

ABSTRACT

SYNTHESIS AND *IN VITRO* CYTOTOXIC ACTIVITY OF

N-(phenylcarbamoyl)butyramide

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To develop the new drug of anticancer group, preparation of *N*-(phenylcarbamoyl)butyramide had been done by reaction of phenylurea and butyryl chloride. The yield of *N*-(phenylcarbamoyl)butyramide was 59%. The structure of compound was confirmed using the spectrophotometer infrared and ¹H-nuclear resonance spectrometer.

The cytotoxic activity was tested using MTT method by culture line of HeLa cell. Through probit analyze of survived cell absorbance, the result showed that IC₂₀ of hydroxyurea is 731,551 µg/mL and IC₂₀ of *N*-(phenylcarbamoyl)butyramide is 921,787 µg/mL. This result proves that (phenylcarbamoyl)butyramide has higher cytotoxic activity than hydroxyurea.

Key word: synthesis, (phenylcarbamoyl)butyramide, cytotoxic activity