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Improvements in surgical facilities, prophylactic procedures and the design of implants have greatly reduced the rates of infection in hospital environments. Nevertheless, when they occur, they create serious complications that affect the patient, the surgeon and society.

Device-related infections are hard to treat and resolve so the patient's health might be compromised. For the surgeon it is a difficult challenge because of the complexity of the variables that influence the phenomenon and many of them are not controllable by the specialist.

Finally, for the community, infection requires considerable expense to cure the individual and it has further costs related to the inability of the patient to work or even fend for him/herself.

Microalgae are a source of secondary metabolites that are **novel bioactive compound**. However the activity of these compounds against bacterial pathogens and biofilm formation has been poorly investigated. **Biofilm** formation is especially important in infections and tissue inflammation related to implants and catheters.

The objective of the NOMORFILM project is to **search for antibiofilm compounds** produced by microalgae that will be useful in the treatment of infections and which could be incorporated into the manufacture of **medical prosthetic devices**.

For this purpose, 4000 microalgae species will be deeply screened specifically for new antibacterial and antibiofilm molecules. Structural elucidation of bioactive compounds from these extracts will ensure that only new chemical entities will be studied. Therefore molecules with novel mechanisms of action can be anticipated. In later stages of the project molecules will be tested for lack of toxicity in animal models of infection. The most interesting antibiofilm molecules will be incorporated into nanoparticles in order to develop manufacturing methodologies to incorporate these compounds into prosthetic device matrices.

NOMORFILM is a large **European consortium** involving fifteen universities, research centres and medical companies. It has been declared by the European Commission worthy to be a part of the **Horizon 2020** activities, the EU Framework Programme for Research and Innovation.

PROJECT INFORMATION

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Nomorfilm project involves 15 European partners from 8 European countries

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UAL: Universidad de Almería
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UNIFI: Universita degli Studi di Firenze
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KG: KtedoGen SRL
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Project Website

www.nomorfilm.eu

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 634588

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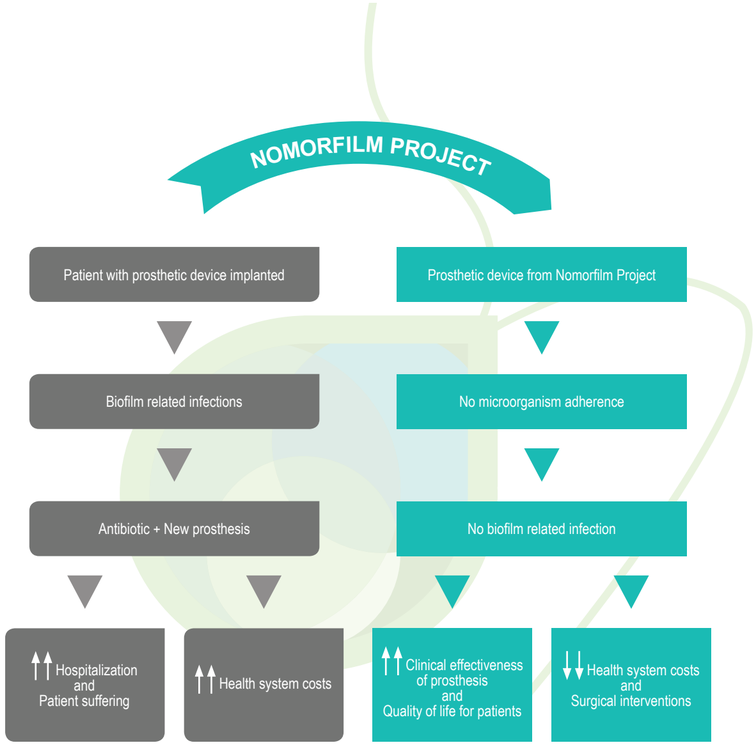
NOVEL MARINE DERIVED BIOMOLECULES AND INDUSTRIAL BIOMATERIALS

microalgae one day will wash infection away



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