

Curriculum Vitae: Dr. Mona Hooda

1. Personal Information

- **Full Name:** Dr. Mona Hooda
- **Designation:** Assistant Professor
- **Department/Discipline:** Chemistry
- **Date of Birth:** October 1, 1991
- **Gender:** Female
- **Nationality:** Indian
- **Address for Correspondence:** Chemistry department, Gurugram University, Gurugram, Sector 87, 122505.
- **Mobile Number:** 8396830878
- **Email ID:** monahooda.chem@gurugramuniversity.ac.in
- **LinkedIn/Research Profile (if any):** Scopus ID 57212655373; <https://orcid.org/0000-0003-4011-032X>

2. Career Objective

To work as a dedicated educator and researcher, contributing to high-quality teaching and meaningful research in synthetic and medicinal chemistry while continuously learning and growing professionally.

3. Educational Qualifications

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|------|---|---|
| 2023 | PhD, Organic Chemistry, | Department of Chemistry, Kurukshetra University, Kurukshetra, Haryana. |
| | Title: "Functionalized Dicarbonyl Compounds as Versatile Synthons in Organic Transformations" | |
| | Supervisor: Prof. Ranjana Aggarwal, KUK. | |
| 2014 | M.Sc., Organic Chemistry (79.80%) | Department of Chemistry, Kurukshetra University, Kurukshetra, Haryana. |
| 2012 | B.Sc. Biochemistry (81.45%) | University College, Kurukshetra University, Kurukshetra, Haryana. |
| 2009 | 12 th (75.20%) | Siri Guru Teg Bahadur Pub Sch, Behar Sahib (Patiala) affiliated to C.B.S.E. |
| 2007 | 10 th (89.20%) | CBSM Sr. Sec. School, Nidani (Jind) affiliated to H.B.S.E. |

4. Teaching Experience

- **Total Teaching Experience:** 2.5 Years

5. Research Experience

- **Areas of Specialization:** Synthetic organic chemistry (Design and synthesis of heterocycles of therapeutic interest, development of novel synthetic methodologies based on green chemistry principles).
- **Research Projects Handled:** NA
- **Research Guidance (Ph.D./M.Phil.):** Currently supervising 3 Ph.D. scholars

6. Publications

(A) Research Papers in Journals

1. Aqueous-mediated hypervalent iodine chemistry: from green reaction medium to reactivity modulator, S. Sharma, A. Jangra, P. Jajoriya, R. Aggarwal, G. Singh and **M. Hooda**, *Arkivoc*, 2026, 4, 202612552. <https://doi.org/10.24820/ark.5550190.p012.552>
2. Advances in Pyrazolopyrimidine Scaffold: Synthetic Strategies and Biological Applications (2019-Present), A. Bansal, V. Kumar, R. Aggarwal, **M. Hooda**, S. Kumar, Meera, *Arch. Pharm.* 2026, 359, e70226. <https://doi.org/10.1002/ardp.70226>
3. Synthesis and characterization of Schiff-base Chemosensor for spectroscopic and colorimetric selective recognition of Cu²⁺ in semi-aqueous medium, R. Aggarwal, P. Kumar, G. Sumran, **M. Hooda**, A. Kumar, *Polyhedron*, 2026, 286, 117930. <https://doi.org/10.1016/j.poly.2025.117930>
4. Efficient synthesis of promising antidiabetic triazinoindole analogues via a solvent-free method: investigating the reaction of 1, 3-diketones and 2, 5-dihydro-3 H-[1, 2, 4] triazino [5, 6-b] indole-3-thione, R. Aggarwal, P. Kumar, **M. Hooda**, R. Singh, and P. Kumar, *Organic & Biomolecular Chemistry*, 2025, 23, 213-225. <https://doi.org/10.1039/d4ob01487a>
5. Eco-friendly Regioselective Synthesis, Biological Evaluation of Some New 5-acylfunctionalized 2-(1H-pyrazol-1-yl)thiazoles as Potential Antimicrobial and Anthelmintic Agents, R. Aggarwal, M. Sharma, **M. Hooda**, P. C. Sharma, D. Sharma, *ChemistryOpen*, 2024, e202400142. <https://doi.org/10.1002/open.202400142>
6. Serendipitous N,S-difunctionalization of triazoles with trifluoromethyl- β -diketones: access to regioisomeric 1-trifluoroacetyl-3-aryl-5-(2-oxo-2-arylethylthio)-1,2,4-triazoles as DNA-groove binders, R. Aggarwal, P. Kumar, **M. Hooda** and S. Kumar, *RSC Adv.*, 2024, 14, 6738-6751. <https://doi.org/10.1039/D4RA00083H>
7. Synthesis and In vitro-In silico Evaluation of Thiazolo-triazole Hybrids as Anticancer Candidates, R. Aggarwal, P. Kumar, N. Jain, **M. Hooda**, S. Kumar, R. Sadana, R. Lwanga, A. Guzman, H. Chugh, R. Chandra, *ChemistrySelect*, 2023, e202301368. <https://doi.org/10.1002/slct.202301368>
8. α -Amylase Inhibitors Based on Thiazolidinone Skeleton: A Promising Approach in Diabetes Management, R. Singh, J. Sindhu, P. Kumar, **M. Hooda**, R. Aggarwal, S. Lal, S. Ahmadi, S. Lotfi, D. Singh, H. Kumar, *ChemistrySelect*, 2023, e202303852. <https://doi.org/10.1002/slct.202303852>
9. An Expedient On-Water Regioselective Synthesis of Novel Arylidene-hydrazinyl-thiazoles as DNA Targeting Agents, R. Aggarwal, **M. Hooda**, P. Kumar, S. Kumar, S. Singh, R. Chandra, *Bioorg. Chem.*, 2023, 106524. <https://doi.org/10.1016/j.bioorg.2023.106524>
10. Visible-light-prompted Synthesis and Binding Studies of 5,6-Dihydroimidazo[2,1-b]thiazoles with BSA and DNA Using Biophysical and Computational Methods, R. Aggarwal, **M. Hooda**, P. Kumar, N. Jain, G.P. Dubey, H. Chugh, R. Chandra, *J. Org. Chem.*, 2022, 87, 3952. <https://doi.org/10.1021/acs.joc.1c02471>
11. Vision on Synthetic and Medicinal Facets of 1,2,4-triazolo[3,2-b][1,3,4]thiadiazine Scaffold, R. Aggarwal, **M. Hooda**, P. Kumar, G. Sumran, *Top. Curr. Chem.*, 2022, 20, 584. <https://doi.org/10.1007/s41061-022-00365-x>
12. Visible-light-mediated regioselective synthesis of novel thiazolo[3,2-b][1,2,4]triazoles: advantageous synthetic application of aqueous conditions, R. Aggarwal, **M. Hooda**, P. Kumar, M. C. Torralba, *Org. Biomol. Chem.*, 2022, 20, 584. <https://doi.org/10.1039/D1OB02194J>
13. Visible-light promoted serendipitous synthesis of 3,5-diaryl-1,2,4-thiadiazoles via oxidative dimerization of thiobenzamides, R. Aggarwal, **M. Hooda**, *J. Sulfur Chem.*, 2022, 43, 242. <https://doi.org/10.1080/17415993.2021.2005064>
14. An efficient, one-pot, regioselective synthesis of 2-aryl/hetaryl-4-methyl-5-acylthiazoles under solvent-free conditions, R. Aggarwal, **M. Hooda**, N. Jain, D. Sanz, R. M. Claramunt, B. Twamley, I. Rozas, *J. Sulfur Chem.*, 2022, 43, 12. <https://doi.org/10.1080/17415993.2021.1975119>
15. Solvent-free, Silica Catalyzed Intriguing Conversion of 3-Hydrazonobutan-2-one Oxime into Biacetyl Bis-hydrazone Schiff Bases, R. Aggarwal, **M. Hooda**, P. Kumar, G. Sumran, *Lett. Org. Chem.*, 2021, 18, 532. <http://dx.doi.org/10.2174/1570178617999200818210859>
16. Visible-light mediated regioselective approach towards synthesis of 7-aryl-6-methyl-[1,2,4]triazolo[3,4-b]thiadiazines, R. Aggarwal, S. sharma, **M. Hooda**, D. Sanz, B. Twamley, *Tetrahedron*, 2019, 75, 130728. <https://doi.org/10.1016/j.tet.2019.130728>

17. Unusual synthesis of azines and their oxidative degradation to carboxylic acid using iodobenzene diacetate, G. Sumran, R. Aggarwal, **M. Hooda**, D. Sanz, R. M. Claramunt, *Synth. Commun.*, 2018, 48, 439. <https://doi.org/10.1080/00397911.2017.1407791>

(B) Books / Book Chapters

1. Spirooxindole derivatives as antioxidant agents' Book: Spirooxindole, Elsevier, Authors: R. Singh, P. Kumar, M. Hooda, R. Aggarwal, J. Sindhu, 2024, Chapter 18, pp 455-470, ISBN 9780443223242, <https://doi.org/10.1016/B978-0-443-22324-2.00018-7>

(C) Conference Paper

1. *A Green approach towards Regioselective synthesis of 7-aryl-6-methyl-[1,2,4]triazolo[3,4-b][1,3,4]thiadiazines* in **international conference** on "Drug Discovery" held at **BITS Pilani, Hyderabad, 29 February – 2 March, 2020**.

7. Research Projects / Grants : NA

8. Conferences / FDPs / Workshops Attended

- Participated in faculty induction programme "133rd faculty induction programme" organized by MMTTC Panjab University, Chandigarh from 01-05-2025 to 28-05-2025.
- Poster presentation on topic "A Green Approach Towards Regioselective synthesis of 5,6-dihydroimidazo[2,1-b]thiazoles" in **international conference** on "Emerging Trends in Functional Materials in Science" organized by Department of Chemistry, Maharshi Dayanand University, Rohtak on 21-22 Nov 2024.
- Oral Presentation entitled "**Visible-light-mediated regioselective synthesis of novel thiazolo[3,2-b][1,2,4]triazoles: advantageous synthetic application of aqueous conditions**" in **national conference** on "Innovations in Science, Engineering & Technology" held at **Arya P.G. College, Panipat, January , 2022**.
- Oral presentation on the topic "*An Efficient, one-pot regioselective synthesis of 2-Aryl-4-methyl-5-acylthiazoles under solvent-free conditions*" in **Young scientists' conference** organized during "**India International Science Festival 2020**" on **22-24 December, 2020** by Ministry of science and technology, Ministry of earth sciences, and ministry of health and family welfare, Govt. of India in collaboration with VIBHA.
- Poster presentation on topic "*A Green approach towards Regioselective synthesis of 5,6-dihydroimidazo[2,1-b]thiazoles*" in **international conference** on "science & technology: rural development" held at **MDU, Rohtak on 4-5 March, 2020**.
- Poster presentation on topic "*Regioselective synthesis of 7-aryl-6-methyl-[1,2,4]triazolo[3,4-b][1,3,4]thiadiazines under solvent free condition*" in **national seminar** on "Recent Trends in Chemical & Environmental Sciences", held at **Dyal Singh College, Karnal, 29 March, 2019**.
- Poster presentation on topic "*PTSA mediated one-pot synthesis of (6-methyl-3-alkyl/aryl-7H-[1,2,4]triazolo[3.4-b]thiadiazin-7-yl)(aryl/hetaryl)methanones with unsymmetrical diketones and 2-mercaptotriazoles as synthons*" in "**106th Indian Science Congress**" at **Lovely Professional University, Phagwara, Punjab, January 2019**.
- Poster presentation on topic "*Reaction of 2-bromo-1-phenylbutane-1,3-dione with thiobenzamides under CFL: an unexpected and efficient synthesis of 3,5-diaryl-1,2,4-thiadiazoles*" in **international conference** on "Frontiers at the Chemistry-Allied Science Interface" organized by Department of Chemistry, **University of Rajasthan, 21,22 December, 2018**.
- Poster presentation on topic "*A Green approach towards regioselective synthesis of (2,5-disubstituted thiazol-4-yl)alkyl/arylmethanones*" in **international conference** titled "Multifunctional Materials: Analytical Techniques and Diverse Applications" organized by department of Chemistry, **NIT Kurukshetra, 20, January 2018**.

9. Awards & Achievements: NA

10. Skills

- **Organic Synthesis:** - Expertise in carrying out various organic synthetic reaction and development of new synthetic methodologies for organic synthesis.
- **Purification Techniques:** - Purification of the organic compound to get appropriate purity using crystallization, distillation and different chromatographic techniques like prep TLC, Flash column chromatography.
- **Structure Elucidation:** - Interpretation of spectral data of synthesized compounds using 1D and 2D NMR, IR, and Mass data
- **Biological Screening:** - *In-vitro* screening of DNA/BSA targeting agents utilizing various spectroscopic approaches.
- **Molecular Docking:** - To get insight into binding mode and pose of the synthesized compounds with the aid of molecular docking.
- **Windows operating system and application softwares:-** MS Office, Chemdraw, Origin, iGEMDOCK, Discovery studio visualizer.