



# A pipeline for the discovery, sustainable production and commercial utilisation of known and novel high-value triterpenes with new or superior biological activities

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## Objective

Mankind is continually screening low-molecular-weight compounds from a plethora of synthetic and natural sources in the search for molecules with novel or superior pharmaceutical, agrochemical or other biological activities. In this regard, plants are a potentially rich source of bioactive molecules. Because of their extreme diversity and complex chemistry, however, plant metabolism is still underexplored. Consequently, the full potential of plant-derived, low-molecular weight, bioactive compounds is still largely untapped.

The TriForC consortium will tackle this issue by establishing an integrative and innovative pipeline for the exploitation of plant triterpenes, one of the largest classes of plant bioactive compounds with an astonishing array of structural diversity and spectrum of biological activities. The TriForC partners each bring to the consortium the necessary tools, resources, methods and production systems required to assemble the pipeline and produce high value plant bioactives for commercialisation for use as e.g. new drugs or agrochemicals.

The TriForC consortia will identify new bioactive triterpenes from natural resources by exploring biodiversity. To increase diversity and bioactivity, new-to-nature triterpenes will be derived by semi-synthesis and by an elaborate metabolic engineering platform in plant and microalgal bioreactor-based production systems. To unleash the potential of triterpenes for green biotechnology, structure-activity relationships for triterpenoids will be explored via high throughput screenings for novel chemical entities with potential agrochemical and pharmacological applications. TriForC will further develop and upscale plant-based bioreactors for sustainable commercial production and bio-refining of high-value triterpenes. The TriForC project will guarantee a sustainable and industrially exploitable supply of high value plant compounds with new or superior biological activities ready for commercialisation.

## Field of science

/social sciences/economics and business/economics/sustainable economy  
/engineering and technology/industrial biotechnology/metabolic engineering

## Programme(s)

FP7-KBBE - Specific Programme "Cooperation": Food, Agriculture and Biotechnology

## Topic(s)

KBBE.2013.3.1-01 - Plant High Value Products - from discovery to final product

## Call for proposal

FP7-KBBE-2013-7-single-stage  
See other projects for this call

## Funding Scheme

CP-TP - Collaborative Project targeted to a special group (such as SMEs)



## Coordinator

**KOBENHAVNS UNIVERSITET**

Address: Norregade 10, 1165 København, Denmark  
Activity type: Higher or Secondary Education Establishments  
EU contribution: € 1 270 960

Website: [Website](#)  
Contact the organisation: [Contact the organisation](#)

Administrative Contact: Søren Bak (Prof.)

## Participants (10)

Sort alphabetically	Sort by EU Contribution	Expand all
	<b>ALKION BIOPHARMA SAS</b> France	EU contribution € 650 720
	<b>SPICER CONSULTING LIMITED</b> United Kingdom	EU contribution € 778 440
	<b>VIVACELL BIOTECHNOLOGY ESPANA SL</b> Spain	EU contribution € 590 181
	<b>STOCKTON ISRAEL LTD</b> Israel	EU contribution € 658 640
	<b>EXTRASYNTHESE SAS</b> France	EU contribution € 362 880
	<b>VIB VZW</b> Belgium	EU contribution € 660 817
	<b>JOHN INNES CENTRE</b> United Kingdom	EU contribution € 705 097
	<b>WEIZMANN INSTITUTE OF SCIENCE</b> Israel	EU contribution € 481 520
	<b>UNIVERSITA DEGLI STUDI DEL PIEMONTE ORIENTALE AMEDEO AVOGADRO</b> Italy	EU contribution € 322 640
	<b>PANEPISTIMIO THESSALIAS</b> Greece	EU contribution € 400 160

## Project Information

**TriForC**  
Grant agreement ID: 613692  
[Project website](#)

**Status**  
Closed project

**Start date**  
1 October 2013

**End date**  
30 September 2017

**Funded under**  
FP7-KBBE

**Overall budget**  
€ 8 875 839

**EU contribution**  
€ 6 882 055

**Coordinated by**  
KOBENHAVNS UNIVERSITET  
Denmark

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