DEPARTMENT OF M. SC. ORGANIC CHEMISTRY

DEPARTMENTAL REPORT 2017-18

I. Departmental Activities:

1. Orientation programme

a. Concept - Orientation programme for I year students on 25 August, 2018 at Loyola hall

b. Purpose - To acquaint the students with rules and regulations of the college

c. Report – Rector blessed the students, Principal and Vice principal extended their welcome and addressed the students

d. Reviews- Students showed positive response which is evident in their behaviour and discipline

e. Photos.

2. Industrial visit

a. Concept - One day trip for MSc II year students to **National Centre for Compositional Characterisation of Materials (NCCM)**- Hyderabad on 27 March 2018

b. Purpose - To have an exposure on latest analytical methods for characterization of materials

c. Report- Students visited Ultra trace analysis (destructive technique), Bulk analysis (destructive technique) and Surface analysis (non-destructive technique). The students learnt principles and handling of UV-Visible Spectrophotometer, Inductively coupled plasma mass spectrometer (ICP-QMS), High performance liquid chromatography (HPLC), Gas chromatograph (GC), etc.

d. Reviews- It was an industrial trip which enlightened the students immensely

e. Photos.



3. Guest lectures

GL-1

a. Concept - Guest lecture conducted for I & II year students on 23 October 2017 at PG Seminar Hall on "*Symmetry- A Nature's Weapon for Existence*" by Dr. Sashikanth, Sreevani Women's PG College, Malakapet, Hyderabad
b. Purpose - To have an exposure for the students on symmetry in nature
c. Report – The three hour presentation gave a good insight on symmetry and its importance in nature
d. Reviews- Students showed positive response
e. Photos.



GL-2

a. Concept - Guest lecture conducted for I & II year students on 29 March, 2018 at PG Seminar Hall on "*Quantum Chemistry and its Applications Towards Technology*" by Prof. P Veera Somaiah, UCS OU, Hyderabad
b. Purpose - To know about Quantum Chemistry and its Applications
c. Report – The three hour presentation included important concepts like energy of hydrogen atom and illustrative examples of quantum chemistry
d. Reviews- Students showed positive response
e. Photos.





4. Parent Teacher Meeting

PTM-1

a. Concept - Parent Teacher Meeting for MSc II year students was conducted on on 16 September 2017 and for M.Sc I Year on 03 March., 2018.
b. Purpose - To interact with parents and give feedback of the students and also get suggestions from them for the improvement of the department
c. Report- Parents and students met all the staff members on one to one basis.

d. Reviews- It is useful for the improvement of the students

PTM-2

e. Concept - Parent Teacher Meeting was conducted for M.Sc I Year on 03 March., 2018.
f. Purpose - To interact with parents and give feedback of the students and also get suggestions from them for the improvement of the department
g. Report- Parents and students met all the staff members on one to one basis.
h. Reviews- It is useful for the improvement of the students

5. In-house Projects:

a. Concept - Three months (22 December 2017 to 21 March 2018) in-house projects for II year students as part of the curriculum
b. Purpose - To get hand on experience and research exposure in chemistry
c. Report- Five students of M.Sc II Year carried out their project work under guidance of Dr. P Thiruapthi
d. Two Students of M.Sc. II Year carried out their project work under guidance of Dr. S. P. Mydhili. All the seven students submitted their project report for the completion of course work.
e. Reviews- Successfully completed their 3months project with proper utilization of departmental infrastructure.

5. Planet

a. Concept- MSc I year students attended Pulse Polio immunization Programme as a part of outreach programme in Secunderabad on 27 March 2018
b. Purpose - To inculcate social responsibilities among students
c. Report- Students explained the neighbourhood about the importance of this programme.
d. Photos.

6. <u>Staff Achievements</u>

a. **Resource Persons/Guest Faculty**

Dr. P Thiruapthi served as guest faculty for Osmania University P.G. College, Jogipet, Medak, Telangana and Osmania University P.G. College, Narspur, Medak, Telangana in **2017-2018.**

b. **Reviewer**

Dr. P Thiruapthi serving as an expert for reviewing research article for journal like ***Inorganica Chimica Acta***, and ***Luminescence,*** Elsevier publication, Netherlands**.**

7. <u>Student Achievements</u>

i. Mr. N. Ajay Kumar, Mr. M. Madhusudhan and Mr. Ch. Sai shiva Reddy of MSc I year participated in one day national seminar on "Nanotechnology: Emerging issues and applications" on 26 February, 2018 organised at St. Pious X Degree and PG college for women, Hyderabad



TAS

National Seminar

NANOTECHNOLOGY

Emerging Issues and Applications

Certificate

This is to certify that Mr/Mrs/Ms N. Ajay Kumar

Loyola degree and pg college has participated in a National Seminar on **"NANOTECHNOLOGY - Emerging Issues and Applications"** organized by Telangana Academy of Sciences in Association with Department of Microbiology, St. Pious X Degree & PG College for Women, Nacharam, Hyderabad on 26th February, 2018.

Cp. Vardhani
Convener
Telangana Academy of Sciences, Hyderabad

Co-Convener
Department of Microbiology
St. Pious X Degree & PG College for Women

Principal
St. Pious X Degree & PG College for Women
Nacharam, Hyderabad



TAS

National Seminar

NANOTECHNOLOGY

Emerging Issues and Applications

Certificate

This is to certify that Mr/Mrs/Ms M. Madhusudhan

Loyola degree and pg college has participated in a National Seminar on **"NANOTECHNOLOGY - Emerging Issues and Applications"** organized by Telangana Academy of Sciences in Association with Department of Microbiology, St. Pious X Degree & PG College for Women, Nacharam, Hyderabad on 26th February, 2018.

Cp. Vardhani
Convener
Telangana Academy of Sciences, Hyderabad

Co-Convener
Department of Microbiology
St. Pious X Degree & PG College for Women

Principal
St. Pious X Degree & PG College for Women
Nacharam, Hyderabad



National Seminar

NANOTECHNOLOGY

Emerging Issues and Applications

Certificate

This is to certify that Mr/Mrs/Ms Sai Shiva Reddy

loyola degree and pg college has participated in a National Seminar on

"NANOTECHNOLOGY - Emerging Issues and Applications" organized by Telangana Academy of Sciences in Association with Department of Microbiology, St. Pious X Degree & PG College for Women, Nacharam, Hyderabad on 26th February, 2018.

Convener
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Co-Convener
Department of Microbiology
St. Pious X Degree & PG College for Women

Principal
St. Pious X Degree & PG College for Women
Nacharam, Hyderabad

8. Career Placements

a. The following students were placed in different companies through campus placements:

S.No.	Student Name	Company name	Salary (Amount in Rs)
1	G . Sravanthi	Clearsynth Labs	186000
2	K. Lydia Grace	Enal Drugs	114000
3	N.Shekhar	Aurorels Labs	156000
4	L.Raju	Aurorels Labs	156000
5	P.Rajashekar Reddy	Symphony Pharma	144000
6	P.Yellam	Symphony Pharma	144000
7	K.Ganesh	Enal Drugs	114000
8	R.Sravani	Enal Drugs	114000
9	R.Shruthi	Alba Nova Life Sciences	144000
10	B.Tarun Kumar	Nova Agritech Ltd	160000
11	E.Sriram	Enal Drugs	114000

12	N.Jayasree	Enal Drugs	114000
13	N.Rekha	Alba Nova Life Sciences	144000
14	S .Bhagya Latha	Enal Drugs	114000
15	B.Harinath	Aurorels Labs	156000

9. <u>Research;</u>

a. Dr. P Thiruapthi has been granted the first slab for of the money for Minor Research Project from UGC-New Delhi for 2017-2018.

10. <u>Seminars attended:</u>

a. Dr. P Thirupathi attended a Two day international seminar on INTEGRATED INTERNATIONAL IMMERSION CONFERENCE, "Igniting Novel Ideas to Generate Opportunities" (INIGO) at Loyola Academy Degree & PG College, Alwal Hyderabad on 23-24 Feb, 2018.

b. <u>Publications</u>

i. Synthesis, Characterization and Antimicrobial Activity of Series of 2-(5-phenyl-1,3,4-oxadiazol-2-yl)-*N*-((1-aryl-1H-1,2,3-triazol-4-yl)methyl) -anilines Using Click Chemistry, *Noole Venkatagiri, Thotla Krishna*, ***Ponnaboina Thirupathi***, *Kedika Bhavani and Chepyala Krishna Reddy, Russian Journal Of General Chemistry*, **2018**, *88*, 1488-1494.

ii. Amberlyst-15 as a Green and Efficient Reusable Catalyst for Friedel-Crafts Alkylation of Activated Arenes with *N*-Sulfonyl Aldimines and Synthesis of Triarylmethanes, **Ponnaboina Thirupathi**, Noole Venkatagiri, and Chepyala Krishna Reddy, *Tetrahedron*, **2018** (Communicated).

iii. Full proceedings in "International Seminar on Green Chemistry for Sustainable Development: *Issues, Challenges and Prospects" on* Interaction of Trans-Resveratrol with liposomes, SP Mydhili, Y. V. Mahalakshmi, Rekala Shalini M. Jyothi, published in **2018**.

ISSN 1070-3632, Russian Journal of General Chemistry, 2018, Vol. 88, No. 7, pp. 1488–1494. © Pleiades Publishing, Ltd., 2018.

Synthesis, Characterization, and Antimicrobial Activity of a Series of 2-(5-Phenyl-1,3,4-oxadiazol-2-yl)-*N*-[(1-aryl-1*H*-1,2,3-triazol-4-yl)methyl]anilines Using Click Chemistry[1]

N. Venkatagiri[a], T. Krishna[a], P. Thirupathi[b], K. Bhavani[a], and C. K. Reddy[a]*

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Received July 27, 2017

Abstract—A series of new triazolyl derived 1,3,4-oxadiazoles **7a–7l** is synthesized with high yields by copper-catalyzed alkyne–azide cycloaddition reaction between a variety of substituted aryl/alkyl azides and 2-(5-phenyl-1,3,4-oxadiazol-2-yl)aniline. Structures of intermediates and the final compounds are confirmed by FT-IR, ^{1}H and ^{13}C NMR, and Mass spectra. The synthesized compounds demonstrate moderate antibacterial activity and potent antifungal activity against the tested strains.

Synthesis, Characterization and Antimicrobial Activity of series of 2-(5-phenyl-1,3,4-oxadiazol-2-yl)-*N*-((1-aryl-1*H*-1,2,3-triazol-4-yl)methyl)anilinesUsing click chemistry

Noole Venkatagiri, Thotla Krishna, Ponnaboina Thirupathi, Kedika Bhavani* and Chepyala Krishna Reddy*

Department of Chemistry, Osmania University, Hyderabad-500007, Telangana, India.

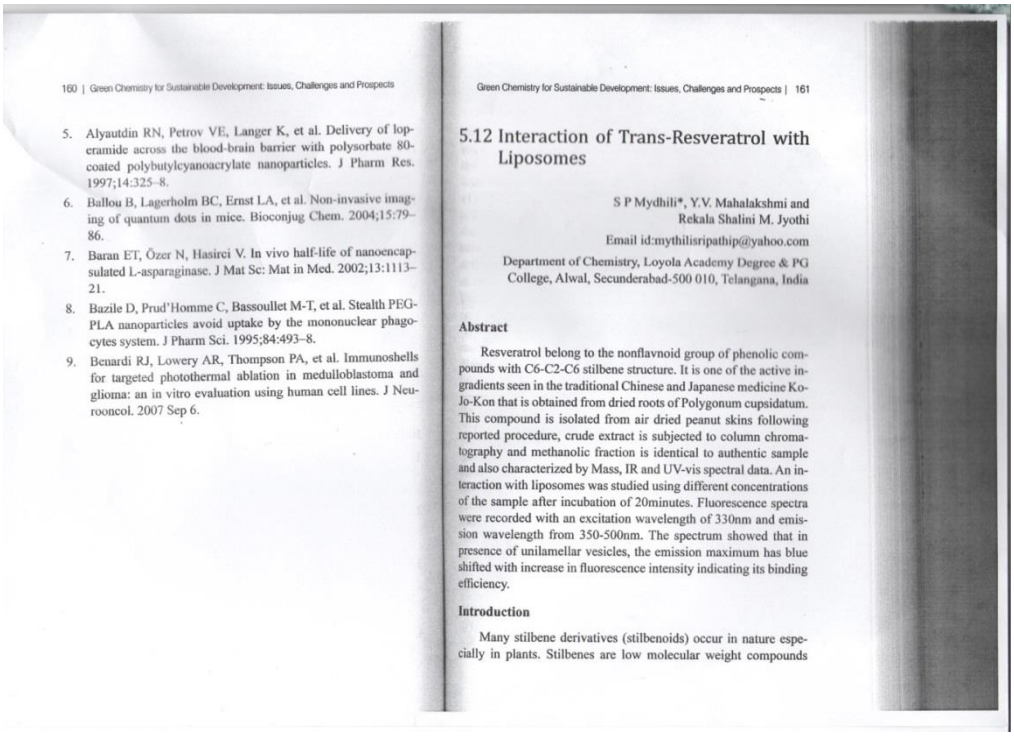
Email: krreddych@gmail.com, kedikabhavani@gmail.com

Abstract

A series of new triazolyl derived 1,3,4-oxadiazoles **7a-7l** was synthesized in good yields, using cupper-catalyzed alkyne–azide cycloaddition reaction between a variety of substituted aryl/alkyl azides and compound 2-(5-phenyl-1,3,4-oxadiazol-2-yl)aniline. The structure of the intermediates and the final compounds were synthesized and confirmed using spectral techniques, FT-IR, ^{1}H NMR, ^{13}C NMR and Mass spectrometry. The synthesized compounds along with the **4** were tested for *in vitro* antimicrobial activity. The compounds were found to possess moderate antibacterial activity and potent antifungal activity against the tested strains.

Keywords: Triazolyloxadiazoles, 1,2,3-Triazole, 1,3,4-Oxadiazole, Click reaction, Microorganisms, Antibacterial and Antifungal activity.

Accepted in Russian Journal of General Chemistry in 2018, 88, **Page number not assigned**



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5.12 Interaction of Trans-Resveratrol with Liposomes

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Abstract

Resveratrol belong to the nonflavnoid group of phenolic compounds with C6-C2-C6 stilbene structure. It is one of the active ingradients seen in the traditional Chinese and Japanese medicine Ko-Jo-Kon that is obtained from dried roots of Polygonum cupsidatum. This compound is isolated from air dried peanut skins following reported procedure, crude extract is subjected to column chromatography and methanolic fraction is identical to authentic sample and also characterized by Mass, IR and UV-vis spectral data. An interaction with liposomes was studied using different concentrations of the sample after incubation of 20minutes. Fluorescence spectra were recorded with an excitation wavelength of 330nm and emission wavelength from 350-500nm. The spectrum showed that in presence of unilamellar vesicles, the emission maximum has blue shifted with increase in fluorescence intensity indicating its binding efficiency.

Introduction

Many stilbene derivatives (stilbenoids) occur in nature especially in plants. Stilbenes are low molecular weight compounds

11. <u>Book Publications</u>

i. Dr P. Tirupathi and Dr. Sonika Sharma edited Proceedings of "International Seminar on Green Chemistry for Sustainable Development: *Issues, Challenges and Prospects"* in **2018**

Chief-Editors:
Dr. Sonika Sharma, *M.Sc., Ph.D*
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Proceedings of "International Seminar on Green Chemistry for Sustainable Development: *Issues, Challenges and Prospects*"

Chief-Editors:
Dr. Sonika Sharma, *M.Sc., Ph.D*
Dr. P. Thirupathi, *M.Sc., Ph.D*

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2018

The present book is an outcome of the International Seminar on "Green Chemistry for Sustainable Development: *Issues, Challenges and Prospects*" organised jointly by Department of Chemistry, Chemical Technology, Biotechnology and Agricultural Science & Rural Development of Loyola Academy Degree & PG College, Secunderabad, Telangana, India. Green Chemistry as multidisciplinary field has immense potential in addressing current issues related to energy, environment, health and agriculture. This book includes papers related to various subthemes of Green Chemistry such as Green Nanotechnology, New Trends in Green Chemistry, Green Agrochemicals, Industrial Waste Management/Treatment *etc.* It also caters the growing interest of research scholars, students and teaching faculty to the role of Green chemistry for sustainable development and discusses the latest trends in the interdisciplinary areas of the Green Chemistry.



Dr. Sonika Sharma, is currently working as Head, Department of Chemistry, Loyola Academy Degree and PG College, Secunderabad, Telangana, India. She obtained her undergraduate and postgraduate degrees in Chemistry (Honours) from Panjab University, Chandigarh and Ph.D. from University of Hyderabad, Hyderabad. She is a recipient of World Laboratory Wilhelm Simon Fellowship to persue her postdoctoral work in Department of Materials, Swiss Federal Institute of Technology, Zurich, Switzerland. Her research interests include synthesis and study of interactions of funtionalised amphiphilic molecules in bilayers and thin films. She published 11 research papers in reputed international journals and authored a book chapter in "Molecular Materials" published by premier global publisher from CRC Press. She has given invited lectures and presented many papers in various national and international seminars. She has over 9 years of teaching experience at PG level.



Dr P Thirupathi is presently working as Lecturer in Chemistry at Loyola Academy Degree & PG College, Secunderabad, TS, India. He obtained his Master degree (Organic Chemistry) from Osmania University, Hyderabad. He received his Ph.D degree from Osmania University (Research work carried out at CSIR-Indian Institute of Chemical Technology, Hyderabad under the guidance of eminent natural product chemist Dr Biswanath Das). He worked as a Postdoctoral Research Associate and later as Assistant Professor at Department of Chemistry, Inha University, Incheon, Republic of Korea. His research interests include isolation and synthesis of naturally occurring bioactive molecules, development of new synthetic methodologies for C-C bond formation, design and development of new fluorescent sensors for the detection of various analytes. He has published 45 research articles in national and international journals. Apart from these, he is reviewer for reputed journals like Tetrahedron, Spectrochemica Acta (best reviewer award), Bioorganic Medical Chemistry Letters, Organic& Bimolecular etc. He has given several lectures in various national and international conferences. He has over 8 years of research and teaching experience at UG and PG level. He is currently pursuing a UGC funded minor research project.

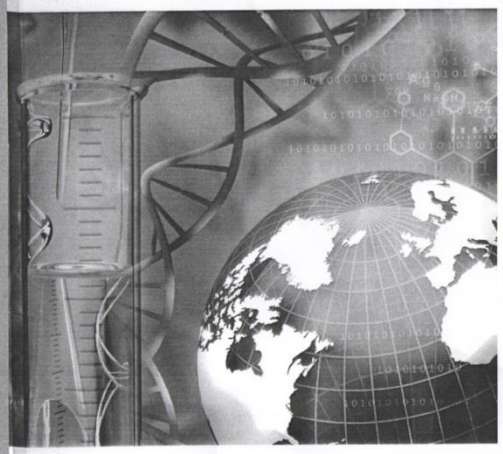
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