

Publications

Research Publications-

1. **Thomas, L.** and Uniyal, P.L. 2013. An insight into the diseases of gymnosperms and pollen induced allergies. *International Journal of Environmental Sciences*. 2(1): 1-10. [ISSN No. 2249-2127].
2. **Thomas, L.**, Ram, H., Kumar, A. and Singh, V.P. 2013. Industrial and biotechnological potential of microbial cellulases. *Journal of Plant Development Sciences*. 5(2): 237-247. [ISSN No. 0974-6382 (print), 2348-9170 (online)].
3. Kumar, A., Ram, H., **Thomas, L.** and Singh, V.P. 2013. Selection of culture media and optimization of media composition for extracellular production of lipase by *Acinetobacter* sp. AH-19. *Vegetos*. 26 (special volume): 63-66. DOI:10.5958/j.2229-4473.26.2s.138. [ISSN No. 0970-4078 (print), 2229-4473 (online)], IF= 0.9.
4. Ram, H., **Thomas, L.**, Kumar, A. and Singh, V.P. 2014. DNA Polymerases of bacterial origin. *Journal of Pure and Applied Microbiology*. 8(3): 2425-2431. [ISSN No. 0973-7510]; 31/06/2014, IF= 0.7.
5. Ram, H., Kumar, A., **Thomas, L.** and Singh, V.P. 2014. *In silico* approach to study adaptive divergence in nucleotide composition of 16S rRNA gene among bacteria thriving under different temperature regimes. *Journal of Computational Biology*. 21(10): 753-759. <https://doi.org/10.1089/cmb.2014.0116>. [ISSN No. 1066-5277 (print), 1557-8666 (online)]; 23/09/2014, IF= 1.5.
6. Ram, H., Kumar, A., **Thomas, L.**, Dastager, S.G., Mawlankar, R. and Singh, V.P. 2015. *Myroides indicus* sp. nov., isolated from garden soil. *International Journal of Systematic and Evolutionary Microbiology*. 65(11): 4008-4012. <https://doi.org/10.1099/ijsem.0.000530>. [ISSN No. 1466-5026 (print), 1466-5034 (electronic)]; 01/11/2015, IF= 2.8.
7. **Thomas, L.**, Ram, H., Kumar, A. and Singh, V.P. 2016. Production, optimization, and characterization of organic solvent tolerant cellulases from a lignocellulosic waste-degrading actinobacterium, *Promicromonospora* sp. VP111. *Applied Biochemistry and Biotechnology*. 179(5): 863-879. <https://doi.org/10.1007/s12010-016-2036-5>. [ISSN No. 0273-2289 (print), 1559-0291 (electronic)]; 08/03/2016, IF= 3.1.
8. **Thomas, L.**, Ram, H. and Singh, V.P. 2017. Evolutionary relationships and taxa-specific conserved signature indels among cellulases of Archaea, Bacteria, and Eukarya. *Journal of Computational Biology*. 24(10):1029-1042. <https://doi.org/10.1089/cmb.2016.0161>. [ISSN No. 1066-5277 (print), 1557-8666 (online)]; 01/10/2017, IF= 1.5.
9. **Thomas, L.**, Ram, H. and Singh, V.P. 2018. Inducible cellulase production from an organic solvent tolerant *Bacillus* sp. SV1 and evolutionary divergence of endoglucanase in different species of the genus *Bacillus*. *Brazilian Journal of Microbiology*. 49(2): 429-442. <https://doi.org/10.1016/j.bjm.2017.05.010>. [ISSN No. 1517 8382]; 06/11/2017, IF= 2.1.
10. Rahman, Z.¹, **Thomas, L.**¹ and Singh, V.P. 2019. Biosorption of heavy metals by a lead (Pb) resistant bacterium, *Staphylococcus hominis* strain AMB-2. *Journal of Basic Microbiology*.

- 59(5): 477-486. <https://doi.org/10.1002/jobm.201900024>. [ISSN No. 1521-4028]; 22/03/2019, IF= 3.5. ¹Authors share equal contribution
11. Rahman, Z., **Thomas, L.** and Singh, V.P. 2020. Study of As-resistant bacteria from Nadia, India and a survey of two As resistance-related proteins. *Journal of Basic Microbiology*. 60(1): 47-57. <https://doi.org/10.1002/jobm.201900373>. [ISSN No. 1521-4028]; IF= 3.5.
 12. Rahman, Z.¹ and **Thomas, L.**¹ 2021. Chemical-assisted microbially mediated chromium (Cr) (VI) reduction under the influence of various electron donors, redox mediators, and other additives: an outlook on enhanced Cr(VI) removal. *Frontiers in Microbiology*. 11: 619766. <https://doi.org/10.3389/fmicb.2020.619766>. [Electronic ISSN: 1664-302X]; 28/01/2021, IF= 4.0. ¹Authors share equal contribution
 13. Koul, M.¹, **Thomas, L.**¹, and Karmakar, K. 2021. Functional aspects of solanaceae trichomes in heavy metal detoxification. *Nordic Journal of Botany*. 39(5):1-10. <https://doi.org/10.1111/njb.03171>. [Online ISSN: 1756-1051]; 24/05/2021, IF= 0.93. ¹Authors share equal contribution
 14. Chetri, S. P., Rahman, Z., **Thomas, L.**, Lal, R., Gour, T., Agarwal, L. K., Vashishtha, A., Kumar, S., Kumar, G., Kumar, R., and Sharma, K. 2022. Paradigms of actinorhizal symbiosis under the regime of global climatic changes: New insights and perspectives. *Journal of Basic Microbiology*. 62: 764-778. <https://doi.org/10.1002/jobm.202200043>. [ISSN No. 1521-4028]; 31/05/2022, IF= 3.5.
 15. Rahman, Z., **Thomas, L.**, Chetri, S. P., Bodhankar, S., Kumar, V., and Naidu, R. 2023. A comprehensive review on chromium (Cr) contamination and Cr (VI)-resistant extremophiles in diverse extreme environments. *Environmental Science and Pollution Research*. 30: 59163-59193. <https://doi.org/10.1007/s11356-023-26624-y>. [Electronic ISSN No. 1614-7499]; 13/04/2023, IF= 5.8.
 16. **Thomas, L.**, Ram, H., and Singh, V.P. 2023. Multipurpose cellulases of *Promicromonospora* sp. VP111, with broad substrate specificity and tolerance properties. *Journal of Basic Microbiology*. 63(7): 790-800. <https://doi.org/10.1002/jobm.202200679>. [ISSN No. 1521-4028]; 25/04/2023, IF= 3.5.
 17. **Thomas, L.**, and Mago, P. 2024. Unearthing the therapeutic benefits of culinary-medicinal mushrooms for humans: Emerging sustainable bioresources of 21st century. *Journal of Basic Microbiology*, e2400127. <https://doi.org/10.1002/jobm.202400127>. [ISSN No. 1521-4028]; 22/05/2024; IF= 3.5.

Chapter in Edited Books-

1. Rahman, Z.¹, **Thomas, L.**¹ and Singh, V.P. 2017. Mercury (Hg)-microbe interactions and role of biogeochemical processes in Hg contamination. In: *Advances in Life Sciences*, Dutt, S., Tyagi, A., Bhati, H.P. and Singh, H. (Ed.), S.R. Scientific Publication, U.P., India. Professor M.U. Charaya felicitation volume, pp. 186-193. [ISBN No. 978-93-83774-28-9]. ¹Authors share equal contribution

2. **Thomas, L.** and Singh I. 2019. Microbial biofertilizers: types and applications. In: Soil Biology, Biofertilizers for Sustainable Agriculture and Environment, Giri, B., Prasad, R., Wu, Q.S., Varma, A. (Ed.), Springer Nature Switzerland AG., Volume 55, pp. 1-19. [ISBN 978-3-030-18932-7, ISBN 978-3-030-18933-4 (eBook)]. <https://doi.org/10.1007/978-3-030-18933-4>
3. **Thomas, L.**, and Rahman, Z. 2020. A genome-wide investigation on symbiotic nitrogen-fixing bacteria in leguminous plants. In: Plant Microbe Symbiosis, Varma, A., Tripathi, S., Prasad, R., (Ed.), pp. 55-73. Springer Nature Switzerland, Cham. AG 2020, [ISBN 978-3-030-36247-8, ISBN 978-3-030-36248-5 (eBook)]. https://doi.org/10.1007/978-3-030-36248-5_4
4. **Thomas, L.**, and Singh, I. 2020. Microbe-Mediated Biotic Stress Signaling and Resistance Mechanisms in Plants. In: Plant Stress Biology, Strategies and Trends, Giri, B., Sharma, M.P. (Eds.), pp. 297-334. Springer, Singapore. [ISBN 978-981-15-9379-6, ISBN 978-981-15-9380-2 (eBook)]. https://doi.org/10.1007/978-981-15-9380-2_10
5. **Thomas, L.**, Rahman, Z., Sharma, K., Nagar, D., Vashishtha, A., Kumar, G., and Chetri, S. P. 2021. *In Vitro* Biosynthesis of Natural Products in Plant Roots. In Rhizobiology: Molecular Physiology of Plant Roots, Mukherjee, S. and Baluška, F. (Eds.), pp. 475-495. Springer, Cham. [ISBN 978-3-030-84984-9, ISBN 978-3-030-84985-6 (eBook)]. https://doi.org/10.1007/978-3-030-84985-6_24
6. **Thomas, L.**, Singh, I. 2022. Intermicrobial Interactions in the Pedosphere and Their Importance. In: Giri, B., Kapoor, R., Wu, Q.S., Varma, A. (Eds.) Structure and Functions of Pedosphere. Springer, Singapore. [ISBN 978-981-16-8769-3, Online ISBN 978-981-16-8770-9]. https://doi.org/10.1007/978-981-16-8770-9_2

Research Projects (Major Grants/Research Collaboration)

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Awards

1. Awarded certificate of distinctive performance in the Third National Science Olympiad, conducted by the Science Olympiad Foundation®, India, held on 29th January, 2001.
2. Qualified NET and awarded Junior Research Fellowship, JRF (2012-2014) and Senior Research Fellowship, SRF (2014-2017) under the Council of Scientific and Industrial Research (CSIR) funding scheme. (Subject- Life Sciences, All India Rank- 59)

Scientific Services

Citations-

1. Google Scholar: Cumulative IF (38), Citations (467), h-index (8)
2. Scopus: Author Identifier (56319247600), Citations (220), h-index (7)

Administrative Responsibilities-

1. **Event coordinator** in the Annual Cultural Festival (Confluence 2007-2008) of Hansraj College, University of Delhi, Delhi- 110007, held from 20th-22nd December, 2007.
2. **Volunteer** in the cultural festival, Antardhvani-2013, of the University of Delhi, held from 22nd-24th February, 2013.
3. **Volunteer** in the 55th and 56th Annual Flower Show of the University of Delhi, held on 22nd February, 2013 and 14th February, 2014, respectively.
4. **Member of organizing committee** in the INSPIRE Program, DST, held at Hansraj College, University of Delhi from 12th - 16th December, 2017.
5. **Member of organizing committee** for two days faculty development program on Agriculture, Health and Society (Interdisciplinary) from 15th-16th March, 2019, organized by Mahatma Hansraj Faculty Development Centre, a Centre of MHRD, Govt. of India under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT), Hansraj College, University of Delhi.
6. **Resource person** in workshop on “Hands on Training Program for the Laboratory Staff”, organized by Internal Quality Assurance Cell (IQAC) and Department of Botany, Hansraj College, University of Delhi, held on 18th and 19th June, 2019 at Department of Botany, Hansraj College, University of Delhi, Delhi.
7. **Member of organizing committee** for two days webinar on “Lockdown ke dauran tann aur mann ki dekhbhal”, held on 14th-15th May, 2020, organized by Department of Botany and Internal Quality Assurance Cell, Hansraj College, University of Delhi.
8. **Reviewer** for the book on "Microbial Process in Agriculture", Springer-Nature (Series of Sustainable Agriculture Reviews; ISSN: 2210-4410), 17th November, 2020.
9. **Resource person** and judge for the IPR quiz competition, conducted as a part of student activities in webinar series on “Intellectual Property Rights: creating value from intellect, innovation and invention”, organized by the Department of Botany, Maitreyi College, from 20th-24th April, 2021.
10. **Co-convener** of Botanique: the Botanical society, Hansraj College, to organize a lecture on “Career Prospecting: Appreciating Opportunities” on the occasion of World environment day, 05th May, 2021.
11. **Reviewer** for the journal 3 Biotech, Springer Nature Switzerland AG (Electronic ISSN: 2190-5738), 12th July, 2021.
12. **Co-convener** of Botanique: the Botanical society, Hansraj College, to organize a workshop cum lecture under the series “Professional Advancements- the Roadmap to Success” on 28th August, 2021.
13. **Member of mushroom cultivation centre committee**, Hansraj College, 22nd December, 2021.
14. **Academic counselor** for IGNOU, Regional Center- DELHI2, Study Center- Hansraj College (29052), with code AVFPT1695N/001, on 8th February, 2022.

15. **Coordinator and member**, Institution Innovation Council (IIC), Hansraj College, to organize a session on “Problem Solving and Ideation”, with Internal Quality Assurance Cell (IQAC) on 22nd February, 2022.
16. **Coordinator and member**, Institution Innovation Council (IIC), Hansraj College, to organize a webinar session on “Building a Path towards Innovation and Entrepreneurship” with MIET Meerut jointly on 23rd February, 2022.
17. **Co-convener** of Botanique: the Botanical society, Hansraj College, to organize a talk on “Close Your Eyes, Open Your Mind: Experimenting and Realizing Ideas”, with Unnat Bharat Abhiyan during National Science Day, 28th February, 2022.
18. **Coordinator and member**, Institution Innovation Council (IIC), Hansraj College, to organize a virtual visit to Yakult Danone India Pvt. Ltd. (ISO 9001:2015, OHSAS 18001:2007), Sonapat, Haryana, on 20th April, 2022.
19. **Member of organizing committee** in one day international (online) conference on “Insights into the Latest Developments in Fungal Biology (ILDFB -2022)”, organized by Department of Botany and Research & Development Cell in collaboration with Mahatma Hansraj Faculty Development Centre, Hansraj College, University of Delhi, on 03rd September, 2022.
20. **Member of the Coordinator team** for conducting examinations (December 2024 to January, 2025) of CBCS graduate and postgraduate, semesters I, III, V, VII and IX, at Dr. Harisingh Gour Vishwavidyala, Sagar, M.P., on 07/12/2024.
21. **Internal Examiner** for conducting Botany practical examination of B.Sc. I Sem. (BOT-DSM-112), Biodiversity: Microbes, Algae, Fungi and Archegoniatae, at Dr. Harisingh Gour Vishwavidyalaya, Sagar, M.P., on 09/01/2025.

Participation in Co-Curricular Activities-

1. **Participated and presented a poster** entitled ‘Characterization of dyes decolorizing bacteria from textile dye industry’, in the **international conference** on Biotechnology : A Rendezvous with Basic Sciences for Global Prosperity (BTBS-2012), A Silver Jubilee Celebration organized by Society for Plant Research & Vegetos, during December 26th-27th, 2012.
2. **Participated and presented a poster** entitled ‘Production of cellulases from newly isolated multi-stress tolerant soil actinomycete *Promicromonospora* sp. VP111’, in the **national conference** on empowering mankind with microbial technologies of the 55th annual conference of association of microbiologists of India (AMI-EMMT-2014), held at Tamil Nadu Agricultural University, Coimbatore, from 12th-14th, November, 2014.
3. **Participated and presented a poster** entitled ‘Characterization of an *n*-hexane tolerant cellulase producing *Pseudoxanthomonas* sp. SV2 of Proteobacteria’, in the **national conference** on Plant Science and Research: Looking beyond 21st century for Environmental and Agricultural Revolution, held at the Department of Botany, University of Delhi, Delhi, from 5th-7th, February, 2016.
4. **Participated and presented a poster** entitled ‘Characterization and partial purification of cellulases from an actinobacterium, *Promicromonospora* sp. VP111’, in the **international**

- conference** on Technological Advancement for Sustainable Agriculture and Rural Development (TASARD-India, 2017), held at National Agricultural Science Complex (NASC), New Delhi, India, from 20th-22nd, February, 2017.
5. Participated in the **national seminar** on “Identifying and Avoiding Publishing in Predatory Journals: A Lesson for Researchers”, held at the Department of Botany, University of Delhi, Delhi- 110007, on 18th March, 2017.
 6. Participated for **poster presentation** entitled “Production of Cellulases from a Heavy Metal Tolerant Bacterium, *Bacillus* sp. SV1 and Detection of its Cellulase Gene”, in the **national seminar** on Microbes and Human Welfare on 23rd-25th September, 2017, organized by School of Life Sciences Jaipur National University, Jaipur and Society for Plant Research.
 7. Attended the **Indo-US international colloquium** on Recent Developments in Interdisciplinary Research, organized by the IQAC, Department of Chemistry, Hansraj College, University of Delhi in association with Loyola University Stritch School of Medicine, IL, USA, on 2nd July, 2018.
 8. Participated in the **international conference** on Integrative Chemistry, Biology and Translational Medicine (ICBTM-2019) from 25th-26th February, 2019, organized by the Centre for Global Health, Hansraj College, University of Delhi and Loyola University Chicago Stritch School of Medicine, USA.
 9. Participated in the **seminar** conducted by Vigyan Prasar in collaboration with Society of General Awareness, Hansraj College, University of Delhi, held on 9th February, 2019.
 10. Participated in one day **national seminar** on “Draft New Education Policy, 2019”, organized by Mahatma Hansraj Faculty Development Centre, a Centre of MHRD, Govt. of India Under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMSTT), Hansraj College, University of Delhi, on 10th August, 2019.
 11. Participated in three day **webinar** on “Covid-19: Challenges and Road Ahead”, organized by Mahatma Hansraj Faculty Development Centre, a Centre of MHRD, Govt. of India Under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMSTT), Hansraj College, University of Delhi, on 7th-9th May, 2019.
 12. Participated in three days **faculty development program** (FDP) on “Fundamentals of Intellectual Property Rights” organized by Department of Botany and IQAC in collaboration with Mahatma Hansraj Faculty Development Centre, a Centre of MHRD, Govt. of India Under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMSTT), Hansraj College, University of Delhi, on 23rd-25th January, 2020.
 13. Participated in the **webinar** on “Student Learning Centre: Objectives and Perspectives”, organized by IQAC, Hansraj College, held on 13th July, 2020.
 14. Participated and completed one week (online) **faculty development program** (FDP) on “Exploratory Data Analysis using Statistical Software R and SPSS” organized by Department of Statistics and Internal Quality Assurance Cell (IQAC) Mata Sundri College for Women, University of Delhi in collaboration with Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi, on 7th January-13th January, 2021.

15. Participated in two day **national e-conference** on “Plant Science Research: Relevance, Funding, Challenges and Opportunities” organized by Department of Botany, Hansraj College in collaboration with Mahatma Hansraj Faculty Development Centre, a Centre of MHRD, Govt. of India Under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT), Hansraj College, University of Delhi, on 16th-17th January, 2021.
16. Participated in an **international online conference** on “Genetics and Genomics Technologies for Crop Improvement” organized by Department of Botany, Hansraj College, University of Delhi and International Maize and Wheat Improvement Centre (CIMMYT), Mexico in collaboration with Mahatma Hansraj Faculty Development Centre, a Centre of MHRD, Govt. of India Under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT), Hansraj College, University of Delhi, on 1-3rd August, 2021.
17. Participated in the **webinar** on “Awareness Session on Prevention of Sexual Harassment at Workplace”, organized by Internal Complaints Committee, Hansraj College, held on 13th August, 2020.
18. Participated in two day **international online conference** on “Insect and Plant Biology: 2021” organized by Mahatma Hansraj Faculty Development Centre, a Centre of MHRD, Govt. of India Under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT), Hansraj College, University of Delhi, on 7th-8th October, 2021.
19. Participated in a six day **workshop** on “Microbes for Sustainable and Resilient Future”, sponsored by Science and Engineering Research Board under Scientific Social Responsibility, and organized by Delhi University Botanical Society, Department of Botany, University of Delhi, Delhi- 110007, from 6th-11th December, 2021.
20. Participated in **IP awareness/training program** under National Intellectual Property Awareness Mission, organized by Intellectual Property Office, India, on 12/01/2022.
21. Participated in **mushroom cultivation and faculty development program**, conducted by Enactus Shaheed Rajguru, an entrepreneurial society in collaboration with Department of Microbiology, Shaheed Rajguru College of Applied Sciences for Women, University of Delhi, from 10th September, 2021 to 22nd February, 2022.
22. Participated in the **regional meet** of Institutions Innovation Council (IIC), MoE’s Innovation Cell, held at Amity University, Jaipur, on 28th July, 2022.
23. Participated and undergone **Innovation Ambassador training** ‘Foundation Level’ (Total 15 sessions) conducted in online mode by MoE’s innovation cell & AICTE for IIC on 30/09/2022.

Memberships-

1. Life member of the International Society of Plant Morphologists (ISPM), Department of Botany, University of Delhi, Delhi- 110007, India.
2. Annual memberships of the Delhi University Botanical Society (DUBS), Department of Botany, University of Delhi, Delhi- 110007, India- 2014, 2015 and 2016.