**Dr. Jagriti Narang**

**Affiliation:** Department of Biotechnology, Jamia Hamdard, New Delhi
**Official Address:** Department of Biotechnology, Jamia Hamdard, New Delhi

## Vision and objective:

Looking for a challenging career, where there is scope of infinite research , always look for a positive and bigger outlook, thrive on imagination and passion, rigorous thinking and boundless curiosity, sets level and standard beyond expectations, attitude is everything.

## Major Highlights of our Research

- Preparing commercial paper based device for the detection of **Dengue (Biosensor and Bioelectronics Published 7.7) and Chikungunya (Patent filed)** which is the **need of the hour** and have an explicit **impact on our society.**
  **•Captured by Economic Times, Dainik Jagran, Press Trust of India, News Channel on 12 July 2017**
- **Reducing rape crimes and making drinks safer with Paper based Microfluidics to civilize our society.** Charm:
  - **Published** (**Impact Factor 7.7)** doi.org/10.1016/j.bios.2016.08.043.
  - Captured by **Economic Times, The Tribune, Yahoo News** on 2 November 2016 as **"Indian scientist develops paper chip to detect date rape drug ketamine"**
  - Colorimetric **smart phone App.** based detection **(Patent filed)**
- **Agriculture** oriented project **"Improvement in Zinc use efficiency in Wheat and Rice Crop by engineered nanoparticles"** granted by **Nanomission DST** in 2016 with an aim to have an impact on society.
- **Diagnosis of highly infectious diseases:** Hepatitis B sensor **(Published 7.7) and** CMV,
- **Analysis of Toxicity of drugs (30 publications)**
- **Enzymatic and Non-enzymatic sensors (30 publications)**
  - **Commercialization:** We have modified the conventional PCR procedure **(Patent filed)** which will soon be available in marketed**.**

- Our research group is involved in coupling of smart molecules onto the sensing interface for determination of various serum metabolites, drugs, and diagnosis of diseases. We have developed **paper based analytical devices** which offers many advantageous features. POC diagnostics helps in providing the prospects for early detection of disease which can cause timely management to resolve the healthcare problems. Economical platform such as paper based analytical devices offers an exciting possibility in the area of POC diagnostics. PAD is replacing the use of expensive metal based electrodes in diagnostic assays which is a good shift for commercialization.

- We have developed a paper based analytical device for the determination of rape drugs in drinks. Illegal usage of such hypnotic drugs spiking them in alcoholic drinks, it produces psychotomimetic effects with added sedation and unconsciousness at higher doses.

- ❖ Consequently screening of this drug is at paramount significance to steer clear of the crimes on reluctant victims.
- ❖ Further modifications in this direction we have linked the device with smart phone App which enables to send message to selected numbers if the person is in danger.

## Statement of teaching

- ➢ Teaching Ph.D, BTech and MTech students 3rd Feb, 2014- till date -Assistant Professor, Amity University, Noida (U.P).
- ➢ Taught BPharma and MPharma students 28th Aug, 2012- 1st Nov, 2012-Assistant Professor, BS Anagpuria Institute of pharmacy, Faridabad, India
- ➢ Taught BSc. students 16th Oct '06- 31st March '08-Lecturer-, Department of Biotechnology, DAV College, Yamuna Nagar, Haryana.

  Teaching should be with new pedagogical advanced methods in order to improve teaching protocol. I always try to improve my skills in teaching with new advanced approach. As a teacher, I believe in mixing up my teaching based on the material, rather than trying to fit the material into the same pedagogical box. In each class, at the very least, I try to engage students in a variety of ways, with visuals, sounds, and words.

## Awards/Achievements

| **Awarding Agency or organization** | **Purpose** | **Year/ Nature of the award** |
|---|---|---|
| SERB (Science and Engineering Research Board) | Project Granted | 2013/Early career Research Award |
| ICMR (Indian Council of Medical Research) | Research work published in reputed journals | 2013/ Shakuntla Amir Chand award |
| MDU (Maharishi Dayanand University) | Extraordinary work done during PhD | 2012/Silver medal |
| DBT (Department Of Biotechnology) | Travel fellowship | 2015/ Travel Fellowship |
| CICS (Centre for International Co-operation in Science) | Travel fellowship | 2015/ Travel Fellowship |
| Sentinal of Science award | Awarded as one of the top 10 percentage of the researchers contributing to the peer review | 2016/Awarded as one of the top 10 percentage of the researchers contributing to |

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| | process | the peer review process |

- Best poster award in poster presentation on organized by Amity institute of applied sciences ICRTDM , Noida during Dec. 15-17, 2015.
- Honored as **Young Scientist Award (Women) - 2017** by prestigious organization (HTMS) for best research work of societal impact
- Best presentation award to our research work on **Date rape drug analysis by different mode of sensing** was given by most repute international event, i.e **EMRS European material research society held at Poland, Warsaw.**
- **HAU Merit scholarship holder** throughout Bachelor's & Master's degrees.
- **Best poster award in poster presentation on Carbon Materials 2012 (CCM) organized by Indian carbon society in Bhabha Atomic Research centre, Mumbai during Nov. 1-3, 2012.**
- **Editorial Board Member**

  **(i)** **Neuroscience and Biomedical Engineering** (Bentham science Publisher).

  **(ii)** **Current Clinical Pharmacology** (Bentham science Publisher).

  **(iii)** **Current nano-medicine** (Bentham science Publisher).

  **(iv)** **Guest editor of issue in Journal of Nanotechnology (Hindwaii Publisher)**

  **(v)** Advances in Biochemistry

  **(vi)** Journal of HIV and AID infections, open access, (Annex publisher)

  **(vii)** Served as Guest Editor of **Sensors and Transducers**

**Memberships**

- Life time member of Society of biological chemists, Bangalore (India)
- Member of **American Chemical Society** vide ACS member number is **31472470**.
- Member of Material today community and material research society (MRSI).
- Member of International association of advanced materials (IAAM)
- Reviewer of international journals like Process Biochemistry, Biosensors and Bioelectronics, Material chemistry and Physics, Material science and engineering C, Physical chemistry physics, Science PG review, Micro & Nano Technology and for many international conferences.
- **International Program Committee members for the 1st International Conference on Sensors Engineering and Electronics Instrumental Advances which is scheduled to be 21-22 November 2015 in Dubai, UAE , ALLSENSORS 2016 April 24 - 28, 2016 - Venice, Italy and in 2nd International Conference on Sensors and Electronic Instrumental Advances (SEIA' 2016) 22-23 September 2016, Barcelona, Castelldefefs, Spain, IMST 2017, China 20-22 Oct, 2017, ICNFCM2017, July 22-23, Honkong.**

**Research Highlights**

- Research is highlighted in **Nature India as "Lab-on-chip to detect diazepam" on 1 st Aug, 2017.**
- Research is highlighted in **Nature India as "Biosensor for dengue virus" on 20 June, 2017.**
- **Research is highlighted in Economic Times, Yahoo news, the tribune as "Indian Scientists Develop Inexpensive Sensor to Detect Date Rape Drug" on Nov, 2016.**
- Research is highlighted in **Nature India as "Knock-out drug sensor for making drinks safer" on Nov, 2016.**
- Research is highlighted in **Nature India** as "**Sensor for detecting hepatitis B virus"** on 22 July 2016.
- Research is highlighted in **Nature India** as "**Brain protein as pesticide sniffer**" on 13 October 2011
- Research is highlighted in Proteomics weekly as "Studies from J. Narang and colleagues yield new information about enzyme research" on February 8, 2010.
- Research is published in Biotech Week, Biosensing Studies from Department of Biochemistry in the Area of Biosensing Reported on April 10th, 2013.

**Research Guidance**

Guided 10 MTech students on various projects

2Ph.D students (Ms. Chaitali Singhal and Ms. Annu Mishra) supervised to Completion

**Books**

**Book edited : 2 Chapters: 8**

**Edited Book Published:**

1. Edited and Authored by Dr. Jagriti Narang and Prof. C. S.Pundir **Title:** Biosensors: An Introductory Textbook (Pan Stanford publishing, distributor: Taylor and Francis group) vide ISBN-10: 9814745944 ISBN-13: 978-9814745949 (Invited for Edition).

2. Edited and Authored by Dr. Jagriti Narang and Prof. C. S.Pundir **Title:** An Introductory Textbook Handbook for carbon nanotubes and its application (Bentham publisher) vide no. 9781681085951-17-1738.

**Book Chapters**

- Nanomaterials Jagriti Narang, Nitesh Malhotra, Chandra Shekhar Pundir, and Tulika Dhaiya **Title:** Biosensors: An Introductory Textbook vide ISBN-10: 9814745944 ISBN-13: 978-9814745949.
- Synthesis of Individual Nanomaterials Jagriti Narang and Chandra Shekhar Pundir **Title: B**iosensors: An Introductory Textbook vide ISBN-10: 9814745944 ISBN-13: 978-9814745949.
- Characterization Techniques Jagriti Narang and Rachna Rawal **Title:** Biosensors: An Introductory Textbook vide ISBN-10: 9814745944 ISBN-13: 978-9814745949.
- Fabrication of Sensors for Electrochemical Determination **Title:** Biosensors: An Introductory Textbook vide ISBN-10: 9814745944 ISBN-13: 978-9814745949
- Electrochemical Techniques Jagriti Narang, and Chandra Shekhar Pundir **Title:** Biosensors: An Introductory Textbook vide ISBN-10: 9814745944 ISBN-13: 978-9814745949
- Fabrication of Sensors for Electrochemical Determination Jagriti Narang, and Chandra Shekhar Pundir **Title:** Biosensors: An Introductory Textbook vide ISBN-10: 9814745944 ISBN-13: 978-9814745949
- Role of carbon nanotubes in tissue engineering Jagriti Narang, Tulika Dhaiya and C.S. Pundir. **Title:** An Introductory Textbook Handbook for carbon nanotubes and its application Introduction to Carbon Nanomaterials, 2017, Vol. 1, 208-235 (Bentham publisher). 9781681085951-17-1738
- Composites in biomedical engineering Jagriti narang, C.S.Pundir, Vinay Narwal Multi-Volume SET (1-9) " Composites in Biomedical Engineering (Elsevier Publisher)
- Methods in Enzymology volume 609 Jagriti narang, Nellam Yadav, C.S.Pundir, Anil Kumar chillar Edited by Challa V. Kumar ISBN-13: 978-0128152409 ISBN-10: 0128152400(Elsevier Publisher)

**Patent Filed**

| S. No | Title of the Patent/copyright | Names of inventors with affiliation | IPR agency | Year |
|---|---|---|---|---|
| 1) | Nanoheterostructure composite for sensing metformin | 1)Dr. Jagriti Narang<br>2) Prof. C. S. Pundir<br>3) Prof. Gajendra Singh<br>4)Ms Chaitali Singhal | Indian patent, 2430/DEL/2015 | 2015 |
| 2) | Wheelchair having armrest cum transfer board with anti-skid mechanism Indian patent, | 1) Dr. Jagriti Narang | Indian patent, 2955/DEL/2015. | 2015 |
| 3) | Method for enhancing the PCR amplification by using MgO nanoparticles no. “07/12/2015 | 1)Dr. Jagriti Narang<br>2)Dr. Nidhi Chauhan<br>3) Ms Chaitali Singhal<br>4) KV Shrivatsan<br>5) Dr. Vanita Chandel | Indian patent, 3972/DEL/2015 | 2015 |
| 4) | Flexible Planter Fasciitis Prop | 1) Dr. Jagriti Narang | Indian patent, | 2016 |

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| | patent | | 201611003247. | |
| 5) | A System and Method for Smearless Detection of DNA with Various morphologies of Zinc Nanomaterials In Agarose Gel Electrophoresis | 1)Dr. Jagriti Narang<br>2) Ms Chaitali Singhal<br>3) Anoop krishnan<br>4) Dr. Vanita Chandel | Indian patent, 201611012990 | 2016 |
| 6) | Methylene blue doped silver core and palladium shell nanohybrids on transparent glass substrate for impedimetric sensing of alprax | 1)Dr. Jagriti Narang<br>2) Ms Chaitali Singhal<br>3) Anoop krishnan | Indian patent, 201611014938 | 2016 |
| 7) | Self-shoulder mobilization unit" in Indian Patent House | 1) Dr. Jagriti Narang | Indian patent | 2016 |
| 8) | Naked-eye quantitative assay on paper device for date rape drug sensing via smart phone APP | 1)Dr. Jagriti Narang<br>2)Dr. Ashish Mathur<br>3) Dr. Ashwani Kumar Dubey<br>4) Ms Chaitali Singhal | Indian patent , 201611025138 | 2016 |
| 9) | An economical portable paper based Chikungunya genosensor for resource constrained settings | 1)Dr. Jagriti Narang<br>2) Ms Chaitali Singhal<br>3)Dr. Ashish Mathur | Indian patent , 201611035711 | 2016 |
| 10) | Electrochemical Biosensor towards Point-of-Care of Hepatocellular Carcinoma Prognosis | 1) Dr. Deepshika Khatre<br>2) Dr. Jagriti Narang<br>3) Ms. Sandhya | Indian patent , 201711026346 | 2017 |
| 11) | Electrochemical detection of hepatocarcinoma for the early detection. | ) Dr. Deepshika Khatre<br>2) Dr. Jagriti Narang<br>3) Ms. Sandhya | Indian patent , 291811008366 | 2018 |

**Educational qualification**

| Education | College/University | Percentage % | Year of |
|---|---|---|---|
| Ph.D in Biochemistry &Genetics | Maharishi Dayanand University | Silver medal | 2012 |
| M Phil. In Biotechnology | Vinakaya Mission University | I | 2008 |
| MSc. ,Major in Biotechnology & Molecular Biology; Minor in Biochemistry | College of Basic Sciences & Humanities, Haryana Agricultural University, Hisar | 76.2 | 2006 |
| B.S.c.(Hons)Agriculture (4 year) | College of Agriculture, Haryana Agricultural University, Hisar | 70.3 | 2004 |
| XII | CBSE, New Delhi Shiksha Bharti Public School, Rohtak (Haryana) | 75.4 | 1999 |
| X | CBSE, New Delhi, Vishwakarma Public School, Rohtak (Haryana) | 71.8 | 1997 |

**Work Experience:** Total experience 5 **years**

| **Name of the Employer/Organisation** | **Post Held** | **From** | **to** | **Nature of duties** |
|---|---|---|---|---|
| Amity University, Noida (U.P) | Assistant Professor | 3rd Feb, 2014 | Till date | Research and Teaching |
| University of Health Sciences, Rohtak | Young Scientist | 24th August, 2013 | 3rd Feb, 2014 | Research and Teaching |
| BS Anagpuria Institute of pharmacy | Assistant Professor | 28th Aug, 2012 | 1st Nov, 2012 | Research and Teaching |
| Biochemistry Research laboratory, MD University, Rohtak, Haryana | Research assistant | 1st April, 08 | 31st March,09 | Research |
| Department of Biotechnology, DAV College, Yamuna Nagar, Haryana | Head of the department | 16th Oct '06 | 24th April '07 | Teaching |
| Department DAV College, Yamuna Nagar, Haryana | Lecturer in Biotechnology | 3rd July '07 | 31st March '08 | Teaching |

**Publication Achievements:**

Total Research papers: **73** International Paper**: 70** ; National Paper: 2. Conference Proceedings: 3 Total impact factor**: 206** **A**verage Impact: **2.86**

| **S.No** | **Papers Title** | **Authors** | **Journal impact factor** |
|---|---|---|---|
| 1. | Impedimetric genosensor for ultratrace detection of hepatitis B virus DNA in patient samples assisted by zeolites and MWCNT nanocomposites | **Jagriti Narang**, Chaitali Singhal, Sumit Narang, Anoop Krishna PN, Riya Gupta, Ruby Kansal and C.S. Pundir. Biosensor and bioelectronics 86 (2016) 566–574"**. (Corresponding Author)** | 7.7 |
| 2. | Detection of chikungunya virus DNA using two- | Chaitali Singhal, Manika Khanuja, Nahid Chaudhary, C.S. Pundir, Jagriti Narang **Scientific** | 4.259 |

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|---|---|---|---|
| | dimensional MoS2 nanosheets based disposable biosensor | **Reports (Nature) (2018) 8:7734 (Corresponding Author).** | |
| 3. | Point of care with micro fluidic paper based device integrated with nano zeolite - graphene oxide nanoflakes for electrochemical sensing of ketamine | **Jagriti Narang**, Chaitali singhal; Ashish mathur; Dhritiman chakraborty; Anusree anil; Aviraj ingle; C.S. Pundir, Biosensors and Bioelectronics 88 (2017) 249-257 **(Corresponding Author)** | 7.7 |
| 4. | Electrochemical impedimetric detection of anti-HIV drug taking Gold nanorods as a sensing interface, | **J. Narang**, G. Singh and C.S. Pundir, Biosensors and Bioelectronics 66 (2015) 332–337 **(Corresponding Author).** | 7.7 |
| 5. | A genosensor for detection of consensus DNA sequence of Dengue virus using ZnO/Pt-Pd nanocomposites. | Chaitali singhal, C.S. Pundir, and **J. Narang** Biosens. Bioelectron. 97 (2017) 75-82 **(Corresponding Author).** | 7.7 |
| 6. | Ultrasensitive electrochemical immuno-sensing platform based on gold nanoparticles triggering chlorpyrifos detection in fruits and vegetables | Anita Talan, Annu Mishra, Sergei A. Eremin, Jagriti Narang, Ashok Kumar, Sonu Gandhi Biosensors and Bioelectronics<br>Volume 105, 15 May 2018, Pages 14–21 | 7.7 |
| 7. | Immobilization of rat brain acetylcholinesterase on ZnS and poly(indole-5-carboxylic acid) modified Au electrode for detection of organophosphorus insecticides, | N. Chauhan, **J. Narang** and C.S. Pundir, Biosens. Bioelectron. 29 (2011) 82– 88. | 7.7 |
| 8. | Replacement of magnesium chloride with magnesium nanoparticles in polymerase chain reaction. | **Jagriti Narang** et. al. Nature protocol Protocol Exchange (2016) doi:10.1038/protex.2016.021**(Corresponding Author).** | |
| 9. | Hydrothermally synthesized zinc oxide nanorods incorporated on lab-on-paper | **J Narang**, C Singhal, M Khanuja, A Mathur, A Jain, CS Pundir Artificial Cells, Nanomedicine, | 5.6 |

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| | device for electrochemical detection of recreational drug | and Biotechnology, 2017, 1-8 | |
| 10. | Lab on paper chip integrated with Si@GNRs for electroanalysis of diazepam. | **Jagriti Narang** , Chaitali Singhal , Ashish Mathur , Manika Khanuja , Ankur Varshney , Kartikey Garg , Tulika Dahiya , C.S. Pundir. Analytica Chimica Acta 980 (2017) 50-57.**(Corresponding Author).** | 4.9 |
| 11. | Nanohetrostructure composite for sensing metformin | . **Jagriti Narang**, Nitesh Malhotra, Chaitali Singhal and C.S.Pundir. International Journal of Nanomedicine 13 (2018) 117–120. .**(Corresponding Author)** | 4.5 |
| 12. | Detection of alprazolam with a lab on paper economical device integrated with urchin like Ag@ Pd shell nano-hybrids. | **J. Narang,** Chaitali singhal; Ashish Mathur; Anoop Krishnan; C.S. Pundir, **Materials Science and Engineering C 80 (2017) 728–735 (Corresponding Author)** | 5.1 |
| 13. | An enzyme free Vitamin C augmented sensing with different ZnO morphologies on SnO2/F transparent glass electrode: A comparative study Materials Science and Engineering C | Chaitali Singhal, C.S. Pundir, Deepshika Gand and **Jagriti Narang Materials Science and Engineering C 69 (2016) 769–779**. **(Corresponding Author)** | 5.1 |
| 14. | Hierarchical electrodeposition of methylene blue on ZnO nanocrystalsthin films layered on SnO2/F electrode for invitro sensing of anti-thalassemic drug | . C Singhal, , N Chauhan, S Narang, C.S.Pundir and **J Narang** Materials science and engineering C .62 (2016) 596–604). **(Corresponding Author)** | 5.1 |
| 15. | Comparative analysis of single-walled and multi-walled carbon nanotubes for electrochemical sensing of glucose on gold printed circuit boards | Ruby Alhansa, Anukriti Singhb, Chaitali Singhala, Jagriti Narang, Shikha Wadhwaa, Ashish Mathur Materials Science & Engineering C 90 (2018) 273–279 | 5.1 |
| 16. | A non-enzymatic sensor for hydrogen peroxide based on polyaniline, multiwalled carbon nanotubes and gold | **J. Narang**, N. Chauhan, A. Singh, C.S. Pundir, Analyst, 136 (2011) 4460**.(First Author)** | 4.0 |

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| | nanoparticles modified Au electrode, | | |
| 17. | Fabrication of MWCNT/PANI modified Au electrode for ascorbic acid determination. | N. Chauhan, **J. Narang** and C.S. Pundir, Analyst, 136 (9) (2011) 1938-1945. | 4.0 |
| 18. | Highly sensitive and rapid detection of acetylcholine using platinum-graphene nanoparticles modified ITO plate. | , N. Chauhan, **J. Narang** and U. Jain, Analyst (2015) 140, 1988-1994 | 4.0 |
| 19. | Development of amperometric lysine biosensors based on Au nanoparticles/multiwalled carbon nanotubes/polymers modified Au electrodes, | N. Chauhan, **J. Narang**, A. Singh and C. S. Pundir, Analyst 137 (2012) 5113-5122. | 4.0 |
| 20. | A new tactics for the detection of S. aureus via paper based geno-interface incorporated with Zeolites and Graphene nano dots | Ashish Mathur, Rathin Gupta, Sidharth Kondal, Shikha Wadhwa*, Ruby Alhans, Ramesh N. Pudake, Shivani Verma, C. S. Pundir and **Jagriti Narang*** International Journal of biol Macromole. **2018 (Corresponding Author)** | 3.8 |
| 21. | Portable Bioactive Paper based genosensor incorporated with Zn-Ag nanoblooms for herpes detection at the point of care | **Jagriti Narang**, Chaitali Singhal, Ashish Mathur, Sachin Sharma, Vishav singla and C.S.Pundir International Journal of biol Macromole. S0141-8130(17)31614-8 | 3.8 |
| 22. | Monitoring analgesic drug using sensing method based on nanocomposite | **J Narang**, N Malhotra, S Singh, G Singh, CS Pundir RSC Advances 5 (4), 2396-2404 | 3.8 |
| 23. | Cadmium oxide and carbon nanotube based nanocomposites synthesis using sensing interface for xanthine detection, | U. Jain, **J. Narang**, K. Rani, Barnna, S. Dhaiya and N. Chauhan, RSC Advances 5 (2015) 29675-29683. | 3.8 |
| 24. | Impedimetric genosensor for detection of hepatitis C virus (HCV1) DNA using viral probe on methylene blue doped silica nanoparticles | Chaitali Singhal, Aviraj Ingle, Dhritiman Chakraborty, Anoop Krishna PN, C.S. Pundir , Jagriti Narang International Journal of Biological Macromolecules 98 (2017) 84–93**(Corresponding Author)** | 3.8 |
| 25. | Determination of Serum Triglyceride by enzyme | **J. Narang**, Minakshi, M. Bhambi and C.S. Pundir, Int. J. Biol. Macromol. 47 (2010) 691– | 3.8 |

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| | electrode using Covalently Immobilized Enzyme on Egg shell membrane, | 695 **First Author)** | |
| 26. | Construction of a triglyceride amperometric biosensor based on chitosan-ZnO nanocomposite film, | **J. Narang** and C.S. Pundir, Int. J. Biol. Macromol. 49 (2011) 707– 715**(First Author)** | 3.8 |
| 27. | Silver nanoparticle/Multiwalled carbon nanotubes/Polyaniline for amperometric glutathione biosensor, | **J. Narang**, N. Chauhan, P. Jain, C.S. Pundir, Int. J. Biol. Macromol. 50 (2012) 672-678 **(First Author)** | 3.8 |
| 28. | Immobilization of rat brain acetylcholinesterase on porous gold-nanoparticle–CaCO3 hybrid material modified Au electrode for detection of organophosphorous insecticides, | N. Chauhan, **J. Narang** and C.S. Pundir, Int. J. Biol. Macromol. 49 (2011) 923– 929 | 3.8 |
| 29. | An amperometric glutathione biosensor based on chitosan-iron coated gold nanoparticles modified Pt electrode, | N. Chauhan, **J. Narang**, Meena and C. S. Pundir, Int. J. Biol. Macromol. 51(5) (2012) 879-886 | 3.8 |
| 30. | Determination of triglycerides with special emphasis on biosensors: A review | , **J. Narang** and C. S. Pundir, Int. J. Biol. Macromol. 61 (2013) 379-89 | 3.8 |
| 31. | Construction of triglyceride biosensor based on nickel oxide-chitosan /zinc oxide/zinc hexacyanoferrate film, | **J. Narang**, N. Chauhan and C. S. Pundir, Int. J. Biol. Macromol. 60 (2013) 45–51**(First Author)** | 3.8 |
| 32. | Nanocrystals of zeolite act as enhanced sensing interface for biosensing of leviteracetum, | **J. Narang**, N. Chauhan, and C. S. Pundir, Journal of pharmaceutical sciences 104 (2014) 1153-9 .**(Corresponding Author)** | 3.0 |
| 33. | Amperometric choline biosensor based on multiwalled carbon nanotubes/zirconium oxide electrodeposited on modified glassy carbon electrode, | S. Pundir, N. Chauhan, **J. Narang** , C.S. Pundir, Anal Biochem. 427(1) (2012) 26-32 | 3.0 |
| 34. | Paper based DNA biosensor for detection of chikungunya | Chaitali Singhal, Amidha Dubey, Ashish Mathur, C.S. Pundir, Jagriti Narang Process | 2.8 |

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| | virus using gold shells coated magnetic nanocubes | Biochemistry 74 (2018) 35–42 | |
| 35. | Paper based electrochemical biosensor using haemoglobin nanoparticles for detection of acrylamide in processed foods | N. Yadav, **J. Narang,** A. Mishra, A. Kumar Chhillar, C. S. Pundir Journal of food and drug analysis (2018) 1 -1 2 | 2.85 |
| 36. | A nylon membrane based amperometric biosensor for polyphenol determination, | **J. Narang**, N. Chauhan, A. Singh, C.S. Pundir, J. Mol. Catal. B: Enzymatic, 72 (2011) 276–281**(First Author)** | 2.3 |
| 37. | Construction of an amperometric triglyceride biosensor using PVA membrane bound enzymes, | C.S. Pundir, Bharvi, S. Singh and **J. Narang**, Clin. Biochem. 43 (2010) 467-472**(First Author)** | 2.3 |
| 38. | Amplified electrochemical signal taking polyanline as sensing interface compared to polyindole carboxylic acid. | **J. Narang**; K. Rani; N. Chauhan and A. Mishra, Synthetic metals, 203 (2015) 54–58. .**(Corresponding Author)** | 2.4 |
| 39. | A highly sensitive non-enzymatic ascorbate sensor based on copper nanoparticles bound to multi walled carbon nanotubes and polyaniline composite. . | N. Chauhan, **J. Narang**, R. Rawal and C.S. Pundir, Synthetic Metals, 161(21) (2011) 2427-2433 | 2.4 |
| 40. | Immobilization of barley oxalate oxidase onto AuNPs-Porous $CaCO_/$ microsphere hybrid for amperometric detection of oxalate in biological material | N. Chauhan, **J. Narang**, Shweta, C.S. Pundir, Clin. Biochem. 45 (2012) 253-258. | 2.2 |
| 41. | Immobilization of lysine oxidase on a gold–platinum bimetallic nanoparticles modified Au electrode for detection of lysine, | N. Chauhan, **J. Narang,** Sunny, C. S. Pundir, Enz. Microbial Tech. 52 (2013) 265– 271. | 2.5 |
| 42. | Evaluation of fish freshness using $TIO_2$/MWCNT nanocomposites | **Jagriti Narang**, Chaitali Singhal and C.S.Pundir. **Food analytical methods 57 (2016) 1-7. .(Corresponding Author)** | 2.1 |

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| 43. | Graphene nanoflakes on transparent glass electrode sensor for electrochemical sensing of anti-diabetic drug | Jagriti Narang, Chaitali Singhal, Rishabh Bhatia, Vikas Kathuria, Manan Jain, Bioprocess Biosyst Eng 2017, 40, pp 537–548.**(Corresponding Author)** | 1.9 |
| 44. | An Amperometric Polyphenol Oxidase Biosensor Based On Polyvinyl Chloride Membrane, | S.Chawla, **J. Narang**, C.S. Pundir, Anal. Methods. 2, (2010) 1106–1111. | 1.9 |
| 45. | An amperometric cholesterol biosensor based on epoxy resin membrane bound cholesterol oxidase, | C.S. Pundir, **J. Narang**, N. Chauhan, Preety, R. Sharma, Indian J. Med. Res 136 (2012) 78-85 | 1.9 |
| 46. | Construction of an amperometric TG biosensor based on AuPPy nanocomposite and poly (indole-5-carboxylic acid) modified Au electrode, | **J. Narang,** N. Chauhan, P. Rani, C.S. Pundir, Bioproces. Biosys. Eng.36 (2013) 425–432 **(First Author)** | 1.9 |
| 47. | A magnetic nanoparticles-zinc oxide/zinc hexacyanoferrate hybrid film for amperometric determination of tyrosine, | **J. Narang**, N. Chauhan, S. Pundir, C. S. Pundir, Bioproces. Biosys. Eng. 36 (2013) 1545-54. **(First Author)** | 1.9 |
| 48. | Impedimetric And Voltammetry Sensing Of Xanthine Using Nanocomposites. | **J Narang**, C Singhal M Singh and C.S. Pundir. Advanced Materials letters 2016 7(7), 555-560 .**(Corresponding Author) (First Author)** | 1.9 |
| 49. | Voltammetric detection of anti-HIV replication drug based on novel nanocomposite gold-nanoparticle–CaCO3 hybrid material | Jagriti Narang; Nitesh Malhotra; Gajendra Singh; C. S. Pundir 38 (5) Bioprocess and Biosystem Engineering , 815-822**(First Author)** | 1.9 |
| 50. | Enhanced Electrochemical Performance Of Xanthine Biosensor By Core–shell Magnetic Nanoparticles And Carbon Nanotube Interface | Utkarsh Jain, **Jagriti Narang** and Nidhi Chauhan. Adv. Mater. Lett. 2016, 7(6), 100-150. | 1.9 |
| 51. | Development of lysine biosensor based on core shell magnetic nanoparticle and | **J. Narang,** U. Jain, S. Singh and N. Chauhan, Advance Materials Letters (2015) 6(5), 407-413. **(First Author)** | 1.9 |

| | | | |
|---|---|---|---|
| | multiwalled carbon nanotube composite | | |
| 52. | Development and validation of biosensing method for acetaminophen drug monitoring | **J. Narang**, G. Singh and C.S. Pundir, Advance Materials Letters 2015, 6(3), 209-216. **(First Author)** | 1.9 |
| 53. | A third generation bilirubin sensor development by using gold nanomaterial as an immobilization matrix for signal amplification | **Jagriti Narang**, Ashish Mathur, Vivek, and C.S. Pundir. Advance Materials Letters 6 (2015) 1012-1017. .**(Corresponding Author)** | 1.9 |
| 54. | Covalent immobilization of lipase, glycerol kinase, glycerol-3-phosphate oxidase and horseradish peroxidase onto PVC strip and its application in serum triglyceride determination, | N. Chauhan, **J. Narang** and C. S. Pundir, Indian J. Med. Res. 139 (2014) 603-609 | 1.9 |
| 55. | Electrochemcial sensing of anti-diabetic drug using hierarchically deposited PB nanocubes on carbon nanospheres layered on transparent glass electrode | **J. Narang**, C. Singhal, V.Kaushal and C.S. Pundir, Advance Materials Letters Volume 8, Issue 4, Page 572-576, Year 2017**(First Author)** | 1.9 |
| 56. | Chemical and Green Synthesis of Iron Nanoparticles from Trachyspermum ammi (carom seeds) and Camellia sinensis (green tea leaves) Extracts and Their Comparative Characterization. | K. Rani, **J. Narang**, N. Chauhan & P. S Bahukhandi International Journal of Green and Herbal Chemistry 5 (2016) 029-037. | 1.9 |
| 57. | Cost effective covalent immobilization of banana (musa sapientum l.) polyphenol oxidase on to easy-to-prepare activated plasticized polyvinyl-chloride vial | Kirti Rani, **Jagriti Narang**, Nidhi Chauhan and Amar Chaudhary. Journal of Global sciences, 5 (2016) 3461-3467. | 1.9 |
| 58. | Naked-eye quantitative assay on paper device for date rape drug sensing via smart phone APP | Jagriti Naranga*, Chaitali Singhala, Ashish Mathur a*, Ashwani Kumar Dubeyb, Anoop Krishna PNa, Anusree Anila, C. S. Pundir Vaccum 2018 | 1.53 |

| | | | |
|---|---|---|---|
| 59. | Quantitative Analysis of Metformin with Special Emphasis on Sensors: A review." | V. Narwal, **J. Narang**, and C.S. Pundir, Current Analytical Chemistry **13 , 2017** | 1.3 |
| 60. | Fabrication of an amperometric TG biosensor based on PVC membrane, | **J. Narang**, and C.S. Pundir Anal. Lett. 43(2010) 1-10. **(First Author)** | 1.2 |
| 61. | Fabrication of triglyceride biosensor based on magnetic nanoparticles/zinc oxide/zinc hexacyanoferrate film:novel immobization matrix for electrochemical sensing, 20(2014) 1331-1336 | **J. Narang**, N. Chauhan, and C. S. Pundir, Adv. Sci. Lett. **(First Author)**.**(Corresponding Author)** | 1.2 |
| 62. | Fabrication on an amperometric xanthine biosensor based on PVC membrane, | C.S. Pundir, R. Devi, **J. Narang**, S. Singh, J. Nehra, and S. Chaudhary, J. Food Biochem. 36 (2012) 21–27 | 0.8 |
| 63. | Amperometric determination of serum cholesterol with pencil graphite rod | , N. Chauhan, **J. Narang**, C.S. Pundir, Am. J Anal. Chem. 2, (2010) 41-46. | 0.8 |
| 64. | Laboratory diagnosis of swine flu, A review. | N. Chauhan, **J. Narang**, S. Pundir, S. Singh and C. S. Pundir, (2012) Art. Blood cell subst. 41 (3), 189-95. | 0.8 |
| 65. | Creatinine biosensing by immobilizing creatininase, creatinase and sarcosine oxidase on nanohybrid interface | Utkarsh Jain, **Jagriti Narang** and Nidhi Chauhan, International Journal of Advanced Research 3 (2015) 1482-1497. | 4.2 |
| 66. | Amperometric determination of xanthine in tea, coffee and fish with pencil graphite rod bound xanthine oxidase, | R. Devi, **J. Narang,** S. Yadav, and C.S. Pundir, J. Anal. Chem. 67 (2012) 273. | 0.69 |
| 67. | Construction of an amperometric polyphenol biosensor based on PVA membrane, | **J. Narang**, S. Chawla, N. Chauhan, M. Dahiya and C. S. Pundir, Sens. Instrum. Food Qual. Saf. 7 (2012) 22-28**.(First Author)** | 0.521 |
| 68. | Development of $MoSe_2$ Nano-Urchins as a Sensing Platform for a | Jagriti Narang *, Annu Mishra, Roberto Pilloton, Alekhya vv, Shikha<br><br>Wadhwa, Chandra Shekhar Pundir, Manika | - |

| | | | |
|---|---|---|---|
| | Selective Bio-Capturing of E. coli Shiga Toxin DNA | Khanuja * Biosensors MDPI | |
| 69. | A Cost Effective Immobilization of Horseradish Peroxidase Nanoparticles on to Easy-To-Prepare Activated Plasticized Polyvinyl-Chloride Vial and Its Application, | K. Rani, N. Chauhan, **J. Narang**, U. Jain,and S. Sharma, Journal of Nano medicines research (2015) 2(1): 00017. (Invited Manuscript). | - |
| 70. | AIDS: Signs to Management of the Disease, | C. Singhal, N. Chauhan, Sunny and **J. Narang**, Journal of AIDS and HIV Infections. 1(1) (2015) 105.**(Corresponding Author)** | - |
| 71. | Highly Sensitive Lysine Biosensor based on Gold Nanoparticle and Multiwalled Carbon Nanotube Composite Modified Au Electrode | , U. Jain, **J. Narang** and N. Chauhan, Innovative Approach in Stem Cell Research, Cancer Biology and Applied Biotechnology 5 (2014) 140. | - |
| 72. | Green versus chemical synthesis of gold and silver nanoparticles**.** | **Jagriti Narang**, Kirti rani, Ifra, Sonia and Chaitali Singhal. Journal of bionanoscience 10 (5) (2016) 347. .**(Corresponding Author)** | - |
| 73. | Paper Based Device Incorporated for Electrochemical Sensing of Date Rape Drug | **Jagriti Narang**, , Nitesh Malhotra, Chaitali Singhal, Ashish Mathur, Dhritiman Chakraborty, Aviraj Ingle, C.S. Pundir Procedia Technology 27 ( 2017) 91–93 (Long abstract) | - |

**Editorial**

**1.** Impetus in Fabrication of Biosensors. Narang J, Chauhan N, (2015) Int J Nanomater Nanotechnol Nanomed 1(1): 101.(Editorial).

**Full Papers (short communication) in conference proceedings**

- Jagriti Narang, Nidhi Chauhan, and C.S.Pundir. Multiwalled carbon nanotubes wrapped nanoflakes graphene nanocomposite for sensitive biosensing Proceedings of T-NANO, 2014, 107-109.
- Jagriti Narang, Nidhi Chauhan, and C.S.Pundir. Prussian blue nanocubes/carbon nanospheres heterostructure composite for biosensing of metaformin, Proceedings of T-NANO, 2014, 116-118
- Nidhi Chauhan, Jagriti Narang and Utkarsh Jain. (2014).Amperometric detection of creatinine using gold nanoparticles and multiwalled carbon nanotubes modified GC electrode, Proceedings of T-NANO, 2258-260

**List of abstract published in Conference Proceedings: 29 (International)**

1. **J. Narang[#],** Fabrication of TG biosensor based on PVC membrane (2009) 17th-19th Jan 2009 National Symposium/Workshop on New Trends of Biosensor Technology (Presented Paper) Hindustan College of Sciences & Technology Farah, Mathura (U.P), India. [Poster presentation, [#]Presenter]
2. **J. Narang[#],** Fabrication of TG biosensor based on eggshell membrane membrane (2009) 19th-20th march ,2009 Biotech 2009: Present and Future Perspectives (Presented Paper).Punjabi University , Patiala-147002(Patiala) [Poster presentation, [#]Presenter]
3. **J. Narang[#],** Construction of polyphenol biosensors based on membrane (2009) 17th -20th Dec '09 IJWBME 2009 (Presented Poster), National Physical Laboratory, New Delhi) [Poster presentation, [#]Presenter]
4. **J. Narang[#],** 30th Oct 2010 India-Japan Seminar on Nanomaterials for Diagnosis and therapeutics Maharshi Dayanand University, Rohtak, India [Poster presentation, [#]Presenter]
5. **J. Narang[#],** Preparation of an amperometric TG biosensor based on nano hexacyanoferate film 13th – 15th Dec 2010 Regulation of Biochemical and cellular Processes in diverse systems Indian Institute of Science, Banglore, India [Poster presentation, [#]Presenter]
6. **J. Narang[#],** Preparation of an amperometric TG biosensor based on Zinc oxide nnaoparticles 26th -27th Mar 2011 Workshop on Nanoscience and Nanotechnology (Presented Paper) Aligarh Muslim University.Aligarh-202002[Poster presentation, [#]Presenter]
7. **J. Narang[#],** Electrochemical sensing of TG biosensor based on various membranes and nanomaterials. Zinc oxide nnaoparticles 18th to 21st dec 2011 International conference on Nanomaterials and Nanotechnology (Presented Paper) University of Delhi, Delhi, India[Poster presentation, [#]Presenter]
8. **J. Narang[#],** (2014). Multiwalled carbon nanotubes wrapped nanoflakes graphene nanocomposite for sensitive biosensing Proceedings of T-NANO, 2014, 107-109. [Poster presentation, [#]Presenter]
9. **J. Narang[#],** Fabrication of an amperometric TG biosensor (2014) National Conference on Nanotechnology and Renewable Energy (NCNRE) Jamia Milia University Delhi, India [Oral presentation, [#]Presenter]
10. **J. Narang[#],** Construction of TG biosensor based on nanoparticles. April 12, 2014 Emerging Trends in Translational Research in India Shiv Nader University [Poster presentation, [#]Presenter].
11. **J. Narang**#,Multiwalled carbon nanotubes wrapped grapheme nnaoflakes for sensing of leviteracetum. International Conferences on Polymeric materials: Biomaterials IIT, New Delhi, India[Oral presentation, [#]Presenter]
12. **J. Narang**#, Electrochemical sensing of anti-HIV drug. May 8-10, 2015 Solid State chemistry and Allied Areas (ISCAS-2015) Bhaskaracharya College of Applied Sciences, University of Delhi. [Oral presentation].
13. **J. Narang**#,Electrochemical impedimetric detection of deferiprone. April 10- 12, 2015 ICNP– 2015, Mahatma Gandhi University, Kerala, India [**Invited Talk,** [#]Presenter].
14. **J. Narang**#, Electrochemical impedimetric detection of anti-HIV drug. .23-26th Aug, 2015 Advanced materials world congress (Oral Presentation) Stockholm, Sweden.
15. N. Malhotra[#], **J. Narang**, N. Chauhan, and C.S.Pundir (2014). Prussian blue nanocubes/carbon nanospheres heterostructure composite for biosensing of

metaformin, Proceedings of T-NANO, 2014, 116-118. [Poster presentation, #Presenter]

**16.** N. Chauhan#, **J. Narang** and U. Jain. (2014).Amperometric detection of creatinine using gold nanoparticles and multiwalled carbon nanotubes modified GC electrode, Proceedings of T-NANO, 2258-260. [Poster presentation, #Presenter].

17. **J. Narang**, Chaitali Singhal#, Hierarchical deposition of Graphene nanoflakes-methylene blue composites on $SnO_2$/F transparent glass electrode for sensitive sensing of metformin, **International** Conference on Recent Trends in Materials and Devices (**ICRTMD**), **Amity University**, October 2015. **Best poster award**, #Presenter
18. Chaitali Singhal#**,** N. Malhotra, C. S. Pundir, **J. Narang**, Nanoheterostructure composite for sensing metformin, International Conference on Material science and Technology (**ICMTECH**), **Delhi University**, March 2016. [Poster presentation, #Presenter]
19. D. Chakraborty#, K. Clement, Chaitali Singhal, N. Malhotra, C. S. Pundir, **J. Narang**, Ultratrace level determination of dna in hepatitis b patient's samples using zeolites-mwcnt nano-composites, **International** Conference on Material science and Technology (**ICMTECH**), **Delhi University**, March 2016. [Poster presentation, #Presenter]
20. A. Anil#, N. Malhotra, Chaitali Singhal, C.S. Pundir, **J. Narang**, Novel voltammetric and impedimetric detection of date-rape drug in beverages using Pt/Pd nanocomposites, **International** Conference on Material science and Technology (**ICMTECH**), **Delhi University**, March 2016. [Poster presentation, #Presenter]
21. **J. Narang#**, N. Malhotra, N. Chauhan, Chaitali Singhal, A. Gupta, Nickel hydroxide nanopetals-MWCNT for electrochemical sensing of anti-epileptic drug, **International** Conference on Material science and Technology (**ICMTECH**), **Delhi University**, March 2016. [Oral presentation, #Presenter]
22. Chaitali Singhal#, **J. Narang,** Hierarchical deposition of Graphene nanoflakes-methylene blue composites on $SnO_2$/F transparent glass electrode for sensitive sensing of metformin, **International** Conference on Nurturing Global Healthcare (**ICNGH**), AIP, **Amity University**, Noida, India. [Poster presentation, #Presenter]
23. Chaitali Singhal#, N. Malhotra, AK PN, C. S. Pundir, **J.Narang,** Methylene Blue Doped Silver Core And Palladium Shell Nanohybrids on Transparent Glass Substrate for Impedimetric Sensing of Alprazolam, **International** Conference on Biomaterials, Biodiagnostics, Tissue Engineering, drug delivery and regenerative medicine **(BiTERM),** Indian Institute of Delhi (**IIT-D),** India. [Poster presentation, #Presenter]
24. K. Clement#, Chaitali Singhal, N. Malhotra, **J. Narang,** Electrochemical DNA biosensor for Hepatitis C virus detection from PCR amplified real samples based on methylene blue doped silica nanoparticles, **International** Conference on Biomaterials, Biodiagnostics, Tissue Engineering, drug delivery and regenerative medicine **(BiTERM),** Indian Institute of Delhi (**IIT-D),** India. [Poster presentation, #Presenter]
25. D. Chakraborty#, Chaitali Singhal, N. Malhotra, **J. Narang**, Point of care with microfluidic paper based device incorporated with Zeolite –GO nanocomposites for electrochemical sensing of date rape drug, **Biosensors 2016**, **Gothenburg, Sweden**, May 2016. [Poster presentation, #Presenter]
26. J. Narang, **N. Chauhan#,** C.S.Pundir Fabrication of an ascorbate biosensor. 26th - 28th May 2010 Biosensors 2010 world Congress (Presented Paper) Glassgow, Scotland, UK [Poster presentation, #Presenter]
27. **J. Narang# "An ultrasensitive technique for the determination of rape drug". 16-17,Nov TECO conference, New Delhi** (Presented Paper) .

28. **Chaitali Singhal[#]** and J. Narang **" Biosensor for the diagnosis of Dengue disease". 16-17, TECO conference, New Delhi** (Presented Paper)

**Academic contributions**

- Teaching Ph.D, BTech and MTech students 3rd Feb, 2014- till date -Assistant Professor, Amity University, Noida (U.P).

- Taught BPharma and MPharma students 28th Aug, 2012- 1st Nov, 2012-Assistant Professor, BS Anagpuria Institute of pharmacy, Faridabad, India

- Taught BSc. students 16th Oct '06- 31st March '08-Lecturer-, Department of Biotechnology, DAV College, Yamuna Nagar, Haryana.

**Techniques Handled:**

- Basic Molecular Biology Techniques like DNA & RNA isolation from different cancerous tissue, electrophoresis techniques, PCR etc.
- In vitro plant tissue culture techniques and media preparation.
- Purification and characterization of enzymes from different sources
- SDS-PAGE and Native PAGE for protein separation.
- Quantitative and qualitative estimations of proteins and nucleic acids through various methods.
- Immobilization of Enzymes with various techniques like covalent coupling, electrostatic interactions etc.
- Cyclic Voltammetry, Chronoamperometry, Electrode preparation, Electrochemical techniques, Impedance Study, FTIR Spectroscopy, Silver staining, Chromatographic techniques, Spectrophotometery, Centrifugation and pH metery.
- Preparation of biosensors for various clinical and environmental applications.
- Works on Bioinformatics web tools

**Declaration:** I hereby declare that the information furnished by me is correct and true as up to my knowledge.

**Place: New Delhi** **Jagriti Narang**