DELAY DIFFERENTIAL EQUATIONS MODEL OF CELL EVOLUTION IN ACUTE LYMPHOBLASTIC LEUKEMIA UNDER TREATMENT

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We introduce a physiological model for the evolution of red blood cells and white blood cells in Acute Lymphoblastic Leukemia under treatment with TPMT. The model incorporates the action of erythropoietin, the asymmetric division and the competiton between normal and leukemic cells. It consists of 12 delay differential equations with 8 delays and it is related to the models in [1], [2], [3], [4]. Under a constant dose of drug administration, equilibria are determined and their stability is investigated.

References

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