

# Antibacterial activity of Thai medicinal plants for cancer treatment in Khampramong Temple



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## INTRODUCTION

Thai medicinal preparation of Khampramong Temple, Sakon Nakhorn Province in Thailand, has been used for cancer treatment more than ten years ago. Khampramong Temple, receiving hospice care and were diagnosed in the terminal stage of several types of cancer. The treatment was aimed to treat a traditional herbal therapy which significantly improved the care outcomes. It composed with eleven herbs.

Many anticancer drugs exhibited antimicrobial activity including antitumor antibiotics such as the anthracycline group [daunorubicin] and quinone group [mitomycin C].

## OBJECTIVE

To determine antibacterial activity of Thai medicinal plants used to treat cancer of Khampramong Temple.

## MATERIALS AND METHOD

Preparation of crude extract

Dry materials

Macerated with 95% ethanol

Dried by evaporator

Ethanollic crude extracts  
Calculated the percentage yields



## CONCLUSION

These results should be supported the use of these herbs in traditional medicine to chronic wound infection of cancer patients and continue for investigating the antimicrobial compounds for cancer treatment.

## ACKNOWLEDGEMENT

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## REFERENCE

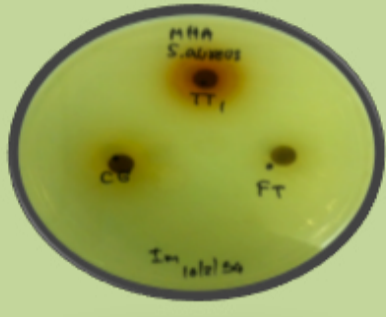
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Satyajit D.Sarker, Lutfun Nahar and Yashodharan Kumaramy.2007.Microtitre plate-based antibacterial assay incorporating resazurin as an indicator of cell growth, and its application in the in vitro antibacterial screening of phytochemicals, Methods;42(4):312-324.

## MATERIALS AND METHOD

This study tested all extracts against two types of gram positive bacteria (Staphylococcus aureus and Bacillus subtilis), one type of gram negative bacteria (Escherichia coli) and one type of yeast (Candida albicans).

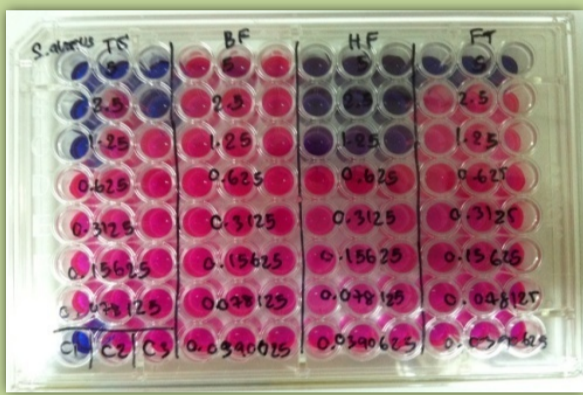
### Disc diffusion method.

determine the inhibition zone around the disc.



### Determination of minimal inhibitory concentrations (MIC) Method.

Minimal inhibitory concentrations (MIC) are used to determine susceptibilities of bacteria to extracts.



## RESULT

**Table 1 :** To showed antibacterial activity of ethanolic crude extracts expressed as diameter of inhibition zones (mm) by disc diffusion method and valued minimal inhibitory concentration MIC (mg/ml)

Ethanolic crude extracts	Staphylococcus aureus (ATCC 25923)		Bacillus subtilis (ATCC 6633)		Escherichia coli (ATCC 25922)	
	Disc (mm)	MIC (mg/ml)	Disc (mm)	MIC (mg/ml)	Disc (mm)	MIC (mg/ml)
Smilax glabra	8.17 ± 0.29	>5	9.17 ±0.29	>5	NI	NI
Pygmaeopremna herbacea	9.33±0.29	>5	9.83±0.76	>5	NI	NI
Rhinacanthus nasutus	7±0	2.5	13.33±1.26	0.15625	11± 2.64	>5
Tectona grandis	14.17 ± 0.76	0.3125	13 ± 0	0.625	NI	NI
Polyalthia cerasoides	9.33±0.58	>5	10 ±1.00	1.25	9.33 ±1.53	>5
Salacia chinensis	9.17 ± 0.28	0.3125	NI	NI	NI	NI
Hydnophytum formicarum	14.17 ±0.29	0.15625	12.5 ± 0.5	0.625	10.33 ±0.57	2.5
Orthosiphon grandiflorus	NI	NI	9.67±0.29	>5	9.67±0.58	>5
Acanthus ebracteatus	NI	NI	10.33+0.58	>5	9.67+0.29	>5
Artemisia Vulgaris	NI	NI	11.67+0.58	1.25	9.83 ± 0.76	>5
Angelica sinensis	NI	NI	10.67+0.58	2.5	NI	>5

NI not inhibition , Disc showed diameter of inhibition zones are Mean SD. (mm) ,  
MIC showed minimal inhibitory concentration (mg/ml)

Almost of extracts showed activity against B. subtilis and Rhinacanthus nasutus extract showed the highest zone. Including seven extracts and six extracts were active against S. aureus and E.coli respectively. None of these were against C.albicans by disc diffusion method. The minimal inhibitory concentrations (MIC) method was found that Hydnophytum formicarum, Tectona grandis and Salacia chinensis exhibited good antibacterial activity against S. aureus

(MIC= 0.15625, 0.3125and 0.3125 mg/ml respectively)