Dr DEVI BALA, B.

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RESEARCH EXPERIENCE

IIT-Madras, Chennai — *Post-Doctoral Fellow (SERB-NPDF)*

2016-2019
Prof.G. Sekar Research group
(Metal Catalyzed Carbene insertion, Carbonylation reactions)
Project Cost: 19,20000.00/-

IIT-Madras, Chennai — *Post-Doctoral Fellow (WPDF)*

2015-2016
Prof.G. Sekar Research group
(Metal Catalyzed Carbene insertion, Carbonylation reactions)

ACEDAMIC QUALIFICATIONS

Madurai Kamaraj University, Madurai — *Ph.D* 2010-2014
Prof. S. Perumal Research group (Organic Chemistry)
("*Synthesis of Novel Heterocycles of Biological Importance*")

Madurai Kamaraj University, Madurai — *M.Phil* 2008-2009

Madurai Kamaraj University, Madurai — *M.Sc* 2006-2008

TBML College, Porayar — *B.Sc* 2003-2006
(*Bharathidasan University*)

PROJECTS

M.Phil Project 2008-2009 Prof. S. Perumal, Madurai Kamaraj University
(A highly atom economic, chemo-, regio- and stereoselective synthesis of spiro-pyrrolothiazoles)

M.Sc Project 2006-2008 Prof. R. Gandhidasan, Madurai Kamaraj University
(Isopropyloxymethylchloride as protecting agent for phenolic hydroxyl groups Synthesis of partial methyl ether)

FELLOWSHIPS

- GATE **2009** 84.1 percentile
- CSIR-UGC NET Dec 2009
- Institute Women Postdoctoral Fellowship (IIT Madras)
- National Postdoctoral Fellowship (SERB-NPDF (IIT Madras))

SKILLS

- Good experience in structural assignments using 1D and 2D NMR techniques
- Trained M.Sc, M.Phil and Ph.D students in laboratory
- Hands on experience in FT-NMR , IR, UV,GC-MS, HPLC
- Good Command in Manuscript preparation and Publishing, Proof reading
- Knowledge in Chemistry related tools and software (Sci-Finder, Mestrenova, Topspin, Endnote)

RESEARCH INTERESTS

- Development of New Synthetic Methodologies
- Asymmetric Synthesis
- Green Chemistry Oriented Synthesis

LIST OF PUBLICATIONS

1. *Luxury of N-Tosylhydrazones in tranisition metal-free transformations.*
Arunprasath, D.; **Devi Bala, B.;** Sekar, G. *Adv. Synth. Catalysis (Review Article)* ***2019****, 361, 1172-1207.*

2. *Dictating the reactivity of η^3-oxoallyl Pd-intermediate towards 5-exo-trig cyclization: Concise access to Indano-spirooxindoles.*
Arunprasath, D.; **Devi Bala, B.;** Sekar, G. *J. Org. Chem.* ***2018****, 83,* 11298–11308.

3. *Stereoselective construction of α-tetralone-fused spirooxindoles via Pd-catalyzed domino carbene migratory insertion/conjugate addition sequence*
Arunprasath, D.; **Devi Bala, B.;** Sekar, G. *Org. Letters* ***2017****, 19,* 5280-5283. *(Most Read Article 2017, Synfacts 2017)*

4. *Sulfoximinocarbonylation of aryl halides using heterogeneous Pd/C catalyst*
Devi Bala, B.; Sharma, N.; Sekar, G. *RSC Advances* **2016**, *6,* 97152-97159.

5. *Sequential synthesis of amino-1,4-naphthoquinone-appended triazoles and triazole-chromene hybrids and their antimycobacterial evaluation*
Devi Bala, B.; Muthusaravanan, S.; Choon,T.S.; Ali, M.A.; Perumal**,** S. *Eur. J. Med. Chem.* ***2014****, 85, 737-746.*

6. *An eco-friendly three-component regio- and stereo-selective synthesis of highly functionalized dihydroindeno[1,2-b]pyrroles under grinding*
Muthusaravanan, S.; Sasikumar, C.; **Devi Bala, B.;** Perumal, S. *Green Chemistry* **2014**, *16,* 1297-1304.

7. *An expedient synthesis of 1,2-dihydrobenzo[g]quinoline-5,10-diones via copper(II) triflate-catalyzed intramolecular cyclization of N-propargylaminonaphthoquinones*
Devi Bala, B.; Muthusaravanan, S.; Perumal, S. *Tetrahedron Lett.* **2013**, *54,* 3735-3739.

8. *Facile four-component domino reactions for the synthesis of highly functionalized tetrahydroquinolones*
Muthusaravanan, S.; **Devi Bala, B.;** Perumal, S. *Tetrahedron Lett.* **2013**, *54,* 5302-5305

9. *An eco-friendly sequential catalyst- and solvent-free four-component stereoselective synthesis of novel 1,4-pyranonaphthoquinones*
Devi Bala, B.; Rajesh, S.M.; Perumal, S. *Green Chemistry* **2012**, *14,* 2484-2490.

10. *Multi-component, 1,3-dipolar cycloaddition for the chemo-, regio and stereoselective synthesis of novel hybrid spiroheterocycles in ionic liquid*
Rajesh, S.M.; **Devi Bala, B.;** Perumal, S. *Tetrahedron Lett.* **2012**, *53,* 5367-5371.

11. *Facile, four-component, domino reactions for the regioselective synthesis of tetrahydro-benzo[g]quinolines*
Devi Bala, B.; Balamurugan, K.; Perumal, S. *Tetrahedron Lett.* **2011**, *52,* 4562-4566.

12. *L-Proline-catalysed sequential four-component "on water" protocol for the synthesis of structurally complex heterocyclic ortho-quinones*
Rajesh, S.M.; **Devi Bala, B.;** Perumal, S.; Menendez J. C. *Green Chemistry* **2011**, *13,* 3248-3254. (Hot article)

13. *A highly atom economic, chemo-, regio- and stereoselective synthesis and evaluation of spiro-pyrrolothiazoles as antitubercular agents*
Karthikeyan,S.V.; **Devi Bala, B.;** Perumal, S.; Alex Raja, V.P.; Perumal, S.; Yogeeswari, P.; Sriram, D. *Bioorg. Med. Chem. Lett.* **2010**, *20,* 350-353.

LIST OF CONFERENCES

ORAL PRESENTATIONS

- "*National Seminar on Expanding Frontiers in Chemistry*", 14-15th February **2013**, Arul Anandar College, Madurai. *(Best Presentation Award)*
- "*International Conference on Recent Advances in Textile and Electrochemical Sciences*", 21- 23rd March **2013**, Alagappa University, Karaikudi.

POSTER PRESENTATIONS

- "*International Conference on Multidisciplinary frontiers in Medicinal Chemistry: Synthesis, Molecular Biology and Technology*", 18th & 19th January **2013**, SASTRA University, Thanjavur. *(Best Presentation Award)*
- *"Chemistry in-House Symposium" (CiHS-2017*), 17th August, **2017**, IIT Madras, Chennai.

REFERENCES

Prof. G. Sekar	**Prof. S. Perumal**	**Dr.M. Jeganmohan**
Department of Chemistry	Emeritus Professor	Associate Professor
Indian Institute of Technology	School of Chemistry	Indian Institute of Technology
Madras	Madurai Kamaraj University	Madras
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