

CURRICULUM – VITAE

Name : DR. (MRS.) A. ARCHANA

I. Personal Information :

Date of Birth : August 13, 1968

Citizenship : Indian

Present Position : Associate Professor

Official Address : Department of Microbiology, Swami Shraddhanand College,
Alipur, Delhi – 110 036. (UNIVERSITY OF DELHI)

Address for Correspondence: B-401, Kedar Apartments,
Sector 9, Rohini, New Delhi – 110 085, India.

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Date of Appointment in the College: 1 May 1995 (Permanent Appointment)

Total Teaching Experience : 20 Years +

Native Place : New Delhi, India

QUALIFICATIONS	UNIVERSITY/INSTITUTE	DIVISION	YEARS SPENT
B. Sc. (Zoology, Botany, Chemistry)	Gargi College, University of Delhi, India	First	1985-1988
M. Sc. (Biotechnology)	M. S. University of Baroda, Vadodara, India	First	1988-1990
Ph.D. (Microbiology)	University of Delhi, New Delhi, India	--	1990-1996
Post Doctoral Research (Molecular Biology) {on Duty Leave}	Max Planck Institute of Biochemistry, Munich, Germany	--	1999-2000

TOTAL RESEARCH EXPERIENCE : 1+5.5+1=7.5 YEARS (Details below) :-

► Topic of M.Sc. Dissertation: “**Protease secretion pathway in yeast *Yarrowia lipolytica***” from M.S. University of Baroda, India. (April 1989 to March, 2000).

Mentor : **Prof. B. B. Chattoo**

► Topic of Ph.D. Thesis: “**Xylanolytic Enzymes of a moderate Thermophile *Bacillus licheniformis* A99**” from University of Delhi South Campus (UDSC), New Delhi, India. (September 1990 to February 1996).

Guide : **Prof. T. Satyanarayana**

► Topic of Post-Doctoral Research: “**Cloning of synthetic human Ubiquitin gene in a chemolithotroph *Ralstonia eutropha* for bulk production**” from MAX-PLANCK Institute of Biochemistry, Munich, Germany. (October 1999 to September 2000).

Group Leader : **Prof. Hermann Heumann**

International /National Positions and/or Awards/ Fellowships

- i. **Deutscher Akademischer Austauschdienst (German Academic Exchange Service) - DAAD Fellowship**, through University Grants Commission for carrying out post doctoral research at Max Planck Institute for Biochemistry, Munich from July 1999 to September 2000.

- ii. **AMI Best Poster Award** at Association of Microbiologists of India (AMI) 33th annual conference at Goa in 1992.
- iii. **Young Scientist Award** at 38th AMI Conference at New Delhi in 1997.
- iv. Qualified **UGC National Eligibility Test (NET)** – Junior Research Fellowship, Senior Research Fellowship and Lecturership.

List of Students awarded/pursuing Ph.D./M/Phil.: N. A.

List of Students guided for M.Tech./B.Tech./B.Sc./M.Sc.: N.A.

INNOVATION PROJECTS UNDERTAKEN :

- i. **Completed : ONE INNOVATION PROJECT (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) [Year 2013-15].

List of Students guided in this project :

B.Sc. (H) Microbiology: Purnati Khuntia, Manti Kumar Saha, Shweta Jaiswal, Priyanka, Ayush Sharma, Anju Mehra, Anjali Panchal, Kumar Anadi Anant.

B.Sc. (H) Chemistry : Ashish Tiwari and Sumit Sharma.

- ii. **Ongoing : ONE INNOVATION PROJECT (2015-16) :** Plasmonic nanostructure in chemical and biological sensing [2015-16].

List of Students involved in the project :

B.Sc. (Physical Sciences): Pulkit, Ravi Payasi, Udit, Nikhil, Prashant Tyagi, Jass, Piyush Sharma.

B.Sc. (H) Microbiology: Shiv Gopal, Souvik Burman and Shraddha Tripathi.

Research Interest: Immunology, Genetic Engineering, Biochemistry, Instrumentation and Industrial & Food Microbiology.

Computer Literacy: MS Office (Word, Power Point, Excel), Sigma Plot, Internet usage.

Refresher/Orientation Courses attended :

1. Refresher course (four weeks) in **Biotechnology** from **Jawaharlal Nehru University (JNU)** in Biotechnology during April 19 to May 14, 1999.

2. Orientation/Refresher course (4 weeks) in **Information Technology** from Centre for Professional Development in Higher Education (CPDHE), **University of Delhi** during March 3-31, 2004.

Contribution in International/ National Conferences Seminars/Workshops :

1. Attended an IPR workshop organized by **Cluster Innovation Centre, North Campus, University of Delhi** on 4th September, 2014.
2. Attended a **Hands-on workshop on Immunology** organized by Department of Biochemistry, **Sri Venkateswara College, University of Delhi** during May 14-18, 2012.
3. Participated in **BIOTIKOS'12 : Biotechnology Emerging Trends and Opportunities in India** organized by the **Biotechnology Society of TERI University** on March 15, 2012.
4. Attended **BIOTIKOS'11 : Impact of Biotechnology on Man and Environment** organized by the **Biotechnology Society of TERI University** on March 10, 2011.
5. Presented a paper entitled "**Applications of Biotechnology : Probiotics**" at the refresher course at CPDHE on March 27, 2004.
6. Participated in a National symposium on "**Microbial technologies for Environmental Management and Resource Recovery**" at University of Delhi South Campus (UDSC) during 1-2 October **1997**.
7. Participated in a meet on "**Biotechnological Application of Microorganisms for Health, Wealth and Environment Sustainability**" at Centre for Advancement of Microbial Sciences held on 24-25 January, **1997**.
8. Participated in a National symposium on "**Biotechnology : Expanding Horizons**" at INSA Auditorium, New Delhi on October 17 and 18, **2003**.
9. Participated in International conference on "**Biology & Biotechnology of Thermophilic Microbes**", held at Department of Microbiology, University of Delhi South Campus (UDSC) during 3-7 December **2001**.
10. Participated in the First University-Industry Interaction Meet on "**Lipase research-Needs and Components**" at Department of Microbiology, University of Delhi South Campus (UDSC) during 20-21 May, **1999**.

11. Participated in a symposium on “**Pollution Abatement through Biological Treatment of Industrial Effluents**” at Centre for Pollution Control Board (CPCB), Ministry of Environment and Forest, Government of India, Delhi held on March 24, **1998**.
12. **Oral presentation on “Xylanolytic Enzymes of a moderate thermophile *Bacillus licheniformis* A99”** at 38th AMI Conference at Jamia Millia Islamia, New Delhi in **1997**.
13. **Displayed a poster on “Xylose metabolism in Thermophilic Molds”** at the 33th annual conference of Association of Microbiologists of India (AMI) at Goa University in **1992**.

LIST OF PUBLICATIONS (with title of the papers/articles, list of authors along with journal title, year of publication, ISSN/ISBN No. and Impact factor) :

Citations : 316
 H-index : 6
 i10-index :

1. **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). *Evaluating Microbial & Chemical Quality of Delhi-NCR Drinking Water, enhancing its Standard and Spreading mass awareness*. **Journal of Undergraduate Research and Innovation**. Volume 1: Paper number 2. (ISSN: 2395-2334).
2. Satyanarayana T. and **Archana A.** (2003). Purification and characterization of cellulase-free xylanase of a moderate thermophile *Bacillus licheniformis* A99. **World J. Microbiol. Biotechnol.** 19: 53-57. (ISSN: 0959-3993, Impact Factor: 1.779, Citations: 37).
3. **Archana A.** and Satyanarayana T. (1998). Cellulase-free Xylanase Production by thermophilic *Bacillus licheniformis* A99. **Indian Journal of Microbiology**, 38:135-139. (ISSN: 0046-8991, Impact Factor: 0.899, Citation: 23).
4. **Archana A.** and Satyanarayana T. (1997). Xylanase Production by thermophilic *Bacillus licheniformis* A99 in solid state fermentation. **Enzyme and Microbial Technology**, 21:12-17. (ISSN: 0141-0229, Impact Factor 2.287, Citations: 194).
5. Banerjee S., **Archana A.** and Satyanarayana T. (1995). Production of Xylanase from *Malbranchea pulchella* var. *sulfurea* TMD-8. **Folia Microbiologica**, 40 (3):279-282. (ISSN: 0015-5632, Impact Factor 1.145, Citations: 11).

6. Banerjee S., **Archana A.** and Satyanarayana T. (1994). Xylose metabolism in a thermophilic mould *Malbranchea pulchella* var. *sulfurea* TMD-8. **Current Microbiology**, 29: 349-352. (ISSN: 0343-8651, Impact Factor 1.423, Citations: **28**).

List of Books/Monographs Published (along with the Publisher's name and ISBN No. and year of Publication)

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). Citations : **23**.

Articles in Edited Books/Conference Proceedings/Book Chapter Published (along with title of the book, publisher and ISBN No. and year of publication) :

1. Lakshna Mahajan, Santosh K. Upadhyay, **A. Archana**, Poonam Gautam. (2015). Chapter on “**Gut microbiota and human health**” (Chapter.ID_36581). In book “**Industrial Microbiology: Microbes in Action**” (Book ID: 5599) **Nova Publishers**, USA. In Press.
2. Vikash Kumar, Digvijay Verma, **A. Archana**, 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).
3. **A. Archana**, 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).
4. **A. Archana**, 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**, Editors: Singh J., Aneja K.R., pp. 57-74. (ISBN 978-1-4613-7182-3).
5. A. Sharma, **A. Archana** and T. Satyanarayana (1996). “**Reduction in Organochlorine Pollutants in Paper Pulp industry using Microbial Xylanases.**” In ; Proceedings of “**National Symposium on Recent Advances in Environmental Sciences**. Editors : Grover, I., Thukral, A. K., Virek, G. S., held at Guru Nanak Dev University, Amritsar, India, March 19-20, 1996.

6. **A. Archana** and T. Satyanarayana (1996). “**Purification and characterization of Endoxylanase of *Bacillus licheniformis* A99**”. In : Proceedings of ‘**Thermophiles-96**’ at University of Georgia, Athens, Georgia, USA, p. 188, September 4-9, 1996.
7. **A. Archana**, S. Sen, K. R. Babu and T. Satyanarayana, (1996). “**Production of Extracellular xylanase, α -amylase and alkaline protease by *Bacillus* species.**” In : Proceedings of ‘**Thermophiles-96**’ held at University of Georgia, Athens, Georgia, USA, p. 270, September 4-9, 1996.
8. **A. Archana** and T. Satyanarayana (1993). “**Comparison of methods for the extraction of intracellular enzyme Xylose Isomerase from *Bacillus licheniformis* A99**”. In : Proceedings of **62nd Annual Conference of Society of Biological Chemists of India**, December 19-22, 1993.
9. **A. Archana** and T. Satyanarayana (1993). “**Parametric Optimization of Xylanase production from *Bacillus licheniformis* A99**”. In : Proceedings of ‘**Thermophiles-93**’, New Zealand, December 16-18, 1993.

Journal Proceedings/ Journals Edited (with title of the journal, year of publication etc.) : None.

e-Chapters authored for Institute of life Long Learning (ILLL), University of Delhi :

1. **Archana A.** (2014). *An Introduction to Immunology*. For B.Sc. (Honours) Microbiology, ILLL, University of Delhi. ISSN 2349-154X.
2. **Archana A.** (2014). *Protozoa*. For B.Sc. (Honours) Microbiology, ILLL, University of Delhi. ISSN 2349-154X.
3. **Archana A.** (2015). *Immunodeficiency*. For B.Sc. (Honours) Microbiology, ILLL, University of Delhi. ISSN 2349-154X.
4. Garg N. and **Archana A.** (2015). *Fermented Dairy Products*. For B.Sc. (Honours) Zoology, ILLL, University of Delhi. ISSN 2349-154X.
5. **Archana A.** and Lakshna Mahajan. (communicated). *Biological Nitrogen Fixation*. For B.Sc. (Honours) Microbiology, ILLL, University of Delhi. ISSN 2349-154X.
6. **Archana A.** (communicated). *Pioneers of Immunology*. For B.Sc. (Honours) Microbiology, ILLL, University of Delhi. ISSN 2349-154X.
7. Mehta P. and **Archana A.** (2010). *Immune Disorders*. For course Material for correspondence undergraduates/ postgraduates of Indira Gandhi National Open University (IGNOU).

e-Chapters reviewed for (ILLL), University of Delhi (uploaded / under process) :

1. “**Hypersensitivity**” by Neelja Singhal, authored for B.Sc. (Honours) Microbiology, ILLI, University of Delhi. ISSN 2349-154X.
2. “**Fermentation Process**” by Nidhi Garg and Simran Jit, authored for B.Sc. (Honours) Zoology, ILLI, University of Delhi. ISSN 2349-154X.
3. “**Organization of DNA – Prokaryotes, Eukaryotes, Viruses & Organelle DNA – Mitochondria and Chloroplast DNA**”, authored by Shailly Anand and Jasvinder Kaur, authored for B.Sc. (Honours) Zoology, ILLI, University of Delhi. ISSN 2349-154X.
4. “**Transgenic Plants**” by Ajaib Singh, authored for B.Sc. (Honours) Zoology, ILLI, University of Delhi. ISSN 2349-154X.
5. “**Gene transfer methods**” by Seema Makhija, authored for B.Sc. (Honours) Zoology, ILLI, University of Delhi. ISSN 2349-154X.
6. “**Recombinant DNA in health (Recombinant insulin and human growth hormone)**” by Poonam Sharma and Mandeep Dadhwal, authored for B.Sc. (Honours) Zoology, ILLI, University of Delhi. ISSN 2349-154X.
7. “**Fermentation Products and Downstream Processing**” by Nidhi Garg and Simran Jit, authored for B.Sc. (Honours) Zoology, ILLI, University of Delhi. ISSN 2349-154X.
8. “**Restriction Endonucleases**” by Ravi Toteja authored for B.Sc. (Honours) Zoology, ILLI, University of Delhi. ISSN 2349-154X.

Popular articles published / Articles published in newspapers etc.

1. **Srivastava A.**, Satyanarayana T. and Sharma A. (1998). *Ecofriendly Papermaking*. *Science Reporter*, January, 24-27. ISSN : 0036-8512.
2. Sharma A., **Archana A.** and Satyanarayana T. (1997). *Enzymatic prebleaching of Paper Pulp*. *The Botanica*, 47 : 163-167. ISSN: 0045-2629.
3. **Srivastava A.** and Satyanarayana T. (1992). *Microbes for Pulping*. *Science Reporter*, September, 39-42. ISSN : 0036-8512.
4. **Srivastava A.** and Satyanarayana T. (1992). *Hot Prospects*. *Science Reporter*, June, 38-41. ISSN : 0036-8512.

Other Accomplishments :

- ❖ Served as a jury member thrice during 2012 to 2014 in annual INSPIRE exhibition organized to judge and motivate All India school children at Pragati Maidan, New Delhi.
- ❖ Worked as Coordinator for a 6 weeks workshop on Entrepreneurship Skill Development Program (ESDP) for undergraduate students at Swami Shraddhanand College in affiliation with Ministry of Micro, Small and Medium Enterprises (MSME) in during August to September 2012.
- ❖ Delivered about 20 lectures in the same program.
- ❖ Served as Guest faculty for Food Microbiology and Food Technology at **Ministry of Micro, Small and Medium Enterprises - Development Institute (MSME-DI)** at Okhla, New Delhi for 4 years consistently (2012-15).
- ❖ Delivered Guest Lectures on “Immunodiagnostics” at TIBBIA College (Unani Medicine), Karol Bagh, New Delhi under the Aegis of MSME-DI in October 2012.
- ❖ Served as Guest/ Part-time faculty in Department of Microbiology, Gargi College during 1994 to 1995.
- ❖ Have served as Deputy Superintendent for Annual/ Semester Examinations (both Theory and Practicals) in college from time to time.
- ❖ Have been a member of various committees such as Purchase committee, Verification committee, EC (extracurricular activities) committee, Sports committee etc. in college in a number of academic sessions.
- ❖ Have been part of the selection committee for appointment of new *ad-hoc* faculty members in four interviews till now in my college and permanent faculty twice at Bal Bharti School, Pitampura, New Delhi by invitation.
- ❖ Have managed Microbiology Department in the capacity of Teacher-in-Charge by rotation four times till date.
- ❖ Participated intricately in the preparation of syllabi of the annual, semester, FYUP as well as CBCS modes for Microbiology undergraduates.
- ❖ Heavily involved in Paper Setting and Evaluation/Revaluation of scripts of undergraduates for the past 20 years consistently.

Professional Association and Membership of Learned Bodies

Life Membership of the following esteemed Learned Bodies :-

1. INDIAN SCIENCE CONGRESS ASSOCIATION (**ISCA**)
2. ASSOCIATION OF MICROBIOLOGIST OF INDIA (**AMI**)
3. BIOTECHNOLOGY SOCIETY OF INDIA (**BSI**)