CURRICULUM VITAE

Dr. ANANDRAO ASHOK PATIL
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PERSONAL INFORMATION

Name	:	Dr. Anandrao Ashok Patil
Nationality	:	**Indian**
Date of Birth	:	1st September 1988
Research Profile: ORCID	:	http://orcid.org/0000-0002-1767-7304

RESEARCH AREA

: **Insect Molecular Biology**
Biology of small non-coding RNA pathways (miRNA, siRNA and piRNA) related proteins at sub-cellular level

EDUCATION

Ph.D. (Agricultural Science) : **2014-2017**
Graduate School of Bioresource and Bioenvironmental Science,
Faculty of Agriculture,
Kyushu University, Fukuoka, **Japan.**

Master of Science (Biotechnology) : **2010-2012**
Department of Plant Biotechnology,
Centre for Plant Molecular Biology and Biotechnology,
Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, **India.**

Bachelor of Science (Agri. Biotechnology) : **2006-2010**
Mahatma Gandhi Mission`s,
College of Agricultural Biotechnology Aurangabad,
Affiliation to M.A.U. Parbhani, Maharashtra, **India.**

RESEARCH CAREER

Ph.D. (Agricultural Science) : **2014-2017**
Thesis Title : Characterization of Yb body and nuage granules in ovary-derived cultured silkworm cell
Supervisor : Prof. Takahiro Kusakabe
Kyushu University, Fukuoka, **Japan.**

Researcher : **2013-2014**
Project Title : RNAi mediated knockdown of chimeric genes in *T. urticae*
Supervisor : Prof. Si Hyeock Lee
Seoul National University, Seoul, **South Korea.**

Master's (Biotechnology) : **2010-2012**
Seminar Presentation : microRNA in Insects
Thesis Title : Molecular characterization of midgut specific enzymes of *Spodoptera litura* (Fab.)
Supervisor : Prof. Subbarayalu Mohankumar
Tamil Nadu Agricultural University, Coimbatore, **India.**

Bachelor's (Biotechnology) : **2009-2010**
Thesis Title : Techniques in Molecular Biology and Biochemistry
Supervisor : Asst. Prof. Tushar Chavan
MGM`s, College of Agri. Biotechnology Aurangabad, **India.**

RESEARCH SKILLS

Expertise	:	Vector Construction, Cell based studies, Confocal microscopy
Molecular Biology, Genetics, Biochemistry	:	RNA isolation, PCR, qRT-PCR, Full Length Gene Cloning, Entry Vector Construction, Plasmid DNA isolation, Plasmid DNA sequence analysis, PCR Mediated Mutagenesis, Construction of Gateway® based DEST and Transgenic Expression Vectors, Protein Expression analysis: SDS-PAGE and Western Blotting, Subcellular Localization Analysis, RNA interference, Baculovirus expression Vector System (BVES) for protein expression in silkworm larvae etc.
Bioinformatics	:	Protein and Nucleotide Blast Analysis, Sequence Alignment to Reference Genome, Multiple Sequence Alignment, Phylogenetic tree Construction, Protein Structure Prediction, Domain Prediction, DNA Sequence Analysis, Primer designing etc.
Organism Handling	:	*B. mori*, *S. litura* and *T. urticae* –Dissection, Injection, etc
Cell Culture (BmN4)	:	Cell culture medium preparation (IPL-41), Cell line maintenance, Plasmid transfection
Software and Online tools	:	CLC Sequence Viewer 7, ApE-A Plasmid Editor, MEGA, GraphPad Prism, Image Lab, 4Peaks, JalView, Sigma Plot etc.
Statistical Analysis	:	Standard deviation, Standard error, t-Test, Range, ANOVA etc.
Con-focal Microscopy	:	1. Leica TCS SP8 and Leica LAS X 2. Nikon A1R (Nikon Co., Tokyo) and NIS-Elements C

RESEARCH EXPERINCE

1. : **Kyushu University, Fukuoka (2014-2015)**

Research Title : RNAi efficiency improvement by co-overexpression of RNAi pathway related components with CeSID-1 protein in *Bombyx mori* ovarian BmN4 cell

Objective : In First year of my Ph.D. degree I tried to improve RNAi efficiency in BmN4 cell with different approaches. In this research, I stably overexpressed RNAi pathway related proteins; Ago1, Ago2, R2D2, Loqs, Tudor and Dicer-2 in RNAi sensitive BmN4-SID1 cell with different vectors (EGFP tags-N and C termini or without any tags) and confirmed whether RNAi efficiency improved or not. I found that the co-overexpression of BmAgo2 and CeSID-1 proteins improved the RNAi efficiency in ovarian BmN4 cell.

2. : **Kyushu University, Fukuoka (2014-2015)**

Research Title : Expression and Purification of Silkworm Argonuate-2 and Dicer-2 Proteins by Baculovirus Expression System in Silkworm larvae

Objective : In this research timer I constructed N-termini and C-termini His-STREP tagged BmAgo2 and BmDicer-2 Baculovirus Expression Vector for recombinant virus production using *Bombyx* cell (PS140) and baculovirus virus were injected into silkworm larvae and tried to purify.

AWARDS

2010	:	Jawaharlal Nehru University (JNU) Scholarship for Master Studies Department of Biotechnology (DBT), New Delhi **Government of India.**
2013	:	Brain Korea 21 (BK-21) Scholarship for Research Student **Government of South Korea.**
2014	:	Japanese Government (Monbukagakusho: MEXT) Scholarship for PhD Studies **Government of Japan.**

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

2013	:	Member of Entomological Society of America
2013	:	Member of The Entomological Society of Korea
2016	:	Member of Japanese Society of Sericulture Science
2016	:	Member of The Molecular Biology Society of Japan

PUBLICATIONS

1. **Patil, A.A.,** Tatsuke, T., Mon, H., Lee, J.M., Morokuma, D., Hino, M., Kusakabe, T., 2017a. Molecular characterization of mitochondrial Zucchini and its relation to nuage-piRNA pathway components in *Bombyx mori* ovary-derived BmN4 cells. Biochem. Biophys. Res. Commun. 493, 971–978. (https://doi.org/10.1016/j.bbrc.2017.09.107).

2. **Patil, A.A.,** Tatsuke, T., Mon, H., Lee, J.M., Morokuma, D., Hino, M., Kusakabe, T., 2017b. Characterization of Armitage and Yb containing granules and their relationship to nuage in ovary-derived cultured silkworm cell. Biochem. Biophys. Res. Commun. 490, 134–140. (https://doi.org/10.1016/j.bbrc.2017.06.008).

3. Chen, J., Xu, J., Hino, M., Yamashita, M., Hirata, K., **Patil, A.A.,** Tatsuke, T., Mon, H., Banno, Y., Kusakabe, T., Lee, J.M., 2016. Co-expression of silkworm allatostatin-C receptor BNGR-A1 with its cognate G protein subunits enhances the GPCR display on the budding baculovirus. J. Asia. Pac. Entomol. 19, 753–760. (https://doi.org/10.1016/j.aspen.2016.07.007).

4. Ho, D., Hyun, J., **Patil, A.A.,** Lee, U., Hyeock, S., 2016. Screening of target genes for RNAi in *Tetranychus urticae* and RNAi toxicity enhancement by chimeric genes. Pestic. Biochem. Physiol. 130, 1–7. (https://doi.org/10.1016/j.pestbp.2015.11.005).

5. Mitsudome, T., Mon, H., Xu, J., Li, Z., Man, J., **Patil, A.A.,** Masuda, A., Iiyama, K., Morokuma, D., Kusakabe, T., 2015. Biochemical characterization of maintenance DNA methyltransferase DNMT-1 from silkworm, *Bombyx mori*. Insect Biochem. Mol. Biol. 58, 55–65. (https://doi.org/10.1016/j.ibmb.2015.01.008).

REFERENCES

1. Ph.D. Thesis Supervisor : **Dr. Takahiro Kusakabe**
Professor,
Department of Bioresource Sciences,
Graduate School of Bioresource and Bioenvironmental Science,
Faculty of Agriculture, Kyushu University,
6-10-1 Hakozaki, Higashi-ku, Fukuoka, Japan-812-8581.
Email: kusakabe@agr.kyushu-u.ac.jp

2. Master Thesis Supervisor : **Dr. Subbarayalu Mohankumar**
Professor and Head,
Department of Plant Biotechnology,
Centre for Plant Molecular Biology & Biotechnology,
Tamil Nadu Agricultural University,
Coimbatore, Tamil Nadu, India-641 003.
E-mail: smktnau@gmail.com

3. Master Thesis Advisory Committee Member : **Dr. Venkatasamy Balasubramani**
Professor,
Department of Plant Biotechnology,
Centre for Plant Molecular Biology & Biotechnology,
Tamil Nadu Agricultural University,
Coimbatore, Tamil Nadu, India-641 003.
Email: venkatbalasubramani@yahoo.com

DECLARATION : I hereby declare that the all details furnished above are true and correct to the best of my knowledge and belief.

Anandrao Ashok Patil