

Dr.A. Archana

**Professor, Department of Microbiology &
Vice President of Microbiologists Society India (MAH/4814/SAT)**



Email aarchana@ss.du.ac.in

Web-Page/ Bio-data
Google Scholar: Prof. Archana Ayyagari - Google Scholar
ORCID: <https://orcid.org/my-orcid?orcid=0009-0009-9245-5507>
YouTube: <https://www.youtube.com/@mentorshipmagic>
LinkedIn: [Prof. Archana Ayyagari | LinkedIn](#)

Academic Qualifications: M.Sc (Biotechnology), Ph.D. (Microbiology), Post-Doctoral Research at Max Planck Institute, Germany

Teaching Experience (Years)	28+ years	Research Experience (Years)	33 years
Area of Research/ Specialization	Industrial Microbiology, Recombinant DNA Technology, Immunology, Food Microbiology, Microbial Biotechnology, Biochemistry, Genetics, Instrumentation and Environmental Microbiology.		
Publications	<p>(h-index: 12 i10-index: 12 Citations: 686)</p> <p>Research Publications & Reviews in National and International Journals: 16</p> <p>Laboratory Manual: 01</p> <p>Chapters in Edited Books: 08</p> <p>E-Chapters: 05</p> <p>Popular Science Articles: 03</p> <p>Papers presented in Conferences: 07</p>		
Research Publications (International/National Journals)	<ol style="list-style-type: none">1. Srivastava R and Ayyagari A. Moving towards and environmentally sustainable food sector through mitigation of food losses and wastage - A possibilarians's approach. Invertis Journal of Renewable Energy, 2021; 11(1): 42-50. Online ISSN: 2454-7611, Print ISSN: 2231-34192. Dwivedi V, Ayyagari A., Chandran R, Diwan P, Gupta S, Gupta V. Repurposing Potential of Diminazene Aceturate as an Inhibitor of the <i>E. coli</i> DNA Gyrase B. Journal of Biomedical Research and Environmental Sciences. 2020 Oct 31; 1(6): 263-270. doi: 10.37871/jbres1153, Article ID:		

	<p>JBRES1153 (Impact factor: 4.070).</p> <ol style="list-style-type: none"> 3. Chandran R, Ayyagari A, Diwan P, Gupta S, Gupta V. <i>In silico</i> Screening of Approved Drugs to describe Novel <i>E. coli</i> DNA Gyrase A Antagonists. J Biomed Res Environ Sci. 2020 Oct 26; 6(10): 233-240. doi: 10.37871/jbres1148, Article ID: JBRES1148 (Impact factor: 4.070). 4. Safikur Rahman, Archana Ayyagari, Durgashree Dutta, Vijay Kumar, Jihoe Kim, Arif Tasleem Jan, Rinki Minakshi (2019). “The onus of cannabinoids in interrupting the molecular odyssey of breast cancer: A critical perspective on UPR^{ER} and beyond”. Saudi Pharmaceutical Journal. 27(3): 437-445 (Impact factor 4.562; cited by 17). 5. Safikur Rahman, Archana Ayyagari, Arif Tasleem Jan, Durgashree Dutta, Rinki Minakshi (2019). “Molecular insight into the relationship between autoimmune thyroid diseases and breast cancer”. Frontiers in Immunology.10:344 (Impact factor 8.786; cited by 33). doi: 10.3389/fimmu.2019.00344 6. Rinki Minakshi, Safikur Rahman, Arif Tasleem Jan, Ayyagari Archana, and Jihoe Kim (2018). Implications of Ageing and Endoplasmic Reticulum Unfolded Protein Response (UPR) in the Molecular Modality of Breast Cancer. Nature Experimental & Molecular Medicine. EMM2017173RR. (Impact Factor 12.153; cited by 32). doi: 10.1038/emm.2017.215 7. Safikur Rahman, Archana Ayyagari, Mudseer Azam & Rinki Minakshi (2018). “Role of osmolytes and their transporter systems in pathogen survival and pathogenicity”. Current Drug Metabolism. 19(12):992-1001. BSP-CDM-2017-HT8-40 (Impact factor 3.408; cited by 5). 8. Safikur Rahman, Archana Ayyagari, Arif Tasleem Jan and Rinki Minakshi (2017). “Dissecting Unfolded Protein Response in managing clandestine modus operandi of Alzheimer’s disease”. Frontiers in Aging Neuroscience. 10:30. doi: 10.3389/fnagi.2018.00030 (Impact factor 4.53). 9. Safikur Rahman, Arif Tasleem Jan, Ayyagari Archana, Jiwoo Kim, Jihoe Kim and Rinki Minakshi (2017). Entanglement of UPR^{ER} in Aging driven Neurodegenerative diseases. 9:341. Frontiers in Aging
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	<p>Neuroscience. Manuscript ID: 277398 doi: 10.3389/fnagi.2017.00341 (Impact Factor 4.53).</p> <p>10. Archana A., Kaur, P., Kanodia, S., Gupta, S., Priyanka, Khuntia, P., Anant, K. A., Saha, M. K., Jaiswal, S., Sharma, A., Tiwari, A., Mehra, A., Panchal, A. and Kumar, S. (2015). <u>Evaluating Microbial & Chemical Quality of Delhi-NCR Drinking Water, enhancing its Standard and Spreading mass awareness</u>. Journal of Undergraduate Research and Innovation. Volume 1: Paper number 2. (ISSN: 2395-2334).</p> <p>11. Satyanarayana T. and Archana A. (2003). Purification and characterization of cellulase-free xylanase of a moderate thermophile <i>Bacillus licheniformis</i> A99. World Journal of Microbiology and Biotechnology 19: 53-57. (ISSN: 0959-3993, Impact Factor: 4.28, cited by 65).</p> <p>12. Archana A. and Satyanarayana T. (1998). Cellulase-free Xylanase Production by thermophilic <i>Bacillus licheniformis</i> A99. Indian Journal of Microbiology, 38:135-139. (ISSN: 0046-8991, Citation: 28, Impact Factor: 3.0; cited by 30).</p> <p>13. Archana A. and Satyanarayana T. (1997). Xylanase Production by thermophilic <i>Bacillus licheniformis</i> A99 in solid state fermentation. Enzyme and Microbial Technology, 21:12-17. (ISSN: 0141-0229 (Impact Factor 3.85; cited by 307).</p> <p>14. Sharma A., Archana A. and Satyanarayana T. (1997). <i>Enzymatic prebleaching of Paper Pulp</i>. The Botanica, 47 : 163-167. ISSN: 0045-2629 (Impact factor 0.54; cited by</p> <p>15. Banerjee S., Archana A. and Satyanarayana T. (1995). Xylanolytic Activity and Xylose Utilization by Thermophilic Molds. Folia Microbiologica, 40 (3):279-282. (ISSN: 0015-5632, Impact Factor 2.96; cited by 12)</p> <p>16. Banerjee S., Archana A. and Satyanarayana T. (1994). Xylose metabolism in a thermophilic mould <i>Malbranchea pulchella</i> var. <i>sulfurea</i> TMD-8. Current Microbiology, 29: 349-352. (ISSN: 0343-8651 (Impact Factor 2.343; cited by 40).</p>
Published Books	Nigam, A. and Ayyagari, A. (2007). Lab Manual in Biochemistry, Immunology and Biotechnology. TATA-McGraw Hill Publishing Company Limited. (ISBN 13:978-0-

	07-061767-4; cited by 81).
Articles in Edited Books / Conference Proceedings / Book Chapter	<ol style="list-style-type: none"> 1. Archana Ayyagari, Durgashree Dutta, Safikur Rahman, Rinki Minakshi (2021) Glycome in Metastasis: Glycan Remodeling and Tumor Progression. In: "The Glycome". Apple Academic Press. (eBook ISBN: 978-1003145394). 2. Archana Ayyagari, Lakshna Mahajan, Safikur Rahman, R. Minakshi (2019). Invited Chapter "Post Translational Modifications In Human Therapeutics Produced In Plant-Expression Systems" for book "Dar - Protein Modificomics" Elsevier Publications, pp. 145-169 (ISBN: 978-0128119136). 3. Lakshna Mahajan, Santosh K. Upadhyay, Archana Ayyagari, Poonam Gautam (2018). Chapter on "Gut microbiota and human health" (Chapter.ID_36581). In: "Industrial Microbiology: Microbes in Action" (Book ID: 5599) Nova Publishers, USA. 4. Vikash Kumar, Digvijay Verma, Archana Ayyagari, Tulasi Satyanarayana (2013). Chapter on "Thermostable Bacterial Xylanases". In book titled, "Thermophilic Microbes in Environmental and Industrial Biotechnology", Springer Publications, pp. 813-857. (ISBN: 978-94-007-5899-5). 5. Archana Ayyagari, A. Sharma, T. Satyanarayana (1999). Chapter on "Xylanolytic Enzymes". In book titled, "Thermophilic Moulds in Biotechnology". Springer Publications. Editors: Johri, B.N., Satyanarayana, T., Olsen, J., pp. 169-190. (ISBN 978-94-007-5899-5). Citations: 5 6. A. Archana and T. Satyanarayana (1999). Chapter on "Potential Biotechnological Applications of Thermophilic Moulds". In book entitled, "From Ethnomycology to Fungal Biotechnology: Exploiting Fungi from Natural Resources for Novel Products". Springer Publications, pp. 57-74. (ISBN 978-1-4613-7182-3). Citations: 5 7. Sharma A., Archana A. and Satyanarayana T. (1997). Reduction in organochlorine pollutants in paper pulp industry using microbial xylanases. In: Proceedings of National Symposium. 8. A. Archana and T. Satyanarayana (1993). Parametric optimization of xylanase production from <i>Bacillus</i>

	<i>licheniformis</i> A99. In: Proceedings of Thermophiles-93, December 16-18, New Zealand, pp. B40-41.
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➤ **Innovation projects undertaken (DU sponsored):**

1. Project 1 (2014-15)

Assessment of Microbial & Chemical quality of drinking water samples from various localities of Delhi NCR and checking the efficacy of various technologies available to make it potable (SSNC 205).

8 students of Microbiology and 2 students of Chemistry were guided in this project.

2. Project 2 (2015-16)

Plasmonic nanostructures in chemical and biological sensing (SSNC 302).

3 students of Microbiology and 7 students of Physical Sciences were guided in this project.

➤ **M.Sc. Dissertation guidance:**

Guided a student Mr. Abhishek Choudhary of Galgotia's University for his dissertation towards fulfilment of his post graduation.

E-chapters authored for Institute of Life Long Learning (ILLL), University of Delhi :

1. **Archana A.** (2018). *Immunodeficiency*. For B.Sc. (Honours) Microbiology, ILLL, University of Delhi. ISSN 2349-154X
2. **Archana A.** (2017). *An Introduction to Immunology*. For B.Sc. (Honours) Microbiology, ILLL, University of Delhi. ISSN 2349-154X
3. **Archana A.** (2016). *Protozoa*. For B.Sc. (Honours) Microbiology, ILLL, University of Delhi. ISSN 2349-154X
4. Garg N. and **Archana A.** (2016). *Fermented Dairy Products*. For B.Sc. (Honours) Zoology, under NME-ICT (National Mission on Education Information Communication Technology in Zoology) under MHRD Project. ISSN 2349-154X

E-chapters authored for Indira Gandhi National Open University (IGNOU):

1. Mehta P. and Archana A. (2010). **Immune Disorders**. For course Material for undergraduates and postgraduates.

Popular articles / Articles in Magazines /Newspapers:

1. **Srivastava A.**, Satyanarayana T. and Sharma A. (1998). *Ecofriendly Papermaking*. *Science Reporter*, January, 24-27. ISSN : 0036-8512.
2. **Srivastava A.** and Satyanarayana T. (1992). *Microbes for Pulping*. *Science Reporter*, September, 39-42. ISSN : 0036-8512.
3. **Srivastava A.** and Satyanarayana T. (1992). *Hot Prospects*. *Science Reporter*, June, 38-41. ISSN : 0036-8512.