

## Dr. Archana Moon

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Ph.D Biochemistry

### Personal Information

**Name:** Prof. (Mrs) Archana Ninad Moon

**Address:** Post Graduate Teaching Department of Biochemistry,  
RTM Nagpur University, Nagpur-440033

**Ph. No.:** +91 7798744244 (M)

**E mail Id:** moon.archana@gmail.com

**Designation:** Professor, Department of Biochemistry, Rashtrasant Tukadoji  
Maharaj Nagpur University, Nagpur-440 033, Maharashtra, India.

### Summary

More than nineteen years of diverse experience as an Academician and Researcher with significant achievements in the field of Biochemistry, Microbiology and Biotechnological applications in phytochemistry, antibiotic resistance mechanisms and cancer biology.

### Core Competencies

Cancer Biology  
Breast Cancer Metastasis to Bone  
Antibiotic Resistance Mechanisms  
Phytochemistry  
Molecular Docking  
Animal Experimentation  
Training and Workshop Organization  
Interdisciplinary Approach in Biochemistry  
Bioinformatics

### Educational Qualification

<i>Exam Passed</i>	<i>Board/ University</i>	<i>Subjects</i>	<i>Year</i>	<i>Division/%</i>
Research Degree	RTM Nagpur University	Biochemistry	2011	Ph.D
Master's Degree	Nagpur University	Biochemistry	1998	First Division 68.20%

Bachelor's Degree	Nagpur University	Biochemistry, Chemistry and Botany	1996	First Division 63.48%
Higher Secondary	MS Board	English, Marathi, Science and Maths	1993	First Division 60.00%
High School	MS Board	English, Hindi, Marathi, Science, Maths and Social Sciences	1991	First Division 65.14%
Other (Diploma/Certificate)	1) Joint CSIR-UGC NET  2) MSCIT	Life Sciences Life Sciences  Computers	1998 2000	LS JRF  86%

## Professional Experience

### Professor

Post Graduate Teaching Department of Biochemistry, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur 440033, M. S., India.

Aug 2016-Present

### Associate Professor

Post Graduate Teaching Department of Biochemistry, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur 440033, M. S., India.

Aug 2013-2016

### M. Phil. and Ph. D Supervisor (Biochemistry)

Post Graduate Teaching Department of Biochemistry, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur-440033, M. S., India.

Apr 2012-Present

### M. Phil. and Ph. D Supervisor (Biochemistry)

North Maharashtra University, Jalgaon, M. S., India.

Mar 2012-Present

**Assistant Professor**

Post Graduate Teaching Department of Biochemistry, Rashtrasant Tukadoji Maharaj  
Nagpur University, Nagpur-440033, M. S., India.  
Jun 2003-Aug 2013

**Director**

Incubein Foundation  
Incubation Centre,  
Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur-440033, M. S., India.  
January 2020-Present

**Training****IPR Training, RUSA Maharashtra Govt., India.**

RGNIPPM, Nagpur, India.  
Oct 2016

**Computer Aided Drug Designing and Virtual Screening using Schrodinger Software**

VNIT, Nagpur, India.  
Mar 2015

**Animal Cell Culture Techniques and MTT Assay**

ICSCCB, Pune, India.  
Nov 2013

**Metagenomic Analysis**

VIT, Vellore, India.  
Jun 2011

**LAMP and RT PCR for Disease Diagnostics**

CIIMS, Nagpur, India.  
Jun 2010

**International workshop cum Winter School of Immunology**

NIH, USA and DST, India, at Cochin, India.  
Aug 2008

**Research Experience****>100 M. Sc. II (Sem IV) (Biochemistry) Students Dissertation**

Post Graduate Teaching Department of Biochemistry, Rashtrasant Tukadoji Maharaj  
Nagpur University, Nagpur-440033, M. S., India.  
Nov 2014-Feb 2022

**Students registered for Ph. D. (Biochemistry) 03 Working; 02 Awarded**

Post Graduate Teaching Department of Biochemistry, Rashtrasant Tukadoji Maharaj  
Nagpur University, Nagpur-440033, M. S., India.  
Jul 2013-till date

**Research Scholar**

Post Graduate Teaching Department of Biochemistry, Rashtrasant Tukadoji Maharaj

Nagpur University, Nagpur-440033, M. S., India.  
Apr 2004 – Apr 2011

**M. Phil Supervisor**  
Bhartidasan University, India.  
2007

**Junior Research Fellow (JRF)**  
ITRC, Lucknow, India.  
2001

**Junior Research Fellow (JRF)**  
EMG Division, NEERI, India.  
2000

### Research Projects: Completed (03)

**Major Research Project: Biochemical Characterization of Bioactive Phytochemicals**  
Funded by: UGC, New Delhi, India.  
Total outlay: Rs. 13, 70, 800/- only  
Duration: 03 years + extended for 01 year  
Apr 2013 – Mar 2017

**Development of murine model for breast cancer metastasis to bone**  
Funded by: RTM Nagpur University, Nagpur, India.  
Total outlay: Rs. 3,00,000/- only  
Duration: 02 years  
Jan 2016- Dec 2017

**Development of new treatment for multidrug resistant uro-pathogenic bacterial infection**  
Funded by: RUSA, Maharashtra Govt., India.  
Total outlay: Rs. 35 lacs; Duration: 08 months (Technology Transfer Project)  
July 2016- March 2017

### Work Published: (61 till date)

**URL: <http://scholar.google.com/citations?user=qiG8iNAAAAAJ>**

1. Evaluation of phytochemical and antibacterial properties of medicinal plants.

**Archana Moon**, Aqueel Khan and B. J. Wadher

J. Curr. Sci. 9 (1): 219- 226 (2006)

2. Antibacterial activity of some medicinal plants against drug resistant isolates of human beings.

**Archana Moon**, Aqueel Khan and B. J. Wadher

Indian Drugs 44(12) December 2007; H-index: 26

<http://www.indiandrugsonline.org/>

3. Biotherapeutic antibacterial potential of *Schleichera oleosa* against drug resistant isolates.

**Archana Moon**, Aqueel Khan and B. J. Wadher

Journal of Pure and Applied Microbiology Vol. 3(1), p 181-186, 2009;

Impact Factor: 0.054

[www.microbiologyjournal.org/](http://www.microbiologyjournal.org/)

4. Biotherapeutic antibacterial potential of *Gardenia resinifera* and *Ochna gamblei* against drug resistant isolates.

**Archana Moon**, Aqueel Khan and B. J. Wadher

<http://www.indiandrugsonline.org/>

5. Biotherapeutic antibacterial potential of *Thespesia populnea* and its corresponding callus against drug resistant isolates

**Archana Moon**, Aqueel Khan and B. J. Wadher

Indian Journal of Natural Products and Resources Vol. 1 (4), December 2010, pp 444-449; H-index: 6

[www.op.niscair.res.in/index.php/IJNPR](http://www.op.niscair.res.in/index.php/IJNPR)

6. Antibacterial activity of callus tissue and leaf extracts of *Bixa orellana*

**Archana Moon** and Ninad Moon

J. Curr. Sci. 15 (2): 489-495 (2010)

7. Investigation of the antibacterial activity of *Psoralea corylifolia* leaf and callus extracts against multi drug resistant periodontal disease causing microorganisms.

**Archana Moon** and Ninad Moon

International Journal of Life Science and Pharma Research Vol.2/Issue 2/ Apr-June 2012; L122-L127

ISSN 2250-0480 (Online); Impact Index: 0. 672

[www.ijlpr.com/](http://www.ijlpr.com/)

8. Combating multi drug resistance of dental caries causing oral pathogens with extracts of some ethnomedicinal plants.

Ninad Moon and **Archana Moon**

Journal of Research Studies: Interdisciplinary for Science and Social Sciences

Issue 1; Vol. 1; March 2012; Pg 32-36

ISSN 2277-839X

9. Biotherapeutic antibacterial activity of some medicinal plants against predominant bacteria causing dental caries.

Ninad Moon and **Archana Moon**

Reviews and Research: A Journal of Life Sciences

Vol. 2; Issue 1, April 2012, Pg. 11-15 (Online)

ISSN: 2249-8656 © STM Journal

[www.stmjournals.com/index.php?journal=RRJoLS](http://www.stmjournals.com/index.php?journal=RRJoLS)

10. Periodontitis: A risk factor for diabetes mellitus

Ninad Moon and **Archana Moon**

Journal of Research Studies: Interdisciplinary for Science and Social Sciences

Issue 2; Vol. 1; June /July 2012; Pg 74-76

ISSN 2277-839X

11. Antibacterial activity of *Pongamia pinnata* leaf and callus extracts against periodontal disease causing microorganisms'  
Ninad Moon and **Archana Moon**  
Reviews and Research: A Journal of Dentistry  
Vol. 3, Issue 2, August 2012, Pages 1-7  
ISSN: 2230-8008 © STM Journal  
[www.stmjournals.com/index.php?journal=RRJoD](http://www.stmjournals.com/index.php?journal=RRJoD)
  
12. Combating multidrug resistance of predominantly occurring oral pathogenic bacteria in periodontitis with medicinal plant extracts  
**Archana Moon** and Ninad Moon  
International Journal for Environmental Rehabilitation and Conservation  
Vol IV, No. 2, 2013 (1-10); ISSN: 0975 – 6272  
[www.essence-journal.com/](http://www.essence-journal.com/)
  
13. Emergence of drug resistance in bacteria: An insight into molecular mechanism  
Pallavi Sahare, **Archana Moon** and Gangadhar Shinde  
Review article in International Journal Scientific and Engineering Research  
Issue: 4, Vol. 9; Pg: 806-818  
<http://www.ijser.org/>
  
14. Molecular modes of antibiotic action and bacterial resistance mechanism  
Pallavi Sahare, **Archana Moon** and Gangadhar Shinde  
Review article in Journal of Antimicrobial Agents (Photon)  
128 (2013) 231-245  
ISJN: 1784-6372  
<https://sites.google.com/site/photonfoundationorganization/home/journal-of-antimicrobials>
  
15. Combating the multidrug resistance of periodontitis causing microorganisms with phytochemicals derived from *Soyamida febrifuga*.  
Ninad Moon, SSV Prasad, Srikanth Guduguntla, Rajender A, **Archana Moon\*** and Srilakshmi Sela  
Research article in Journal of Research and Advancement in Dentistry (Magadh University Journal)  
2013; 2: 3s: 13-21  
pISSN 2278-0076; eISSN 2321-9270  
<http://www.jrad.co.in/>
  
16. Two Hybrid System: A Molecular Biology Tool to study Protein-Protein Interactions  
Pallavi Sahare and **Archana Moon**  
International Journal of Proteomics (Photon)  
ISJN: 7213-9032; Photon 113 (2013) 170-178  
<https://sites.google.com/site/photonfoundationorganization/home/international-journal-of-proteomics>
  
17. Combating uropathological multidrug resistant pathogens with *Soyamida febrifuga*.  
Vidya Kondbattunwar, **Archana Moon\***, Pallavi Sahare, and Gangadhar Shinde  
Asiatic Journal of Biotechnology Resources  
2014 MDIMCE-Volume 4; Issue 3

Pg: 8-12; ISSN: 2249-2399

<http://www.pacificjournals.com/ajobr>

18. A current perspective on the emergence of antibiotic resistance towards human uropathological samples

Pallavi Sahare, **Archana Moon\*** and Gangadhar Shinde

Asiatic Journal of Biotechnology Resources

2014 MDIMCE-Volume 4; Issue 3

Pg: 36-40;; ISSN: 2249-2399

<http://www.pacificjournals.com/ajobr>

19. Bixa orellana: a phytochemical rich plant with antibacterial activity

Vidya Kondbattunwar, **Archana Moon\***, Pallavi Sahare, and Gangadhar Shinde

Asiatic Journal of Biotechnology Resources

January, 2014,; Vol. 4., Issue 4; Special issue 11; Pgs. 30-33

ISSN: 2249-2399

<http://www.pacificjournals.com/ajobr>

20. Co-trimoxazole: Exceptional MDR pattern against clinical isolates of E. coli

Pallavi Sahare, **Archana Moon** and Gangadhar Shinde

Asiatic Journal of Biotechnology Resources

January 2014; Vol. 4., Issue 4; Special issue 11; Pgs. 97-100;

ISSN: 2249-2399

<http://www.pacificjournals.com/ajobr>

21. Evaluation of phytochemical and antibacterial properties of Gardenia resinifera against causative oral pathogenic bacteria of periodontitis.

Ninad Moon, **Archana Moon** and Anuroop Singhai

The Journal of Contemporary Dental Sciences (JCDS)

(North Gujarat University Journal)

2013; 3 (1); Pg: 22-28

ISSN: 2249-2917 (print); ISSN: 2249-2917 (Linking)

NLM ID: 101603549 (Serial)

22. Cross talk between bones and bone protein markers

**Archana Moon\***, Neha Bhale, Gangadhar Shinde, Pallavi Sahare and Komal Talreja

International Journal of Current Science

July 2014, 12: E 20-38

ISSN 2250-1770; ICV: 5. 08

<http://www.currentsciencejournal.info/>

23. Techniques employed for proteomic analysis of bone samples

**Archana Moon\***, Neha Bhale, Gangadhar Shinde, Pallavi Sahare and Komal Talreja

International Journal of Current Science

July 2014, 12: E 144-160; ICV: 5. 08

ISSN 2250-1770

<http://www.currentsciencejournal.info/>

24. Emergence of beta lactam resistance in clinical isolates of UTI causing pathogens

Pallavi Sahare and **Archana Moon\***

International Journal of Life Science, Environment and Technology

August 2014, Vol. 3, Issue 4, pgs. 1387-1392; Impact Factor: 0. 409; ICV: 6. 11  
ISSN: 2278-3687 (O)  
[www.ijset.net](http://www.ijset.net)

25. In vitro phytochemical analysis for combating urinary tract infection with  
*Andrographis paniculata*  
Pallavi Sahare , **Archana Moon\*** and Gangadhar Shinde  
Journal of Pharmaceutical, Chemical and Biological Sciences (JPCBS)  
August 2014, Vol. 2; Issue 2; pgs. 93-103; Impact Factor: 0. 35  
ISSN: 2348-7658  
[www.jpcbs.info](http://www.jpcbs.info)

26. Estimation of beta lactamase from multidrug resistant uropathological bacteria  
Pallavi Sahare and **Archana Moon\***  
Journal of Advancement in Medical and Life Sciences (JALS)  
Vol.1; Issue 4; pgs. 1-4; ISSN: 2348-294X; DOI: 10.15297/JALS.V1I4.01; 2014  
<http://scienceq.org/Journals/JALS.php>

27. Protein Biomarkers: In Life and After Life  
**Archana Moon**, Neha Bhale, G. B. Shinde, Pallavi Sahare and Komal Talreja  
Journal of Advancement in Medical and Life Sciences (JALS)  
Vol. 1; Issue 3; pgs.1-6; ISSN: 2348-294X; DOI: 10.15297/JALS.V1I3.01; 2014  
<http://scienceq.org/Journals/JALS.php>

28. Role of receptor activator of nuclear factor kappa b ligand (rankl) and  
osteoprotegerin (opg) in periodontal bone destruction: a review  
Ninad Moon, Mohd. Inayatulla Khan, **Archana Moon**  
Journal of Evolution of Medical and Dental Sciences  
eISSN- 2278-4802; pISSN- 2278-4748  
Vol. 3/ Issue 18; May 05, 2014; Pgs. 4781-4785; ICV: 6. 61  
DOI: 10.14260/jemds/2014/2511  
<http://www.jemds.com/>

29. An insight into pathogenesis of Herpes Simplex Virus  
**Archana Moon\***, Pallavi Sahare and Komal Talreja  
Asian Journal of Biological and Life Sciences, August, 2014  
ISSN Print: 2278-747X; ISSN Online: 2278-5957  
Vol. 3; Issue 2; pgs. 143-148.  
<http://www.pbsjournals.com>

30. Penicillin Binding Proteins: An insight into novel antibacterial drug target  
Pallavi Sahare and **Archana Moon\***  
International Journal of Science and Engineering Research  
Vol. 5; issue 8; Pg 13-23; ISSN 2259-5518(Online); ISSN 2250-0480 (Online), 2014  
<http://www.ijser.org/>

31. Brassica oleoreca: Phytochemical profiling for anti cancer compounds  
Komal Talreja and **Archana Moon\***  
International Journal of Life Sciences and Pharma Research  
Oct-Dec 2014, Vol. 4; Issue 4; pgs. L1-L10; ISSN 2250-0480 (Online)  
[www.ijlpr.com/](http://www.ijlpr.com/)



32. An Insight into breast cancer metastasis to bone  
Komal Talreja, **Archana Moon\*** and Swati Kotwal  
International Journal of Life Science and Pharma Research  
July 2015; Vol. 5/Issue 3/Pgs. L1-L19; ISSN 2250-0480 (Online)  
[www.ijlpr.com/](http://www.ijlpr.com/)
33. In vivo toxicity profile of *L. var. Capitata*  
Komal Talreja, **Archana Moon\***, Surbhi Shivhare, Ninad Moon, Akshay Dhoble,  
Sanjay Ingle and Radhika Pagey  
International Journal of Pharma and Biosciences (IJPBS)  
ISSN: 0975-6299; July 2015 6(3); Pg.: 408-419  
<http://www.ijpbs.net>
34. Brassica oleracea: A potent antioxidant therapeutic in health and diseases  
Komal Talreja and **Archana Moon\***  
International Journal of Pharmaceutical Sciences and Research  
6(10); October, 2015; ISSN(Online): 0975-8232; (Print): 2320-5148  
[www.ijpsr.com](http://www.ijpsr.com)
35. Phytochemical Profiling and Characterization of Bioactive compounds from Broccoli.  
Ravina Guriya, **Archana Moon\*** and Komal Talreja  
International Journal of Pharmacognosy and Pharmaceutical Research  
2015; 7(4); 825-831; ISSN: 0975-4873  
[www.ijppr.com](http://www.ijppr.com)
36. Therapeutic potential of bioactive phytochemicals by inhibiting beta lactamases from MDR clinical isolates.  
Pallavi Sahare and **Archana Moon\***  
International Journal of Pharmaceutical Sciences and Research  
6(11); November, 2015; SSN(Online): 0975-8232  
(Print): 2320-5148  
[www.ijpsr.com](http://www.ijpsr.com)
37. Molecular and Computational Analysis of beta-Lactamases: Comprehensive Approach towards Combating Drug Resistance by Chlorogenic acid  
Pallavi Sahare and **Archana Moon\***  
Int. J. Pharm. Sci. Rev. Res., 37(2), March – April 2016; Article No. 18, Pages: 104-109  
(IJPSRR)ISSN 0976044X  
[www.globalreserachonline.net](http://www.globalreserachonline.net)
38. Effect of nutrients on liver marker enzymes of wistar rats  
Komal Talreja and **Archana Moon\***  
International Journal of Pharmaceutical Sciences and Research  
ISSN(Online): 0975-8232  
(Print): 2320-5148; IJPSR, 2016; Vol. 7(5): 2236-2241.  
[www.ijpsr.com](http://www.ijpsr.com)
39. The analysis of phyto-ligands for TEM inhibitory potential in multidrug resistant *E. coli*

Pallavi Sahare and **Archana Moon\***

International Journal of Pharmacy and Technology

March-2016, Vol. 8, Issue No.1, 10967-10981

<https://www.ijptonline.com/>

40. In-silico modeling of beta lactam resistant Enterococcus faecalis PBP4 and its interactions with various phyto-ligands

Pallavi Sahare and **Archana Moon\***

International Journal of Pharmacy and Pharmaceutical Sciences

vol.8; issue 7; july 2016

<https://innovareacademics.in/journal/ijpps/index.htm>

41. In silico docking studies of phyto-ligands against E. coli PBP3: Approach towards antibacterial therapeutic agent

Pallavi Sahare and **Archana Moon\***

International Journal of Pharmaceutical Sciences and Research

ISSN(Online): 0975-8232; (Print): 2320-5148

Vol.7; issue 9; Sept 2016

[www.ijpsr.com](http://www.ijpsr.com)

42. Insilico docking of various inhibitors of E. faecalis folate pathway

**Archana Moon\***, Deeba Khan, Pranjali Gajhbiye and Monali Jariya

International Journal of Scientific and Research Publications

Vol.: 07, Issue 3; March 2017; ISSN:2250-3153

[www.ijsrp.com](http://www.ijsrp.com)

43. In silico studies of inhibitors of dihydrofolate reductase and dihydropterate synthase of E. coli

**Archana Moon\***, Deeba Khan, Pranjali Gajhbiye and Monali Jariya

International Journal of Pharmacy and Technology

Vol No 9. Issue1, April 2017

<https://www.ijptonline.com/>

44. Computational and biochemical analysis of myrosinase from Brassica oleracea

Komal Talreja and **Archana Moon\***

Vol No. 9, Issue 1, April 2017

International Journal of Pharmacy and Technology, IJPT

<https://www.ijptonline.com/>

45. Development of murine model for breast cancer metastasis to bone

Komal Talreja and **Archana Moon\***

Journal of Cancer Research and Treatment

Vol. 5. No. 1, 2017

<https://www.sciepub.com/journal/jcrt>

46. Anticancer Therapy: Chlorogenic acid, Gallic acid and Ellagic acid in synergism  
Journal of Pharmacy and Biological Sciences

**Archana Moon\***, Trupti Agrawal, Pooja Gupta, Nikita Kondlekar, Amit Taksande

IOSR Journal of Pharmacy and Biological Sciences (IOSR-JPBS)

e-ISSN:2278-3008, p-ISSN:2319-7676.

Volume 12, Issue 3 Ver. VI (May – June 2017), PP 48-52

<http://www.iosrjournals.org>

47. Insilico prediction of toxicity of ligands utilizing ADMETSAR  
**Archana Moon\***, Deeba Khan, Pranjali Gajbhiye & Monali Jariya  
 International Journal of Pharma and Bio Sciences  
 2017 July; 8(3): (B) 674-677  
[www.ijpbs.net](http://www.ijpbs.net)
48. Effect of Nutrient Formulation on Biochemical Markers in Developed Murine Model for Breast Cancer Metastasis to Bone  
 Komal Talreja and **Archana Moon\***  
 International Journal of Engineering Technology Science and Research  
 July 2017, ISSN 2394 – 3386  
 Volume 4, Issue 7, Pg: 20-36  
[www.ijetsr.com](http://www.ijetsr.com)
49. Sustained release effervescent floating matrix tablets of chlorogenic acid (cga): development, optimization and in-vitro evaluation  
 World Journal of Pharmacy and Pharmaceutical Sciences (WIPPS)  
 ISSN 2278-4357;  
 Mool Aditi, Belgamwar Veena, **Moon Archana\***, Walde Sheelpriya and Gupta Sunil  
 Volume 6, Issue 9, 1814-1836, 2017 Sept  
[www.wjpps.com](http://www.wjpps.com)
50. Antibacterial synergism of selected phytochemicals against MDR UTI pathogenic bacteria.  
**Archana Moon\***, Pranjali Gajbhiye, Monali Jariya, Deeba Khan, Amit Taksande  
 IJPBS, 2017 October; 8(4): (B) 135-141; ) Oct-Dec  
[www.ijpbs.net](http://www.ijpbs.net)
51. A Comparative Study of the Cytotoxic Effect of Chlorogenic Acid on Bm-12 cells from Bombyx mori (Insect) and Mammalian Cell Line  
**Archana Moon\***, Amit Taksande, Punyasha Samal, Vaijayanti Chahande, Prashant Chavhan, Manoj Rai  
 IJPBS, 2017 October; 8(4): (B)) Oct-Dec  
[www.ijpbs.net](http://www.ijpbs.net)
52. Molecular studies on fola and folp genes of uropathogenic multi drug resistant E. Coli  
**Archana Moon\***, Monali Jariya, Pranjali Gajbhiye, Deebakhan, Amit Taksande  
 IJPT, Oct 2017; ISSN: 0975-766X  
<https://www.ijptonline.com/>
53. Molecular analysis of folA and folP genes of Uropathogenic Multi Drug Resistant E. faecalis  
**Archana Moon**, Monali Jariya, Pranjali Gajbhiye, Deebe Khan, Amit Taksande  
 Science Journal, RTM Nagpur University, Vol. XIV: 34, pp. 34-40, 2018  
 UGC Approved Journal No.: 63430  
 ISSN: 09726330
54. A Comparative Analysis of L- Nicotine Content in Various Tobbaco Samples  
 Amit Taksande, **Archana Moon**, Drishti Singh  
 Science Journal, RTM Nagpur University, Vol. XIV: 34, pp. 69-72, 2018

55. Molecular and in silico studies on dihydrofolate reductase (dhfr) uropathogenic staphylococcus aureus

**Archana Moon\***, Pranjali Gajbhiye, Monali Jariya, Deebea Khan, Amit Taksande  
International Journal of Scientific and Research Publications (IJSRP) 9(1) (ISSN: 2250-3153),  
DOI: <http://dx.doi.org/10.29322/IJSRP.9.01.2019.p8575>

56. Molecular and in silico studies on dhfr of uropathogenic klebsiella pneumoniae

**Archana Moon\***, Deebea Khan, Pranjali Gajbhiye and Monali Jariya  
World Journal of Pharmacy and Pharmaceutical Sciences, vol. 8, issue 2, 900-913  
SJIF: 7.421; ISSN: 2278-4357  
[www.wjpps.com](http://www.wjpps.com)

57. DHFR: A target for novel compounds.

**Archana Moon\***, Monali Jariya, Pranjali Gajbhiye, Deebea Khan, Amit Taksande, Ashwani Singh, Hemlata Mohadikar, Pooja Palandurkar, Shivani Makode, Sneha Dhote, Sheha Gopkar  
International Journal of Pharmacy and Technology, IJPT  
Vol. No.:11; Issue: 1, Pp.31629-316  
<https://www.ijptonline.com/>

58. In-silico docking analysis of beta lactamase from Klebsiella pneumoniae with various inhibitors

**Archana Moon\***, Mohd Vashid Ansari, Anjali Wanjari, Bahuwarna Balpande, Dipali Simoniya and Kalyani Kalkar  
World Journal of Pharmacy and Pharmaceutical Sciences  
Volume 9, Issue 4, 1035-1046 ; ISSN 2278 – 4357  
[www.wjpps.com](http://www.wjpps.com)

59. Repositioning nsoids and curcumin for chemo prevention of lung cancer

**Archana Moon\***, Susmita Patel, Bhagyashree Fuke, Kanchan Kukreja, C. Shivani Sri, Tejswini Saonerkar, Prachi Raut, Rita Lakkakul and Ninad Nagarkar  
World Journal of Pharmacy and Pharmaceutical Research  
Volume 9, Issue 5, 1171-1182  
ISSN 2278 – 4357

60. Repositioning of nsoids for lung cancer treatment and augmentation by quercetin

**Archana Moon\***, Bhagyashree Fuke, Susmita Patel, C. Shivani Sri, Tejswini Saonerkar, Kanchan Kukreja, Prachi Raut, Ninad Nagarkar, Rita Lakkakul  
World Journal of Pharmaceutical Research,  
Vol. 9; Issue 7, Pg. 1795-1806, 2020  
[www.wjpr.com](http://www.wjpr.com)

61. Comparative analysis of IVF practices and adoption ratio in Nagpur division.  
Indian Journal of Social Research

**Moon\***, S. Murai, P. Ahir, S. Hedau, S. Pendse, P. Ukey, M. Rajan, P. Gajbhiye, N. Nashikkar, K. Darode, A. Mendulkar, P. Gaikwad, A. Randal and N. Nagarkar. Volume 61 no. 6 ; November - December, 2020

62. Prevalence of obesity in human males mediated by aryl-hydrocarbon receptor (AhR)  
Archana Moon\*, Virendra Meshram<sup>1</sup>, Ankita Pise<sup>2</sup>, Arshiya Mirza<sup>3</sup>, Himanshu Ukey<sup>4</sup>, Kaustubh Dandekar<sup>5</sup>, Kanchan Thamke<sup>6</sup>, Megha Kewalramani<sup>7</sup>, Nitupayasi<sup>8</sup>, Pallavi Atram<sup>9</sup>, Priti Durge<sup>10</sup>, Priya Khatri<sup>11</sup>, Samiksha Meshram<sup>12</sup>, Shweta Mishra<sup>13</sup>

International Journal of Science and Research (IJSR) ISSN: 2319-7064

SJIF (2020): 7.803

Paper ID: SR21623120734

Volume 10 Issue 6, June 2021, PP. 1661-1665

DOI: 10.21275/SR21623120734

63. Arabidopsis thaliana: its emergence as a model organism

A.N. Moon<sup>1\*</sup>, P.N. Umredkar<sup>2</sup>, A.V. Dhankar<sup>3</sup>, E.D. Sontakke<sup>4</sup>, M.S. Rajan<sup>5</sup>, S.S. Gadkine<sup>6</sup>, A.V. Petle<sup>7</sup>, N.M. Kar<sup>8</sup> and V.V. Nandeshwar<sup>9</sup>, C. S. Sri<sup>10</sup> and S. Patel<sup>11</sup>

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64. Saccharomyces cerevisiae: An opportunistic pathogen cause fungal infection in immunocompromised condition.

Archana Moon<sup>1\*</sup>, V. G. Meshram<sup>2</sup>, Shantanu D. Chilate<sup>3</sup>, Kanchan K. Thamke<sup>4</sup>, Simran S. Mankar<sup>5</sup>, Shivani S. Tayde<sup>6</sup>, Priyanka V. Bhade<sup>7</sup>, Vishal K. Kolhe<sup>8</sup>, Pallavi S. Atram<sup>9</sup>, Priti V. Durge<sup>10</sup>, Monali Jariya<sup>11</sup>

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International Journal of Innovative in Science, Engineering and Technology(IJIRSET) .

65. Escherichia coli: A Model Organism in Life Science Research

Archana Moon,<sup>1\*</sup> Virendra Meshram<sup>2</sup>, Deeba Khan<sup>3</sup>, Ankita Pise<sup>4</sup>, Arshiya Mirza<sup>5</sup>, Himanshu Ukey<sup>6</sup>, Kaustubh Dandekar<sup>7</sup>, Megha Kewalramani<sup>8</sup>, Nitupayasi<sup>9</sup>; Priya Khatri<sup>10</sup>, Samiksha Meshram<sup>11</sup>, Shweta Mishra<sup>12</sup>

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66. A Review: Drosophila melanogaster as A Model Organism to Study Memory

Archana N. Moon<sup>1</sup>, Apurva S. Mendulkar<sup>2</sup>, Sushil G. Hedau<sup>3</sup>, Nikita R. Nashikkar<sup>4</sup>, Purna R. Ukey<sup>5</sup>, Payal S. Ahir<sup>6</sup>, Pratiksha A. Gajbhiye<sup>7</sup>, Sampada P. Pendse<sup>8</sup>, Kanchan A. Darode<sup>9</sup>, Shubham R. Murai<sup>10</sup>, Aniket P. Randal<sup>11</sup>, Ninad Nagarakar<sup>12</sup>

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### Patents Filed: (04)

1. 4342/MUM/2015; Method for extraction of antibacterial Ellagic acid towards mechanistic action against proteins from MDR isolates. (Status: Published in Patent Journal: Publication Date : 04/12/2015 Journal No. - 49/2015) Form 18 submitted in Feb 2016
2. 4621/MUM/2015; Quercetin extraction method for treatment of Multidrug- resistant Urinary Tract Infection (Status: Published in Patent Journal: Publication Date : 01/1/2016 Journal No. - 01/2016) Form 18 submitted in Feb 2016
3. 4622/MUM/2015; Method for Chlorogenic acid extraction for treatment of MDR-UTI with PBP and  $\beta$ -lactamase inhibitory action. (Status: Published in Patent Journal: Publication Date : 01/1/2016 Journal No. - 01/2016) Form 18 submitted in Feb 2016
4. TEMP/E-1/9452/2017-MUM: Formulation of sustained release oral floating matrix tablet of chlorogenic acid. TATUS: Filed complete patent on 17/03/17

### Mou/Collaborations

MoU signed with Zim Laboratories Pvt. Ltd., Nagpur on 3rd August, 2016 for Collaborative Research.

NDA signed with Zim Laboratories Pvt. Ltd., Nagpur September, 2016 for Technology Transfer

### Books Published: (03+01)

1. A text book of Cytology, Plant Breeding and Evolution (2014)  
Avinash Aney and Archana Moon  
G. C. Publishers  
Nagpur, M. S., India.  
ISBN: 978-93-82962-33-5
2. A textbook of Cytology and Genetics (2012)  
Avinash Aney and Archana Moon  
G. C. Publishers  
Nagpur, M. S., India.  
ISBN: 978-81-926159-0-5
3. A textbook of Biochemistry, Molecular Biology and Biotechnology (2012)  
Avinash Aney, Archana Moon and Prashant Wagh  
G. C. Publishers  
Nagpur, M. S., India.  
ISBN: 978-81-925501-2-1
4. 01 Chapter in Environmental Protection (2008) Editor: Arvind Kumar  
Daya Publishing House, New Delhi, Ch. 37. Pp 191 to 201 ISBN: 8-7035-488-9

### Invited Talks

1. 'Protein-Protein Interactions', Workshop at CIIMS, Nagpur during June 2010.
2. 'Genome Unzipped', Workshop at CIIMS, Nagpur during June 2011.

3. 'Drug Targets: From Proteins to Genes', AICTE sponsored faculty development program during 2012.
4. 'RNA Interference: A Molecular Tool for Drug Designing' at M. H. College for Women, Jabalpur, MP, India during 2012
5. 'siRNA mediated silencing of genes: a therapeutic approach' at the Refresher Course in Life Sciences, at the Department of Biochemistry, RTMNU, Nagpur during 20th Feb, 2013 to 12th March, 2013.
6. 'Cancer Biology' at the Refresher Course in Life Sciences, at the Department of Biochemistry, RTMNU, Nagpur during 20th Feb, 2013 to 12th March, 2013.
7. 'RNA Interference: a molecular tool for drug designing and therapeutics' at The School of Life Sciences, North Maharashtra University, Jalgaon, (M. S) as a part of National Science Day Celebration on the 9th March, 2013.
8. 'Cross Talk: Cancer Cells and Tissues' at the Refresher Course, Life Sciences, at Academic Staff College, RTM Nagpur University, Nagpur, 13th March, 2014
9. 'Molecular Analysis of Multi Drug Resistance' at the Refresher Course, Life Sciences, at Academic Staff College, RTM Nagpur University, Nagpur, 13th March, 2014.
10. 'Metastasis of Breast Cancer to Bone' at the Refresher Course, Life Sciences, at Academic Staff College, RTM Nagpur University, Nagpur, 28th Feb, 2015.
11. 'Molecular Analysis of Penicillin Binding Proteins associated with  $\beta$ -lactam resistance in multidrug resistant (MDR) uropathological bacteria' at the Refresher Course, Life Sciences, at Academic Staff College, RTM Nagpur University, Nagpur, 28th Feb, 2015.
12. 'Cancer cells and tissues', at Dharampeth Science College, Nagpur, 2016
13. 'Scope of CBCS syllabus in biochemistry, Work shop for Veterinary College Faculty during March 2017
14. 'From R & D to technology transfer' National Conference during February 2018 at GN College of Pharmacy
15. STTP: Invited Talk at PIET during February, 2018 'Molecular Mechanisms of MDR'
16. 'Anticancer bioactivities of glucosinolates and nutrients for prevention and treatment of breast cancer' Refresher Course in Life Science, Academic Staff College, RTMNU, Nagpur on 15th October, 2019.

17. ‘Microbial & Molecular studies on bacterial enzymes and development of insilico strategies for combating MDR’ at the 11th National Conference on Solid State Chemistry and Allied Areas (NCSA-2019). Organized by S. K. Porwal College, Kamptee on 20-21 December, 2019.

18. ‘ Use of Computational Software for studying Ligand Binding to Proteins’ Refresher Course in Life Science, Academic Staff College, RTMNU, Nagpur on 26 August, 2020.

### **Workshops/Conferences Organized/Achievements/Important Posts held**

1. Organizing Secretary, Professor M. C. Nath Memorial Lecture Series Committee from January, 2019 to date

2. Joint Organizing Secretary, Professor M. C. Nath Memorial Lecture Series Committee from 2004 to January, 2019

3. Convener, SBC, Nagpur Chapter, India, January 2019 to date

4. Coordinator, Workshop cum Training Program ‘Continuing Skill Development Program of University’ January 2012 till date.

*Treasurer, Global Biotech Forum, 16th June, 2012 for a period of 05 years.*

5. Member, Vision Document Preparation Committee, for preparing Vision Document for 20 years of the University Department of Biochemistry, RTMNU, Nagpur during November 2012.

6. Visited NMU, Jalgaon to attend the GBF meeting to form the Steering Committee for conducting the third Global Sustainable Biotechnology Conference, on the 20th November, 2012 in the capacity of Treasurer of GBF.

7. Co-ordinator, Refresher Course in Life Sciences, Theme: Perspectives in Life Science Research during 20th Feb, 2013 to 12th March, 2013 at the Department of Biochemistry, RTMNU, Nagpur which was supported by Academic Staff College, RTMNU and UGC, N. Delhi.

8. Admission Committee Member, RGBC Entrance Examination for M. Sc. I, Biotechnology, RTMNU, Nagpur, 2013

9. Advisory Committee Member, UGC Sponsored State Seminar on Exploration of Biochemistry and Molecular Biology for Betterment of Human Life, Organized by Arts and Science College, Pulgaon, Distt. Wardha.

10. Co-ordinator, Continuing Technical Skill Development Program on ‘ Research Skills: Animal Use, Statistical Analysis and Soft Skills Development’, 13-15 February, 2014.

11. Member, Steering Committee, 3rd Global Sustainable Biotechnology Congress, organized by GBF, NMU, Jalgaon and CETY’S University, Mexico, 1-5 December, 2014.



12. Expert- Institutional Biosafety Committee, NMU, Jalgaon, 2015-2016
13. Co-ordinator, one day workshop on 'Innovative Platforms for research under technology Park, RTMNU, Nagpur on 23rd February, 2016
14. Member, Task Force Committee in Biochemistry, RTMNU, Nagpur, 2015-16, 2016-17
15. Member, BOS, Biochemistry, RTMNU, Nagpur 2018 onwards
16. Research Expert, BOS Biochemistry, MAFSU, Maharashtra 2019-2024
17. Member, BOS, Continuous Education and Life long Learning, RTMNU, Nagpur.

#### **Posters/Oral Papers Presented: Awards won: 12**

1. Deeba Khan: dihydrofolate reductase: a target for novel antibiotics : VYSC 2019 Post Graduate Department Of Biochemistry, LIT Premises, Amravati Road, Nagpur . VYSC-2019 third prize Poster
2. Molecular analysis of AmpC  $\beta$ L: New avenues to combat drug resistance (Second Prize)  
Pallavi Sahare and Archana Moon \*  
Avishkar 2016, Stage IV; Organized on: 10-12 Jan'2016, Savitribai Phle Pune University, Pune
3. DHPS: an enzyme with potency to curb mdr in bacterial (Second Prize)  
Khushboo Agrawal and Archana Moon \*  
Two days national conference on Agribiosciences; Organized by: Dr. Ambedkar College , Nagpur , 25-26 Feb, 2016
4. Investigation Of Dhfr From Co-Trimoxazole Resistant Uropathogenic Bacteria (First Prize) Sauda Sheikh and Archana Moon \*  
Raman Science Centre, Nagpur, 18-20th Feb, 2016
5. Investigation Of Dhfr From Co-Trimoxazole Resistant Uropathogenic Bacteria (First Prize) Deeba Khan, Monali Jariya  
Supervisor: Dr. Archana Moon  
Avishkar 2016, Stage II Organized on: 21st Dec, 2015; Mohta Science College, Nagpur
6. Pencillin Binding Proteins:Antibacterial Targets with new avenues (Best Research Paper Award) Pallavi Sahare and Archana Moon\*  
National Conference Organized by Sevadal Mahavidhyala, Nagpur  
4th October, 2015
7. Anti-Cancer Bioactivity and Toxicological Studies of Brassica oleracea Extract Nutrient for the Prevention and Treatment of Breast Cancer Metastasis to Bone

Komal Talreja and Archana Moon\*

International Symposium on Current Advances in Radiobiology, Stem cells and Cancer Research Feb 19-21, 2015

School of Life Sciences, JNU, New Delhi.

Published in Proceedings: Nature India (Nature Publishing Group)

8. Anticancer Bioactivity of Brassica oleracea and Dietary Nutrients as Supplements for the Prevention and treatment of breast cancer. (Awarded Best Oral Presentation)

Komal Talreja and Archana Moon\*

1-5 Dec, 2014 International Conference at NMU, Jalgaon, GSBC

9. Molecular analysis of Penicillin Binding Proteins associated with beta-lactam resistance in multidrug resistant (MDR) uropathological bacteria. Pallavi Sahare and Archana Moon\*

1-5 Dec, 2014

International Conference at NMU, Jalgaon, GSBC

10. Antibacterial activity of crude extracts from plant parts and corresponding calli of *Schleichera oleosa* (Poster Presentation) 78th Annual Meeting of Society of Biological Chemists (India)

30th October - 1st November, 2009.

NCCS and University of Pune.

*Sphaeranthus indicus*: A biopharmaceutically significant antibacterial agent against drug resistant isolates (Poster Presentation) 18-20 December, 2008, SBC, IIT, Chennai

11. Investigation of antibacterial activities of some ethno medicinal plants (Poster presentation) 2nd Biotech Congress, 18th- 21st December, 2006, RGBC, RTMNU, Nagpur.

### Related Accomplishments

Examiner & Paper Evaluator : Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur.

- Attended more than 85 National and International Conferences, Symposia, Workshops and Seminars since 2003 till date. More than 45 Abstracts published in proceedings of various National and International Conferences.
- Referee to International Journals:
  - African Journal of Biotechnology,
  - African Journal of Microbiology,
  - International Journal of Life Science and Pharma Research,
  - Reviews and Research: Journal of Life Science,
  - British Journal of Pharmaceutical Research,
  - International Journal of Microbiology and Immunology Research
  - BMC Reports

Referee to National Journal:

- Indian Journal of Applied Research

Editor:

A biannual Departmental Newsletter- eBioResource since January 2012 till date.

Participation in Corporate Life:

- University/ Institution level Faculty meetings attended as and when required and scheduled by the HOD/Administration.
- Co-Curricular Activities: Actively participated in the all co-curricular activities.
- Enrichment of Campus Life (hostels, sports, game, cultural activities):  
Participated in games and sports during the annual social gathering.
- Students Welfare and Discipline: Actively engaged in student welfare and maintenance of discipline on the campus.
- Membership/Participation in Bodies/Communities on Education and National Development: Member of Board of Studies in Biochemistry, RTM NU, Member of Board of Studies in Biochemistry, Jabalpur University, Jabalpur.
- Professional Organizations of Teachers: Member of Association of University Teachers (AUT), Nagpur University, Nagpur.
- Member of Nagpur University Teachers Organization (NUTO), Nagpur University, Nagpur.
- Subject Expert: Appointment of TGT and PGT teachers' in JNV, HRD Ministry, Pune during 2012-2013 and 2013-2014.
- Subject Expert: Appointment of Assistant Prof. in Biochemistry, Hislop College, Nagpur during July 2014.
- Member, Advisory Committee: Technology Park, RTMNU, Nagpur during August 2014.
- Chairman: Ph. D Viva-Voce, Biochemistry, NMU, Jalgaon, 2014.
- Subject Expert: For screening of Research Proposal under RGSTC, Maharashtra Govt. for NMU, Jalgaon during November 2014 and February, 2015.
- Task Force Member in Biochemistry, RTMNU, Nagpur-2015-2016
- Member, Board of Studies in Biochemistry, RTMNU, Nagpur during 2018-23

- **Refresher and Orientation Courses**

- 54th Orientation Program (UGC & Academic Staff College, Nagpur) from 20/9/2006 to 17/10/2006

- Refresher Course in Life Sciences (UGC & Academic Staff College, Nagpur) from 27/02/2008 to 18/3/2008
- Refresher Course in Life Sciences (UGC & Academic Staff College, Nagpur) from 22/02/2010 to 14/03/2010
- Refresher Course in Life Sciences (UGC & Academic Staff College, Nagpur) from 04/03/2011 to 24/03/2011

## Honorary Fellowship

Honorary Fellowship: Awarded in 2005 by Society for Sciences for Research Contribution in the field of Biochemistry

## Professional Membership

- Life Member: Society of Biological Chemists' India. Life Member: Society for Science, India.
- Life Member: Indian Immunology Society, India.
- Life Member: Marathi Vigyan Parishad, Nagpur
- Life Member: Global Biotech Forum, Nagpur.
- Life Member: Dr. Ambedkar Teachers' Association, Nagpur.
- Life Member, Indian Science Congress Association, India.

## NCBI-Gene Bank Submissions

*Nucleotide Sequences Submitted to NCBI-Gene Bank (58 till date)*

*Gene bank accession number received for 28 PBP genes, 18 AmpC  $\beta$ -lactamase alleles, 06  $\beta$ -lactamase OXA alleles and 06  $\beta$ -lactamase TEM alleles from NCBI/2015*

1. BankIt1796438 Seq1 assigned accession no. KP724846
2. BankIt1796438 Seq2 assigned accession no. KP724847
3. BankIt1796438 Seq3 assigned accession no. KP724848
4. BankIt1796438 Seq4 assigned accession no. KP724849
5. BankIt1796438 Seq5 assigned accession no. KP724850
6. BankIt1796438 Seq6 assigned accession no. KP724851
7. BankIt1798302 Seq1 assigned accession no. KP760834
8. BankIt1798302 Seq2 assigned accession no. KP760835
9. BankIt1798302 Seq3 assigned accession no. KP760836
10. BankIt1798302 Seq4 assigned accession no. KP760837
11. BankIt1798302 Seq5 assigned accession no. KP760838
12. BankIt1798302 Seq6 assigned accession no. KP760839
13. BankIt1810083 EC1 assigned accession no KR010370
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52. BankIt1819525 Seq7 assigned accession no KR422416
53. BankIt1819525 Seq8 assigned accession no KR422417
54. BankIt1819529 Seq1 assigned accession no KR422418
55. BankIt1819529 Seq2 assigned accession no KR422419
56. BankIt1819529 Seq3 assigned accession no KR422420
57. BankIt1819529 Seq4 assigned accession no KR422421
58. BankIt1819529 Seq5 assigned accession no KR422422

## References

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