

Dr. P. Pradeepkumar, Ph.D.

Biomaterials in Medicinal Chemistry Laboratory
Department of Natural Products Chemistry
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**CAREER OBJECTIVES**

To undertake a challenging research position in the field of chemistry includes advanced polymeric micelles assisted green solvents for cancer chemotherapy applications. To be a part of progressive educational institution that gives scope to enhance my knowledge, skills and reach the apex in the scientific field with sheer dedication and hard work.

EDUCATIONAL PROFILE

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| Madurai Kamaraj University <i>(University with Potential for Excellence)</i> Doctor of philosophy of Chemistry Research supervisor: Dr. M. Rajan Thesis title: SYNTHESIS OF CROSS LINKED MULTI-POLYMERIC NANOCOMPOSITES FOR SITE-SPECIFIC ANTI-CANCER DRUG DELIVERY | 2014-2019 |
| Vivekananda College <i>(College with Potential for Excellence)</i> Master of Science of Chemistry Project supervisor: Sri. B. Servaramuthu Thesis title: ORGANOCATALYST MEDIATED APPEL REACTION | 2012-2014 |
| Vivekananda College <i>(College with Potential for Excellence)</i> Bachelor science of Chemistry | 2009-2012 |

TECHNICAL SKILLS

Laboratory:

High-performance liquid chromatography (HPLC), Spectrofluorometer, UV-Vis spectrometer, Mass spectrometer, Nuclear magnetic resonance spectroscopy (NMR), TGA, XRD, DSC, SEM, TEM, Stability Samples, Column Chromatography, Analytical method, Lab Equipment, Research Projects.

Computational:

Microsoft office, Power point, Origin, Chemdraw, Photoshop, Image J and Painting.

RESEARCH INTEREST

- The self- assembly of the synthetic polymeric carriers for cancer drug delivery applications.
- Bioimaging of the cancer cell with Fluorescent Conjugated Polymer-Peptide.
- The synthesis of polymers assisted by Green solvents (Deep eutectic solvents and Natural deep eutectic solvents).

PUBLICATIONS

- **Periyakaruppan Pradeepkumar**, Dharman Govindaraj, Murugaraj Jeyaraj, Murugan A. Munusamy, Mariappan Rajan. Assembling of multifunctional latex-based hybrid nanocarriers from *Calotropis gigantea* for sustained (doxorubicin) DOX releases. *Biomedicine & Pharmacotherapy* 87 (2017) 461–470.
- **Periyakaruppan Pradeepkumar**, Abdallah Mohamed Elgorban, Ali Hassan Bahkali, Mariappan Rajan. Natural Solvent-Assisted Synthesis of Amphiphilic Co-Polymeric Nanomicelle for Prolonged Release of Camptothecin Delivery. *New J. Chem.* 42 (2018) 10366.
- **Periyakaruppan Pradeepkumar**, Naresh Kumar Rajendran, Abdullah A. Alarfaj, Murugan A. Munusamy and Mariappan Rajan. Deep Eutectic Solvent-Mediated FA-g- β -Alanine-co-PCL Drug Carrier for Sustainable and Site-Specific Drug Delivery. *ACS Appl. Bio Mater.* 1 (2018) 2094-2109.
- **Periyakaruppan Pradeepkumar**, S. Suresh Kumar, Mariappan Rajan. Synthesis of bio-degradable poly (2-hydroxyethyl methacrylate) using natural deep eutectic solvents for sustainable cancer drug delivery. *SN Applied Science.* 1 (2019) 568.
- **Periyakaruppan Pradeepkumar**, Ramalingam Sangeetha, Sathaiyah Gunaseelan, Perumal Varalakshmi, Anil A Chuturgoon, Mariappan Rajan. Folic Acid Conjugated Polyglutamicacid Drug Vehicle Synthesis Through Deep Eutectic Solvent for Targeted Release of Paclitaxel. *Chemistryselect* 4 (2019) 10225-10235.
- Mariappan Rajan, Poorani Krishnan, **Periyakaruppan Pradeepkumar**, Mayandi Jeyanthinath, Murugaraj Jeyaraj, Mok Pooi Ling, Palanisamy Arulselvan, Akon Higuchi, Murugan A. Munusamy, Ramitha Arumugam, Giovanni Benelli, Kadarkarai Murugan, S. Suresh Kumar. Magneto-chemotherapy for cervical cancer treatment with camptothecin loaded Fe₃O₄ functionalized β -cyclodextrin nanovehicles. *RSC Adv.* 7 (2017) 46271.
- Dharman Govindaraj, **Periyakaruppan Pradeepkumar**, Mariappan Rajan. Synthesis of morphology tuning multi mineral substituted apatite nanocrystals by novel natural deep eutectic solvents. *Materials Discovery* 9 (2017) 11-15.

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- Xianfu Sun, **Periyakaruppan Pradeepkumar***, Naresh Kumar, Rajendran, Harshavardhan Shakila, Nicolette Nadene Houreld, Dunia A. Al Farraj, Yousif M. Elnahas, Nandhakumar Elumalai, Mariappan Rajan. Natural Deep Eutectic Solvent Supported Targeted Solid Liquid Polymer carrier for Breast Cancer therapy *Corresponding Author. RSC Adv.* (2020)
 - **Periyakaruppan Pradeepkumar**, Mariappan Rajan. Targeted Delivery of Doxorubicin in HeLa Cells in Using Deep Eutectic Solvents Guided Self-Assembled Polymeric Nanocarrier. (*ChemistrySelect-Under review*).

BOOK CHAPTERS

- Mariappan Rajan, Rajendran Amarnath Praphakar, **Periyakaruppan Pradeepkumar**. Polymer Composite Strategies in Cancer Therapy, Augment Stem Cell Osteogenesis, Diagnostics in the Central Nervous System, and Drug Delivery. *Polymer Nanocomposites in Biomedical Engineering* pp 235-270.
- **Periyakaruppan Pradeepkumar** and Mariappan Rajan. Industrial Applications of Green Solvents. *Materials Research Forum LLC (MRF) (To be communicated)*.

CONFERENCES/SEMINARS/SYMPOSIUM/WORKSHOPS

- **Periyakaruppan Pradeepkumar** and Mariappan Rajan. “Extraction of Safe Natural Polymer From Wrightia Tinctoria Latex for Purpose Of Medicinal Application”, National Conference on Recent Advances in Chemical Science (RACS-2015), Gandhigram Rural Institute-Deemed University, Gandhigram – 624 302, Dindigul District, Tamil Nadu, India.
- **Periyakaruppan Pradeepkumar**, and Mariappan Rajan. “Synthesis of Cisplatin Releasing Poly (Citrate-Co- ϵ -Caprolactone) Drug Carrier by Using Deep Eutectic Solvents” Two days national conference on biomaterials in medicinal chemistry (12-13th April 2017) organized by School of chemistry, Madurai Kamaraj university, Madurai-21. ISBN: 938656801-2.
- **Periyakaruppan Pradeepkumar**, and Mariappan Rajan. “Synthesis Degradable Poly (2-Hydroxyethyl Methacrylate) Using Natural Deep Eutectic Solvents for Sustainable Drug Delivery” Advanced Functional Materials And Devices (8-12/01/2017), International Workshop, Manonmanium Sundaranar University, Tirunelveli, Tamil Nadu, India. ISBN: 978-93-81402-38-2.
- **Periyakaruppan Pradeepkumar**, and Mariappan Rajan. “Synthesis of CPT Releasing Poly (Citrate-Co- ϵ -Caprolactone) Drug Carrier by Using Deep Eutectic Solvents” at the three days international conference on Frontire Areas in Chemical Technologies [FACTS-2017] (July 06-08/2017) Organised by department of

industrial Chemistry, Alagappa University, Karaikudi-630 003, Tamil Nadu, India.
ISBN: 978-81-928690-7-0.

- **Periyakaruppan Pradeepkumar**, and Mariappan Rajan. “A Suitable Approach to Deep Eutectic Solvents of Self-Assembled Receptor Amino Acid Grafted PCL Micelle for Cancer Targeted Drug Delivery” at the one day international conference on Modern trends in Chemistry (MTC-25) Organized by department of Chemistry, Vivekananda College, Madurai-625 234, Tamil Nadu, India. ISBN: 819339986-2.
- **Periyakaruppan Pradeepkumar** has participated in national workshop on “Advanced Characterization Techniques (ACT-2015)” Organized by department of Chemistry, Periyar University, Salem during 29&30 January 2015.
- **Periyakaruppan Pradeepkumar** has participated in One Day National Seminar on “Current Trends in Chemistry [CTC-2017]” held on March 03rd, 2017 at PG & Research Department of Chemistry, Sri Paramakalyani College, Alwarkurichi, Tamil Nadu.
- **Periyakaruppan Pradeepkumar** has participated in One Day National Symposium on Recent Trends in Chemistry-IX (RTC-2018) held at the Department of Chemistry, The American College, Madurai-625002, Tamil Nadu on 18th Jan 2018.
- **Periyakaruppan Pradeepkumar** has participated in the two days lecture workshops on “Recent Development in Chemistry” Organized by School of Chemistry, Madurai Kamaraj University, Madurai-625021 during 27th & 28th Jan 2016 sponsored by Science Academies of Indian (INSc., INSA & NASI).
- **Periyakaruppan Pradeepkumar** has participated in the international Symposium on “The Engineering of Drug Delivery Systems Using Ultrasound-Responsive Bio Materials” Organized by Research Advisory committee, Fatima College, Madurai on 19.09.2017.
- **Periyakaruppan Pradeepkumar** has participated in the one day Workshop on “Curriculum Development on Nanoscience and Nanotechnology (CDNSNT-16)” conducted by Nanosciences and technology, Curriculam Development Cell (CDC), Madurai Kamaraj University, Madurai-625021 on 7th Oct 2016.
- **Periyakaruppan Pradeepkumar** has participated in the National Seminar on “Recent Trends in Chemistry” Sponsored by DST & MKU, Organized by Department of Natural Products chemistry, School of Chemistry, Madurai Kamaraj University, Madurai-625021, Tamil Nadu on 11th Sept 2015.

PERSONAL PARTICULARS

Date of Birth 16th May 1992
Sex Male
Marital status Unmarried
Nationality India
Languages Known English, Tamil

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41/- South Street, Bomminaickan Patti (P.O)
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REFERENCES

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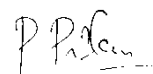
Dr. V. S. Vasantha

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DECLARATION

I hereby declare that the above-mentioned particulars are true to the best of my knowledge and I bear the responsibility for the correctness of the above mentioned particulars.

Yours Sincerely,



(P. PRADEEPKUMAR)

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Folio No. 20307

Book No. 204



மதுரை காமராசர் பல்கலைக்கழகம் MADURAI KAMARAJ UNIVERSITY

(University with Potential for Excellence)

Palkalai Nagar, Madurai - 625 021

PROVISIONAL CERTIFICATE Ph.D.

This is to certify that P. PRADEEPKUMAR
has qualified for the Degree of DOCTOR OF PHILOSOPHY in
CHEMISTRY he/she having been declared
eligible on 13.12.2019 (Date of Viva-Voce) to receive the
Ph.D. Degree at a Convocation of this University.



[Handwritten Signature]
REGISTRAR

Prepared by..... V. P. S. S.
Checked by..... K. P. S. S.
Superintendent..... P. M. M. S. S.
~~Asst~~ / Deputy Registrar..... S. S. S. S.

NOTE :

1. Any alteration or overwriting makes this Provisional Certificate is invalid.
2. Any clarification or query on this Provisional Certificate should be addressed to the Controller of Examinations, Madurai Kamaraj University, Madurai - 625 021.