

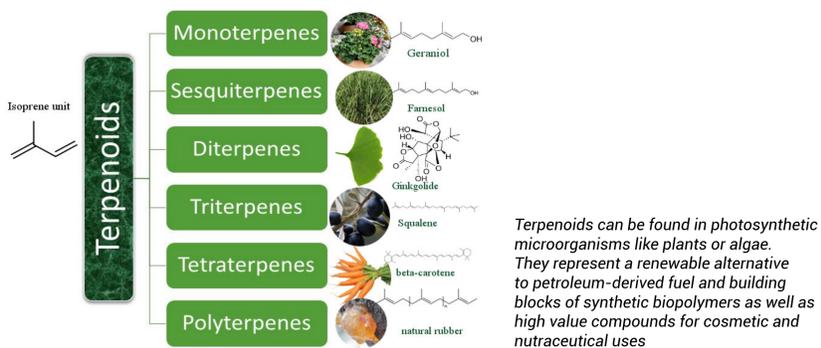


# abacus,

## A joint European initiative to **FOSTER ALGAE AS A BIOMASS** applied to the production of **ADDED VALUE COMPOUNDS**

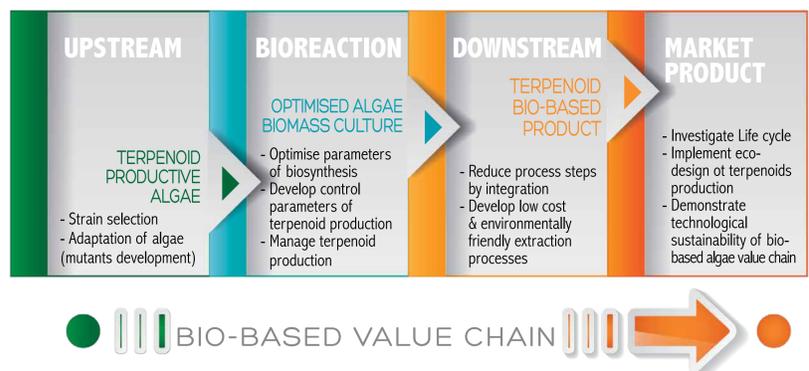
Bringing **INNOVATIVE MICROALGAE-BASED** compounds to the **MARKET**

Algae production in Europe is currently limited to a few small industries, mainly for the feed, nutrition and cosmetic sectors. This sector is ripe for further expansion. However, creating an economically viable and sustainable method of growing large quantities of algae and converting them into successful commercial products that the markets accept remains a challenge.



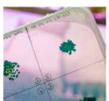
*ALGAE ARE A FERTILE SOURCE OF POTENTIAL NEW NATURAL MATERIALS. ABACUS WILL MAKE A MAJOR STEP IN MASTERING THE VALUE CHAIN FOR COMPETITIVE, ALGAE BASED-PRODUCTS*

Abacus aims at a business-oriented and technology-driven development of a new algal biorefinery, thereby bringing to the **market competitive and innovative algae-based ingredients** for high-end applications, spanning from algal **terpenes for fragrances** to long-chain terpenoids (carotenoids) for **nutraceuticals and cosmetic actives**.



## abacus **CONCEPT**

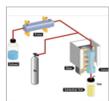
ABACUS ASSOCIATES SEVERAL INTERDISCIPLINARY APPROACHES IN ORDER TO SUPPORT A HIGH-VALUE PRODUCT MARKET DEVELOPMENT STEMMING FROM:



Selection and biological engineering of microalgal strains and oriented photosynthesis of terpenoids



Technological improvement and automation of algae production systems to optimize biomass yields and photosynthesis of terpenoids



Technological development of the downstream processing steps to reduce time and costs, and to optimize environmental acceptability



Market development based on new algae-derived ingredients and structuration of new biobased value chains

*The main achievement from ABACUS will be to tackle the biological and bioprocess challenges of oriented algal production for different terpenoids encompassing both well-established and more innovative market sectors*

## abacus **AT A GLANCE**



*This project has received funding from the Bio-Based Industries Joint Undertaking under the European Union's Horizon 2020 research and innovation program (grant agreement N° 745668).*



[www.abacus-bbi.eu](http://www.abacus-bbi.eu)

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