

CURRICULUM VITAE

Dr. Vikas Hooda

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Academic Chronicle

Ph.D (Biotechnology) Maharshi Dayanand University, Rohtak,

NET (Life Sciences)

M.Sc. (Biotechnology)

Research Interests

Biosensors and detection methods, Enzyme technology, Nanobiotechnology, Antimicrobials, Chemical and Green Synthesis of NPs and their applications

Teaching Activities

Teaching full time M.Sc. courses and Ph.D course work students of Agriculture Biotechnology and Biotechnology.

No. of students completed Ph.D: 06

No. of students registered for Ph.D: 04

Post-Doc Fellow (D.S. Kothari)- 01

No. of students supervised for P.G. (Dissertation): 70+

Awards

Best Poster Award at International Conference on Biotechnology: Emerging Trends (ICB-2012) on 18-20 Sept, 2012.

Best Poster Award “Fabrication & Characterization of Nafion/AChE-cSWCNT/MWCNT/AuNPs-Au Electrode for amperometric determination of organophosphorus compound” National Conference on Applied Physics & Material Science organized by Department of Physics, MDU Rohtak Year 2015.

Best Poster Award “Fabrication of nanomaterial based cetylcholinesterase biosensor for

determining organophosphorus compounds” National Conference on biotechnology: Emerging Trends (NCB-2016).

Research Publications

Bansal, K., **Hooda, V.**, Verma, N., Kharewal, T., Tehri, N., Dhull, V. and Gahlaut, A., 2022. Stress Alleviation and Crop Improvement Using Silicon Nanoparticles in Agriculture: a Review. *Silicon*, pp.1-14.

Goyal, B., Verma, N., Kharewal, T., Gahlaut, A. and **Hooda, V.**, 2022. Structural effects of nanoparticles on their antibacterial activity against multi-drug resistance. *Inorganic and Nano-Metal Chemistry*, pp.1-13.

Tehri, N., Vashishth, A., Gahlaut, A. and **Hooda, V.**, 2022. Biosynthesis, antimicrobial spectra and applications of silver nanoparticles: Current progress and future prospects. *Inorganic and Nano-Metal Chemistry*, 52(1), pp.1-19.

Hooda, V., Gahlaut, A. and **Hooda, V.**, 2021. A novel amperometric biosensor for rapid detection of ethanol utilizing gold nanoparticles and enzyme coupled PVC reaction cell. *Environmental Technology*, 42(21), pp.3318-3328.

Yadav, A., Kharewal, T., Verma, N., Tehri, N., Gahlaut, A. and **Hooda, V.**, 2021. Electrochemical biosensors for the quantification of streptomycin in food systems: an overview. *International Journal of Environmental Analytical Chemistry*, pp.1-16.

Dhull, V., Gahlaut, A. and **Hooda, V.**, 2021. Nanomaterials based biosensors for the detection of organophosphate compounds: a review. *International Journal of Environmental Analytical Chemistry*, pp.1-25.

Hooda, V., Verma, N., Gahlaut, A. and Gothwal, A., 2021. Reusable Enzymatic Strip for Detection of Arsenic. *Brazilian Archives of Biology and Technology*, 64.

Verma, N., Saini, R., Gahlaut, A. and **Hooda, V.**, 2020. Stabilization and optimization of purified diamine oxidase by immobilization onto activated PVC membrane. *Food Biotechnology*, 34(4), pp.306-322.

Kharewal, T., Verma, N., Gahlaut, A. and **Hooda, V.**, 2020. Biosensors for penicillin quantification: A comprehensive review. *Biotechnology Letters*, 42(10), pp.1829-1846.

Kumari, S., Tehri, N., Gahlaut, A. and **Hooda, V.**, 2020. Actinomycetes mediated synthesis, characterization, and applications of metallic nanoparticles. *Inorganic and Nano-Metal Chemistry*, 51(10), pp.1386-1395.

Tanwar, J., Sharma, M., Parmar, A., Tehri, N., Verma, N., Gahlaut, A. and **Hooda, V.**, 2020. Antibacterial potential of silver nanoparticles against multidrug resistant bacterial isolates from blood cultures. *Inorganic and Nano-Metal Chemistry*, 50(11), pp.1150-1156.

Tehri, N., Kaur, R., Maity, M., Chauhan, A., **Hooda, V.**, Vashishth, A. and Kumar, G., 2020. Biosynthesis, characterization, bactericidal and sporicidal activity of silver nanoparticles using the leaves extract of Litchi chinensis. *Preparative Biochemistry & Biotechnology*, 50(9), pp.865-873.

Verma, N., Sisodiya, L., Gahlaut, A., Hooda, V. and **Hooda, V.**, 2020. Novel approach using activated cellulose film for efficient immobilization of purified diamine oxidase to enhance enzyme performance and stability. *Preparative Biochemistry & Biotechnology*, 50(5), pp.468-476.

Hooda, V. and Gahlaut, A., 2020. Amperometric cholesterol determination using HRP incorporated carbon paste electrode. *Biosciences Biotechnology Research Asia*, 17(1), pp.53-64.

Verma, N., Hooda, V., Gahlaut, A., Gothwal, A. and **Hooda, V.**, 2020. Enzymatic biosensors for the quantification of biogenic amines: A literature update. *Critical Reviews in Biotechnology*, 40(1), pp.1-14.

Gahlaut, A., Hooda, V., Gothwal, A. and **Hooda, V.**, 2019. Enzyme-based ultrasensitive electrochemical biosensors for rapid assessment of nitrite toxicity: Recent advances and perspectives. *Critical Reviews in Analytical Chemistry*, 49(1), pp.32-43.

Gahlaut, A., Hooda, V., Gothwal, A. and **Hooda, V.**, 2019. Enzyme-based ultrasensitive electrochemical biosensors for rapid assessment of nitrite toxicity: Recent advances and perspectives. *Critical Reviews in Analytical Chemistry*, 49(1), pp.32-43.

Hooda, V., Kumar, V., Gahlaut, A. and **Hooda, V.**, 2018. A novel amperometric bienzymatic biosensor based on alcohol oxidase coupled PVC reaction cell and nanomaterials modified working electrode for rapid quantification of alcohol. *Preparative Biochemistry and Biotechnology*, 48(10), pp.877-886.

Hooda, V., Gahlaut, A., Gothwal, A. and **Hooda, V.**, 2018. Recent trends and perspectives in enzyme based biosensor development for the screening of triglycerides: a comprehensive review. *Artificial cells, nanomedicine, and biotechnology*, 46(sup2), pp.626-635.

Gahlaut, A., Hooda, V., Dhull, V. and **Hooda, V.**, 2018. Recent approaches to ameliorate selectivity and sensitivity of enzyme based cholesterol biosensors: a review. *Artificial cells, nanomedicine, and biotechnology*, 46(3), pp.472-481.

Hooda, V., Kumar, V., Gahlaut, A. and **Hooda, V.**, 2018. Alcohol quantification: Recent insights into amperometric enzyme biosensors. *Artificial Cells, Nanomedicine, and Biotechnology*, 46(2), pp.398-410.

Puneet, B., Priyanka, S., Beniwal, V.S. and **Vikas, H.**, 2018. Micropropagation of *Stevia rebaudiana* using shoot tip explants-a magical sweetener and medicinal plant. *Annals of Biology*, 34(1), pp.4-11.

Hooda, V., Gahlaut, A., Gothwal, A. and **Hooda, V.**, 2017. Bilirubin enzyme biosensor: potentiality and recent advances towards clinical bioanalysis. *Biotechnology letters*, 39(10), pp.1453-1462.

Beniwal, P., Siwach, P., Beniwal, V.S. and **Hooda, V.**, 2017. In vitro studies on direct shoot regeneration of *Stevia rebaudiana* using nodal explants. *Crop Research*, 52(6), pp.259-267.

Lata, K., Dhull, V. and **Hooda, V.**, 2016. Fabrication and optimization of ChE/ChO/HRP-AuNPs/c-MWCNTs based silver electrode for determining total cholesterol in serum. *Biochemistry Research International*, 2016.

Dhull, V.I.K.A.S., Dilbaghi, N.E.E.R.A.J. and **Hooda, V.I.K.A.S.**, 2015. Nanomaterials based acetylcholinesterase biosensors for organophosphorus compounds detection: review. *Int. J. Pharm. Pharm. Sci*, 7, pp.17-24.

Dahiya, M., Dhull, V., Kumar, S., Dilbaghi, N. and **Hooda, V.**, 2015. Fabrication and optimization of silver based PAA/OPH₃-ZnONP/c-MWCNTs electrode for

amperometric determination of organophosphorus compounds. *Sensor Letters*, 13(1), pp.72-80.

Hooda, V., Sharma, D. and Yadav, A.C., 2014. Carrot seed quality as affected by different irrigation, fertility and spacing levels. *Annals of Agri Bio Research*, 19(1), pp.134-136.

Hooda, V. and Tehlan, S.K., 2014. Effect of biofertilizers, FYM and nitrogen levels on seed yield and seed quality of coriander (*Coriandrum sativum* L.). *Annals of Agri Bio Research*, 19(1), pp.121-123.

Gothwal, A., Dahiya, M., Beniwa, P. and **Hooda, V.**, 2014. Purification and kinetic studies of organophosphorus hydrolase from *B. diminuta*. *Int. J. Pharm. Pharmaceut. Sci*, 6(10), pp.341-344.

Gothwal, A., Beniwal, P., Dhull, V. and **Hooda, V.**, 2014. Preparation of electrochemical biosensor for detection of organophosphorus pesticides. *International Journal of Analytical Chemistry*, 2014.

Dhull, V., Gahlaut, A., Dilbaghi, N. and **Hooda, V.**, 2013. Acetylcholinesterase biosensors for electrochemical detection of organophosphorus compounds: a review. *Biochemistry research international*, 2013.

Gahlaut, A., Dahiya, M., Gothwal, A., Kulharia, M., Chhillar, A.K., **Hooda, V.** and Dabur, R., 2013. Proteomics & metabolomics: Mapping biochemical regulations. *Drug Invention Today*, 5(4), pp.321-326.

Gahlaut, A., Shirolkar, A., **Hooda, V.** and Dabur, R., 2013. β -sitosterol in different parts of *Saraca asoca* and herbal drug ashokarista: Quali-quantitative analysis by liquid chromatography-mass spectrometry. *Journal of Advanced Pharmaceutical Technology & Research*, 4(3), p.146.

Gahlaut, A., Shirolkar, A., **Hooda, V.** and 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*, 7(2), pp.143-149.

Hooda, V., Yadav, A.C. and Singh, V., 2013. Economics of carrot seed crop as affected under various moisture regimes, fertility and spacing levels. *Annals of Biology*, 29(2), pp.193-195.

Hooda, V., Yadav, A.C. and Singh, V., 2013. Effect of varying moisture regimes, fertility and spacing levels on growth, flowering and seed yield of carrot. *Annals of Agri Bio Research*, 18(2), pp.227-230.

Gahlaut, A., Gothwal, A., **Hooda, V.** and Dabur, R., 2013. RAPD patterns of some important medicinal plants and their substitutes used in Ayurveda to identify the genetic variations. *Int J Pharm Pharm Sci*, 5(1), pp.239-241.