

Biochemical and Pharmacodynamical Study of Microporous Molecularly Imprinted Polymer Selective For Vancomycin, Teicoplanin, Oritavancin, Telavancin and Dalbavancin Binding

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Editorial

Molecular imprinting is a rapidly developing technique for preparing polymeric materials that are capable of high molecular recognition [1-18]. This method usually involves crosslinking of functional monomers in the presence of template molecules by radical polymerization and then, removing the target molecules. The imprinted polymers selectively bind again with the template molecules. During the last decade, application of molecular imprinting polymers (MIPs) as affinity phase in solid phase extraction, as recognition elements in sensors, as stationary phase for preparative purification or separation of enantiomers and as catalyst are being actively pursued [10-18]. Antibiotic drugs are still commonly used in medicine. In recent decade, concerns have been raised regarding the public health impact of the occurrence of antibiotics in the aquatic environments. There are indication of increased bacterial resistance in wastewater from hospital and pharmaceutical industries and this is also causing concern.

In this editorial, molecular imprinting polymers (MIPs) possessing special binding ability to Vancomycin, Teicoplanin, Oritavancin, Telavancin and Dalbavancin are investigated (Figure 1). The results clearly indicate that synthesized molecular imprinting polymers (MIPs) possess higher Vancomycin, Teicoplanin, Oritavancin, Telavancin and Dalbavancin binding ability as compared with corresponding non-imprinted polymers. Moreover, the decrease in porogenic solvent polarity used for the synthesis of molecular imprinting polymers (MIPs) can enhance the molecular imprinting polymers (MIPs) Vancomycin, Teicoplanin, Oritavancin, Telavancin and Dalbavancin binding due to the decrease in dielectric constant.

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