

# 11<sup>TH</sup> WORLD DRUG DELIVERY SUMMIT

October 16-18, 2017 Baltimore, USA

## A new methodology in drug delivery

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Our main goal in presenting this methodology was to modify the conventional systemic delivery of drugs because such procedures may cause toxicity; for example, polymeric coatings may present some disadvantages such as limited chemical stability, local inflammatory reactions and so on. As a result, we thought that it could be interesting to embed bioactive compounds and biomolecules within inorganic coating such as  $\text{TiO}_2$ ,  $\text{ZrO}_2$ , and  $\text{SiO}_2$ . This type of coating increases drug passage time through its small and long pores forward intended fluid (whether *in vitro* or *in vivo*) and eliminates different stimuli such as (temperature, pH, ultrasonic irradiation,...) to remove the coating on the surface of drug carrier system. This could be very effective economically and time spent. Moreover, if such inorganic coatings have nanostructure properties, they improve cellular adhesion, enhances osteoblast proliferation, and increase biomineralization. In this talk, emphasis is placed on presenting the technique, and would like to explore it as a new methodology in drug delivery.

## Biography

Mehran Ghiaci is a Professor of Chemistry at Isfahan University of Technology (Iran). He received his BS (1973) and MS (1974) in chemistry from Pars College (Iran). He received his PhD degree (1980) in Physical Organic Chemistry from University of California at Los Angeles (USA). His current research interests include physical organic chemistry, heterogeneous catalysts, organic synthesis, surface chemistry, chemical sensing and drug delivery.

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