BIOGRAPHICAL SKETCH

BABYKUTTY, SUBOJ	POSITION TITLE Assistant Professor & Research Supervisor
Department of Zoology Mar Ivanios College Nalanchira Trivandrum- 15	

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Edwin L. Steele Lab, Radiation Oncology, Massachusetts General Hospital, Harvard Medical School, MA, USA	Postdoctoral training	10/2013-10/2015	Tumor microenvironment and tumor immunology
Sree Chitra Tirunal Institute For Medical Science and Technology, Trivandrum, Kerala, India	PhD	04/2012	Role of nitric oxide in tumor biology
Department of Environmental Sciences, Mahatma Gandhi University, Kottyam, Kerala, India	M.Phil	05/2005	Environmental Science
Department of Zoology, Kerala University, Trivandrum, Kerala, India	M.Sc	05/2003	Zoology
N.S.S College, Pandalam, Kerala, India	B. Sc	3/2001	Zoology

A. Positions and Honors.

Positions

11/2015- till date: Assistant professor (Teaching/Research), Mar Ivanios College, Trivandrum, Kerala, India.

11/2013- 10/2015: Research Fellow, Edwin L Steele Laboratories, Radiation Oncology, Massachusetts General Hospital, Harvard Medical School, MA, USA

2011-2013: Assistant professor (Teaching/Research), Mar Ivanios College, Trivandrum, Kerala, India.

2008-2011: Senior research fellow, Department of Biochemistry, Sree Chitra Tirunal Institute Medical Science and Technology, Trivandrum, Kerala, India

2006-2008: Junior research fellow, Department of Biochemistry, Sree Chitra Tirunal Institute for Medical Science and Technology, Trivandrum, Kerala, India

Academic and Professional Honors.

2021 Teachers Associateship For Research Excellence (Tare)

2021 Kairali Research Award (Biological Science)

2013 Indo-US postdoctoral research fellowship, DST, Govt. of. India

2009 Travel Grant by Department of Science and Technology, Govt. of. India.

2009 Travel Grant by Department of Biotechnology, Govt. of. India

2008 Senior Research Fellowship, ICMR, Govt. of. India.

2008 Senior Research Fellowship, Lady Tata Memorial research foundation (not availed).

2004 Lectureship in Life Sciences, CSIR-UGC, Govt. of. India

2004 MG University First Rank for MPhil

2003 Kerala University Third Rank for MSc Zoology

2001 Kerala University First Rank for BSc Zoology

B. Membership:

Member American Association of Cancer Research (No: 339035) BoS

member Zoology (Mar Ivanios College)

Research Guide (Kerala University)

C. Books :

Cell and Molecular Biology. K, Vijayakumaran Nair Ph.D., M Jayaprakash, R.AshaDevi Ph.D, Suboj Babykutty, Ph.D. ISBN: 978-81-952407-0-8

D. Research papers:

1. Incio J, Ligibel JA, McManus, Suboj P, Jung K, Kawaguchi K, Pinter M, Babykutty S, Chin SM, Vardam TD, Huang Y, Rahbari NN, Roberge S, Wang D, Gomes-Santos IL1, Puchner SB, Schlett CL, Hoffmman U, Ancukiewicz M, Tolaney SM, Krop IE, Duda DG, Boucher Y, Fukumura D, Jain RK. Obesity promotes resistance to anti-VEGF therapy in breast cancer by up-regulating IL-6 and potentially FGF-2. ***Sci Transl Med. 2018 Mar 14;10 (432).***

2. Incio J, Liu H, Suboj P, Chin SM, Chen IX, Pinter M, Ng MR, Nia HT, Grahovac J, Kao S, **Babykutty S,** Huang Y, Jung K, Rahbari NN, Han X, Chauhan VP, Martin JD, Kahn J, Huang P, Desphande V, Michaelson J, Michelakos TP, Ferrone CR, Soares R, Boucher Y, Fukumura D, Jain RK. Obesity-induced inflammation and desmoplasia promote pancreatic cancer progression and resistance to chemotherapy.***Cancer Discov. 2016 May 31; Aug 6 (8): 852-69***

3. Incio J, Tam J, Rahbari NN, Suboj P, McManus DT, Chin SM, Vardam TD, Batista A, **Babykutty S**, Jung K, Khachatryan A, Hato T, Ligibel JA, Krop IE, Puchner SB, Schlett CL, Hoffmman U, Ancukiewicz M, Shibuya M, Carmeliet P, Soares R, Duda DG, Jain RK, Fukumura D.

PlGF/VEGFR-1 Signaling Promotes Macrophage Polarization and Accelerated Tumor Progression in Obesity.***Clin Cancer Res. 2016 Jun 15;22(12):2993-3004.***

4. Incio J, Suboj P, Chin SM, Vardam-Kaur T, Liu H, Hato T, **Babykutty S**, Chen I, Deshpande V, Jain RK, Fukumura D. Metformin Reduces Desmoplasia in Pancreatic Cancer by Reprogramming Stellate Cells and Tumor-Associated Macrophages. ***PLoS One. 2015 Dec 7;10(12):e0141392***.

5. **S. Babykutty**, Priya P.S, Nandini.R.J, Suresh Kumar M.A, Mangalam Nair, Priya Srinivas, Srinivas Gopala, Nimbolide retards tumor cell migration, invasion and angiogenesisby downregulating MMP-2/9 expression via inhibiting ERK1/2 and reducing DNA binding activity of NF-κB in colon cancer cells. ***Mol Carcinog. 2012 Jun; 51(6):475-90.***

6. **S. Babykutty**, P. Suboj, A. Nair, C. Mohan, P. Srinivas, S. Gopala, Nitric oxide enhances migration/invasion of colon cancer cells by upregulating MMP-2/9 via activation of the cGMP-PKG-ERK signaling pathways. ***Clinical and Experimental Metastasis. 2012 Jun; 29(5):471-92.***

7. P. Suboj, **S. Babykutty**, V.G. D. Roshan, R. S. Nair, P. Srinivas, S. Gopala. Aloe emodin inhibits colon cancer cell migration/angiogenesis by downregulating MMP-2/9, RhoB and VEGF via reduced DNA binding activity of NF-kB. ***European Journal of Pharmaceutical Science. 2012 Apr 11; 45(5): 581-91.***

8. P. Suboj, **S. Babykutty**, P. Srinivas, S. Gopala. Aloe emodin induces G2/M cell cycle arrest, and apoptosis via activation of caspase- 6 in human colon cancer cells. ***Pharmacology. 2012; 89:91-98****.*

9. **S. Babykutty**, Jose Padikkala, P. P. Sathiadevan, Vinod Vijayakurup, T. K. Abdul Azis, Priya Srinivas, Srinivas Gopala. Apoptosis induction of centella asiatica on human breast cancer cells. ***Afr J Tradit Complement Altern Med. 2008 Oct 25; 6(1):9-16.***

E. Reviews:

10. Srinivas Gopal, **S. Babykutty**, Priya Prasanna Sathiadevan, priya Srinivas, Molecular mechanism of emodin action: transition from laxative ingredient to an antitumor agent. Med Res Rev. 2007 Sep; 27(5): 591-608

11. Patil MD, Bhaumik J, **Babykutty S**, Banerjee UC, Fukumura D. Arginine dependence of tumor cells: targeting a chink in cancer's armor. Oncogene. 2016 Apr 25. doi: 10.1038/onc.2016.37, [Epub ahead of print].

F. Conference abstracts:

12. **S. Babykutty**, Takahiro Heishi, Kosuke Tsukada, Yuhui Huang, Sergey Kozin, David Conner, Qingcong Lin, Raju Kucherlapati, Rakesh K. Jain and Dai Fukumura. Restoring perivascular nitric oxide gradients normalizes breast cancer vasculature. Nitric Oxide - Nitrite/Nitrate Conference - June 16-20, 2014, Cleveland, Ohio (Poster presentation).

13. **S. Babykutty**, Priya Prasanna Sathiadevan, Srinivas Gopala, Insidious role of nitric oxide in matrix digestion/migration through cGMP-ERK-AP1 pathway Scientific Program In connection with Institute Day celebration, March 12, 2011. (Oral Presentation)

14. **S. Babykutty**, Priya Prasanna Sathiadevan, Srinivas Gopala, Insidious role of nitric oxide in matrix digestion/migration through cGMP-ERK-AP1 pathway in colon cancer cells, 23rd Kerala Science Congress, Dec 21-23, 2010. (Oral Presentation)

15. **S. Babykutty**, Priya Prasanna Sathiadevan, Vinod Vijayakurup, Padmakrishnan. C. J, Priya Srinivas, Gopal Srinivas. Nitric oxide-cGMP-MMP2/9 circuit in colon cancer migration and invasiveness: An in vitro study. ECCO 15 -ESMO 34 Multidisciplinary Congress, Berlin, 2009 (Poster presentation)

16. Priya Prasanna Sathiadevan, **S. Babykutty**, Vinod Vijayakurup, Padmakrishnan. C. J, Priya Srinivas, Gopal Srinivas. Aloe emodin, a versatile anthraquinone targeting multiple facets (apoptosis, metstasis, angiogenesis) of cancer progression. European Journal of Cancer Supplements, Vol 7 No 2, September 2009, Page 95 (Poster presentation)

17. Priya Prasanna Sathiadevan**,** **S. Babykutty**, Vinod Vijayakurup,Priya Srinivas,Gopal Srinivas. In vitro Anticancer activity of alo emodin involves G2/M arrest and inhibition of metastasis in colon cancer cells. International PSE symposium on Natural products in cancer therapy. Italy, 2008 (Poster presentation)

18. **S. Babykutty**, Jose Padikkala, Pria Srinivas, Gopal Srinivas. Growth inhibitory and apoptosis inducing effects of methanolic extract of centella asiatica in MCF 7 cells. International symposium on translational research: Apoptosis and cancer, Trivandrum, 2005, page no.189 (Poster presentation)

G. Courses Handling for UG/ PG Classes:

For PG Classes—Theory: Molecular Biology—Transcription, Translation, Post Translational Modification and Gene Regulation.

Genetics— Pattern of inheritance, Chromosomal aberrations and Genetics of Cancer.

Environmental management: Environmental Impact Assessment and Sustainable development

Practical: Animal Cell culture techniques, Cell viability assays and molecular biology techniques such as PCR, Western blot and ELISA.

For UG Classes—Microbiology, Physiology, Animal Diversity