



शिवाजी कॉलेज
(दिल्ली विश्वविद्यालय)
Shivaji College
(University of Delhi)



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SUPPORTING DOCUMENTS FOR 7.2.1

Best Practice II: Interdisciplinary Research work



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Best Practice II

1. Intramural Research Scheme

No. of student beneficiary :44

No. of teacher beneficiary :13

Total beneficiary :57

महाविद्यालय अनुसंधान एवं नवाचार प्रकोष्ठ
College Research & Innovation Cell
शिवाजी कॉलेज (दिल्ली विश्वविद्यालय)
Shivaji College (University of Delhi)
नई दिल्ली - ११० ०२७
New Delhi - 110 027

Intramural Research Scheme
Minor Research Projects
Sanction Year: 2022-2023

S. No	File No.	Principal Investigators	Title of the Project	Student Details	Sanction Order Details & Date of Start (DOS)
1	MRP/2022 - 2023/0001	1. Dr Neena Khanna (Dept. of Chemistry) 2. Dr Parveen Gahlyan (Dept. of Chemistry)	Synthesis of rhodamine based chemosensors and their application in detection of toxic metal ions	1. Garv Gupta (Roll No.: 21/10027) B. Sc. (H) Chemistry 2. Sakshi Bhardwaj (Roll No.: 21/10066) B. Sc. (H) Chemistry 3. Yogita (Roll No. 21/10053) B. Sc. (H) Chemistry 4. Garv Gaur (Roll No. 21/10048) B. Sc. (H) Chemistry 5. Gunit Manaktala (Roll No. 21/10071) B. Sc. (H) Chemistry	SH/Adm./ 2175/23 Dated 31/01/2023 DOS: 02.02.2023
2	MRP/2022 - 2023/0002	1. Dr Neetu Rani (Dept. of Mathematics)	Mathematical Modelling for Volume Estimation of Guava (Psidium Guajava L.)	1. Raghav Anand Nath (Roll No. 21/17007) B. Sc. (H) Mathematics 2. Vaibhav Bhatt (Roll No. 21/17143) B. Sc. (H) Mathematics 3. Sneha Gupta (Roll No. 21/17096) B. Sc. (H) Mathematics 4. Shashvat Kumar Mishra (Roll No. 22/17067) B. Sc. (H) Mathematics 5. Dolly Chawla (Roll No. 22/09026) B. Sc. (H) Botany 6. Saloni (Roll No. 22/09018) B. Sc. (H) Botany	SH/Admn/ 2295/23 Dated 03/03/2023 DOS: 05.03.2023

Kumari Prizanka
03/03/2023

Shiv K. Sarda
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आचार्य/ऑफिसिंग प्रिन्सिपल
शिवाजी महाविद्यालय / Shivaji College
दिल्ली विश्वविद्यालय / University of Delhi,
राजा गार्डन, नई दिल्ली-110027
Raja Garden, New Delhi-110027

*List of Sanctioned Minor Research Projects.



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3	MRP/2022 - 2023/0003	1. Dr Kiran Bamei (Dept. of Botany) 2. Dr Seema Talwar (Dept. of Botany)	Impact of Elevated Temperature on the Seed Germination of Medicinal plants (<i>Catharanthus roseus</i> and <i>Trig onella foenum- graecum</i>)	1. Ankit (Roll No. 22/09005) B. Sc. (H) Botany 2. Tribeni (Roll No. 22/09022) B. Sc. (H) Botany 3. Palak (Roll No.22/23052) B.Sc. (Prog.) Life Sciences 4. Shorya (Roll No.22/23071) B.Sc. (Prog.) Life Sciences 5. Gautam (Roll No.22/23065) B.Sc. (Prog.) Life Sciences	SH/Admn/ 2296/23 Dated 03/03/2023 DOS: 05.03.2023
4	MRP/2022 - 2023/0004	1. Dr Preeti Tiwari (Dept. of Geography) 2. Ms Ekta Raman (Dept. of Geography)	Impact Assessment of Swachh Bharat Mission in Raghubir Nagar	1. Sonia Borana (Roll No.22/31050) B.A. (H) Geography 2. Vanshika Punia (Roll No.22/31055) B.A. (H) Geography 3. Aman Singh (Roll No.22/49151) B.A.(Program) 4. Maseera Siddiqui (Roll No.:22/31029) BA(H) Geography 5. Aditya Sharma (Roll No.:22/49112) B.A.(Program)	SH/Admn/ 2297/23 Dated 03/03/2023 DOS: 05.03.2023
5	MRP/2022 - 2023/0005	1. Dr Jayita Thakur (Dept. of Biochemistry) 2. Dr Usha Yadav (Dept. of Biochemistry)	Comparative analysis of the effects of dietary supplements on <i>Drosophila melanogaster</i>	1. Sayena Simron (Roll No. 21/06055) B.Sc. (H) Biochemistry 2. Sanjana Gupta (Roll No. 21/06007) B.Sc. (H) Biochemistry 3. Sony Sharma (Roll No. 21/06050) B.Sc. (H) Biochemistry 4. Sahil Anand (Roll No. 21/06031) B.Sc. (H) Biochemistry 5. Shivangi Aggarwal (Roll No. 21/06030) B.Sc. (H) Biochemistry 6. Vandana (Roll No. 21/06047) B.Sc. (H) Biochemistry 7. Debdatta Chatterjee (Roll No. 22/06009) B.Sc. (H) Biochemistry 8. Pooja (Roll No. 22/06024)	SH/Admn/ 2298/23 Dated 03/03/2023 DOS: 05.03.2023

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Shiv K. Sarda

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03/03/2023

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शिवाजी महाविद्यालय / Shivaji College
दिल्ली विश्वविद्यालय / (University of Delhi)
एनए गार्डन, नई दिल्ली-110027
Page Garden, New Delhi-110027

*List of sanctioned Minor Research Projects.



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				B.Sc. (H) Biochemistry 9. Kanishk Rai (Roll No. 22/06017) B.Sc. (H) Biochemistry 10. Tushar Gupta (Roll No. 22/06032) B.Sc. (H) Biochemistry	
6	MRP/2022 - 2023/0006	1. Ms Nimita Kant (Dept. of Zoology) 2. Dr Jitendra Kr. Chaudhary (Dept. of Zoology)	Developing insights into stem cell therapeutic potential for hematological disorders based on analysis of National Institute of Health (NIH)'s clinical trials repertoire	1. Priya Roy (Roll No.21/22020) B.Sc. Zoology(H) 2. Akanksha (Roll No. 21/22021) B.Sc. Zoology(H) 3. Supriya Bhardwaj (Roll No. 21/22054) B.Sc. Zoology(H) 4. Lakshay Bhardwaj (Roll No. 21/22064) B.Sc. Zoology(H) 5. Priya Talwar (Roll No. 21/22069) B.Sc. Zoology(H)	SH/Admn/ 2299/23 Dated 03/03/2023 DOS: 05.03.2023
7	MRP/2022 - 2023/0007	1. Dr Lalita Rana (Dept. of Geography) 2. Ms Rashmi Singh (Dept. of Geography)	Urban Sprawl Modelling & Commuting Pattern- Delhi Gurgaon Corridor: A Sustainable Growth	1. Inika Garg (Roll No. 22/31020) B.A. (H) Geography 2. Jhilmil Verma (Roll No. 22/31021) B.A. (H) Geography 3. Toyaj Giri Goswami (Roll No. 22/31054) B.A. (H) Geography 4. Nivedita Sharma (Roll No. 22/31033) B.A. (H) Geography 5. Dildar Ali (Roll No. 22/31017) B.A. (H) Geography 6. Shashank Singh (Roll No. 22/31047) B.A. (H) Geography 7. Akilesh Kumar (Roll No. 22/31009) B.A. (H) Geography 8. Syed Sadiq Husain (Roll No. 22/31053) B.A. (H) Geography	SH/Admn/ 2300/23 Dated 03/03/2023 DOS: 05.03.2023

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03/03/2023

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आचार्य/प्रमुख / Officialing Principle
शिवजी कॉलेज / Shivaji College
दिल्ली विश्वविद्यालय / (University of Delhi)
राजा गार्डन, नई दिल्ली-110027
Raja Garden, New Delhi-110027

*List of Sanction Minor Research Projects.



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Intramural Research Scheme

2. List of Completed Minor Research Projects

Completion Year: 2022-2023

S. No.	File No. & Sanction order	Principal Investigators	Title of the Project	Students	Date of Start (DOS)& Actual Date of Completion (ADOC)	Link
1.	MRP/2021/0005 SH/Admn/24/6/21 Dated 25.02.2021	Dr Kiran & Ms Deepti	Study of Socio-Economic Impact of COVID-19 using Mathematical Modelling and Data Analytics Techniques	1. Anu Kriti Tripathi, B. Com.(H) 2. Shefali Karla, B. Com. (H) 3. Udit, B. Com. (H) 4. Piyush Dahiya, B.Sc.(H) Mathematics 5. Suyesh Pathak, B.Sc.(H) Mathematics	DOS: 26.02.2021 DOC: 25.08.2022	Summary of Research Findings
2.	MRP/2021/0007 SH/Admn/24/5/21 Dated 25.02.2021	Dr T. S. Rana & Dr Bharat Ratnu	Pattern and consequences of climate change on agriculture: a micro level study of two villages in Haryana	1. Khushi Kaushik, B. A. (H) Geography 2. Rozina Akhtar, B. A. (H) Geography 3. Khushwant Kakran, B. A. (H) Geography 4. Manoj, B. A. (H) Geography 5. Tamanna, B. A. (H) Geography 6. Nikita, B. A. (H) Geography	DOS: 26.02.2021 ADOC: 31.10.2022	Summary of Research Findings

*List of Completed Minor Research Projects



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S. No.	File No. & Sanction order	Principal Investigators	Title of the Project	Students	Date of Start (DOS) & Actual Date of Completion (ADOC)	Link
3.	MRP/2021/009 SH/Admn/24/4/21 Dated 25.02.2021	Dr Deepika & Dr Nidhi	Synthesis and characterization of multifunctional ZnO nano particles for biomedical, piezoelectric and ferroelectric applications	1. Mitali Kapoor, B. SC. (H) Physics 2. Kabeer Kumar, B. Sc. (H) Physics 3. Nipun Sareen, B. Sc. (H) Zoology 4. Yashika Kataria, B. Sc. (H) Zoology 5. Khushboo Singhal, B.Sc. (H) Zoology	DOS: 26.02.2021 ADOC: 25.08.2022	Summary of Research Findings
4.	MRP/2022/0001 SH/Admn/4/61/22 Dated: 15.03.2022 Revised: SH/Admn/7/8/22 Dated: 04.05.2022	Dr Renu Baweja & Dr Abhijeet Mishra	Disseminating Antimicrobial Resistance in Food Chain using Blended Learning Approach	1.SudhanshuShukla (20/06034), B. Sc. (H) Biochemistry 2. Aantra Rao (20/06012), B. Sc. (H) Biochemistry 3. Vanshika Bansal (20/06022) B. Sc. (H) Biochemistry 4. Karishma (20/06005) B. Sc. (H) Biochemistry 5. Gungun Saini (20/06038) B. Sc. (H) Biochemistry 6. Sparsh Aggarwal (21/06032) B. Sc. (H) Biochemistry	DOS: 16.03.2022 ADOC: 15.03.2023	Summary of Research Findings

*List of Completed Minor Research Projects



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S. No.	File No. & Sanction order	Principal Investigators	Title of the Project	Students	Date of Start (DOS) & Actual Date of Completion (ADOC)	Link
5.	MRP/2022/0002 SH/Admn/4 57/22 Dated: 15.03.22	Dr Prabhavati & Dr Vandana Katoch	Role of Medicinal Plant for Sustainability of Environment	1. Sumit Kumar Pathak 20/09024) B.Sc. (H) Botany 2. Sarthak (21/09008) B.Sc. (H) Botany 3. Palak Gupta (21/09048) B.Sc. (H) Botany 4. Saniya (21/10056) B.Sc. (H) Chemistry 5. Anurag (21/10052) B.Sc. (H) Chemistry	DOS: 16.03.2022 ADOC: 15.03.2023	Summary of Research Findings
6.	MRP/2022/0003 SH/Admn/4 58/22 Dated: 15.03.2022	Mr Sumeet Singh Raheja & Ms Shruti Goyal	Effectiveness of Nudges in Waste Management Policy Making	1. Akanksha Srivastava (20/28098) B. A. (H) Economics 2. Kinshuk Taneja (20/28111) B. A. (H) Economics 3. Aparna Rana (20/28109) B. A. (H) Economics 4. Shaily Sengar (20/28030) B. A. (H) Economics 5. Parth Jain (20/28090) B. A. (H) Economics	DOS: 16.03.2022 ADOC: 15.03.2023	Summary of Research Findings

*List of Completed Minor Research Projects



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S. No.	File No. & Sanction order	Principal Investigators	Title of the Project	Students	Date of Start (DOS)& Actual Date of Completion (ADOC)	Link
7.	MRP/2022/0004 SH/Admn/459/22 Dated: 15.03.2022	Dr Sunita Singh	Interplay of Genetic and Lifestyle Risk Factors in Cardiovascular Disease	1. Tini Lung Libang (20/06035) B.Sc. (H) Biochemistry 2. Sony Sharma (21/06050) B.Sc. (H) Biochemistry 3. Disha Chandeliya (21/06046) B.Sc. (H) Biochemistry 4. Himani Gautam (21/06045) B.Sc. (H) Biochemistry 5. Kajal Rawat (21/06018) B.Sc. (H) Biochemistry 6. Nitika Kumari (21/06042) B.Sc. (H) Biochemistry 7. Bhumika Choudhary(21/06043) B.Sc. (H) Biochemistry	DOS: 16.03.2022 ADOC: 15.03.2023	Summary of Research Findings
8.	MRP/2022/0005 SH/Admn/460/22 Dated 15/03/2022	Ms Anshu Chopra & Ms Nikita Gupta	Impact of online education on the schooling choices: A study of slums in Delhi	1. Khushi Bhatia (20/28025) B. A. (H) Economics 2. Abhishek Raj (20/28108) B. A. (H) Economics 3. Divyanshi Pathak (20/28097) B. A. (H) Economics 4. Devanshi Thakur (20/28107) B. A. (H) Economics 5. Saloni Agarwal (20/28061) B. A. (H) Economics	DOS: 16.03.2022 ADOC: 15.03.2023	Summary of Research Findings

*List of Completed Minor Research Projects



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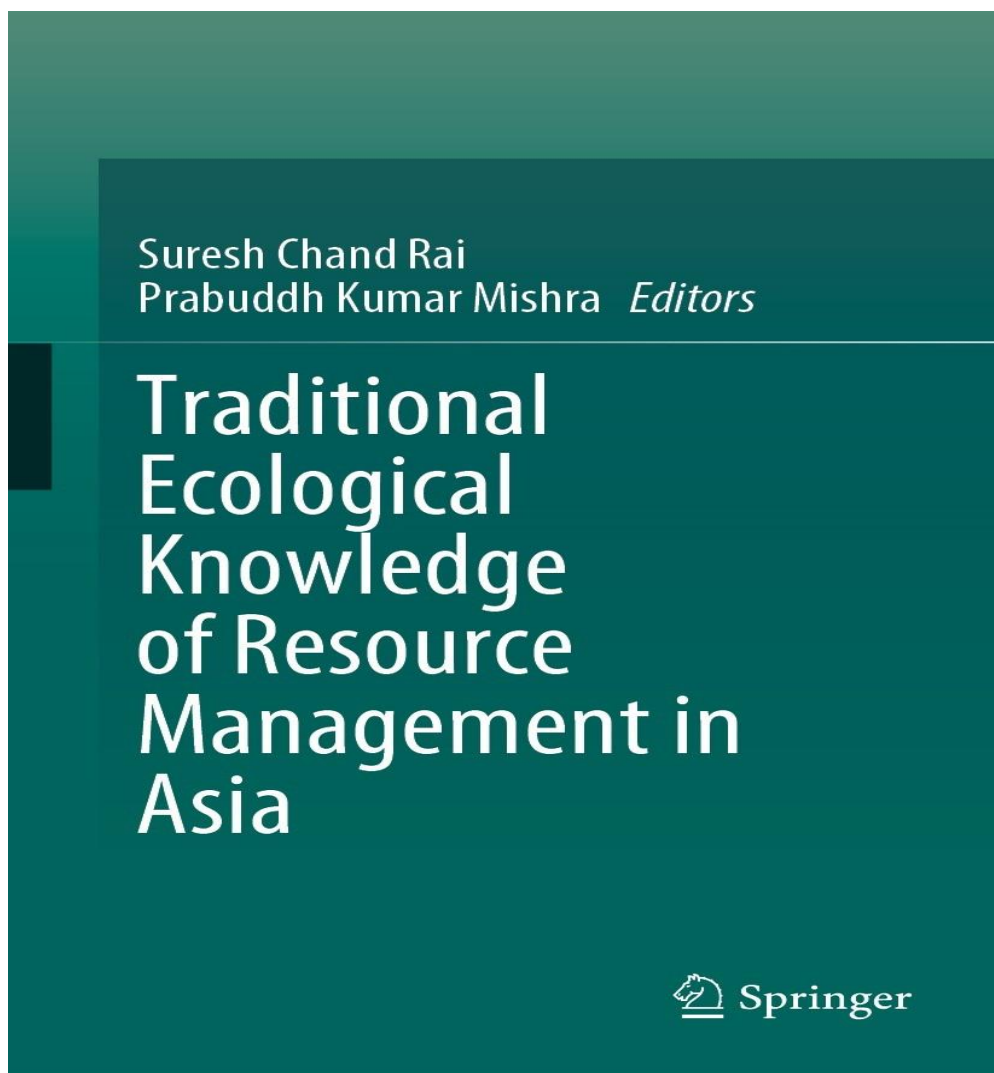


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3. Interdisciplinary Publications:

i. Books Cover Page

Editors: Suresh Chand Rai & Prabuddh Kumar Mishra



*Screenshot of book cover page.



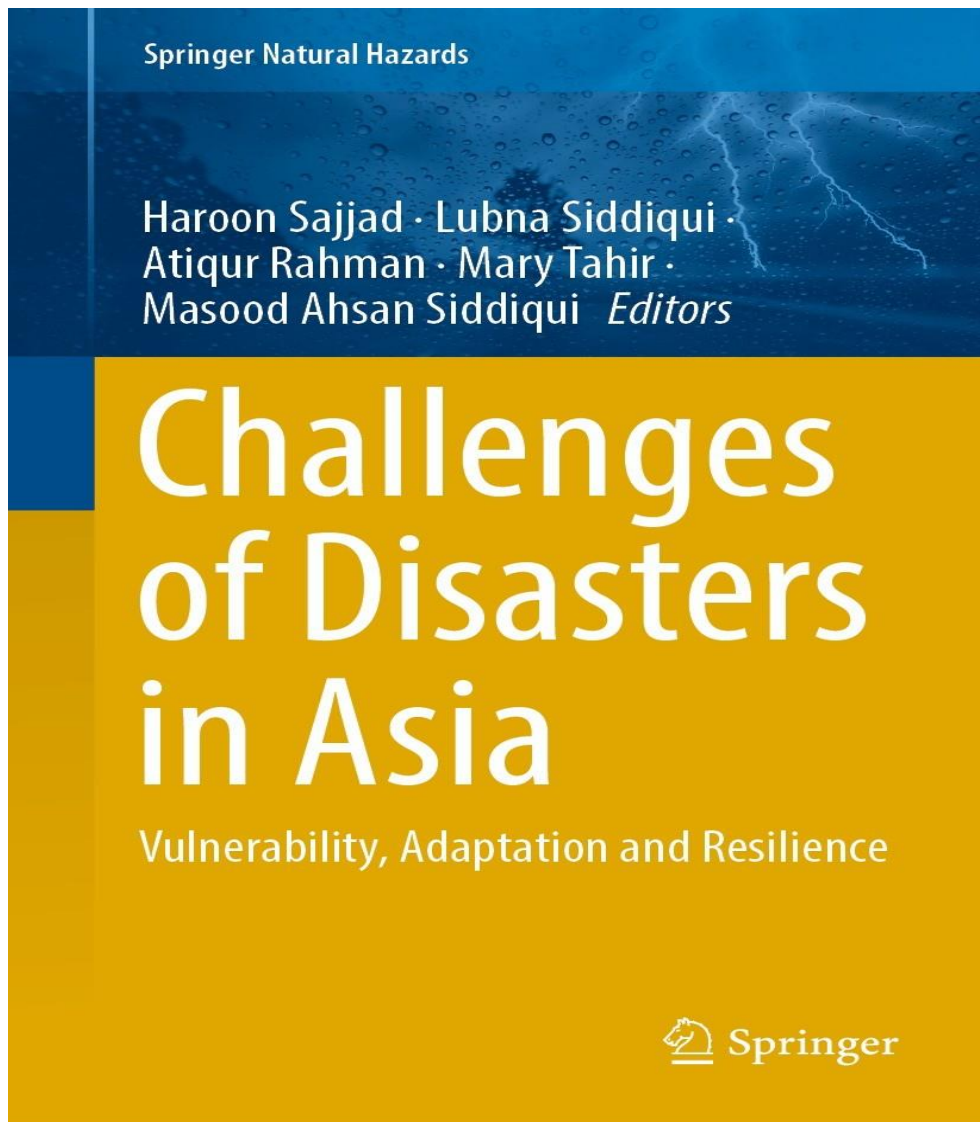
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ii. **Book Chapter:**

Book Title: Challenges of Disasters in Asia Vulnerability, Adaptation and Resilience.



* Screenshot of book cover page.



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Contd.

Chapter: Adaptation Policy and Community Discourse of Climate Change in the Mountainous Regions of India.

Author: Preeti Tiwari.

12:26 PM | 7.6KB/s | 4G+ | 82%

Challenges of Disasters in Asia
pp 287–297 | [Cite as](#)

[Challenges of Disasters in Asia](#) > Conference paper

Adaptation Policy and Community Discourse of Climate Change in the Mountainous Regions of India

[Anshu](#) ✉, [Vijendra Kumar Pandey](#) & [Preeti Tewari](#)

Conference paper | [First Online: 24 September 2022](#)

134 Accesses

Part of the [Springer Natural Hazards](#) book series (SPRINGER NAT)

Abstract

Global climate change is attributed to the increase in greenhouse gas emissions due to industrialisation. Scientists and policy makers are continuously debating on ways to

*Screen shot of book chapter first page.



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iii. Interdisciplinary Research Papers

Title of Paper: Use of gold nanoparticle-silibinin conjugates: A novel approach against lung cancer cells

Authors: Rangnath, Abhijeet Mishra et. al.

[Online Link of Paper](#)

The screenshot shows the first page of a research paper titled "Use of gold nanoparticle-silibinin conjugates: A novel approach against lung cancer cells". The paper is published in Frontiers in Chemistry, Volume 10, Article 1018759, on October 13, 2022. The authors listed are Rangnath Ravi, Md. Zeyaulah, Shubhrima Ghosh, Mohiuddin Khan Warsi, Renu Baweja, Abdullah M. AlShahrani, Abhijeet Mishra, and Razi Ahmad. The paper is an open access article. The abstract discusses lung cancer as a challenging carcinoma with low survival rates and high recurrence, and proposes the use of phytochemicals like silibinin conjugated with gold nanoparticles (GNPs) as a novel therapeutic approach. The paper is available at <https://doi.org/10.3389/fchem.2022.1018759>.

*Screenshot of research paper first page.



Contd.

Title :Fabrication of Superparamagnetic Bimetallic Magnesium Nanoferrite Using Green Polyol: Characterization and Anticancer Analysis in Vitro on Lung Cancer Cell Line A549.

Authors: Rangnath Ravi, Abhijeet Mishra et. al.

[Online Link of Paper](#)

The screenshot shows the first page of a research paper titled "Fabrication of Superparamagnetic Bimetallic Magnesium Nanoferrite Using Green Polyol: Characterization and Anticancer Analysis in Vitro on Lung Cancer Cell Line A549" published in ACS Applied Bio Materials. The authors are Rangnath Ravi, Abhijeet Mishra, Anamika, and Sharif Ahmad*. The abstract describes the green synthesis of bimetallic magnetic magnesium ferrite nanoparticles using castor oil as a surface modifier and synthesis agent. The paper includes characterization data (FTIR, XRD, SEM, AFM, TEM, Brunauer-Emmett-Teller (BET), and VSM) and anticancer analysis in vitro on lung cancer cells (A549). A diagram illustrates the synthesis process: Castor Oil (with hydroxyl and carboxyl groups) reacts with Ethanol Acetic Acid at 120°C to form MgFe2O4 Nanoferrite with Castor Oil functional groups. The diagram also shows the effect of calcination temperatures (600-900°C) on particle size and saturation magnetization, and compares the treated nanoparticles with a control group on A549 Lung cancer cells.

*Screenshot of research paper first page.



Contd.

Title: Noscapine–Amino Acid Conjugates Suppress the Progression of Cancer Cells *Published in "New Drug Modalities in Medicinal Chemistry, Pharmacology, and Translational Science"*.

Authors: Abhijeet Mishra, Rangnath Ravi et. al.

Link: <https://doi.org/10.1021/acscptsci.2c00172>

*Screenshot of research paper first page. Link of paper is given below.