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Hematopoietic cell populations as therapeutic targets

Pharmacodynamics is a rapidly growing field with a focus on mathematical modeling of drug effects. A very important class of therapeutic/toxic effects is hematological cell populations, dynamics of which have been a well investigated subject of physiologically structured population models. However, only recently such models have incorporated drug effects on cell populations.

This talk will introduce the pharmacodynamic models of drug effects on hematopoietic cell populations. It will also make a link to physiologically structured population models through such structures as cell age and fluorescent label. The roles of physiological structures in describing therapeutic effects of various drugs will be emphasized.