CHAPTER IV

BIOLOGICAL ACTIVITY

4.1 Results of biological activity test

The *in vitro* activity of some compounds (10 μg/ml) from *Croton oblongifolius* against the 6 cell lines, for example, HS 27 (fibroblast), Hep-G2 (hepatoma), SW 620 (colon), Chago (lung), Kato (gastric), BT 474 (breast) cancer are reported in Table 13.

Table 13 Cytotoxic activity against 6 cell lines of some compounds from *C. oblongifolius.*

Compound	%Survival for cell lines					
	HS 27 (fibroblast)	**Hep-G2 (hepatoma)**	**SW 620 (colon)**	**Chago (lung)**	**Kato (gastric)**	**BT474 (breast)**
1	98	78	101	194	119	86
2	124	84	98	96	113	107
3	21	4	3	4	6	20
2a	92	48	51	96	67	80
Doxorubicin	35	17	20	63	54	28

Compound 2, abieta-7, 13-diene-3-one, which consisted of diene, and its derivatives have been tested showed no cytotoxic activity against 6 cell lines.

Compound 3, cleistantha-4, 13(17), 15-triene-3-oic acid, which consisted of triene, showed significant cytotoxic activity against 6 cell lines. It was showed that compound **3** exhibited cytotoxic activity against all cancer cell with %survival values less than doxorubicin test.

Furthermore, hardwickiic acid, which was the main product of the crude hexane, and its derivatives have been tested for antimicrobial activity. It was found that no biological properties have been specifically related to hardwickiic acid. (-)-Hardwickiic acid showed a significant qualitative antibacterial activity against the Gram-positive bacteria (*B. subtilis*, *St. aureus*) and *M. smegmatis* [19].