

# FOOD ADDITIVES

Encapsulation of different types of food additives



*“We care about your success”*

**DNA Catcher S.L.**

Pol. Ind. Mocholí · Plaza Cein Nº5, nave A8

31110 Noáin, Navarra (Spain)



“DNA CATCHER wants to be the best choice being competitive and flexible to help customers to deliver their products into the market”

## “ABOUT US”

DNA CATCHER is an innovative Spanish company whose main objective is to improve the quality and performance of active ingredients using encapsulation technology in polymeric beads applied in:



**Pharmaceuticals & nutraceuticals**  
Human and veterinary medicine



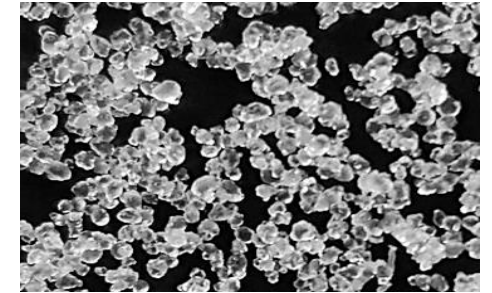
**Food additives**  
Encapsulation of different type of food additives



**Environmental health & odor control**  
Gas emission and bad odors neutralization



**Flavors & volatile compounds**  
Enhancement of flavor performance in food matrices

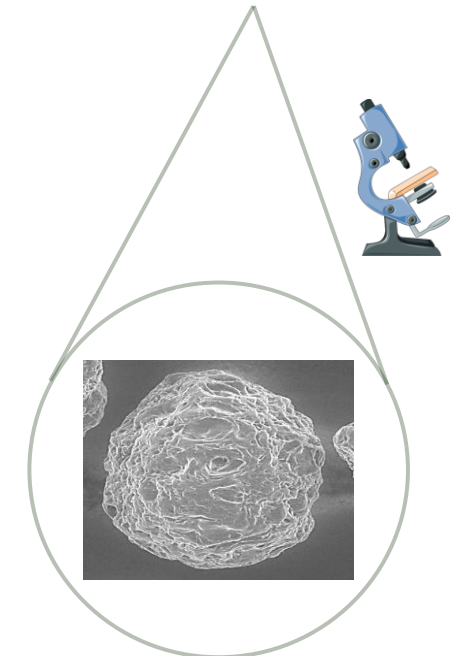


DNA CATCHER has developed their products based on **Patented Technologies** using safe, ecofriendly and Food Grade High density polysaccharides Beads (HDB-Technology) that fit to the market need with extensive application versatility.



PCT/EP2020/062573

- ✓ Easy to be manufactured at industrial scale with different sizes (0.2-2,000  $\mu\text{m}$ ).
- ✓ High capacity to load active molecules & microorganisms.
- ✓ Simple & standard equipment and techniques.
- ✓ Low cost Food Grade material.
- ✓ Avoiding the use of volatile organic solvents.



## Team mission, vision, objectives and capacities



### Multidisciplinary

Experience in multiple sectors



### Specialization

Team with expertise



### Creativity & innovation

Cutting edge technology



### Environmental sustainability

Natural, biodegradable and biocompatible raw materials

- ❖ Assay and evaluation according to customer needs.
- ❖ Highly capable to solve problems related with stability, bioavailability, taste, compatibility, etc.
- ❖ Development of thermo, pH, and oxidation-resistant systems, which prevent the loss of volatile compounds.
- ❖ Lab scale manufacturing by high granulation and fluid bed dryer with top spraying (up to 5 kg).
- ❖ Freeze drying.
- ❖ Physiochemical assays, solubility and release studies, quality control.



# BUSINESS MODEL

## Make things easier: Value creation

R&D services  
/contract research  
**“We will help you  
achieve your tech  
and market  
targets”**



Product supply  
and out licensing  
of technology or  
final products



**“Ready to cover  
your market  
need”**

Co-development  
agreement

**“We assume risks & love  
challenges with you”**



## Acid-Pro-HDB

Heat stabilization and delivery of organic acids

Organic acids are important for taste, and also have antimicrobial activity. They are used to keep animals healthy either by inhibiting pathogens.

### Acid-Pro-HDB

- Increases the stability of organic acids at high temperatures.
- Allows the delivery of organic acids, cheese flavors such as lactic, propionic and isovaleric acids.
- Increments organic acid stability in animal food, therefore protecting food against contamination.



## Oil-Pro-HDB

Oils in powder format

Oxidation stability is one of the most important quality parameters of edible oils. It is accelerated by high temperatures, water, acids and catalysts such as copper.

### Oil-Pro-HDB

Increases oil oxidation stability. Can be applied to:

- Fish oil powder: core shell microcapsules loaded with fish oil for milky products.
- Olive oil powder: core shell microcapsules loaded with olive oil as seasoning ingredient.
- MCT oil powder: core shell microcapsules loaded with MCT oil as flavor carrier.





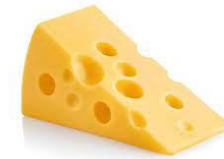
## Acid-Pro-HDB

Heat stabilization and delivery of organic acids

### Example

Encapsulation of **liquid cheese flavor** based on the combination of organic acids & other compounds for snacks and potato chips:

- Gouda cheese flavor mix loaded in HDB.
- Swiss cheese flavor mix loaded in HDB.



### Results

HDB powder (200-800  $\mu\text{m}$ ) loaded with volatile cheese flavor composition:

- Efficient encapsulation with a flavor loading yield around 25-40% w/w, according to the physicochemical properties of flavor compounds.
- Good taste performance.
- Fast or controlled release profiles can be achieved in the mouth.
- Easy to be applied to the surface of food matrix.



# LICENSING OPPORTUNITIES & CONTACT

Technology	R&D	Efficacy	Pilot study	Current state of art
Acid-Pro-HDB	✓	X	X	<ul style="list-style-type: none"> <li>• Ongoing development.</li> <li>• Looking for partners for co-development.</li> </ul>
Oil-Pro-HDB	✓	X	X	<ul style="list-style-type: none"> <li>• Ongoing development.</li> <li>• Looking for partners for co-development.</li> </ul>



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## Technical and sales support

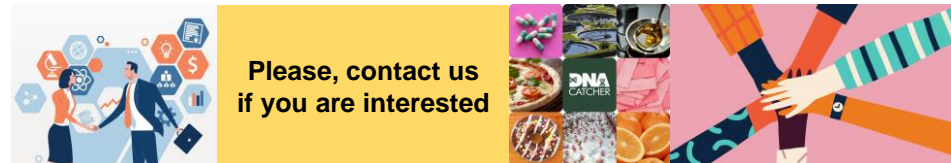
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We are open to discuss collaboration, co-development or joint venture relationships with partners (out-licensing, manufacturing and supply)