



Rayat Shikshan Sanstha's

# Radhabai Kale Mahila Mahavidyalaya, Ahmednagar

Reaccredited with 'A' Grade by NAAC/An ISO 9001:2015 Certified College  
Affiliated to Savitribai Phule Pune University, Pune (PU/AN/ASC/034)



## Research & Development Cell

### Report for AY 2022-23

#### 1. Avishkar Research Project Competition

To promote the research culture in Radhabai Kale Mahila Mahavidyalaya, Ahmednagar, college organized Avishkar Research Project Competition on Thursday, 15<sup>th</sup> September 2022 at 11:00 am. Inaugurator and chief guest for this competition was Dr. S. R. Thopate, Principal, Radhabai Kale Mahila Mahavidyalaya, Ahmednagar. There were 69 enthusiastic participants in all the six category of the competition. This competition identifying the hidden innovative scientific talents and capacities of the youth of Universities; Providing opportunities for inculcating research attitude in the youth and teachers of higher education system; Promoting talented researchers to participate at National/International events.

#### List of the Selected Students in Avishkar Research Project Competition

Sr. No.	Category	Rank	Level		No. of Participant Students
			UG	PG	
1	Pure Sciences	I	Arshiya Sayyed & Vaishnavi Nimase	Aliya Babamiya Pathan & Chaitali Macchindra Mundhe	27
		II	Rutuja Suresh Bhosale	Sangeeta Hazare & Vaishanavi Veer	
2	Medicine & Pharmacy	I	Bhakti Anandrao More & Muskan Sayyed		02
3	Agriculture and Animal Husbandry	I	Payal Raosaheb Bobade		02
		II	Pradnya Chandrakant Raut		
4	Engineering and Technology	I	Alfiya Javed Pathan & Aparna S. Mirchandani		04
		II	Rutuja Shahaji Kothare & Dhanshri Arjun Raut		
5	Humanities, Languages and Fine Arts	I	Arati Santosh Ghugarkar & Sakshi Rajendra Bakare		13
		II	Tabassum Salim Pathan & Nikita Subhash Bade		
6	Commerce, Management and Law	I	Ashwini Rokade	Arati Sanjay Kadam	21
		II	Amruta Prashant Pitale, Akshada Asaram Manchare, Hemlata Udaylal Gujar, Ishwari Vaibhav Chavan		





## 2. Research Publications.

In the academic year 2022-23 the faculty from the college published 27 research papers in National and International Reputed Journal.

### List of the Publications 2022-23

Sr. No.	Name of Authors	Title of Paper	Name of the Journal	Volume	Page nos	Year
<b>Department of Chemistry</b>						
1.	Prin. Dr. S. R. Thopate	Design, synthesis, and biological evaluation of novel quinoline derivatives as small molecule mutant EGFR inhibitors targeting resistance in NSCLC: In vitro screening and ADME predictions	European Journal of Medicinal Chemistry	245	1148-89	2023
2.	Prin. Dr. S. R. Thopate	Molecular Docking Studies and Application of 6-(1-Arylmethanamino)-2-Phenyl-4H-Chromen-4-Ones as Potent Antibacterial Agents	Polycyclic Aromatic Compounds	<a href="https://doi.org/10.1080/10406638.2022.2150238">https://doi.org/10.1080/10406638.2022.2150238</a>		2023
3.	Dr. M. H. Shaikh	Click chemistry inspired syntheses of new amide linked 1,2,3-triazoles from naphthols: biological evaluation and in silico computational study	Research on Chemical Intermediates	<a href="https://doi.org/10.1007/s11164-023-05008-4">https://doi.org/10.1007/s11164-023-05008-4</a>		2023
4.	Dr. M. H. Shaikh	[DBU][OAc]-mediated synthesis and anthelmintic activity of triazole-tetrazole conjugates	Research on Chemical Intermediates	48	5187-5208	2022
5.	Dr. M. H. Shaikh	Investigation of the Anti-inflammatory potential of Mono-carbonyl Analogues of Curcumin	Analytical Chemistry Letters	12	586-598	2022
6.	Dr. M. H. Shaikh	Design, Synthesis and Bioevaluation of Highly Functionalized 1, 2, 3-Triazole-Guanidine Conjugates as Anti-Inflammatory and Antioxidant Agents	Polycyclic Aromatic Compounds	<a href="https://doi.org/10.1080/10406638.2022.2105904">https://doi.org/10.1080/10406638.2022.2105904</a>		2022
7.	Dr. M. H. Shaikh	Synthesis, Biological Activity, and Computational Study of 1-[5-(4-Methylthiazol-5-yl)-2-phenyl-1,3,4-oxadiazol-3(2H)-yl]ethanone Derivatives	Russian Journal of General Chemistry	92	1511-1518	2022
8.	Dr. M. H. Shaikh	One-pot synthesis of substituted benzimidazole derivatives under ultrasonic irradiation using znfe2o4 reusable catalyst	Chemistry Journal of Moldova General, Industrial and Ecological Chemistry	<a href="http://dx.doi.org/10.19261/cjm.2022.892">http://dx.doi.org/10.19261/cjm.2022.892</a>		2022
9.	Dr. M. H. Shaikh	Pyridine-1,3,4-Thiadiazole-Schiff Base Derivatives, as Antioxidant and Antimitotic Agent: Synthesis and in Silico ADME Studies	Polycyclic Aromatic Compounds	<a href="https://doi.org/10.1080/10406638.2022.2026988">https://doi.org/10.1080/10406638.2022.2026988</a>		2022
10.	Dr. Ms. R. S. Endait	Triazole Derivatives And Their Biological Potential: A Review	International Journal of Advance and Applied Research	9	176-186	2022
11.	Dr. Ms. R. S. Endait	A Green Synthesis of Schiff'S Bases With Multifluorinated Core And Their Antifungal Study	Samriddhi: A Journal of Physical Sciences, Engineering and Technology	14	19-24	2022
12.		Synthesis And Antibacterial Screening Of Imidazole Containing Substituted Flavones	Journal of the Maharaja Sayajirao University of Baroda	57	58-63	2023
13.	Ms. N. R. Darekar	Synthesis, Characterization and Biological Evaluation of Thiazole Containing Chromones and Pyrazole Derivatives	Indian Journal of Heterocyclic Chemistry	32	433-438	2022
14.	Ms. N. R. Darekar	Synthesis, Biological Activity, and Computational Study of 1-[5-(4-Methylthiazol-5-yl)-2-phenyl-1,3,4-oxadiazol-3(2H)-yl]ethanone Derivatives	Russian Journal of General Chemistry	92	1511-1518	2022

15.	Ms. N. R. Darekar	Synthesis and antibacterial screening of thiazolyl pyrazole containing chromones and aurones	Heterocyclic letters	12	571-576	2022
16.	Ms. N. R. Darekar	Synthesis And Antibacterial Screening of Imidazole Anchored Pyrazolines, Benzodiazepines And Chromones	Heterocyclic letters	12	281-293	2022
17.	Dr. Ms. R. N. Shelke	A Facile Synthesis of New Substituted Thiazol-2-amine Derivatives as Potent Antimicrobial Agent	Letters in Applied NanoBioScience	12	32	2023
18.	Dr. Ms. R. N. Shelke	Development of a new chromogenic spray reagent for the detection and identification of synthetic pesticide carbaryl in biological material by high-performance thin-layer chromatography	JPC - Journal of Planar Chromatography - Modern TLC	35	431-434	2022
19.	Dr. Ms. R. N. Shelke	Ultrasound-Assisted, $ZnCr_2O_4$ Nanocatalyzed Synthesis of Substituted Tetrahydroquinolines via Povarov Reaction	Letters in Applied NanoBioScience	11	4080 - 4088	2022
<b>Department of Botany</b>						
20.	Dr. Ms. M. G. Bhagwat	Studies on Edaphic Factors and Fungal Diversity of Niphad Tehsil of Nashik District, Maharashtra, (India)	International Journal of Advance and Applied Research	10	157-161	2022
<b>Department of Zoology</b>						
21.	Dr. G. A. Raut	Mantid diversity (Insecta: Mantodea) of Radhanagari wildlife sanctuary in the northern Western Ghats, Maharashtra, India	Journal of the Bombay Natural History Society (JBNHS)	119	-	2022
<b>Department of Physical Education</b>						
22.	Mr. V. U. Elke	Comparison of Health Related physical fitness level of the students from different courses	Utkal Historical Research Journal	36	106-109	2023
<b>Department of Economics</b>						
23.	Dr. B. M. Mundhe	What drives recovery of growth after Covid 19 crisis in india	Anvesak	52	191-193	2022
<b>Department of English</b>						
24.	Dr. S. G. Saykar	Feminist Interpretation of the Songs in Pushpa: The RisePart-I	Mukt Shabd Journal	XI	439-445	2022
25.		Maginalization and Stratum of Dalit, Muslim in India	Sarcouncil Journal of Arts Humanities and Social Sciences	02	1-6	2023
<b>Department of History</b>						
26.	Dr. G. S. Vidhate	वेरूळ लेणीतील हरिती व पंचीका शिल्प	Insight Research Analysis	XII	199-200	2023
27.		Critically analysis the role and contribution of Godavari Parulekar in Warli Movement	Ideal	XI	63-74	2023

### 3. Research Club

The research club has been formed with the objective to become the destination of many young researchers coming from different branches with broad interests and skills.

#### The main objectives of the club are:

1. To foster a research culture and provide a healthy research environment.
2. To encourage, guide and train students to participate in research activities.
3. To learn and develop business plans to incorporate them into a business proposal.
4. To provide research and development services to the community.
5. To publish high quality work in the most prestigious, top ranked journals to ensure the spread of the benefit as much as possible.





#### 4. Book/Book Chapter Publications.

In the academic year 2022-23 the faculty from the college published book/book chapter.

Sr. No.	Name of the teacher	Title of the book/chapters published	Year of publication	ISBN/ISSN number of the proceeding	Name of the publisher
<b>Book/Book chapter Published</b>					
1	Dr. G. S. Vidhate	शेतकरी आणि बीबी कामगार चळवळ विशेष संदर्भ: अहमदनगर जिल्ह्यातील कम्युनिस्ट	2022	978-81-948610-2-7	श्री. प्रवीण साळुंवे, ज्ञानज्योत प्रोडक्शन प्रा. लि., कोल्हापूर
2	Dr. G. S. Vidhate	अहमदनगर जिल्ह्यातील पहिला कम्युनिस्ट कॉंग्रेस डी. बी. कुलकर्णी	2022	-	श्री. प्रवीण साळुंवे, ज्ञानज्योत प्रोडक्शन प्रा. लि., कोल्हापूर
3	Dr. Ms. R. S. Endait	Role of Isoquinoline In Drug Discovery	2022	978-93-94819-06-1	Jyotikiran Publication, Pune
4	Dr. Ms. R. N. Shelke	An Overview of the Synthesis of Pyrroline, Indolizine, and Quinolizinium Derivatives Using Different Nanocatalysts	2022	9781003141488	CRC Press
5	Dr. Ms. R. N. Shelke	Nanocatalysis An Efficient Tool for the Synthesis of Triazines and Tetrazines	2022	9781003141488	CRC Press

#### 5. Patent

In the AY 2022-23 six patents were published

Sr. No.	Inventor/ Applicant Name	Title of the Patent	Patent Published Date	Patent Application No.
1	Dr. M. H. Shaikh	1,2,3-Triazolyl Thiazolidinedione Derivatives As Therapeutic Agents	03/06/2022	202121051912
2	Dr. Ms. R. S. Endait	Green nanotechnology-driven drug delivery assemblies	02/09/2022	202211048657
3	Dr. S. R. Thopat, Dr. Ms. R. S. Endait	Substituted Imidazole compounds as anti-bacterial agent	16/09/2022	202221049874
4	Dr. Laxmi Ganesh Kathawate	Rare-Earth Doped Material Platforms For Quantum Nanophotonics Process	14/10/2022	202221056581
5	Dr. M. H. Shaikh, Ms. N. R. Darekar	Substituted 1,2,3 Triazole Compounds As Antioxidant Agent	11/11/2022	202221061719
6	Dr. S. G. Saykar	Financial planning & management for salaried employee in an organisation along with strategies for tax savings for the benefits of both employee and employer in private sector	02/12/2022	202241068394
7	Dr. S. M. Kotkar	IoT cloud-based traffic control and detect smart movable of ambulance	09/12/2022	202241069483
8	Dr. M. H. Shaikh	Substituted 1, 2, 3 Triazole Compounds As Antitubercular Agent	12/05/2023	202321021591

6. Two Day's State Level Workshop on "National Education Policy-2020 with Reference to Establishment of Research & Development Cell" on 24th & 25th February, 2023; Sponsored By Savitribai Phule Pune University, Pune under Quality Improvement Programme (QIP) 2022-23 Radhabai Kale Mahila Mahavidyalaya, Ahmednagar & Savitribai Phule Pune University, Pune has jointly organized Two Day's State Level Workshop on "National Education Policy-2020 with Reference to Establishment of Research & Development Cell" on 24<sup>th</sup> & 25<sup>th</sup> February, 2023.

Inaugurator and chief guest for this Workshop was Dr. Dinanath D. Patil, Principal, Sahakar Maharshi Bhausaheb Santuji Thorat College, Sangamner. There were 82 enthusiastic faculties participate from the different colleges and universities. Also, 75 students from the college participate in this workshop.

**List of the Resource person for the workshop**

Sr. No.	Name of the Resource Person	Designation
1	Dr. Dinanath D. Patil	Principal, SMBSTC, Sangamner
2	Dr. Santosh A. Yadav	Research Curator, History Museum, Ahmednagar
3	Dr. Shivaji P. Raut	Writer & Academician, Satara
4	Dr. Kakasaheb C. Mohite	Principal, CT Bora College, Shirur
5	Dr. Kailas S. Mahale	Research Co-ordinator, RBNB college, Shirampur
6.	Bhaskar H. Zaware	Principal, New Arts, Com & Sci. College, Ahmednagar

**7. Intellectual Property Rights (IPR) Workshop**

Research & Development Cell & Internal Quality Assurance Cell (IQAC) has jointly organized one day workshop on "Intellectual Property Rights (IPR)" on Monday 10<sup>th</sup> April, 2023 at 11:00 am. Dr. Anil V. Ghule, Director, Department of Intellectual Property Rights, Shivaji University, Kolhapur, delivered lecture on "Intellectual Property Rights (IPR)". There were 105 enthusiastic participants in all including 30 faculty and 75 students who participated in the workshop on IPR.

**8. Research Methodology Workshop**

Research & Development Cell & Internal Quality Assurance Cell (IQAC) has jointly organized one day workshop on "Research Methodology" on Monday 10<sup>th</sup> April, 2023 at 02:00 pm. Dr. Anil V. Ghule, Professor, Department of Chemistry, Shivaji University, Kolhapur, delivered lecture on "Research Methodology". There were 84 enthusiastic participants in all including 25 faculty and 59 students who participated in the workshop on Research Methodology.

**9. Research Guideship**

Faculties having the Research Guideship for the Ph. D. Affiliated to SPPU, Pune in respective subject.

Sr. No.	Name of Research Guide	Subject
1	Dr. S. R. Thopate	Chemistry
2	Dr. S. G. Saykar	English
3	Dr. G. S. Vidhate	History
4	Dr. Ms. M. G. Bhagwat	Botany
5	Dr. M. H. Shaikh	Chemistry
6	Dr. G. A. Raut	Zoology
7	Dr. S. S. Kekade	Physics
8	Dr. Ms. L. G. Kathawate	Chemistry

*m. Shaikh*

Dr. M. H. Shaikh  
Co-ordinator  
Research & Development Cell



*S. R. Thopate*

Dr. S. R. Thopate  
Principal & Chairman  
Research & Development Cell