
CURRICULUM VITAE

SWATHY BABU

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Area of Interest: Broad area of interest lies in pathology. My primary field of interest is in Cancer biology. I would like to unravel the microenvironment that leads to the same. Being conversant in various laboratory techniques in this field I am more interested in bio imaging techniques. My interest also lies in Neurodegenerative diseases.

CAREER OBJECTIVE

To be in a position that utilizes my skills and knowledge in different areas of research and development, that offers professional growth with continuous innovative learning.

EDUCATIONAL QUALIFICATION

PhD Research student at [Okinawa Institute of Science Education and Research Graduate University Japan](#), from 2016- Present.

ACADEMIC PROFILE

- 2011-2016 Graduated from [Indian Institute of Science Education and Research, Kolkata](#) with five year integrated BS MS dual degree. Qualified with grade point 10/10 for thesis.
- 2010-2011 Qualified higher secondary education, with 96 % from St.Joseph Hss Paingottoor School Ernakulam, Kerala.
- 2008-2009 Qualified high school education with grade point 10 /10 from Sree Narayana Memorial Vocational Higher Secondary School Vannappuram, Kerala.

AWARDS AND FELLOWSHIPS

- 2016 Qualified NET “National Eligibility Test” (Joint [CSIR-UGC](#)) for Research Fellowship and Eligibility for Lectureship under CSIR Fellowship Scheme, Government of India
- 2016 Qualified Joint Graduate Entrance Examination for Biology and Interdisciplinary Life Sciences ([JGEEBILS](#)), a shared entrance test for graduate programs in Biology and interdisciplinary life sciences.
- 2015 Qualified Graduate Aptitude Test in Engineering (GATE), an entrance exam conducted annually for admissions to various science and technology post-graduate programs in India.

2014,2015	Summer Research Fellow at Indian Institute of Science Education and Research IISER, Kolkata
2011	Qualified for Innovation in Science Pursuit for Inspired Research (INSPIRE) Fellowship by the Department of Science & Technology. [2011-2016]
2010	Proficiency for scoring highest marks in Higher Secondary section.
2009	Parents Teachers Association endowment for best performance in high school examination (SSLC March 2009).

PROJECTS/ RESEARCH EXPERIENCE

1. *Oxygen glucose deprivation induced nitric oxide release, in Cornu Ammonis 3 of rat hippocampus.* Under Prof. Tomoyuki Takahashi, OIST Japan. 2018
2. “*Arsenic alter cell to cell communication by directly binding to gap junction protein Connexin 43*” under Dr Jayasri Das Sarma, Professor, Department of Biological Sciences, IISER – Kolkata.2015-2016.
3. “*Conformation of microtubule mediated trafficking of MHV RSA59 in brain and spinal cord by Slice culture*” under Dr Jayasri Das Sarma, Professor, Department of Biological Sciences, IISER – Kolkata.2015
4. Expertise the technique “*Slice culturing*” under Dr Jayasri Das Sarma, Professor, Department of Biological Sciences, IISER – Kolkata. 2014.
5. “*A study of diversity and density of selected plant species in IISER – K Campus*” as a part of BS MS curriculum under the joint guidance of Dr Annagiri Sumana, Assistant Professor and Dr Aninditha Bhadra, Assistant Professor, Department of Biological Sciences, IISER – Kolkata. 2014
6. “*Normal pulse, and reflex of human*” as a part of BS MS curriculum under the joint guidance of Dr Anuradha Bhat, Assistant Professor and Dr Guha Dharmarajan, Assistant Professor, Department of Biological Sciences, IISER – Kolkata.2013
7. Experimental Demonstration project of “*Steam engine*” as a part of BS MS curriculum under Dr Dibyendu Nandi, Assistant Professor, Department of Physical Sciences, IISER – Kolkata. 2012.

POSTER

Swathy Babu, Jeff Liner, Ichiro Masai. *Cellular functions of a nuclear matrix associated protein, in DNA damage response network for cell- cycle arrest and apoptosis*, 2019 ([The 26th East Asia Joint Symposium](#) held at Seoul, south Korea).

Swathy Babu, Hiroshi Takagi, Tomoyuki Takahashi, *Oxygen glucose deprivation induced nitric oxide release, in Cornu Ammonis 3 of rat hippocampus*. 2018 (As a part of professional development course, [OIST Japan](#))

Swathy Babu, Afaq Hussain, Subhajit Das Sarma, Nadeem Ahmed Khan, Jayasri Das Sarma. “Arsenic induced alteration in trafficking of connexin 43 results in loss of functional gap junctions”. *Frontiers In Modern Biology* ([FIMB](#)) 2015.

PRESENTATIONS

1. *Cellular functions of a nuclear matrix associated protein, in DNA damage response network for cell- cycle arrest and apoptosis*, 2019 (Inter-departmental seminar, OIST Japan,)
2. *Cellular functions of a nuclear matrix associated protein, in DNA damage response network for cell- cycle arrest and apoptosis*, 2019 (The 26th East Asia Joint Symposium held at Seoul, south Korea).
3. *T cell receptor*, 2015 (As part of immunology course work).
4. *Is male rhesus macaque red color ornamentation attractive to females?* 2015(Paper presentation).
5. *Ground and surface water contamination*, 2014 (As a part of Bioremediation of contaminated soil and water course work).
6. “*Working of microelectrode voltmeter*”, 2014 (As a part of physiology coursework).
7. *A study of diversity and density of selected plant species in IISER – K Campus*, 2014.

OTHER ACTIVITIES

1. Participate in organizing [Developing Neural Circuits Course 2019](#)
2. Participate in organizing [Retina Workshop 2019](#) (Retina: Mechanism of photoreceptor degeneration and regeneration, and roles of immune system)
3. Organizer of [TEDxOIST](#): Minds for creations. 2017
4. Attend 26th Annual Short Course on Experimental Models of Human Cancer by Jackson Laboratory (2017, Maine, USA)
5. Attended Frontiers In Modern Biology (FIMB) 2015: This symposium covers diverse areas of modern biology across three main sessions; Disease biology, genomics, evolution and interdisciplinary areas in biology.
6. Attended VIJYOSHI 2015: This National Science Camps is to provide a forum for interactions between bright young students and leading researchers in various branches of science and mathematics.
7. Volunteered [VIJYOSHI 2015](#)(National Science Camp).
8. Volunteered INQUIVESTA (India’s largest science festival).
9. First Runner-up in IISER Kolkata badminton tournament (women’s doubles 2013-2014).
10. Second Runner-up in IISER Kolkata badminton tournament (mixed doubles 2014-2015).

TECHNICAL SKILLS

1. *Ex-vivo* slices culturing (Brain, spinal cord, Retina).
2. Zebrafish maintenance and single cell microinjection
3. RNA sequencing and analysis
4. ATAC-Sequencing and analysis
5. Cell culture and CRISPR Cas9 gene knock out
6. Vibratome and Microtome sectioning.
7. RNA extraction and cDNA preparation from Slice culture and cell culture.
8. Mouse and Rat Handling
9. Immunohistochemistry
10. Mice and tissue infection with virus
11. Plasmid Isolation, Restriction digestion, Transformation, Conjugation.
12. Molecular cloning and Protein expression
13. Real Time PCR, ELISA
14. UV-Viz and Infrared Spectroscopy
15. Drosophila Developmental biology
16. Confocal microscopy and Electron microscopy
17. Exposure in NMR, MALDI, Mass Spectrometry, CD (Circular dichroism)
18. Experience in electronics and optics (lab courses).

Programs and Software skills

19. Python
20. R
21. Gnu Plot
22. Prism
23. Image analysis (FIJI, IMARIS)

PERSIONAL PROFILE

Name : SWATHY BABU

DOB : 4 OF MARCH 1993

Father's Name : BABU N K

Gender : FEMALE

Nationality : INDIAN

Permanent Residential Address : NADUKKUDIPUTHENPURAYIL (H)
VANNAPPURAM (PO)
IDUKKI
KERALA
INDIA, PIN CODE: 685607

Current Residential Address : 172 WEST COURT
OIST GRADUATE UNIVERSITY

1919-1 TANCHI ONNA-SON
OKINAWA 904-0495, JAPAN

DECLARATION

I, Swathy Babu, hereby declare that all the information given above is true to the best of my knowledge.

Place: Okinawa