

Outreach Programme on “Monitoring of Drug Residues & Environmental Pollutants (MDR&EP)”

Collaborating Centre : Department of Veterinary Pharmacology & Toxicology,
Bihar Veterinary College, Bihar Animal Sciences University,
Patna, Bihar.

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About the Network Project

The Network Project – Outreach Programme on “Monitoring of Drug Residues & Environmental Pollutants (MDR&EP)” funded by Indian Council of Agricultural Research, New Delhi was launched in the year 2009. This network Project at present has 13 centres spread all across the country having its Coordinating Centre at Indian Veterinary Research Institute, Izatnagar. The other collaborating centres are located in Maharashtra (Mumbai), Tamilnadu (Chennai), West Bengal (Kolkata), Gujrat (S.K. Nagar), Uttarakhand (Pantnagar), Madhya Pradesh (Jabalpur), Jharkhand (Ranchi), Assam (Guwahati), Bihar (Patna), Haryana (Karnal), Karnataka (Bengaluru) and Punjab (Ludhiana). The Project was initiated with the mandate of monitoring of residues of drugs and environmental pollutants for establishing data base of residual profile of xenobiotics in foods of animal origin. The Network Project after its start in the 11th Plan, successfully completed its tenure in 12th Plan and now has its approval till the financial year 2019-20. Based on the need for extension of this Project, it is most likely to be extended for another two to three years.

Collaborating Centre: Bihar Veterinary College, Patna

The Department of Veterinary Pharmacology & Toxicology, Bihar Veterinary College, Patna is one of the Collaborating Centres of this network Project since 2009. The assigned mandated target for the Patna centre is monitoring of residues of antibiotics in milk samples of cattle and buffaloes. Indiscriminate use of antibiotics especially in veterinary practices has led the emergence of antibiotic resistance in microorganisms and treatment failures in human beings. Not only that, it also poses serious problems to the dairy industry as well as undesirable concentrations of antibiotics may cause chronic toxicity in infants and adult human beings too.

The Centre has been continuously monitoring the residues of antibiotics like tetracyclines, sulphonamides, fluoroquinolones etc. in milk samples of cattle and buffaloes. The samples are being routinely analysed by high sensitive equipments like High Performance Liquid Chromatography (HPLC). Till date, the Bihar Veterinary College, Patna Centre has surveyed almost all the districts of the Bihar state for generation of database of antibiotic residues in different districts. Overall results indicate that pooled milk samples do not have any problem of antibiotic residues, however, individual milk samples from cattle and buffaloes have presence of around 1 to 2% antibiotic residues. The cause of these residues of antibiotics were traced to be extralabel use of antibiotics and violation of withdrawal periods.



Processing of milk samples for HPLC analysis



HPLC analysis of milk samples



Team of the Network Project of ICAR headed by Dr. Ashok Kumar, ADG(AH), ICAR along with P.Is. of different centres of the Project.