

MAGESHI KAMARAJ

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Education:

Bachelor of Technology in Biotechnology CGPA- 8.1/10 **2010-2014**

Anna University, Chennai, India.

Higher Secondary Course, Percentage obtained- 95.17% **2008-2010**

State Board, Tamil Nadu, India.

Research Experience:

CNRS- Centre national de la recherche scientifique, France **December 2018-present**
PhD student

Supervisors: Dr. Monique Frain and Dr. Nadine Peyrieras

- **Cell dynamics and genetic regulation in the zebrafish hindbrain morphogenesis:**

My project aims to build a mechano-genetic model to characterize the processes underlying morphogenesis and differentiation of the zebrafish hindbrain from the in vivo observation of cell behaviors, optomanipulation of signalling activities and assessment of biomechanical forces.

CSIR- Institute of Genomics and Integrative Biology, India **November 2014-July 2017**

Junior research fellow

Supervisor: Dr. Chetana Sachidanadan

- **The role of Epigenetic regulators in embryonic development using zebrafish as a model organism:**

We aim to study the role of epigenetic regulators in development. Knockdown of zebrafish ep300, an epigenetic regulator causes developmental defects in the embryos and mimic the human disease Rubinstein Taybi Syndrome where ep300/cbp is mutated. Ep300a histone acetyltransferase domain is sufficient to partially rescue disease phenotypes in the zebrafish disease model. Inhibition of histone deacetylases ameliorates select phenotypes in the disease model.

Spic Bioprocess Laboratory, India **July- September 2014**

Internship

Supervisor: Dr. Meenakshi Sundaram

- **Effect of transcriptional terminators on recombinant protein expression in *Pichia pastoris*:**

Studied the effect of various transcription terminators from *P.pastoris* and *S.cerevisiae* in the level of recombinant protein expression in *P.pastoris* to develop a novel strain with enhanced recombinant protein expression level for largescale production.

NIH –National Institute of Research in Tuberculosis, India **December 2013-April 2014**

Bachelors thesis project

Supervisor: Dr. S. Subash Babu

- **Optimization of Flow Cytometry for analyzing circulating immune cells in healthy control and Latent Tuberculosis individuals**

Studied the T memory cell population in healthy controls and Latent TB individuals by harvesting immune cells from human blood samples and quantiFERON pellets followed by FACS analysis.

Area of Interests:

- Developmental Biology
- Genetics

Technical Skills:

- FACS
- ELISA
- Zebrafish Handling and husbandry
- Microinjection into zebrafish embryos
- cDNA synthesis, Real time PCR
- Nucleic acid isolation
- Two photon microscopy
- Fluorescent Microscopy
- Western Blotting
- Bacterial cloning and transformation
- Riboprobe Preparation, RNA *In situ* Hybridization
- Chemical screening on zebrafish embryos
- Mov-IT software for cell lineage analysis

Trainings:

- One-week Training at the Clinical Genetics Laboratory of Christian Medical College, Vellore, India (May, 2012).
- One-week Training at the Cytogenetics laboratory of Cancer Institute, Chennai, India (June, 2013).
- One-week Training at the Electron Microscopy Laboratory, Cancer Institute, Chennai, India in (June, 2013).
- ImageInLife Biolmaging Workshop – CNRS Ile-de-France, Gif-sur-Yvette, France (22-31 January 2018).
- Qualification in animal experimentation – project designer level, CNRS training, Marseille, France, (28 June- 6 July, 2018).
- ImageInLife Science Communication & Fundraising workshop by Ralf Dahm, Seignosse, France (27-28 September, 2018).
- ImageInLife Summer School on the Modelling and Simulation of Biological Development by René Doursat, Seignosse, France (29 September – 2 October, 2018).

Conferences Attended:

- Poster presentation on “**Treatment for Parkinson’s disease using stem cells**” in National Level Technical Symposium at Vellore Institute of Technology, Vellore, India (2012).
- Poster presentation on my research titled “**The Role of a Histone- Acetyl Transferase gene in Embryonic development**” at **Indian Zebrafish Investigators’ Meeting (iZIM 2016)** held in Mumbai (2016).
- Poster presentation on “**Cell dynamics and genetic regulation in the zebrafish hindbrain morphogenesis**” at **MiFoBio (Functional Microscopy In Biology) Workshop Conference**, Seignosse, France (October, 2018).

Awards:

- **Junior Research Fellowship** awarded by Council for Scientific and Industrial Research, Govt. of India (January 2015 -March 2017).
- Recipient of the **Central Government Scholarship for Academic Excellence** for pursuing bachelor program (2010-2013).
- Awarded Scholarship for securing first position in Class XII board Examination (2010).
- Scholarship for pursuing PhD from **ImagInLife, @EU_H2020 Marie Skłodowska-Curie European Training Network** (2017-2020).

Affiliations:

- **Vice President** (2013-14) and **Director of Community Service** (2012-13), Rotaract Club, Anna University.
- **Member**, Advertisement committee of National Level Technical Symposium– Biotechcellence, Centre for Biotechnology (2013).
- **Member**, National Sports Board Organization, Anna University (2011).

Languages Known:

Tamil (Native), English (Advanced), Hindi (Intermediate), French (A1 level)

Publication:

Aswini Babu, **Mageshi Kamaraj**, Moumita Basu, Debanjan Mukherjee, Shruti Kapoor, Shashi Ranjan, Mahadeva M.Swamy, Stephanie Kaypee, Vinod Scaria, Tapas K.Kundu, Chetana Sachidanandan: [Chemical and genetic rescue of an ep300 knockdown model for Rubinstein Taybi Syndrome in zebrafish](https://doi.org/10.1016/j.bbadis.2018.01.029). BBA Molecular basis of disease. 2018 January <https://doi.org/10.1016/j.bbadis.2018.01.029>