

Curriculum Vitae

Ammathnadu S. Amrutha, PhD

(Family name)

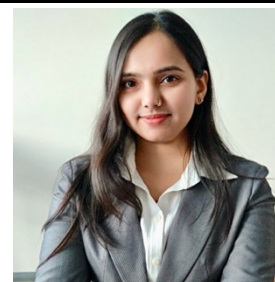
(Given name)

DOB: 6th May 1990, Indian

Address: Urban Life 27, Room No. 103, Kita 27, Nishi 6, 1-8, Sapporo,
Hokkaido, Japan 001-0027

Email: amrutha[at]icredd.hokudai.ac.jp

Phone: (+81) 011-706-9677



Positions

04/2020-04/2021

Career Break

Post-partum child care

04/2018-03/2020

Postdoctoral Researcher

RIES, Hokkaido University, Japan

Advisor: Prof. Nobuyuki Tamaoki

Research Project: DNA-based, artificial molecular machines powered by light

06/2012-08/2013

Research Associate

Apotex Pharmachem India Pvt. Ltd., Site 1A, Bommasandra Industrial Area IV
Phase, Jigani Link Road, Bengaluru – 560099, Karnataka, India

Supervisor: Dr. Suryanarayana Rao

Research Project: Synthesis and characterization of active pharmaceutical ingredients (APIs)

Education

10/2013-9/2016

Ph.D in Life Science, awarded with an ‘Excellent’ grade, in September 2016,
Hokkaido University, Japan

Thesis title: “*Structure-Property Relationship Studies of the Photoresponsive Inhibitor of Kinesin-Microtubule Motor System*”

Advisor: Prof. Nobuyuki Tamaoki

8/2010-8/2012

Master’s Degree – (M. Sc. Organic Chemistry, 1st rank, 78.8 %, Gold medal)

Department of Chemistry, Mangalore University, Karnataka, India

7/2007-6/2010

Bachelor’s Degree – (B. Sc., 1st rank, 91.28 %, Chemistry - 96.8 %) S. D. M.

College, Ujire, Karnataka, India

Research Internship

06/2011-08/2011

New Chemistry Unit, **JNCASR**, Jakkur, Bengaluru – 560 064, India (with Prof. Subi J. George)

Project Title: “Synthesis and Characterization of π -conjugated building blocks”

05/2009-07/2009 Department of Chemistry, **University of Mysore**, Manasagangotri, Mysore, Karnataka, India (with Prof. K. S. Rangappa)
Project Title: "Synthesis of simple dipeptides by liquid phase method"

Fellowships

2013-2016 MEXT Scholarship - Japanese Government
2011 JNCASR-Summer Research Fellowship
2009 IASc-INSA-NASI Summer Research Fellowship

Awards

11-12/12/2018 **Best Poster Award** in the **19th RIES-HOKUDAI International Symposium** (Jozankei View Hotel, Sapporo, Japan)
2013 **Qualified GATE (2013)** with **All India Ranking 1395** (number of candidates appeared – 11768)
2012 **First Rank in M.Sc., Syngenta Gold medal** (Organic Chemistry) Mangalore University, Karnataka
20/02/2010 **Second Prize in Intercollegiate Science Seminar competition**, organized by Material Science Forum, Department of Material Science, Mangalore University
3-4/02/2010 **First Prize in Pu-239, IMPRINTS-2010**, National Level Science Fest, St. Aloysius College, Mangalore
2010 **First Rank in B.Sc.** (Physics, Chemistry, Mathematics) S. D. M. College, Ujire, Belthangadi Taluk, D. K. District, Karnataka
Many awards in singing and other cultural competitions at Mangalore University

Proficiencies and Skills

Analytical Techniques: NMR (JEOL ECS400), UV-vis spectroscopy, Mass spectrometry (MALDI-TOF, ESI-TOF), Preparative and analytical HPLC, Flash photolysis, In vitro protein assays, Fluorescence Optical Microscopy

Reaction Techniques: Solid phase peptide synthesis, Liquid phase peptide synthesis, Multi-step organic synthesis

Softwares: Chemdraw, Origin, Kaleidagraph, Sci-finder, Adobe illustrator, NMR softwares, Mendeley Desktop (reference manager) and MS office.

Languages known: English, Hindi, (Full Professional Proficiency),
Kannada, Tulu, (Native Proficiency)
Sanskrit, Malayalam, Tamil, Telugu (Limited working Proficiency)
Japanese (Elementary Proficiency)

Publications in International Journals

Sl · No.	Authors	Title	Journal
5	Ammathnadu S. Amrutha , K. R. Sunil Kumar, Nobuyuki Tamaoki*	<i>Azobenzene-based Photoswitches Facilitating Reversible Regulation of Kinesin and Myosin Motor Systems for Nanotechnological Applications</i>	Minireview article ChemPhotoChem , 2019, 3, 337-346 JIF: 2.838 Citations: 5
4	Ammathnadu S. Amrutha , Ammathnadu S. Achalkumar, Quan Li*	<i>Light-Driven Phase Transitions in Liquid Crystals and Their Applications</i>	Chapter 7 in book titled Photoactive Functional Soft Materials , Wiley VCH, Weinheim, 2018 ISBN 978-3-527-34482-6
3	Ammathnadu S. Amrutha , K. R. Sunil Kumar, Takashi Kikukawa, Nobuyuki Tamaoki*	<i>Targeted Activation of Molecular Transportation by Visible Light</i>	ACS Nano , 2017, 11, 12292-12301 JIF: 13.903 Citations: 15
2	K. R. Sunil Kumar, Ammathnadu S. Amrutha , Nobuyuki Tamaoki*	<i>Spatiotemporal Control of Kinesin Motor Proteins by Photoswitches Enabling Selective Single Microtubule Manipulations</i>	Lab Chip , 2016, 16, 4702-4709 JIF: 6.914 Citations: 13
1	Ammathnadu S. Amrutha , K. R. Sunil Kumar, Kazuya Matsuo, Nobuyuki Tamaoki*	<i>Structure-Property Relationships of Photoresponsive Inhibitors of Kinesin Motor</i>	Org. Biomol. Chem. , 2016, 14, 7202-7210 JIF: 3.564 Citations: 7

*Corresponding author

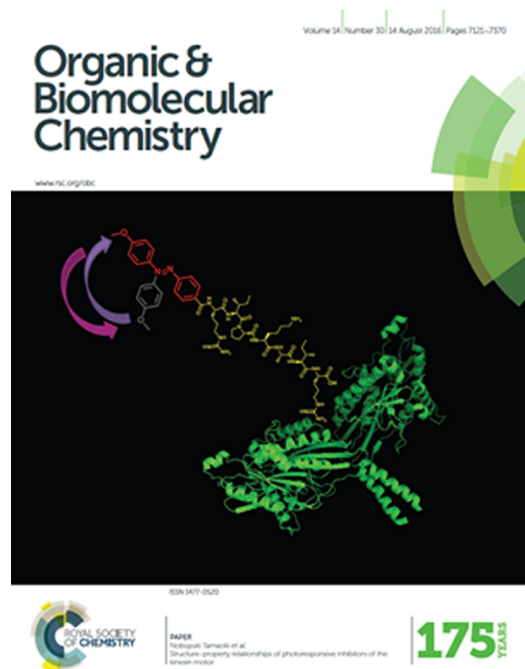
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Number of years effectively worked in science: 6 years and 5 months

(2 years – post-doctoral research + 3 years - doctoral studies + 1 year and 1month - industrial experience + 4 months - two summer research projects)

Journal Cover pages and Highlights

1. *Org. Biomol. Chem.*, 2016, 14, 7202-7210



2. *Lab Chip*, 2016, 16, 4702-4709 - This piece of work was featured in 'nanotechnology spotlights' of 'Nanowerk' (a leading nanotechnology portal).

Presentations at Conferences

Oral Presentations

4. "Targeted Activation of Motor Protein – Driven Molecular Transportation by Visible Light", **Ammathnadu S. Amrutha**, International Webinar on Frontier Research in Chemical Sciences 2020, September 10-12, 2020, Department of Studies in Chemistry, Mangalore University, Karnataka, India.
3. "A New Class of Azobenzene Tethered Peptides Allowing the Reversible Kinesin Motility Control by the Single Wavelength of Visible Region", **Ammathnadu S. Amrutha**, K. R. Sunil Kumar, Nobuyuki Tamaoki, 96th annual meeting of Chemical Society of Japan, 24 - 27 March, 2016, Doshisha University, Kyoto, Japan.
2. "Influence of Structural Modifications Made at the Photoresponsive Unit and the Peptide Sequence on the Efficiency of the Photoresponsive Inhibitor of Kinesin Motor", Ammathnadu S. Amrutha, K. R. Sunil Kumar, Nobuyuki Tamaoki, 3rd International Life-Science Symposium, 26 November, 2015, Hokkaido University, Japan.
1. "A Study on the Structure-Property Relationship of the Photoresponsive Inhibitor of Kinesin-Microtubule Motor System", **Ammathnadu S. Amrutha**, Takashi Kamei, Nobuyuki Tamaoki, 2nd International Life Science Symposium, 23 October, 2014, Hokkaido University, Japan.

Poster Presentations

7. “Photoresponsive DNA Nanotubes for Nanotechnological Applications”, **Ammathnadu S. Amrutha** and Nobuyuki Tamaoki, RIES-NCTU Symposium, 3-4 December, 2019, Hokkaido University, Japan.

6. “DNA-based, Photoresponsive Artificial Molecular Machines for Applications in Nanotechnology”, **Ammathnadu S. Amrutha** and Nobuyuki Tamaoki, 20th RIES-HOKUDAI International Symposium, 2-3 December, 2019, Hokkaido University, Japan.

5. “Spatiotemporal Activation of Molecular Shuttle by Visible Light”, **Ammathnadu S. Amrutha**, K. R. Sunil Kumar, Takashi Kikukawa, and Nobuyuki Tamaoki, 6th International Conference on Multifunctional, Hybrid and Nanomaterials, 11-15 March, 2019, Sitges, Spain.

4. “Spatiotemporal Regulation of Motor Protein–Driven Molecular Transportation by Visible Light”, **Ammathnadu S. Amrutha**, K. R. Sunil Kumar, Takashi Kikukawa, and Nobuyuki Tamaoki, Young Researchers in Cutting Edge Life Science Symposium, 25 January, 2019, Furate Hall, Hokkaido University, Sapporo, Japan.

3. “Targeted Activation of Motor Protein – Driven Molecular Transportation by Visible Light”, **Ammathnadu S. Amrutha**, K. R. Sunil Kumar, Takashi Kikukawa, and Nobuyuki Tamaoki, 19th RIES-HOKUDAI International Symposium, 11-12 December, 2018, Jozankei View Hotel, Sapporo, Japan.

2. “Selective and Localized Regulation of Motor Protein-Driven Molecular Transportation by Visible Light”, **Ammathnadu S. Amrutha** and Nobuyuki Tamaoki, G3 meeting, 26-27 November, 2018, Tokyo Institute of Technology, Suzukakedai Campus, Tokyo, Japan.

1. “Effects of the Peptide Sequences and the Substituents at the Photoresponsive Unit on the Properties of the Azo-peptide Working as the Kinesin Motor Inhibitor”. **Ammathnadu S. Amrutha**, K. R. Sunil Kumar, Nobuyuki Tamaoki, The 16th RIES-Hokudai International Symposium, 10 -11 November, 2015, Gortaux Kingdom Hotel, Sapporo, Japan.