

Total publications

As on Nov 25, 2019	
Total Research Publications	28
Corresponding/Senior Author	5
First author	6
Co-author	17

PUBLICATIONS AS PRINCIPAL INVESTIGATOR (RGCB, Thiruvananthapuram)

1. Mahesh A, Khan MI, Govindaraju G, Verma M, Awasthi S, Chavali PL, Chavali S, **Rajavelu A***, Dhayalan A*. SET7/9 interacts and methylates the ribosomal protein, eL42 and regulates protein synthesis. **BBA - Molecular Cell Research**. (2019) in press. ***Corresponding authors.**
2. Jabeena CA, **Rajavelu A***. Epigenetic players of chromatin structure regulation in *Plasmodium falciparum*. **ChemBioChem**. 2019 Jan 10, in press. ***Corresponding author**
3. **Rajavelu A**, Lungu C, Emperle M, Dukatz M, Bröhm A, Broche J, Hanelt I, Parsa E, Schiffers S, Karnik R, Meissner A, Carell T, Rathert P, Jurkowska RZ, Jeltsch A. Chromatin-dependent allosteric regulation of DNMT3A activity by MeCP2. **Nucl Acid Res**. 2018, 46 (17):9044-9056.
4. Thomas JM, Surendran S, Abraham M, **Rajavelu A***, Kartha CC* (2018). Gene expression analysis of nidus of cerebral arteriovenous malformations reveals vascular structures with deficient differentiation. **Plos One**, 13; 13 (6). ***Corresponding author**
5. Emperle M, **Rajavelu A**, Kunert S, Arimondo PB, Reinhardt R, Jurkowska RZ, Jeltsch A. The DNMT3A R882H mutant displays altered flanking sequence preferences. **Nucleic Acids Res**. 2018 Apr 6; 46(6):3130-3139.
6. Emperle M, Dukatz M, Kunert S, Holzer K, **Rajavelu A**, Jurkowska RZ, Jeltsch A. The DNMT3A R882H mutation does not cause dominant negative effects in purified mixed DNMT3A/R882H complexes. **Sci Rep**. 2018 Sep 5; 8(1):13242.
7. Govindaraju G, Jabeena CA, Sethumadhavan DV, Rajaram N, **Rajavelu A** (2017). DNA methyltransferase homologue TRDMT1 in *Plasmodium falciparum* specifically methylates endogenous aspartic acid tRNA. **Biochim Biophys Acta – Gene Regulator Mechanisms**. 2017 Oct; 1860(10): 1047-1057. ***Corresponding author**
8. Awasthi S, Verma M, Mahes A, Khan MI, Govindaraju G, **Rajavelu A**, Chaval PL, Chavali S, Dhayalan A. DDX49 is an RNA helicase that affects translation by regulating mRNA export and the levels of pre-ribosomal RNA. **Nucl Acid Res**. 2018, Mar 30.

9. Verma M, Chandar R, Chakrapani B, Coumar MS, Govindaraju G, **Rajavelu R**, Chavali S, Dhayalan A (2017). PRMT7 interacts with ASS1 and citrullinemia mutations disrupt the Interaction. **J Mol Biol.** 429 (15): 2278 – 2289.
10. Thomas JM, Surendran S, Abraham M, **Rajavelu A***, Kartha CC* (2016). Genetic and epigenetic mechanisms in the development of arteriovenous malformations in the brain. **Clinical Epigenetics.** 8 (1), 78. ***Corresponding author.**

PUBLICATIONS AS POST DOCTORAL FELLOW (Stuttgart University, Germany)

11. Deplus R[#], Blanchon L[#], **Rajavelu A[#]**, Boukaba H[#] et al (2014). Regulation of DNA methylation patterns by CK2 mediated phosphorylation of Dnmt3a. **Cell Reports.** 8 (3); 743-753.
[#] **Shared first authors**
12. Emperle M, **Rajavelu A**, Reinhardt R, Jurkowska R, Jeltsch A (2014). Cooperative DNA binding and protein/DNA fiber formation increases the activity of the Dnmt3a DNA methyltransferase. **J Biol Chem.** 289 (43), 29602-29613.
13. Bashtrykov P, **Rajavelu A**, Hackner B, Ragozin S, Carell T, Jeltsch A (2014). Targeted mutagenesis results in an activation of DNA methyltransferase 1 and confirms an autoinhibitory role of its RFTS domain. **ChemBioChem.** 9(3), 743-8.
14. Rilova E, Erdmann A, Gros C, Masson V, Aussagues, Cassaboiss VP, **Rajavelu A**, et al (2014). Design, Synthesis and Biological Evaluation of 4-Amino-N-(4-aminophenyl) benzamide Analogues of Quinoline-Based SGI-1027 as Inhibitors of DNA Methylation. **ChemMedChem.** 9 (3), 590-601.
15. S Asgatay, C Champion, G Marloie, T Drujon, C Senamaud-Beaufort, Ceccaldi A, Erdmann A, **Rajavelu A** et al (2014). Synthesis and Evaluation of Analogues of N-Phthaloyl-L-tryptophan (RG108) as Inhibitors of DNA Methyltransferase 1. **J Med Chem.** 57 (2), 421-434.
16. Ceccaldi A*, **Rajavelu A***, Ragozin S, Senamaud-Beaufort C, Bashtrykov P, Testa N, Dali-Ali H, Maulay-Bailly C, Amand S, Guianvarc'h D, Jeltsch A, Arimondo PB (2013). Identification of Novel Inhibitors of DNA methylation by Screening of a Chemical Library. **ACS Chemical Biology.** 8 (3); 543-8.
***shared first authors**

PUBLICATIONS AS PhD STUDENT (Jacobs University Bremen, Germany)

17. **Rajavelu A**, Jurkowska R, Fritz J, Jeltsch A (2012). Function and disruption of DNA Methyltransferase 3a cooperative DNA binding and nucleoprotein filament formation. **Nucleic Acid Res,** 40(2): 569-80.
18. Jurkowska R*, **Rajavelu A*** Anspach N, Urbanke C, Jankevicius G, Ragozin S, Nellen W, Jeltsch A (2011). Oligomerization and Binding of the Dnmt3a DNA Methyltransferase to

Parallel DNA Molecules: Heterochromatic localization and role of Dnmt3L. *J Biol Chem.* 286 (27); 24200-7.

***shared first authors**

19. Siddique AN*, Nunna S*, **Rajavelu A**, Zhang Y, Jurkowska RZ, Reinhardt R, Rots MG, Jurkowski T & Jeltsch A. Targeted methylation and gene silencing of VEGF-A in human cells by using a Dnmt3a-Dnmt3L single-chain fusion protein with increased DNA methylation activity. *J Mol Biol.* 425(3), 479-91.

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20. **Rajavelu A**, Tulyasheva Z, Jaiswal R, Jeltsch A*, Kuhnert N* (2011). The inhibition of the mammalian DNA methyltransferase 3a (Dnmt3a) by dietary black tea and coffee polyphenols. *BMC Biochem.* 12; 16.
21. Halby L, Sénamaud-Beaufort C, Ajjan S, Ceccaldi A, Drujon T, **Rajavelu A**, Champion C, Jurkowska R, Lequin O, Nelson WG, Jeltsch A, Guy A, Guianvarc'h D, Ferroud C and Arimondo PB (2012). Rapid synthesis of new DNMT inhibitors derivatives of Procainamide. *ChemBioChem*, 13(1): 157-65.
22. Ceccaldi A, **Rajavelu A**, Champion C, Rampon C, Jurkowska R, Jankevicius G, Sénamaud-Beaufort C, Ponger L, Gagey N, Dali Ali H, Tost J, Vríz S, Ros S, Dauzonne D, Jeltsch A, Guianvarc'h D, Arimondo PB (2011). C5-DNA methyltransferase Inhibitors: From Screening to Effects on Zebrafish Embryo Development. *Chembiochem.* 14; 12 (9); 1337-45.
23. Dhayalan A, **Rajavelu A**, Rathert P, Tamas R, Jurkowska RZ, Ragozin S, Jeltsch A (2010). The Dnmt3a PWWP domain reads histone 3 lysine 36 trimethylation and guides DNA methylation. *J Biol Chem.* 285(34); 26114-20.
24. Zhang Y, Jurkowska R, Soeroes S, **Rajavelu A**, Dhayalan A, Bock I, Rathert P, Brandt O, Reinhardt R, Fischle W, Jeltsch A (2010). Chromatin methylation activity of Dnmt3a and Dnmt3a/3L is guided by interaction of the ADD domain with the histone H3 tail. *Nucleic Acids Res.* 38(13); 4246-53.

PUBLICATIONS AS JUNIOR RESEARCH FELLOW (IISc, Bangalore)

25. Nagaraj VA, **Arumugam R**, Prasad D, Rangarajan PN, Padmanaban G (2010). Protoporphyrinogen IX oxidase from Plasmodium falciparum is anaerobic and is localized to the mitochondrion. *Mol Biochem Parasitol.* 174(1):44-52.
26. Nagaraj VA, Prasad D, **Arumugam R**, Rangarajan PN, Padmanaban G (2010). Characterization of coproporphyrinogen III oxidase in Plasmodium falciparum cytosol. *Parasitol Int.* 59(2):121-7.
27. Nagaraj VA, **Arumugam R**, Chandra NR, Prasad D, Rangarajan PN, Padmanaban G (2009). Localisation of Plasmodium falciparum uroporphyrinogen III decarboxylase of the heme-biosynthetic pathway in the apicoplast and characterization of its catalytic properties. *Int J Parasitol.* 39(5):559-68.

28. Nagaraj VA, Arumugam R, Gopalakrishnan B, Jyothisna YS, Rangarajan PN, Padmanaban G (2008). Unique properties of Plasmodium falciparum porphobilinogen deaminase. **J Biol Chem.** 283(1): 437-44.