of Bax and activation of CAD in Ehrlich Ascites Tumor cells. Kumar C Anil; Jayarama Shankar; Basappa; **Salimath Bharathi P**; Rangappa Kanchugarakoppal S. **Investigational new drugs** 25(4):343-50. 2007.

**Impact factor: 3.396**

18. N-Substituted-2-butyl-5-chloro-3H-imidazole-4-carbaldehyde derivatives as anti-tumor agents against Ehrlich ascites tumor cells in vivo. Kumar C Anil; Swamy S Nanjunda; Gaonkar S L; Basappa; **Salimath Bharathi P**; Rangappa Kanchugarakoppal S. **Medicinal chemistry** (Shariqah (United Arab Emirates) 3(3):269-76. 2007.

**Impact factor: 4.802**

19. Purification and characterization of butyrate-induced protein phosphatase involved in apoptosis of Ehrlich ascites tumor cells. Belakavadi M. Prabhakar B.T. and **Salimath B.P. Biochim Biophys Acta.** 1770 (1), 39-47. 2007.

**Impact factor: 2.610**

20. G. Thippeswamy and **Salimath B.P.** Induction of caspase-3 activated DNase mediated apoptosis by hexane fraction of ***Tinospora cordifolia*** in EAT cells. **Environmental Toxicology and Pharmacology** 23, 212-220. 2007

**Impact factor: 1.425**

21. Drug delivery to brain tumors: challenges and progress. Ningaraj N.S, **Bharathi P.Salimath,** Sankpal U.T, Perera R, Vats T. **Expert Opinion on Drug Delivery**, 3, 499-509. 2006.

**Impact factor: 2.89**

*22.* Antiangiogenic effect of 2-benzoyl-phenoxy acetamide in EAT cell is mediated by HIF-1α and down regulation of VEGF in-vivo. B.T. Prabhakar, Shaukath Ara Khanum, K. Jayashree, S. Shashikanth and **Bharathi P. Salimath, Invest. New Drugs,** 24 (471-478), 2006.

**Impact factor: 3.396**

23. *Curcuma aromatica* extract induces apoptosis and inhibits angiogenesis in Ehrlich Ascites Tumor cells *in vivo.* Thippeswamy G. and **Bharathi P. Salimath**, **mySCIENCE** 1(1), 79-92.2006.

24. Antiangiogenic and proapoptotic activity of a novel glycoprotein from *U. indica* is mediated by NF-kB and Caspase activated DNase in ascites tumor model. A. V. Deepak and **Bharathi P. Salimath, Biochimie**, 88, 297-307, 2006.

**Impact factor: 3.489**

25. Anti-tumor and proapoptotic effect of novel synthetic benzophenone analogues in Ehrlich ascites tumor cells. B.T. Prabhakar, Shaukath Ara Khanum, K. Jayashree, **Bharathi P. Salimath** and S. Shashikanth **Bioorganic Med Chem,**14,435-446, 2006.

**Impact factor: 2.822**

26. Angiogenic and proliferative effects of the cytokine VEGF in Ehrilich ascites tumor cells is inhibited by *Glycyrrhiza glabra.* M.L. Sheela, M.K. Ramakrishna and **Bharathi P. Salimath, Intern. Immunopharmacol,** 3**,**494-498, 2006.

**Impact factor: 2.312**

27. Butyrate induced proapoptotic and antiangiogenic pathways in EAT cells require activation of CAD and down regulation of VEGF. Madesh Belakavadi, B.T. Prabhakar and **Bharathi P. Salimath**, **Biochem. Biophys. Res. Commn**. 335, 993-1001, 2005.

**Impact factor: 2.720**

28. Mechanism of inhibition of ascites tumor growth in mice by curcumin is mediated by NF-kB and caspase activated Dnase. Madesh Belakavadi and **Bharathi P. Salimath, Mol. Cellu. Biochem.** 273, 57-67, 2005.

**Impact factor: 1.896**

**iv) Paper as a part of book: (Authors, Title of the paper, Title of the book, Publisher, Year of publication, Page No.**

1.**Bharathi P. Salimath**, Thippeswamy G, Sheela, ML, John T, Lucas JR and Steven A. Rosenzweig. Targeting Tumor Angiogenesis for Preclinical Validation of Antiangiogenic compounds from medicinal plants. Vol 3, Efficacy safety and clinical Compendium of Bioactive Natural Products. 2009.

2.Ningaraj N.S, **Bharathi P. Salimath,** Sankpal U.T, Perera R, Vats T. Drug delivery to brain tumours: challenges and progress **Expert Opinion on Drug Delivery**, 3, 499-509. 2006.

3. Peter Dieter, **Bharathi P.Salimath** and Dieter Marme. The role of Calcium and Calmodulin in higher plants. In: **Annual Proceedings of Phytochemical Society of Europe** (Eds: A Bourdet et akl.), Oxford University Press. 23:213- 229.1983.

**v) Monographs/Reports (if any)** _____

**14. Conference/Seminar organized:**

| Sl. No. | Status as organizer | Title of the conference/seminar | Date |
|---|---|---|---|
| 1 | **Organizer** | DST Women Scientist's Programme | 2005. |
| 2 | **Organizer** | DST Health Science Advisory Committee Programme | 2006. |
| 3 | **Coordinator** | Hands on Training Course in Advanced Cell and Molecular biology techniques | 2006 |
| 4 | **Coordinator** | Hands on Training Course on Gene Expression Studies and Analysis | 2009 |
| 5 | **Coordinator** | Hands on training course on Use of Cell Culture Technology for Studying | 2011 |

| | | | |
|---|---|---|---|
| | | Angiogenesis and Apoptosis | |

**15. Conference/Seminar chaired:**

| Sl. No. | Title of the seminar | Organized by | Date |
|---|---|---|---|
| 1 | Indian Association for Cancer Research – Satellite Meeting | Amala Cancer Research Institute, Thrissur, Kerala | 12th February 2011 |

**16. Conference/Seminar participated:**

| Sl. No. | Title | Organized by | Year/Month | Only participated | Participated and presented the paper |
|---|---|---|---|---|---|
| **1** | Winter Symposium on angiogenesis in cancer and vascular disease | Nature Group, Miami | 2006/February | | Yes |
| **2** | Indian Science Congress Association | Chidambaram, Tamil Nadu | 2007/ February | | Yes |
| **3** | National Biotechnology Conference | Alapullazha, Kerala | 2007/ February | | Yes |
| **4** | Indian Science Congress Association | Vishakhapatnam | 2008/January | | Yes |
| **5** | International symposium on Emerging | Indian Institute of Science, | 2009/February | | Yes |

| | | | | | |
|---|---|---|---|---|---|
| | Challenges and Approaches in Cancer Biology | Bangalore. | | | |
| **6** | National Conference on Plant Biodiversity and Bioprospecting. | Department of Botany, University of Mysore | 2009/ March | | Yes |
| **7** | National conference on recent trends in animal physiology | Department of Zoology, University of Mysore | 2009/October | | Yes |
| **8** | Indian Association for Cancer Research – Satellite Meeting | Amala Cancer Research Institute, Thrissur, Kerala | 2011/ February | | Yes |

**17. Chairman/Member of Authority/Committee etc:**

| **Sl. No.** | **Chairman/Member/Secretary** | **Committee/Authority** | **Year (From-To)** |
|---|---|---|---|
| **1** | **Chairperson** | Department of Biochemistry, University of Mysore, Mysore | |
| **2** | **Chairperson** | Department of Biotechnology, University of Mysore, Mysore. | 2001-2003 |
| **3** | **Chairperson** | Board of Studies in Biotechnology, UOM, Mysore | 2005-2007 |
| **4** | **Chairperson** | Board of Examiners, Biotechnology, UOM, Mysore. | 2006-2007 |

| | | | |
|---|---|---|---|
| **5** | **Member** | Affiliation Committee, College Development Council, UOM, Mysore. | |
| **6** | **Member** | Board of Appointments (Professor/ Reader/ Lectuteres) University of Mysore, Karnatak university, Kuvempu University, Shivaji University | |
| **7** | **Member** | BOE and BOS of other Universities in Karnataka | |
| **8** | **Member** | Subject expert committee in Life Sciences, Women scientist's scheme, Department of Science and Technology, New Delhi. | 2002-2007 |
| **9** | **Member** | Programme Advisory Committee, Health Sciences, Department of Science and Technology, New Delhi. | 2005-2007 |
| **10** | **Member** | National Assessment and Accreditation Committee, University Grants Commission, New Delhi. | 2010 – Till date |
| **11** | **Member** | JSS Science Foundation: Information Support System for Rural Higher Secondary schools. Principal Scientific Advisor, Govt. of India | 2010– Till date |

**18. Membership to Professional Organization/Associations:**

| **Sl. No.** | **Name of the Association/Organizations** | **Life member/Ordinary member** |
|---|---|---|
| 1 | Society of Biological Chemists | Life Member |
| 2 | Indian Association of Cancer Research | Life Member |
| 3 | Indian Society for Cell Biology | Life Member |
| 4 | Biotechnology Society of India | Life Member |
| 5 | Indian Science Congress Association | Member |

**19. Any other Information:**

1. Delivered Plenary Lecture during National Women's Science Congress on 5th and 6th December 2008 at Bijapur.
2. Delivered invited lectures on Stem cells and their Applications and Tumor Angiogiogenesis as a target for cancer therapy for Karnataka Science and Technology academy Lecture Series on 24th, 25th and 26th March 2009 at Mangalore University.
3. Invited to be the Chief Guest for Bio-oratory 2009 state level competition on 15th October 2009 at Mahajana's First Grade College.
4. Delivered Special lecture on Cancer Immunology at Teresian college , Mysore
5. Delivered Special lecture on Genetic engineering and its applications. at NCERT , Bannur road
6. Delivered Special lecture on applications of biotechnology at G.P. Porwal and V.V. Salimath College, Sindgi , Bijapur.

**(SIGNATURE)**