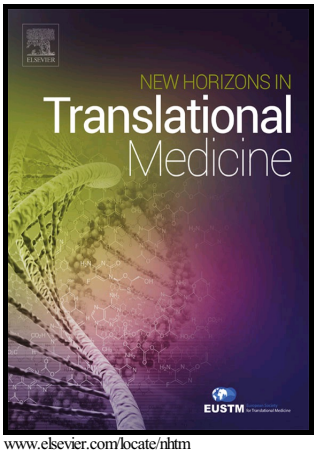

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BioMicroelectromechanical Systems: A Novel Approach for Drug Targeting In Chronic Diseases

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Abstract:
Despite of decades of research in conventional drug delivery systems many challenges are unconfronted in treatment of chronic diseases at a personalized medicine level. So there is a need for development of targeted and efficient drug delivery systems at such levels of treatment. Microelectromechanical systems have some unique characteristics like analyte sensitivity, electrical responsiveness, temporal control and sizes similar to cells and organelles that has led to engineering of implants for drug delivery in various chronic diseases.Targeting can be achieved through the use of this technology as the drugs are released at the site of action as well as in minimal effective concentrations, thus avoiding side-effects also. This review gives a general overview about the Bio Microelectromechanical systems used in targeting with some relevant examples. Hence Microelectromechanical systems prove to be a promising contender for development of drug delivery systems and targeting in pharmaceutical field.

Keywords: Actuators, Biocompatibility, Infusion pumps, Micro system technology, Micro fabrication technologies, Nanorobots, Sensors.