

# FuturEnzyme Exploitation Workshop

Meeting #2

12M annual meeting

05/31 – 06/01/2022



Project funded by the European Union's Horizon 2020  
Research and Innovation Programme under grant agreement No [101000327]



# Agenda

- Introduction
- Preliminary Exploitation Plan
- FuturEnzyme Questionnaires
- Exploitation example Eucodis
- Open Discussion



# Exploitation

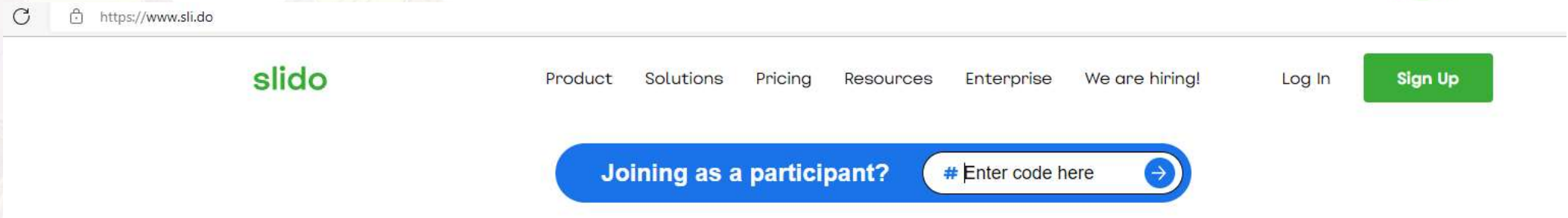
- "*Exploitation* is the act of selfishly taking advantage of someone or a group of people in order to profit from them or otherwise benefit oneself."
- "Exploitation means to make the best use of something, especially an opportunity, by creating a profit or an other benefit."
- We need rules, trust and communication... lot of communication!

# CSIC's and CLIB's role in FuturEnzyme's exploitation

- Trustworthy and confidential relationship to you as project partners
  - Neutral mediator between partners
  - Bilateral discussion and consultation about potentially exploitable results
- Central documentation of exploitation activities
  - Patent applications
  - Invention disclosures
  - Utility models
  - ...
- Provide template for exploitation results (if required)




# Introduction to Slido



- Scan QR code with your mobile phone or:
- Visit [www.sli.do](https://www.sli.do) and enter code #FE12M



 Test question: What is your favourite cheese?

 What type of organisation are you working for?

# Preliminary Exploitation Plan

- The Preliminary Exploitation Plan was submitted to EU on May 2022 – key points are detailed in following slides
- **Key Exploitable Results**
  - Online predictive web tools to search enzymes with manufacturer specifications. Methodology and software platform
  - A portfolio of a targeted enzyme library and enzymatic processes for specific applications relevant to the detergent, textile and cosmetic sectors
  - A portfolio of enzymes for applications not-relevant to the project
  - Enzymatic nano-formulations for multiple purpose activities
  - An enzyme-based detergent. Methodology + production
  - Enzyme-based textile treatment. Methodology + production
  - An enzyme-based cosmetic. Methodology + production
  - Guidelines & training courses



# Preliminary Exploitation Plan

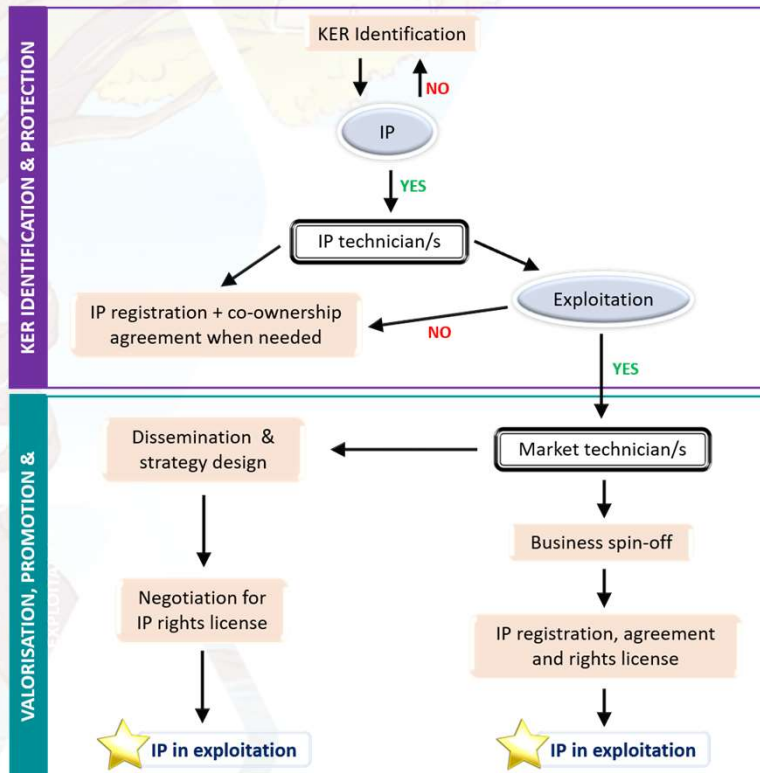
## Exploitation routes

- The use for further research to assess and/or demonstrate potential interest in the operation or commercialisation of the pipeline or process
- Developing and selling new products/services
- Spin-off activities
- Cooperation agreement/Joint Ventures
- Selling IP rights/Selling IP-related business
- Licensing IP rights
- Standardization activities

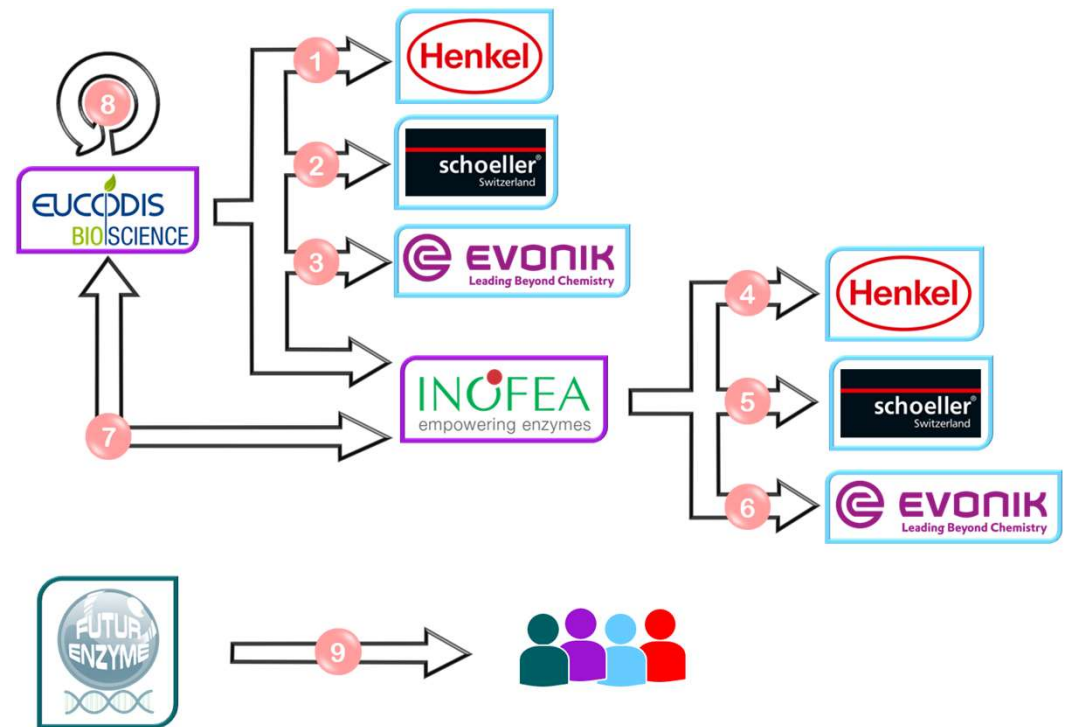
# Preliminary Exploitation Plan

What needs to be clarified?  
What is missing?

- IPR management



- Market assessment








# Brainstorming on questionnaires

Goal: Identify key impacts and exploitable results



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-  What target groups for questionnaires could you think of?
-  How could your organisation profit from FuturEnzyme-specific questionnaires on any target group?
-  What distribution channels could you offer for any type of questionnaire?

# Brainstorming on questionnaires

- Some suggested questions

- Identification of authors of a result: should co-ownership be applied?
- Identification of potential users of the results: inside or outside the consortium?
- Which enzymes are interesting? Are they published? Are there any genetic modifications that allow us to patent or protect them?
- Is there something similar published or patented? Is the enzyme/result easy to copy?
- If an interesting enzyme or result is found, which could be the next steps before publishing/protecting?
- What additional steps would be needed so that the enzyme can be applied / manufactured industrially?
- Which of the described exploitation routes would apply for the enzyme / product / process of interest?
- Do the enzyme/results have other applications different to those initially thought for the project?
- Have we achieved the proposed objective of the Exploitation Plan?
- Which end-users or third parties are willing to invest in its full development and commercialisation if the proposed TRL is reached at the end of the Exploitation Plan?
- What potential impact will the new TRL have on improving the transfer of such technology?
- A certain milestone/deliverable after the start of the Exploitation Plan may involve reassessing the protection of these new results and filing a patent application (technology not initially patented) or be a reason to decide to extend the previously filed patent and continue with the next phase. Which transfer partner can already be approached?
- Who and how will the consortium decide if new parties want to participate / a spin-off, will be continuously evaluate, including during the Exploitation workshops.

# Next steps

- Definition of „Exploitation task force“
  - Name 1 Contact person per project partner for follow-up information and activities (until end of June, mueller@clib-cluster.de)
  - Feedback on draft questionnaires
  - Preparation of future exploitation work shops
- Idea for next workshop: Short presentation of manufacturer
  - Requirements on enzymes for industrial use (type/activity of enzyme, amount, stability, other requirements)
  - What does a lab result need to fulfill to be interesting for industry partners?



## Exploitation of results

If we want to increase the impact of the project beyond the commercial use of the hit enzymes by Henkel, Evonik and Schoeller, we have to make the remaining, non-selected hit enzymes available to others!

They are a huge treasure, but often remain hidden in lab freezers. Easy availability is the key to success!

### Questions:

- How do we know which enzymes may be of interest?
- How do we reach others?
- How do we supply the enzymes?
- How do we protect IP and ensure commercial success?

# Exploitation of results – some ideas for discussion!

How do we know which enzymes may be of interest to others? How do we reach others?

We could set up a web questionnaire and distribute it to interested parties through newsletter and publications, e.g. asking for:

- Enzyme family of interest
- Reaction of interest
- Substrate of interest
- Preferred option to obtain the enzyme (e.g. obtain mg quantities from supplier, get sequence information only, get a license for the expression plasmid...)

# Exploitation of results – some ideas for discussion!

## How do we supply the enzymes?

### Supply options:

- Sequences/Plasmids: difficult to protect, maybe an option for academic labs
- Supply of enzyme preparations in screening grade/quantities
  - In Eucodis experience, commercial customers don't want to produce the enzymes themselves but want to obtain mg/gram quantities for initial screenings.
  - We could assemble screening kits of interesting consortium enzymes (no the selected hits), Eucodis could produce and supply them to customers, and share the profit with the consortium partners/providers of the enzymes.



# Exploitation of results – some ideas for discussion!

## How do we protect IP and ensure commercial success?

- Distributing sequences or giving access to consortium libraries to third parties ensuring secrecy and protection of our interests.
  - Individual agreements/contracts with third parties – difficult and maybe a lot of work
  - General agreement on website, access after agreeing and after confirmation of contact details
- Distribution via Eucodis
  - Eucodis could sell the kits to interested academic and commercial third parties
  - General Terms and Conditions do not allow reverse engineering, and offer at least some protection
  - Consortium partners would participate in the revenues and get their share

**Thank you for your  
active participation!**

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