

Best Poster Award “Fabrication of nanomaterial based cetylcholinesterase biosensor for determining organophosphorus compounds” National Conference on biotechnology: Emerging Trends (NCB-2016).

(PUBLICATIONS)

Books (Authors)

1. **Hooda, V.**, Gothwal, A., Gahlaut, A. (2012). Enzymatic Strips for Bio-Diagnostics: Protein Biotechnology. Lambert Academic Publishing, Germany, ISBN: 978-3-659-21579-7.
2. Dabur, R., **Hooda, V.**, Gahlaut, A. (2012). Secondary Metabolites to combat Diabetes: Natural Medicine. Lambert Academic Publishing, Germany, ISBN: 978-3-659-23656-3.

Book Chapters (International)

1. Dhull, V., Gahlaut, A., Gothwal, A., Duhan, J.S., **Hooda, V.** (2013). Nitrite Biosensors: Analytical Tools for Determination of Toxicity due to presence of nitrite ions. *Biotechnology: Prospects and Applications* published by Springer, Germany, ISBN 978-81-322-1682-7.
2. **Hooda, V.**, Kumar, R., Singh, J. (2007). Genomics-electrochemical nucleic acid sensing & clinical diagnostics. *Bioinformatics Computing*. Published by NAROSA: 81-87. ISBN:81-7319-794-6
3. **Hooda, V.**, Singh, J., Gupta, D. (2007). Chip based biosensor for detection of Human Papillomavirus. *Bioinformatics Computing*. Published by NAROSA: 153-158. ISBN:81-7319-794-6

Abstract Publications:

1. Dhull, V., Dilbaghi, N., **Hooda, V.** (2015). “Fabrication and application of nanomaterial based AChE biosensor for screening of organophosphorus compounds” Scientific event on Asian Network for Natural Materials held at Department of Chemistry & Centre of Advanced Studies in Chemistry, Panjab University, Chandigarh from 28th February to 2nd March, 2015.
2. Dhull, V., Dilbaghi, N., **Hooda, V.** (2015). “Fabrication & Characterization of Nafion/AChE-cSWCNT/MWCNT/AuNPs-Au Electrode for amperometric determination of Organophosphorus Compounds” National Conference on Applied Physics & Material Science organized by Department of Physics, MDU Rohtak on February 5-6, 2015.
3. Rathee, K., Dhull, R., Dhull, V., **Hooda, V.**, Singh, S. (2016). “Synthesis of zinc oxide nanorods on gold substrate & their characterization” National Conference on Biotechnology: Emerging Trends (NCB-2016) organized by Department of Biotechnology, Chaudhary Devi Lal University, Sirsa (Haryana) on February 11-12, 2016.

4. Dhull, V., Dilbhagi, N., **Hooda, V.** (2016). “Fabrication of nanomaterial based Acetylcholinesterase biosensor for determining organophosphorus compounds” National Conference on Biotechnology: Emerging Trends (NCB-2016) organized by Department of Biotechnology, Chaudhary Devi Lal University, Sirsa (Haryana) on February 11-12, 2016.

5. Dhull, V., Dhull, R., Rathee, K., Singh, S., **Hooda, V.** (2016). “Fabrication of PAA/ASOD/cSWCNTs-AuNPs/Au wire based ascorbate biosensor for screening of fruits & vegetable samples” National Conference on Biotechnology: Emerging Trends (NCB-2016) organized by Department of Biotechnology, Chaudhary Devi Lal University, Sirsa (Haryana) on February 11-12, 2016.

Research Publications:

1. **Hooda, V.**, Kumar, K., Ahlawat, D.S. (2006). Novel Fabrication of CA Membrane Bound Carbon Electrode for Bi-enzymatic Determination. *Sensors & Transducers Journal* (ISSN 1726-5479) **73(11)**: 804-809.

2. **Hooda, V.**, Gahlaut, A., Pundir, C.S. (2007). Biosensors: Future Analytical Tools. *Sensors & Transducers Journal* (ISSN 1726-5479). **76(2)**: 935-944.

3. **Hooda, V.**, Kumar, R., Pundir, C.S. (2007). Covalent immobilization of lipase onto onion membrane affixed on plastic surface: Kinetic properties and application in milk fat hydrolysis. *Indian Journal of Biotechnology*. **6(4)**: 479-484.

4. **Hooda, V.**, Pundir, C.S. (2008). Fabrication of Pt based amperometric cholesterol biosensor using cellulose acetate membrane. *Journal of Scientific and Industrial Research*. **67(4)**: 299-306.

5. Kumari, A., Gakhar, S.K., **Hooda, V.** (2009). Antibodies raised against hemolymph of *Anopheles culicifacies* reduce the fecundity and malaria parasite development. *Journal of Vector Borne Diseases*. **46(4)**: 255-260.

6. **Hooda, V.**, Gahlaut, A., Kumar, H., Pundir, C.S. (2009). Biosensor based on enzyme coupled PVC reaction cell for electrochemical measurement of serum total cholesterol. *Sensors & Actuators: B*. ISSN: 0925-4005. **136**: 235–241.

7. Gahlaut, A., Chhillar, A.K., Gothwal, A., **Hooda, V.** (2012). Development of Analytical Method Based on Enzymatic PVC Strip for Measurement of Serum Total Cholesterol. *International Journal of Applied Biotechnology and Biochemistry* (ISSN 2248-9886). **2**:185-195.

8. Gahlaut, A., Gothwal, A., Chhillar, A.K., **Hooda, V.** (2012). “Electrochemical Biosensors for Determination of Organophosphorus Compounds: Review”. *Open Journal of Applied Biosensor, (Scientific Research Publication, USA)*. **1**: 1-8.

9. Gahlaut, A., Gothwal, A., Chhillar, A.K., **Hooda, V.** (2012). Molecular Techniques for Medical Microbiology Laboratories: Futuristic Approach in Diagnostics of Infectious Diseases. *International Journal of Pharma and Bio Sciences, ISSN 0975-629, 3(3):* 938 – 947.

10. Gahlaut, A., Gothwal, A., Chhillar, A.K. **Hooda, V.** (2012). Electrochemical Based Diagnosis of Ascorbic Acid. *Sensors & Transducers Journal. 143(8):* 143-151.

11. Gahlaut, A., Gothwal, A., **Hooda, V.** (2012). Electrochemical Biosensors for Determination of Ascorbic Acid. *International Journal of Bio Engineering and Technology. 3(1):* 1-5.

12. Gahlaut, A., Taneja, P., Shirolkar, A., Nale, A., **Hooda, V.,** Dabur, R. (2012). Principal Component and Partial Least Square Discriminant based analysis of Methanol Extracts of Bark and Re-Generated Bark of *Saraca asoca*. *International Journal of Parma and Pharmaceutical Sciences. 4(4):* 331-335.

13. Gahlaut, A., Gothwal, A., **Hooda, V.,** Dabur, R. (2013). Rapid pattern of some important medicinal plants and their substitutes used in Ayurveda to identify the genetic variations. *Int J of Pharma and Pharmaceut Sci. 5(1):* 239-241.

14. Shirolkar, A., Gahlaut, A., **Hooda, V.,** Dabur, R. (2013). Phytochemical composition changes in untreated stem juice of *Tinospora cordifolia* (W) Mier during refrigerated storage. *Journal of Pharmacy Research (ELSEVIER). 7:*1-6.

15. Gahlaut, A., Shirolkar, A., **Hooda, V.,** Dabur, R. (2013). A rapid and simple approach to discriminate various extracts of *Saraca asoca* [Roxb.], De. Wild using UPLC-QTOFMS and multivariate analysis. *Journal of Pharmacy Research (ELSEVIER). 7(2):* 143-149.

16. Gahlaut, A., Shirolkar, A., **Hooda, V.,** Dabur, R. (2013). β -Sitosterol in Different Parts of *Saraca asoca* and Herbal Drug Ashokarista: LC/ESI/MS/MS Quali-Quantitative Analysis. *Journal of Advanced Pharmaceutical Technology & Research (PUBMED). 4(3):* 146-150.

17. Dhull, V., Gahlaut, A., Dilbaghi, N., **Hooda, V.** (2013). Acetylcholinesterase biosensors for the electrochemical detection of organophosphorus compounds: Review. *Biochemistry Research International. 2013:* Article ID 731501.

18. Gahlaut, A., Dhull, V., Dahiya, M., Gothwal, A., Kulharia, M., Chhillar, A.K., **Hooda, V.,** Dabur, R. (2013). Proteomics & Metabolomics: Mapping biochemical regulations. *Drug Invention Today. 5:* 321-326.

19. Gothwal, A., Beniwal, P., Dhull, V., **Hooda, V.** (2014). Preparation of Electrochemical Biosensor for detection of Organophosphorus Pesticides. *International Journal of Analytical Chemistry. 2014:*8. Article ID 303641.

20. Dhull, V., Dilbaghi, N., **Hooda, V.** (2014). Detection of organophosphorus compounds using AChE PVC strip colorimetric method. *Der Pharmacia Lettre. 6:* 304-314.

21. Dhull, V., Dilbaghi, N., **Hooda, V.** (2015). Nanomaterials Based Acetylcholinesterase

Biosensors for Organophosphorus Compounds Detection: Review. *International Journal of Pharmacy and Pharmaceutical Sciences*. **7(2)**: 17-24.

22. Dahiya, M., Dhull, V., Kumar, S., Dilbaghi, N., **Hooda, V.** (2015). Fabrication and Optimization of PAA/OPH-ZnONP/c-MWCNTs Based Silver Electrode for Amperometric Determination of Organophosphorus Compounds. *Sensor Letters*. **1**: 1-9.

23. Lata, K., Dhull, V., **Hooda, V.** (2016). Fabrication & Optimization of ChE/ChO/HRP-AuNPs/c-MWCNTs based silver electrode for determining total cholesterol in serum. *Biochemistry Research International*. **2016**:11.

Publications (2017)

1. Vinita Hooda, Vikas Kumar, Anjum Gahlaut & Vikas Hooda (2017): Alcohol quantification: recent insights into amperometric enzyme biosensors, Artificial Cells, Nanomedicine, and Biotechnology, DOI: 10.1080/21691401.2017.1315426

2. Anjum Gahlaut, Vinita Hooda, Vikas Dhull & Vikas Hooda (2017): Recent approaches to ameliorate selectivity and sensitivity of enzyme based cholesterol biosensors: a review, Artificial Cells, Nanomedicine, and Biotechnology, DOI:10.1080/21691401.2017.1337028

3. Vinita Hooda, Anjum Gahlaut, Ashish Gothwal & Vikas Hooda (2017): Bilirubin enzyme biosensor: potentiality and recent advances towards clinical bioanalysis, Biotechnology Letters, DOI: 10.1007/s10529-017-2396-0

4. Puneet Beniwal, Priyanka Siwach, Vijay S Beniwal & Vikas Hooda (2017): Micropropagation of stevia Rebudiana using shoot tip explants- A magical sweetener and medicinal plant, Annals of Biology

5. Puneet Beniwal, Priyanka Siwach, Vijay S Beniwal & Vikas Hooda (2017): In vitro studies on direct shoot regeneration of stevia rebudiana using nodal explants

Conference/ Seminars/ Workshop: **(Total=32)**

1. Participated in “**National Conference on Research in Clinical Psychology**” on Feb. 24th-27th, 1999 Organized by Association of Clinical Psychologists, Delhi (DACP) at AIIMS, New Delhi.

2. Participated in **Patent Awareness Workshop** on 21st Dec. 2002 Organized by Department of

Bio-Sciences, MD University, Rohtak & Punjab State Council for Science & Technology, Chandigarh and Sponsored by PFC, TIFAC, Deptt. Of Science & Technology, New Delhi.

3. Participated in the **International Conference on "Trends In Cellular and Molecular Biology"** held at School of Life Sciences, **Jawaharlal Lal Nehru University**, New Delhi from March 6-8, 2003.

4. Participated in National Seminar on **"Role of Biochemistry in Modern Day Agriculture"** held at **CCS Haryana Agriculture University, Hissar** held on 24th Jan 2004.

5. **Sixth DST sponsored** workshop on **"Prospects of Biosensor in modern Biology and Biotechnology Applications"** Organized at Panjab University, Chandigarh from Oct 25, 2004 to Nov. 6, 2004.

6. Participated in **"75th Annual Meeting Society of Biological Chemists (India)"** Organized by **Jawaharlal Lal Nehru University, New Delhi** from November 21-24, 2004.

7. Participated in **73rd Annual Meeting Society of Biological Chemists (India) "Challenges & Opportunity to harness the modern biology for Socio-economic development in Genomic Era"** held at **G.B. Pant University of Agriculture & Technology, Pantnagar** from November 21-24, 2004.

8. Participated in **National workshop on "Research Methodology & Use of Computers in Applied Statistics"**, UGC Sponsored and Organized by C.R. College of Education, Rohtak from 09-13 January, 2005.

9. Attended **"Extension Lecturer on "Creation of E-Learning Resources in Higher Education and Designing of V-Books"** held at Maharshi Dayanand University Library, Rohtak on 04.05.2005.

10. Participated in **"National seminar on Nanotechnology- The Road Ahead"** held at NBRI, Lucknow, Sponsored by DBT, New Delhi & CSIR, New Delhi on 17th - 19th Nov. 2005

11. Participated in **"Patent Awareness Workshop"** Organized by PIC, Hisar in collaboration with **TIFAC, New Delhi & Department of Biosciences, M.D.U. Rohtak** on 30th Dec, 2005.

12. Attended **"Workshop on Information Technology for Teachers"** Organized by **Department of Computer Sciences and Applications at MDU Rohtak** held on January 7th, 2006,

13. Participated in **"Biomaterials, Tissue Engineering and Medical Diagnostics"** the **"XVI National SBAOI Conference"** at IIT, New Delhi held on January 24-25 , 2006.

14. Participated in **"Recent Advances in Biosciences- A National Seminar"** organised by G.V.M. Girls College Sonapat, Haryana held on Feb 10-11, 2006.

15. Participated in **National Conference on "Bioinformatic Computing"** at Chaudhary Devi Lal University, Sirsa held on Feb19, 2006.

16. Participated in National conference on **"Information Technology: Setting Trend In**

Modern Era" & "**8th Annual Conference of Indian Society of Information Theory & Application**" held at N.C. College of Engineering, Panipat on March 18-20, 2006

17. Participated in workshop titled "**Nanotechnology-Current Status and Challenges**" held at **IIT Delhi** from 17-3-2007 to 18-3-2007.

18. Participated in workshop titled "**Recent Trends in Nanotechnology**" held at Department of Engineering and Technology, Maharshi Dayanand University, Rohtak on March 27, 2007.

19. Participated in HEC Sponsored State Level Seminar on "**Biological Science- A Current Perspective**" Organized by Pt. NRS Govt. College, Rohtak on March 12th -13th, 2008.

20. Participated in Symposium "**Emerging Trends in Biotechnology**" held at UIET, M.D.U., Rohtak on November 24, 2009.

21. Participated in Symposium "**Molecular Medicine at Translational Crossroads**" Organized by Department of Bio-Technology & Molecular Medicine, PGIMS in December 2009 at Pt. BDS University of Health Science, Rohtak.

22. Participated in **National Seminar on "Computing Life: Raw to Refined"** Organized by Department of Zoology, MD University, Rohtak on March 27th, 2010.

23. Organized and Participated in **National Conference on "Medical Biotechnology Vision 2020"** held at ACBT, MDU, Rohtak from April 16 to April 18 2010.

24. Participated in COLLOQUIUM on "**Microbial Technology and its Human Benefits**" held at M.D. University, Rohtak on 7th August 2010.

25. Participated in "**National workshop on Bioinformatics**" Organized by CBT, Maharshi Dayanand University, Rohtak from 14 to 16th September 2010.

26. Attended in "**India-Japan Seminar**" held at Department of Biochemistry, Maharshi Dayanand University, Rohtak on Oct 30, 2010.

27. Participated in the seminar on "**Intellectual property-creation and protection**" Organized by Department Of Microbiology, Maharshi Dayanand University Rohtak on 23rd April, 2011.

28. Participated in UGC sponsored "**Training in basic techniques in Biotechnology, Bioinformatics and Food technology**" held at CDLU Sirsa on 15 July 2011 to 28th July 2011.

29. Participated in the seminar on "**Molecular Techniques-The Face Of Modern Sciences**" Organized by the Department Of Biotechnology, Maharshi Dayanand University Rohtak on 24th October, 2011.

30. Attended National Workshop on "**E-Governance in India: Issues and Challenges**" Organized by the Department of Public Administration, Maharshi Dayanand University, Rohtak on October 05, 2016.

31. Participated in National Seminar cum Workshop on “**Animal Ethics and Experimentation**” Organized by Central Animal House, Maharshi Dayanand University, Rohtak on October 22, 2016.

32. Bioinformatics MDU

33. GJU feb 2017

34. Blood donation march 2017.

- Administrative assignment by University:**
- (a) **Department Coordinator, CBT for Career counseling and Placement cell.**
 - (b) **Department Coordinator, CBT for creation of Data Bank of at MDU Alumni.**
 - (c) **Member, Post Graduate Board of Studies, CBT, MDU.**
 - (d) **Member, Faculty of Life Sciences, MDU.**
 - (e) **Departmental In-charge of Research Student Ph.D. seminars and annual presentations.**
 - (g) **Secretary, Biotechnology Association, CBT, MDU.**
 - (h) **President, MDU Teachers Club from 2011-13.**
 - (i) **Member of Executive Team for NAAC gradation of MDU.**
 - (k) **Organizing Secretary, DST INSPIRE program, Govt. of India at MDU.**