

Macroalgas como fonte de produtos com potencial biotecnológico

Porquê? E para quê?

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20 de outubro de 2021

Porquê as macroalgas?



Macroalgas na praia

- ✓ Organismos sésseis
- ✓ Exposição a fatores bióticos e abióticos diversos



“Zona entre marés”

Porquê as macroalgas?



10 espécies



15 espécies



4 espécies



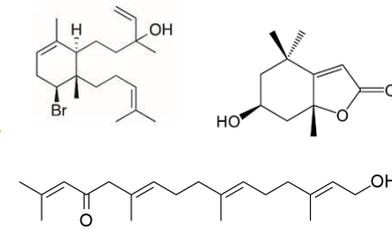
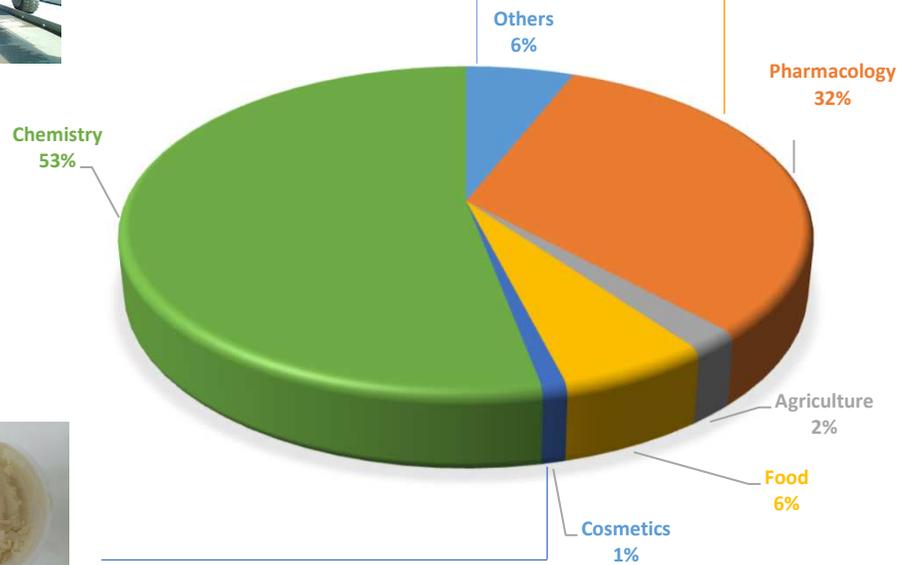
Para quê?



Antifouling



Novos ingredientes bioativos

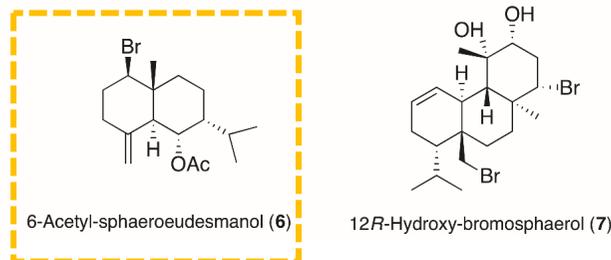
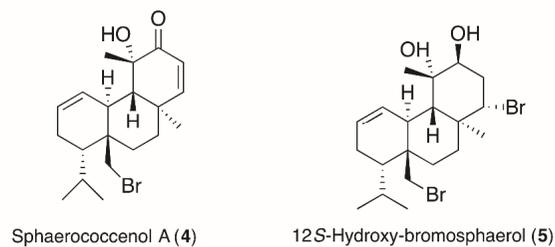
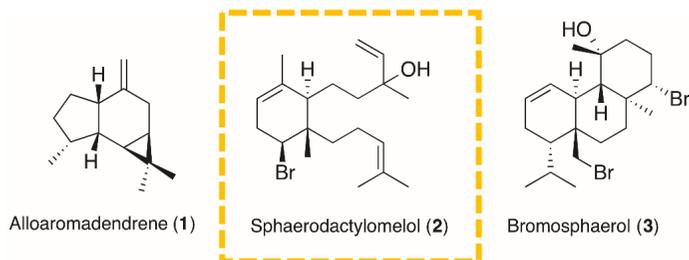
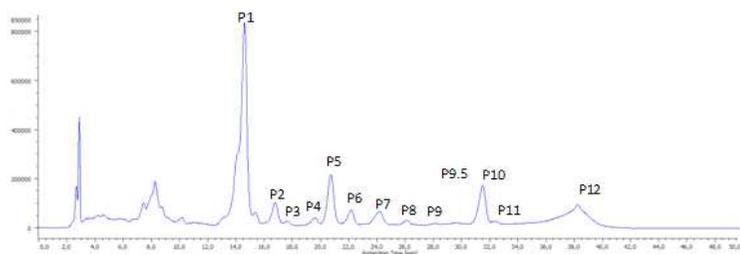


Neuroprotetores
Anticancerígenos
Antimicrobianos

Leary, D.V., Marjo, H., Gwenaëlle, A., Salvatore, and M.C. (2009). Marine genetic resources: A review of scientific and commercial interest. *Marine Policy*, 33: 183-194.



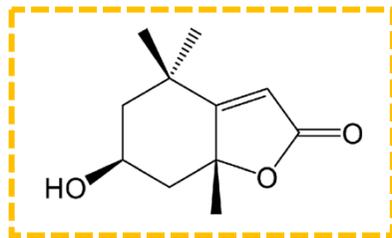
Sphaerococcus coronopifolius



Compostos novos de origem natural



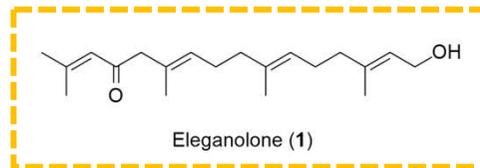
Codium tomentosum



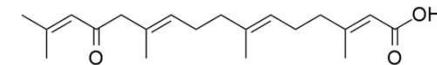
Loliolide



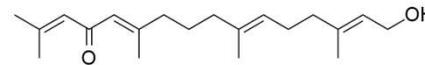
Bifurcaria bifurcata



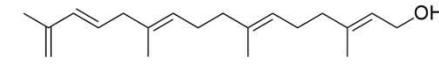
Eleanolone (1)



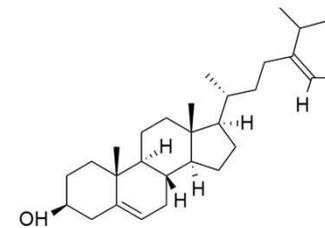
Eleanonal (2)



Bibiolone (3)



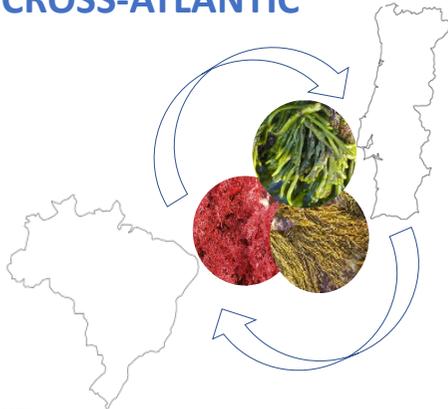
14, 15 hydroxy - eleanolone (4)



Fucosterol (5)

Projeto CROSS-ATLANTIC

CROSS-ATLANTIC



RED

Plocamium cartilagineum

Asparagopsis armata

Sphaerococcus coronopifolius

BROWN

Sargassum muticum

Fucus spiralis

Bifurcaria bifurcata

GREEN

Codium tomentosum

Portugal

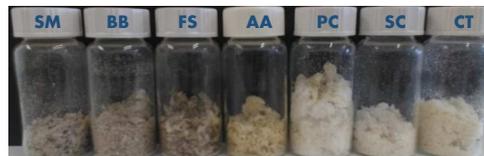
Gracilaria birdiae

Gracilaria cornea

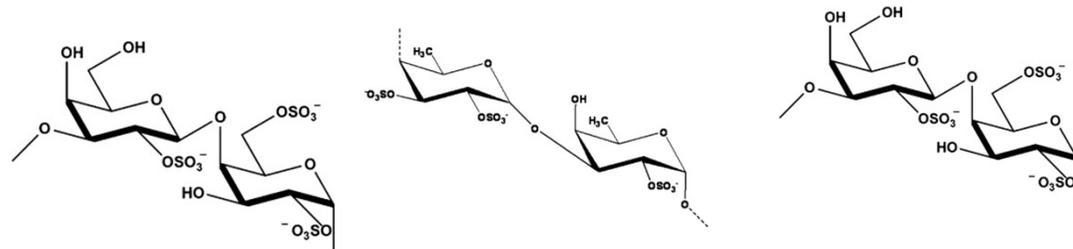
Hypnea musciformis

Solieria filiformis

Brazil



Polissacarídeos sulfatados



Agentes Antifouling



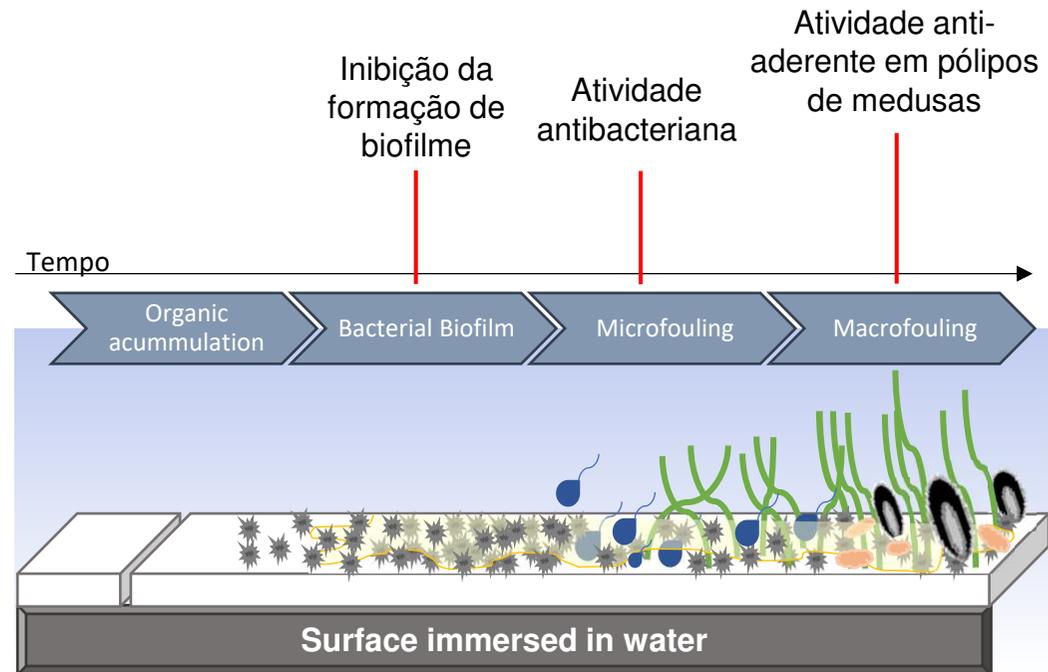
Asparagopsis armata



Fonte de compostos/ extratos



Sargassum muticum



Turning a real threat into a major opportunity

Pinteus, S., et al. (2020) Medusa polyps adherence inhibition: A novel experimental model for antifouling assays. *Science of The Total Environment*, 715, 136796.
Pinteus, S., et al. (2021) The marine invasive seaweeds *Asparagopsis armata* and *Sargassum muticum* as targets for greener antifouling solutions. *Science of The Total Environment*, 750,141372.

Principais conclusões

- ✓ As macroalgas são um fonte relevante de componentes com potencial biotecnológico para diferentes áreas;
- ✓ Aumento do conhecimento sobre os nossos recursos marinhos;
- ✓ Contribuir para a criação de produtos de valor acrescentado;
- ✓ Conhecimento adquirido relevante para criar respostas a novos desafios/ problemas ainda desconhecidos;

Agradecimentos

Financiamento



Cofinanciado por:



- ✓ **CROSS-ATLANTIC Project** (PTDC/BIA-OUT/29250/2017), co-financiado pelo COMPETE (POCI-01-0145-FEDER-029250);
- ✓ **Red2Discovery Project** (PTDC/MAR-BIO/6149/2014) co-financiado pelo COMPETE (POCI-01-0145-FEDER-016791);
- ✓ **POINT4PAC Project** (SAICTPAC/0019/2015 - LISBOA-01-0145-FEDER-016405);

Parceiros Institucionais



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