

# Dr. Kamesh Rajendra Babu, Ph.D.

Address: No.18/19 Kalandar Street, Big-Kanchipuram, Tamilnadu-631502, India

Mobile: (+91)6380683838 email: kameshrbabu88@gmail.com

## Work History

---

**Postdoctoral Research Fellow** with Dr.Lei Sun,"Investigation of alternative splicing in adipocytes under nutritional changes",

Duke-NUS Medical School, Singapore

(Apr 2020-March 2021)

**Postdoctoral Research Fellow** with Dr.Yvonne Tay,"Investigation of non-coding RNAs involved in cancer progression", Cancer Science Institute,

National University of Singapore, Singapore

(Mar 2017-Mar 2020)

**Research Fellow** with Prof.Martina Muckenthaler,"Identification of non-coding RNAs involved in iron homeostasis",

University Hospital Heidelberg, Germany

(Mar 2013-Dec 2016)

**Guest Scientist** with Prof.Martina Muckenthaler,"Study on the expression and regulation of miRNAs in response to cellular iron ( $Fe^{2+}$ ) in monocyte derived macrophage cells: *In-vitro*",

University Hospital Heidelberg, Heidelberg, Germany

(April 2012-Feb 2013)

## Education

---

**PhD in Molecular Medicine**, University of Heidelberg, Germany

(Mar 2013-Dec 2016)

**MPhil in Biochemistry**, University of Madras, Chennai, India

(July 2011-Aug 2012)

**MSc in Biotechnology**, VIT University, Vellore, India

(July 2009-June 2011)

**BSc in Microbiology**, University of Madras, Chennai, India

(June 2006-April 2009)

## Publications

- 
1. Li, J., Xu, D., Jiang, Y., Degirmenci, U., **Babu, K.R.**, Xin, L., Yang, H., Sun, L. (2021) Alternative Isoform Usage Analysis of Adipose Tissues Reveals HuR as a Master Regulator for the Depot-specific Signatures. *Nature Metabolism* (In Revision).
  2. **Babu, K.R.**, Sun, L. (2020) Control of iron availability in cancer by microRNAs. *Proceedings of the Singapore National Academy of Science*. 14(2): 79-89 .
  3. **Babu, K.R.**, Tay, Y. (2019) The Yin-Yang Regulation of Reactive Oxygen Species and MicroRNAs in Cancer. *International Journal of Molecular Sciences*. 20(21):5335
  4. Zhang, B., **Babu, K.R.**, Lim, C.Y., Kwok, Z.H., Li, J., Zhou, S., Yang, H., Tay, Y. (2019). A comprehensive expression landscape of RNA-binding proteins (RBPs) across 16 human cancer types. *RNA Biology*. 10.1080/15476286.2019.1673657, 1-16, doi:10.1080/15476286.2019.1673657
  5. **Babu, K.R.**, Muckenthaler, M.U. (2019). miR-148a regulates expression of the transferrin receptor 1 in hepatocellular carcinoma. *Scientific Reports*. 9, 1518 doi:10.1038/s41598-018-35947-7
  6. **Babu, K.R.**, Muckenthaler, M.U. (2016). miR-20a regulates expression of the iron exporter ferroportin in lung cancer. *Journal of Molecular Medicine* 94: 347-359
  7. Appari,M., **Babu, K.R.**, Kaczorowski,A., Gross,W., & Herr,I. (2014). Sulforaphane, quercetin and catechins complement each other in elimination of advanced pancreatic cancer by miR-let-7 induction and K-ras

inhibition. International Journal of Oncology 45(4): 1391-1400

## Conference Papers

---

1. **Babu, K.R.**, Prakash, A., Altamura, S., Klaus, B., Benes, V., Huber, W., Bateman, A., Muckenthaler, M.U. (2016). Identification of hepatic long non-coding RNAs involved in iron homeostasis. European iron club-Meeting, Innsbruck, Austria - Poster Presentation.
2. **Babu, K.R.**, Muckenthaler, M.U. (2015). miR-20a regulates expression of the iron exporter ferroportin in lung cancer. Sixth Congress of the International BioIron Society, Hangzhou, China - Oral Presentation
3. **Babu, K.R.**, Muckenthaler, M.U. (2014). Expression of the iron exporter Ferroportin is controlled by microRNA family miR-17. European iron club-Meeting, Verona, Italy - Poster Presentation
4. **Babu, K.R.**, Muckenthaler, M.U. (2014). The microRNA cluster miR-17-92 decreases expression of the iron exporter Ferroportin. Non-coding RNA-mechanism to cancer, DKFZ, Heidelberg, Germany - Poster Presentation
5. **Babu, K.R.**, Hoti, S.L. (2012). Pharmacogenomic approach to unravel the variation in response to Diethylcarbamazine (DEC). International symposium on Global Challenges of Chronic Tropical Diseases, Max-planck Institute of Infection Biology, Berlin, Germany - Poster Presentation
6. **Babu, K.R.**, Hoti, S.L. (2012). Pharmacogenomic approach for unraveling the efficacy variation of diethylcarbamazine in lymphatic filariasis. International conference on Molecular Medicine: MolMed-2012, VIT University, Vellore - Poster Presentation
7. **Babu, K.R.**, Hoti, S.L. (2011). Exploring polymorphism in the promoter of gene encoding prostaglandin I<sub>2</sub> synthase involved in the diethylcarbamazine action. International conference on Medical Genetics and Genomics, Bharathidasan University, Tiruchirappalli, India - Poster Presentation

## Certifications

---

1. **Biomedical Research** - Collaborative Institutional Training Initiative (CITI), National University of Singapore, Singapore (Nov 2020)
2. **Responsible Conduct of Research** - Collaborative Institutional Training Initiative (CITI), National University of Singapore, Singapore (Jul 2020)
3. **Good Clinical Practice** - Collaborative Institutional Training Initiative (CITI), National University of Singapore, Singapore (Jul 2020)
4. **Data or Specimens Only Research** - Collaborative Institutional Training Initiative (CITI), National University of Singapore, Singapore (Jul 2020)
5. **Responsible Care and Use of Fish for Scientific Purposes** - National University of Singapore, Singapore (Jun 2017)
6. **Responsible Care and Use of Laboratory Animals** - National University of Singapore, Singapore (Apr 2017)
7. **Laboratory Animal Science and Methods of Animal Experimentation** - Interfakultäre Biomedizinische Forschungseinrichtung (IBF), Ruprecht-Karls-University Heidelberg, Germany (Jun 2013)

## Workshops

---

1. **Grant Proposal Writing**, ProSciencia GmbH, Luebeck (Jul 2016)
2. **Protein Purification & Analysis**, GE Healthcare, Munich, Germany (Aug 2015)
3. **Writing documents in 'L<sup>A</sup>T<sub>E</sub>X'**, University of Heidelberg, Germany (Oct 2014)
4. **Next-generation sequencing data analysis**, University of Heidelberg, Germany (Oct 2013)
5. **Quantitative PCR**, University of Heidelberg, Germany (Oct 2013)
6. **Scientific writing**, Wiley-VCH, Germany (Sep 2013)

7. **Biostatistics using 'R' programming language**, University of Heidelberg (Sep 2013)
8. **Protein crystallization & crystallography**, University of Heidelberg, Germany (May 2013)
9. **Cytospin, Cytometry & confocal microscopy**, University of Heidelberg (Apr 2013)
10. **Lentivirus transduction**, University of Heidelberg, Germany (Apr 2013)
11. **Visualization of HIV assembly sites by super-resolution and live cell microscopy**, University of Heidelberg, Germany (Mar 2013)
12. **Animal Cell Culturing Techniques**, Biozone Research Technologies, Chennai, India (Sep 2011)
13. **National workshop on Immunoinformatics**, Karpaga Vinayaga College of Engineering and Technology, Madhuranthagam, India (Sep 2011)

## Awards & Prizes

- 
1. **Travel grant** - European Iron Club Meeting 2016, Innsbruck, Austria (Apr 2016)
  2. **Travel grant** - Kyoto University Winter School 2016, Kyoto, Japan (Feb 2016)
  3. **Travel grant** - International BioIron Society, Hangzhou, China (Sep 2015)
  4. **Travel grant** - European Iron Club Meeting 2014, Verona, Italy (Sep 2014)
  5. **Best poster award** - International Conference on Medical Genetics and Genomics, Tiruchirappalli, India (Dec 2011)
  6. **First prize** - Scientific model making event, Abhigyan '07, Madras Christian College, Chennai, India (Jan 2007)

## References

---

### 1. Prof. Martina Muckenthaler, PhD

Head of Molecular Medicine,

Department of Paediatric Oncology, Haematology and Immunology,

University of Heidelberg, Heidelberg, Germany.

**email:** Martina.Muckenthaler@med.uni-heidelberg.de **phone:** +49 (0) 6221 56-6923

### 2. Dr. Yvonne Tay, PhD

Principal Investigator, Cancer Science Institute of Singapore,

President Assistant Professor, Department of Biochemistry,

National University of Singapore, Singapore - 117599

**email:** csitmsy@nus.edu.sg **phone:** +65 6516 7756

### 3. Dr. Lei Sun, PhD

Associate Professor, Cardiovascular and Metabolic Disorders Program,

Duke-NUS Medical School, Singapore - 169857

**email:** sun.lei@duke-nus.edu.sg **phone:** +65 66013021