

# Antibacterial activity of the marine sponge *Stylissa massa* from Sri Lanka

Lakmini Kosgahakumbura<sup>1,2</sup>, Jayani Gamage<sup>1,2</sup>, Paco Cárdenas<sup>2</sup>, Chamari Hettiarachchi<sup>1</sup>, Prabath Jayasinghe<sup>3</sup>, Sunithi Gunasekera<sup>2\*</sup>

<sup>1</sup>Department of Chemistry, University of Colombo, Kumaratunga Munidasa Mawatha, Colombo 03, Sri Lanka

<sup>2</sup>Pharmacognosy, Department of Pharmaceutical Biosciences, Biomedicinska centrum BMC, Husarg.3, Sweden

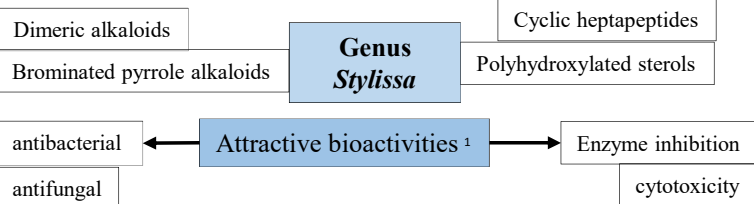
<sup>3</sup>National Aquatic Resources Research and Development Agency (NARA), Crow Island, Colombo 15, Sri Lanka

\* sunithi.gunasekera@farmbio.uu.se

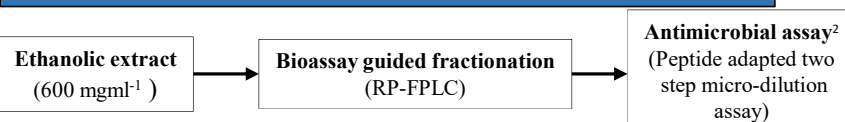


## Introduction

- Stylissa massa* is a marine sponge widely distributed in the Indo-Pacific region



## Methodology



## Results

Table 1 – Average Minimum Inhibitory Concentration of the fractions against *S. aureus* and *E. coli*

Frac. number	MIC value / $\mu\text{g/mL}$		Frac. number	MIC value / $\mu\text{g/mL}$	
	<i>S. Aureus</i>			<i>E. coli</i>	
20	125		20	62.5	
30	125		30	125	
32	250		32	250	
35	500		35	500	
Ciprofloxacin	7.8		Ciprofloxacin	0.975	

## Discussion

- Fraction 20,30,32 and 35 have a moderate antibacterial activity compared to the positive control.

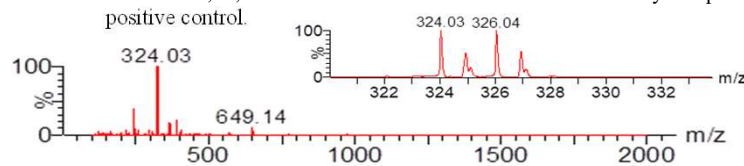


Figure 1 – LC-MS spectrum of fraction 20

- Fragmentation pattern of the m/z 324 signifies the presence of brominated compounds.

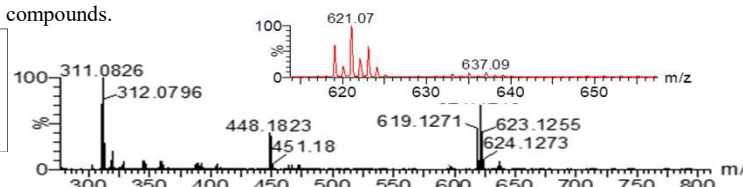
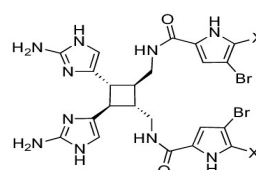


Figure 2 – MSMS fragmentation of the major compound in fraction 30



- m/z 619.3
- Isolated from the marine sponge *Agelas sceptrum*, Glover Reef, Belize in 1981<sup>3</sup>
- Consist of antimicrobial, antiviral, antimuscarinic, and antihistaminic properties

Figure 3 - dimer of sceptrin, the major compound in fraction 30



## Conclusions

- Stylissa massa* from Sri Lanka has a moderate antibacterial activity against the two strains, *E. coli* and *S. aureus*.
- There are similarities in the chemical composition of the two species *Agelas sceptrum* and *Stylissa massa*.
- The MS results showed the presence of five brominated alkaloids in their dimeric form, two of them are known in the literature.

## Acknowledgements

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## References

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Lakmini Kosgahakumbura  
lakminikosgahakumbura23@gmail.com

