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P135. THE RELATIONSHIP BETWEEN FORENSIC PHARMACOLOGY-GENETICS AND NANOTECHNOLOGY

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Forensic pharmacology is defined as a multidisciplinary field, which requires obtaining knowledge in not only in pharmacology, but also in he legal aspects, which therefore covers a wide area and where a different knowledge is required. On the other hand, the field that analyzes the changes in the reactions of the people to the drugs due to the variations in their genetic structure is called pharmacogenetics. In a general definition, these polymorphisms associated with the variability in the reactions to the drug can be divided into two as pharmacokinetics and pharmacodynamics. When pharmacokinetics changes, course of the drug within the body changes. This genetic difference in the enzymes playing role in elimination and/or metabolism of the drug is important. Thus, when these enzymes are much, the drug will be metabolized rapidly and if the concerned drug is not prodrug, then its period of effect or effect will reduce. This way, differences among the persons having the same drug will arise. Thanks to pharmacogenetic researches, in the light of the illnesses and information on the genes, it will be possible to create drugs treating illnesses. In addition to these, one of the new elements brought along by nanotechnology is the nanostructures that were developed to achieve the cell-specific gene transfer for improving specificity of the treatment. These researches not only will maximize the effects of treatment, but also will reduce the possibility of damage to the healthy cells. This research we conducted will address different examples in this field.

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