

# Plant Biotechnology a Cornerstone for a Knowledge Based Bio-Economy

**KBBE towards 2020 – 13<sup>th</sup> September 2010**

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Websites:

<http://www.ipbo.ugent.be>

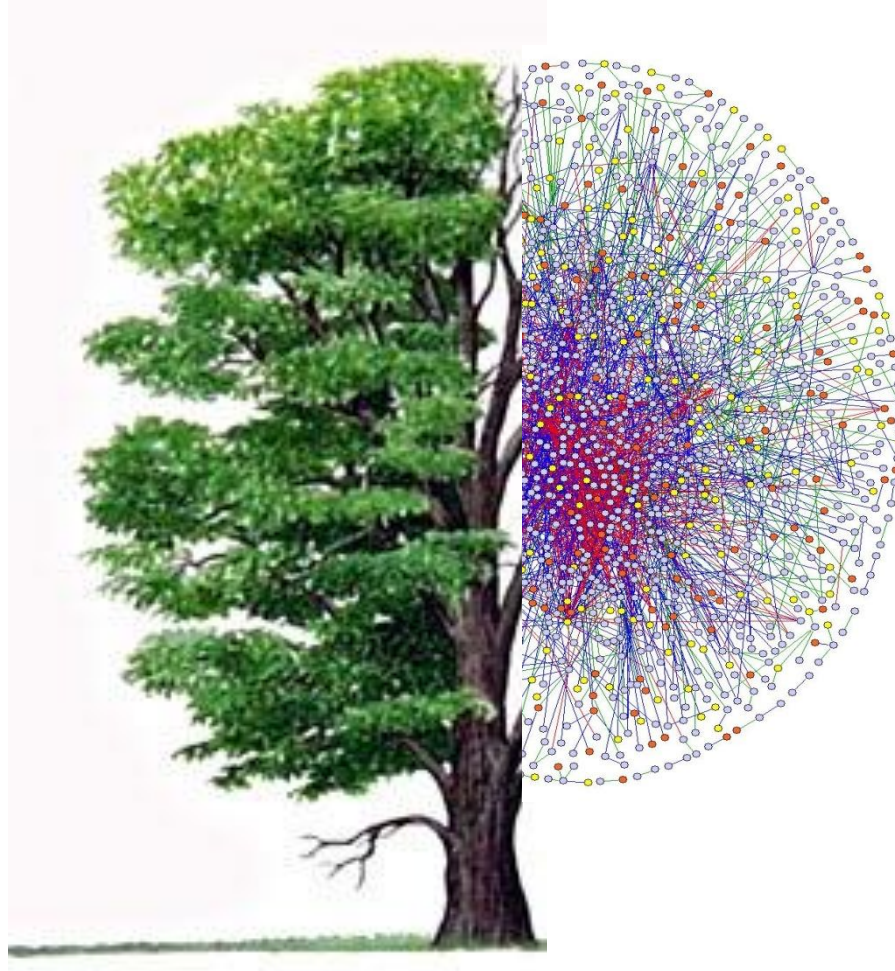
<http://www.psb.ugent.be>

<http://www.efb-central.org>

<http://www.pubresreg.org>

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# Plants for Knowledge



# Bio-economy

- Food and feed production
- Feedstock for industry
- Environmental remediation

Through a sustainable agriculture



# Challenge

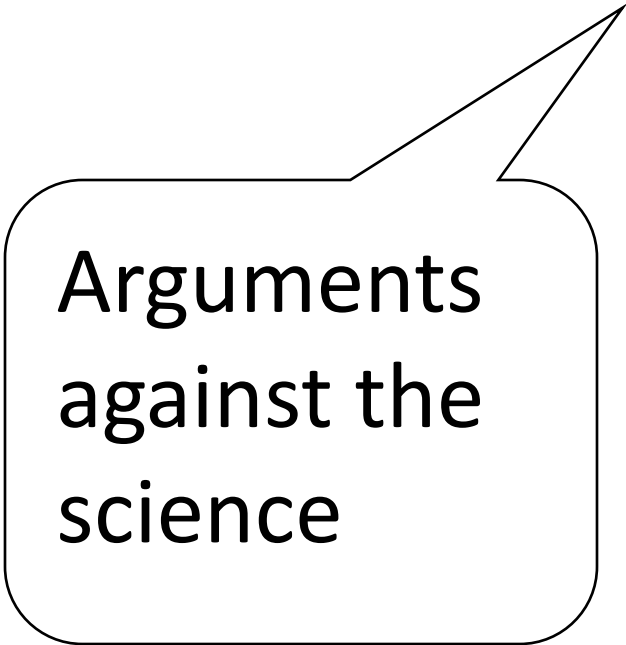
**In 2015 the Millennium Goals will not be met if we stay with business as usual**

- We need GM agriculture to:
  - ✓ Increase agricultural productivity
  - ✓ Provide income for the rural poor
  - ✓ Not extend the amount of arable land used
  
- We need substantial investment in international agriculture
  
- We need to assure that emerging and developing countries can create SMEs and a seed industry to bring GM crops to the market

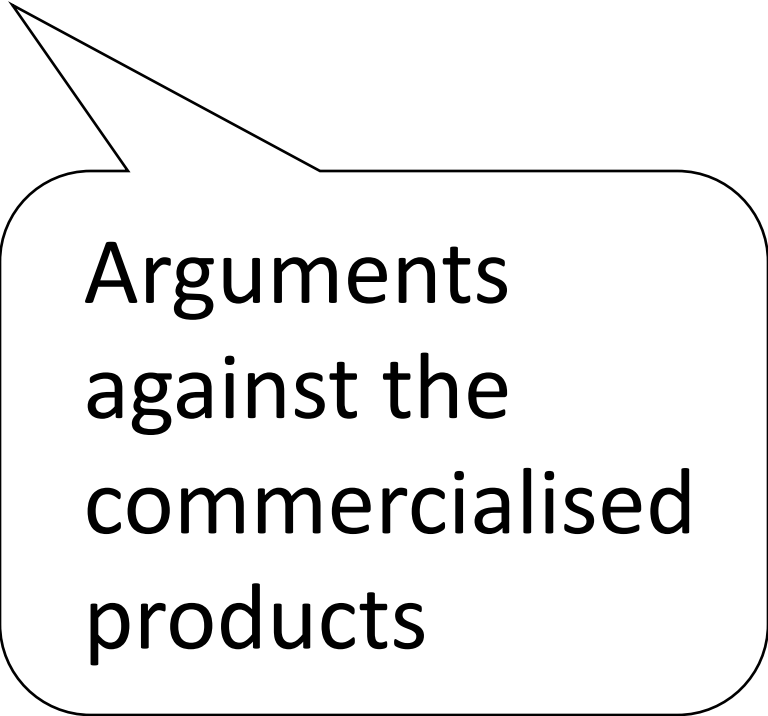


# Plant Biotechnology

## GM crops



Arguments  
against the  
science

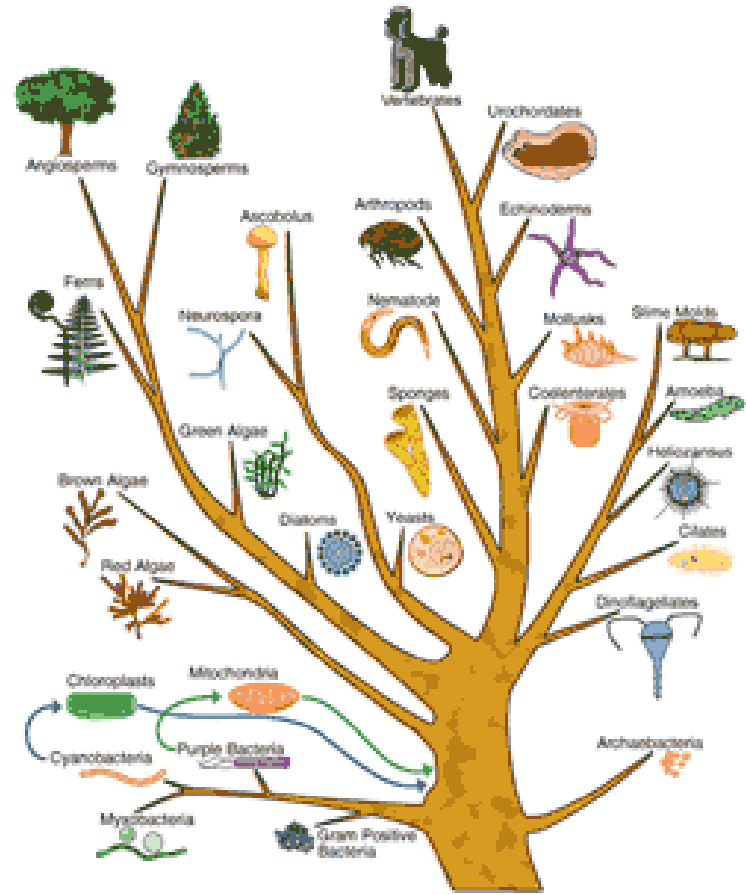


Arguments  
against the  
commercialised  
products



# Lessons from Molecular Evolution

- The living world is one large gene-pool of functional and pseudogenes
- This gene-pool is permanently evolving, this is the base of evolution
- Nature is one big genetic laboratory
- It is very misleading to talk about human gene, pig gene, rat gene etc.



# Drivers of the global Knowledge Based Bio-Economy (KBBE)

Food



Health



Natural, Environmental  
& Political Challenges



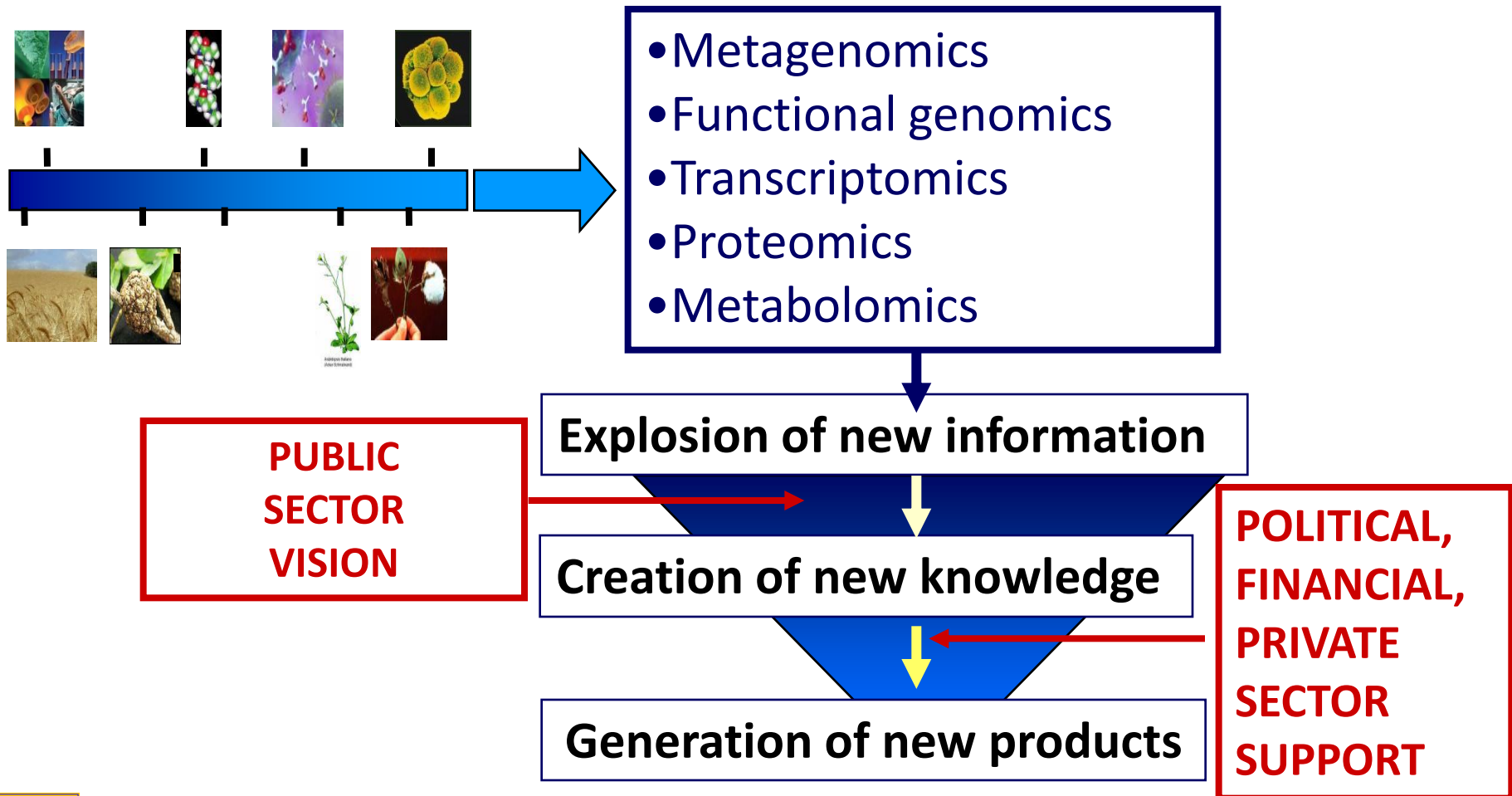
Science based solutions !







# Systems Biology: compressing history



# **‘Appropriate GM’ is entirely within our grasp**



Why then, are such life-saving technologies not reaching the farmers who desperately need them? Perhaps more importantly we should ask how severely this is delaying the Millennium Developmental Goals?

[www.spec.bc.ca/project/project.php?projectID=23](http://www.spec.bc.ca/project/project.php?projectID=23)





21<sup>st</sup> Century Plants will  
be GM-Plants



In a Better Environment

# The danger of misinformation

