

**GOËMAR**

LE LABORATOIRE DE LA MER



**Stimulation of natural defenses :**  
**a growing technique for plant**  
**protection against diseases**

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**St-Malo - France**

# A GROWING COMPANY

## focused on **international** expansion



**Head Quarter**  
Saint Malo, France (1974)



**US Commercial Subsidiary**  
Agricultural business

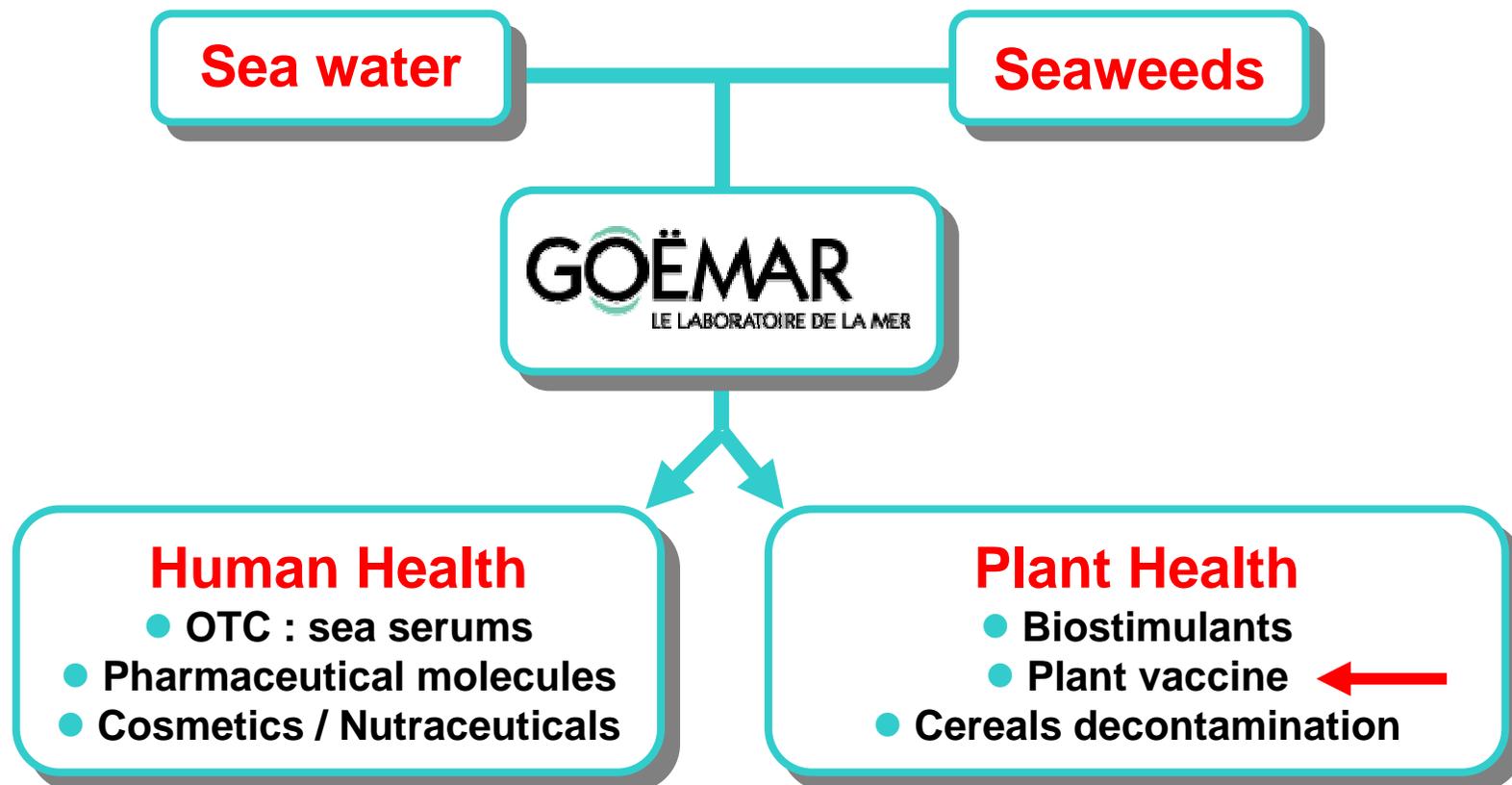


**US Manufacturing Subsidiary**  
Valve and packaging technologies



# OUR ACTIVITY

## Developing and marketing **Sea** based products aimed at **Health**



# Plant vaccine

## An innovating **crop protection** strategy

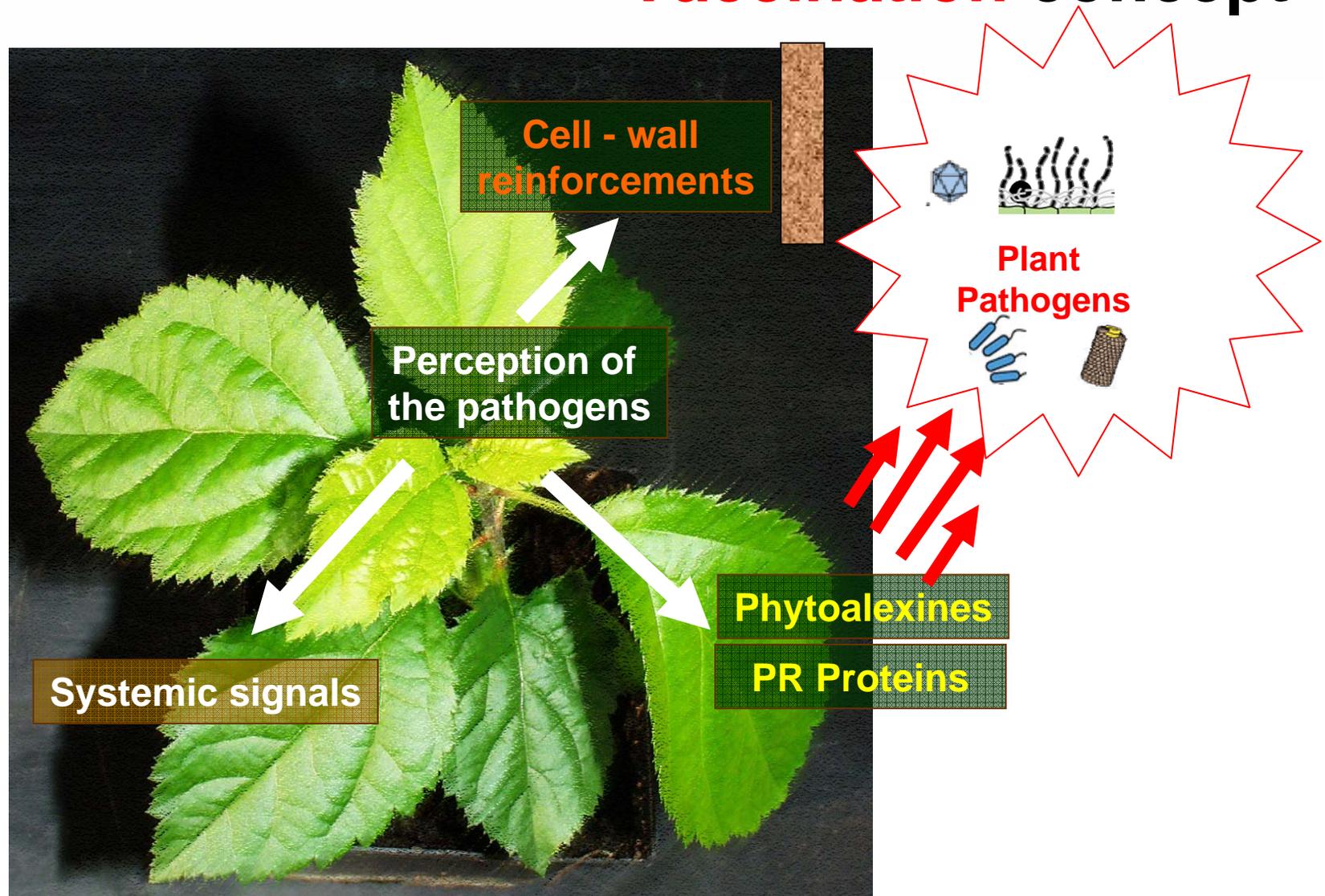


### Plant Health : **Iodus product**

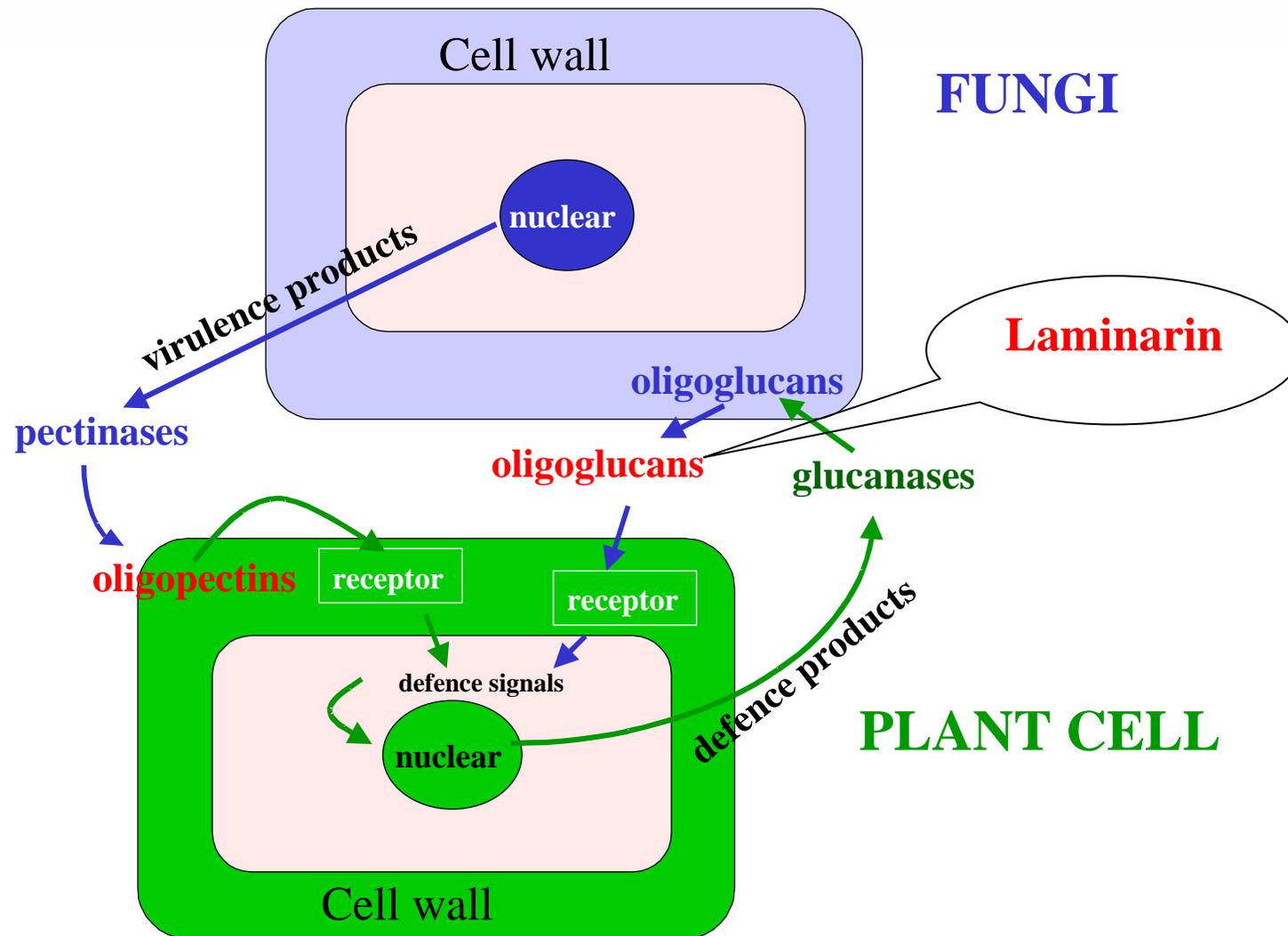
- The **first plant vaccine** approved
- A product resulting from **10 years** of R & D
- A **patented** molecule, **Laminarin**, extracted from *L. digitata*
- A **natural** product, a real technological breakthrough



# Laminarin and the Vaccination concept

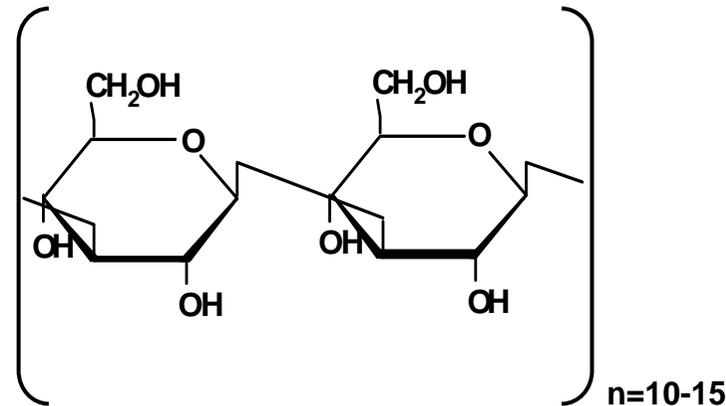


# Elicitors and plant-pathogen relations



# *Laminarin* active molecule

●  **$\beta$ -glucan** purified from *Laminaria digitata*



● **Toxicological data : non-classified molecule**

- Non irritating
- No mutagenic effect
- No residues
- ...

## ***Laminarin*** based vaccine Status in France

- **Approval** in November 2002 in France, against early diseases of **Wheat** (*Iodus™ 2 Cereals*)
- **First sales in France in 2003** on winter wheat
- ***Laminarin*** is included in **Annex I** of the 91/414/CEE Directive, since January 2005
- **Extension** in December 2005 on **Barley** early diseases (*Iodus™ 2 Cereals*)
- New registrations in progress for **Strawberry** (Powdery Mildew) and **Apples/Pears** (Fire blight)

***Iodus 2 Cereals***  
**Other countries**

- Registrations in progress for cereals in :
  - **UK**
  - **Germany**
  - **Switzerland**

## *Laminarin:* a wide range of other potential applications



### **Vine**

- Downy and Powdery Mildew, Grey Mold
- Esca (wood)



### **Apple**

- Scab, Powdery Mildew, Fire Blight
- Storage diseases (fruits)



**Tomato** : Bacterial spot



**Soybean** : Asian rust



**Strawberry** : Bacterial spot



**Etc...**

## ***Goëmar Agriculture Business on the French market***

- **A sales network made of 22 peoples :**  
Goëmar's sales team works actively **over the whole French territory.**
- **Presence on major markets :**  
Large crops : **40 % of our turn over**  
Fruit trees : **33 %**  
Vine : **27 %**
- **Strong relations with distributors:**  
Our team maintains **a thigh technical and commercial partnerships** with the distributors.

## *Goëmar selling's capacities Worldwide*

- **Goëmar's Export team works with *our national and international distributors.***
- ***Agrimar* is a subsidiary of Goëmar in **US.****

## ***Business Strategy***

- **Vaccine products :**  
Goëmar is looking for **agreements** with national or international companies to **develop** and **sell Laminarine** products **worldwide**.
- **Other Bio Control Products :**  
Goëmar is **seeking for agreements** with other companies to **release these products** on the **French market**



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