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Mathematical modeling of glucose insulin system during hemodialysis using different dialysate glucose concentrations.

This talk we will presents sensitivity identifiably analysis of a mathematical model of glucose insulin system during hemodialysis based on minimal model. This model incorporates sufficient structure and complexity to allow for examining the metabolic action and regulation of glucose and insulin systems. The complexity of the model allows for the representation of a variety of modes and sites for action but at the same time the number of parameters renders the validation with accessible data limitation problematic. Subset selection techniques are employed to examine which parameters are mostly likely identifiable for a variety of potential sources of data on the state of the system.