This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 760891

Press release

The Netherlands, February 2018

Launch of the CHIC project: Chicory as a multipurpose crop for dietary fibre and medicinal terpenes

- **CHIC is a research and innovation project supported through the EU Horizon 2020 funding programme.**
- **The €7.3 million project supports the establishment of a responsible innovation pathway for the development and application of New Plant Breeding Techniques (NPBTs) for chicory as a multipurpose crop for the production of high value consumer products, in line with societal needs and concerns.**
- **The consortium includes SMEs, an industrial partner, non-profit organizations and research institutes from 11 European countries and one from New Zealand.**

Root chicory (*Cichorium intybus* L.) is an under-utilized crop. It is currently used for the commercial production of inulin, which is added to many food products as a dietary fibre and sweetener.

The CHIC project aims to develop chicory varieties that can be used to produce dietary fibre with enhanced prebiotic effects to promote gut health. At the same time, given its biosynthetic capacity, high yields and low agronomic requirements, chicory has significant potential as a versatile production host in molecular farming for the production of many additional health-related products with benefits for consumers. CHIC also aims to harness this potential to cultivate chicory for the extraction of other types of health-related compounds (terpenes) as potential lead molecules for drug development.

To achieve this, new chicory varieties must be developed. However, chicory breeding is currently exceptionally time-consuming. Since it is an obligatory outcrossing species, no true varieties can be obtained, and germplasm is maintained by *in vitro* propagation.

Therefore, **chicory is a highly relevant case where new plant breeding technologies (considered in the NPBT set)[1] can make a real difference**.

Some EU member states and stakeholder groups are increasingly concerned about the impact of these technologies on the safety of its daily food and the integrity of the environment. Moreover, a clear EU regulation or policy on new plant breeding technologies is still pending. This has led to a

[1] https://ec.europa.eu/food/plant/gmo/modern_biotech_en and http://ftp.jrc.es/EURdoc/JRC63971.pdf

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situation where the industry is hesitant to adopt novel developments, and potentially beneficial innovations do not reach consumers.

CHIC explores the interactions between technological potential and societal acceptance of modern plant breeding

By developing and implementing a set of new plant breeding technologies, CHIC will adapt the biosynthesis and architecture of root chicory. This will strengthen chicory as a production system for high-quality dietary fibres and establish it as source of bioactive terpenes.

The consortium will evaluate the technological performance of these new plant breeding technologies, as well as the safety, environmental, regulatory, socio-economic and broader societal issues associated with them.

CHIC will strive to ensure responsible innovation and to raise public awareness by involving stakeholders and considering their needs and concerns in all phases of the project.

Participants

The CHIC consortium consists of 17 participants from 11 European countries and one international participant:

Research institutes

WAGENINGEN UNIVERSITY & RESEARCH	Wageningen University & Research Wageningen University and Wageningen Research (Netherlands) -Project Coordinator-	www.wur.eu
Université de Lille 1 SCIENCES ET TECHNOLOGIES	Université des Sciences et Technologies de Lille (France)	http://eep.univ-lille.fr/
IPB Leibniz-Institut für Pflanzenbiochemie	Leibniz - Institut fur Pflanzenbiochemie (Germany)	www.ipb-halle.de/en/
Plant & Food RESEARCH RANGAHAU AHUMARA KAI	The New Zealand Institute for Plant and Food Research Limited (New Zealand)	www.plantandfood.co.nz/
FONDAZIONE EDMUND MACH	Fondazione Edmund Mach (Italy)	www.fmach.it/
VTT	Teknologian tutkimuskeskus VTT Oy (Finland)	www.vtt.fi/

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Institut za Biološka istraživanja "Siniša Stanković" (Serbia)	www.ibiss.bg.ac.rs/index.php/sr-yu/
Julius Kühn-Institut Bundesforschungsinstitut für Kulturpflanzen (Germany)	www.julius-kuehn.de/
Graz University of Technology (Austria)	www.tugraz.at
Joanneum Research Forschungsgesellschaft mbH (Austria)	www.joanneum.at

SMEs

iBET - Instituto de Biologia Experimental e Tecnológica (Portugal)	www.ibet.pt
KeyGene (Netherlands)	www.keygene.com/
IDConsortium (Spain)	www.idconsortium.es

Large industry

Sensus b.v. (Netherlands)	www.inspiredbyinulin.com/

Other private and public non-profit organizations

Fundacja: Art & Science Synergy Foundation (Poland)	www.artscience-node.com
European Plant Science Organization (Belgium)	www.epsoweb.org/

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Programme: H2020, Call BIOTEC07-2017 New Plant Breeding Techniques (NPBT) in molecular farming: Multipurpose crops for industrial bioproducts

Project full name: Chicory as a multipurpose crop for dietary fibre and medicinal terpenes

Acronym: CHIC

Duration: 54 months

Total budget: € 7.3 million

Consortium: 17 participants from 11 European countries and one from New Zealand. Participants represent three SMEs and one large industrial partner, 11 academic participants and two non-profit organizations

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For more information about CHIC Project, visit our website and follow us on:

- @H2020_CHIC
- h2020-chicproject
- @H2020.CHICproject
- @h2020.chicproject
- www.youtube.com/channel/UCdEvOAEO_sWd3i1SyGF5nCw