



# agrosavfe

protecting and saving safely

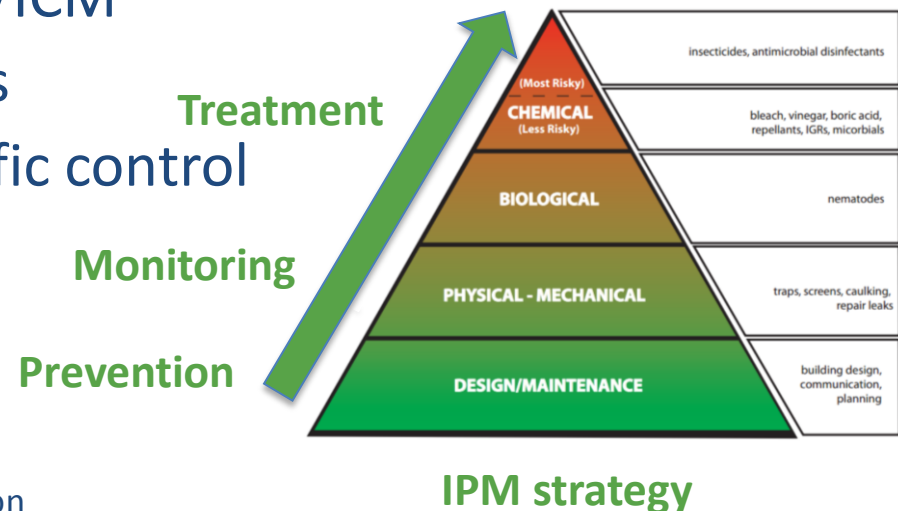


Agrobody<sup>®</sup>-based crop protection products for a  
sustainable agriculture  
Stakeholder meeting  
Inge Van Daele

May 17th 2016

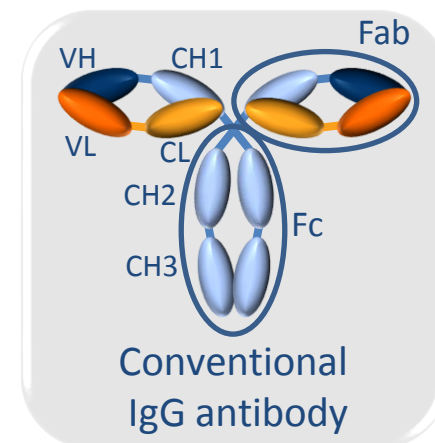
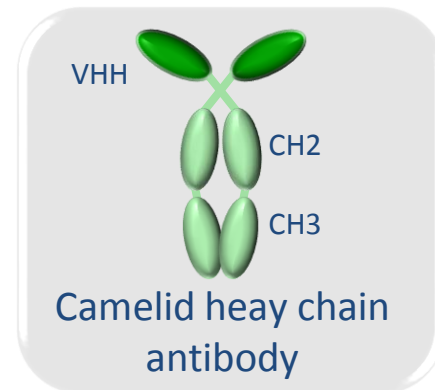
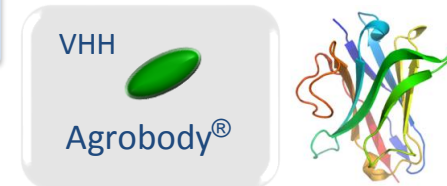
## Introduction

- **AgroSavfe** established in 2013 as a spin-off from VIB to develop applications with camelid binding domains (VHH) in agriculture
- Focus on **Agrobodies**® as novel **biological control agents** for an effective and sustainable pest and disease control
- Alternative or complement to existing control agents
- Compatible with chemical and biological sprays
- Agents for synergy and for IPM/ICM
- Can be engineered in GM-crops
- Broad spectrum or target specific control

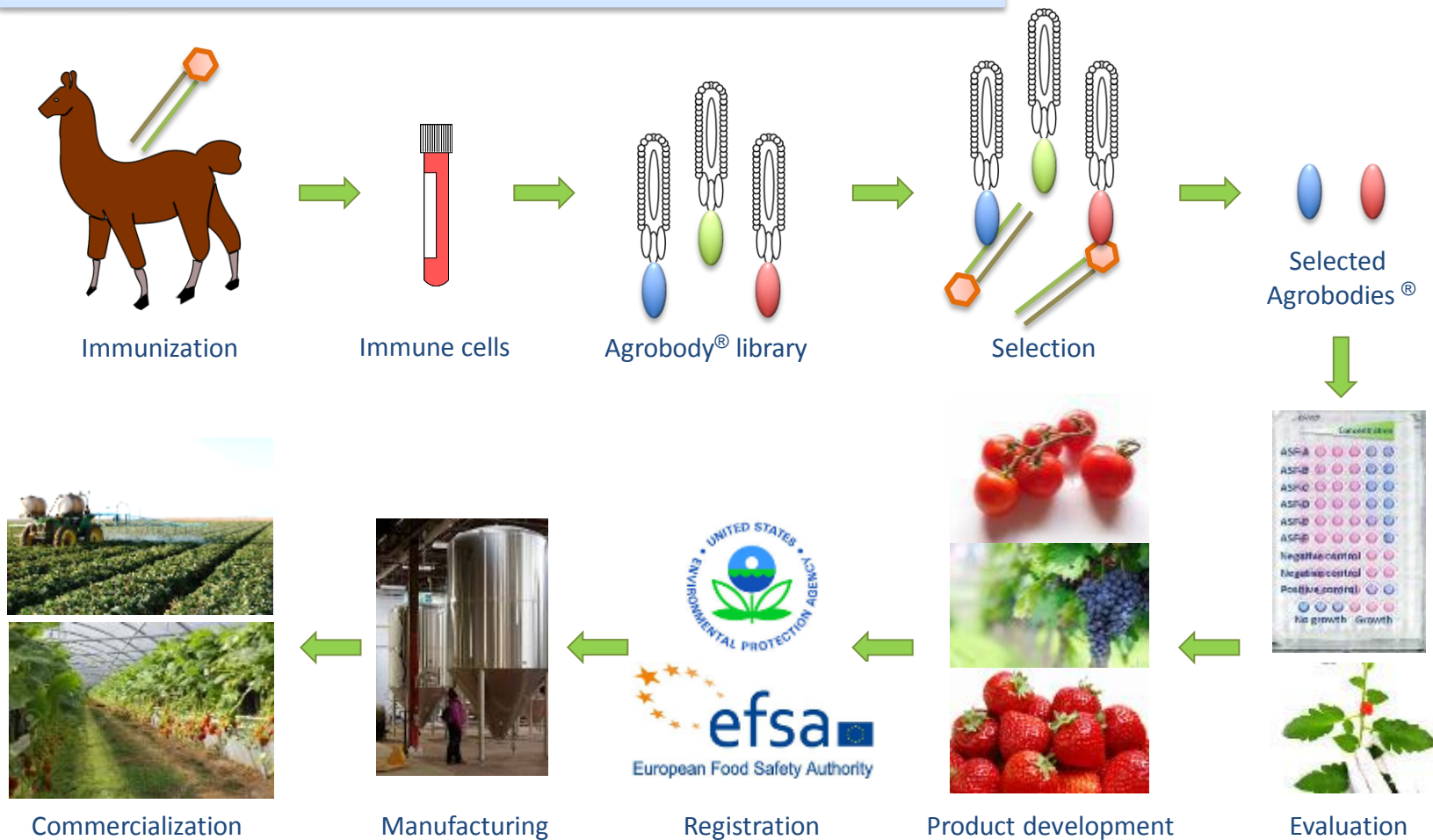


## Agrobodies<sup>®</sup> are based on a validated technology

- Agrobodies combine
  - Affinity and specificity
    - High efficacy
    - Non-toxic for mammals, plants, insects
  - Easy of manufacturing
    - Production in E. coli and yeast
  - Derived from naturally occurring proteins
  - Optimization through engineering
  - Thermal and chemical stable
    - pH range of 2 – 11
    - Temperature range till 54°C
  - 12 – 15 kDa
- Agrobody technology platform
  - Flexible: wide choice of targets
  - Functional domains derived from naturally occurring proteins
  - Industrial scale production by fermentation confirmed
  - Science and technology well understood
  - Technology has proven value for health care, industrial and consumer goods



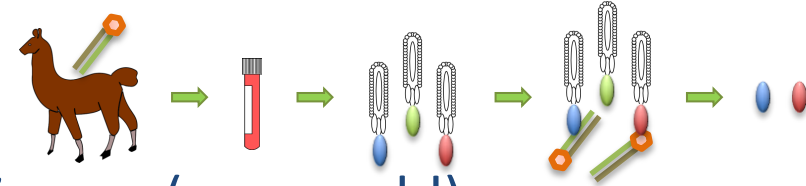
## From immunization to commercialization



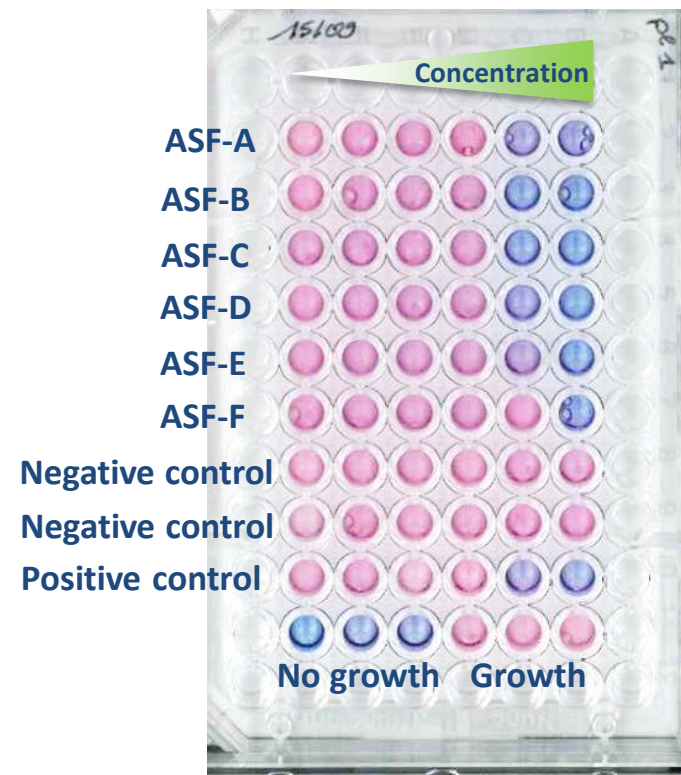
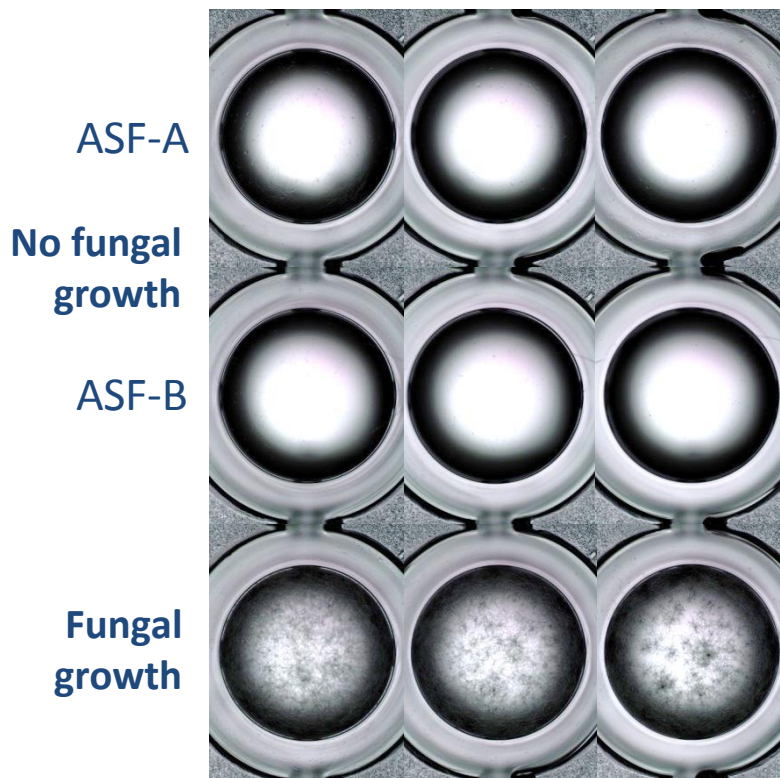
- Antifungal agrobodies
- Binding to cell membrane and cell wall
- Binding to Glucosylceramide (GlcCer)
  - very conserved molecule and involved in fungal growth, differentiation, virulence, immunogenicity, lipid raft architecture
- Broad spectrum activity
  - *Botrytis cinerea*, *Alternaria brassicola*, *Fusarium* sp., *Cercospora beticola*, *Verticillium dahlia*, *Penicillium* sp.
- Fungicidal *in vitro*



## *In vitro* antifungal activity



- Agrobodies active against *Botrytis cinerea* (grey mold)
- Full growth inhibition of *Botrytis cinerea*



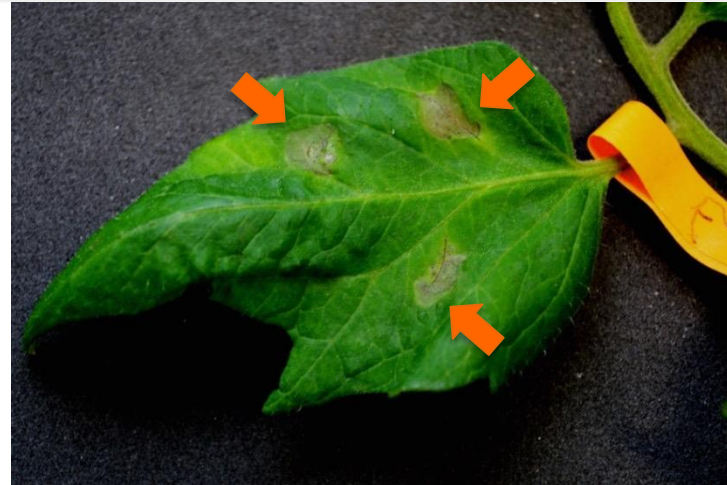
# Agrobodies protect plants from fungal infections

## Agrobodies protect tomato plants from *Botrytis* infections



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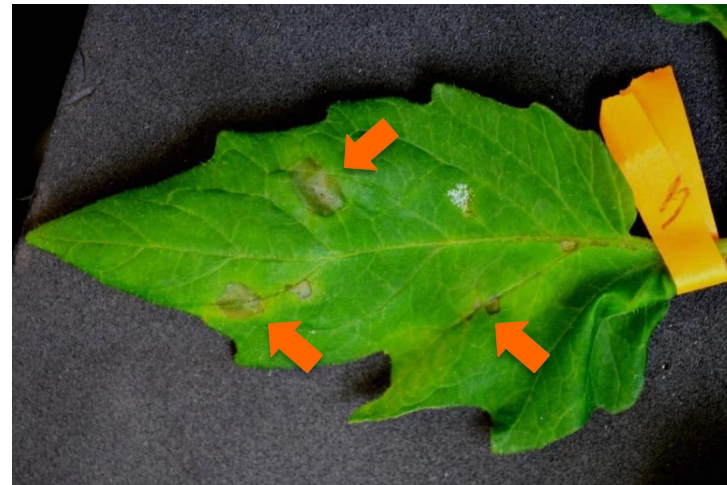
5 dpi



Untreated control



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Thank you!