

20<sup>th</sup> International Conference and Exhibition on  
**Pharmaceutics & Novel Drug Delivery Systems**

March 18-20, 2019 | Edinburgh, Scotland

**Interpenetrating Polymer Network (IPN) based drug delivery system for local action**

**Kajal Ghosal and Avirup Biswas**

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences, India

An interpenetrating polymer network (IPN) is a type of newly developed bioactive material used for delivery of drugs and other various purposes in the pharmaceutical industry. IPN helps in increasing bioavailability and also have good swelling properties. They are used in various ways of drug delivery as they increase stability of the formulation containing active drugs. They increase solubility of hydrophobic drugs and IPN are also targeted for tissue engineering. IPN have shown different properties. They are biocompatible, nontoxic in nature and biodegradable and thus showing advantages in controlled release drug delivery. IPN can be formulated with both natural and synthetic polymers and has synergistic effect of both polymers can be seen in IPN based drug delivery system. The drawbacks can be reduced. In our study, diclofenac sodium (half-life of the drug is very low) with the help of IPN have been tried for prolonged therapy. We can increase the bioavailability of the drug and thus by increasing the amount of time the drug is present inside the body.