





HEALTH • GRAIN



Cereal foods and health- Where are we now?

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HEALTHGRAIN, very short history

- ECC Congress in Vienna March 2002: Working group “Nutrition and Health”.
- In June 2002 an expression of interest was made to FP6 as one of the 1156 expressions in the area of food quality and safety: “Exploiting European cereal grains for human health”
- Working program appeared end 2002, with a call for project in this field in 2003.
- HEALTHGRAIN proposal was submitted on 5th February 2004.
- In June 2004 the proposal was selected as one of the 12 others considered for funding
- The project started 1st June 2005

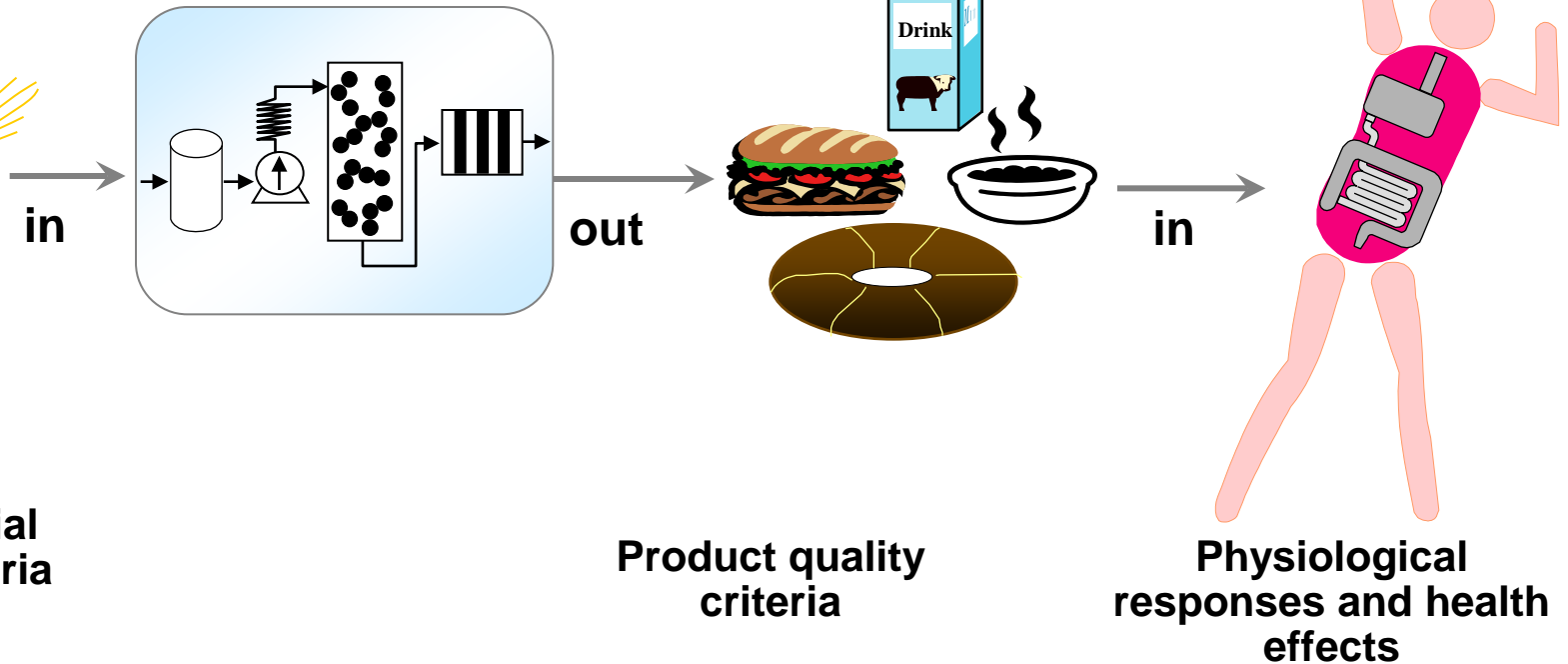


Health benefits of cereals must end up in processed foods

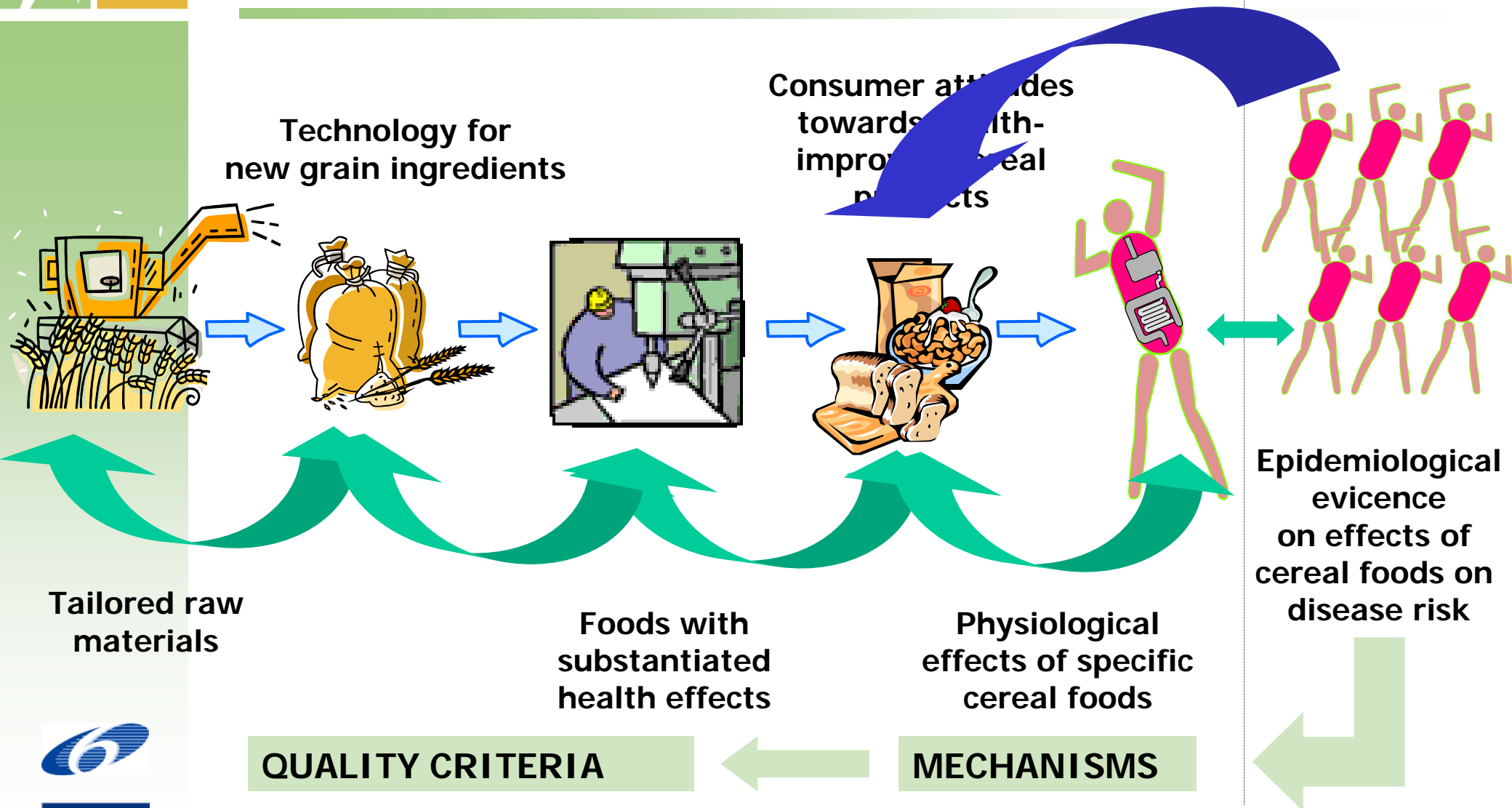
Plant breeding

Cultivation conditions

Raw material quality criteria

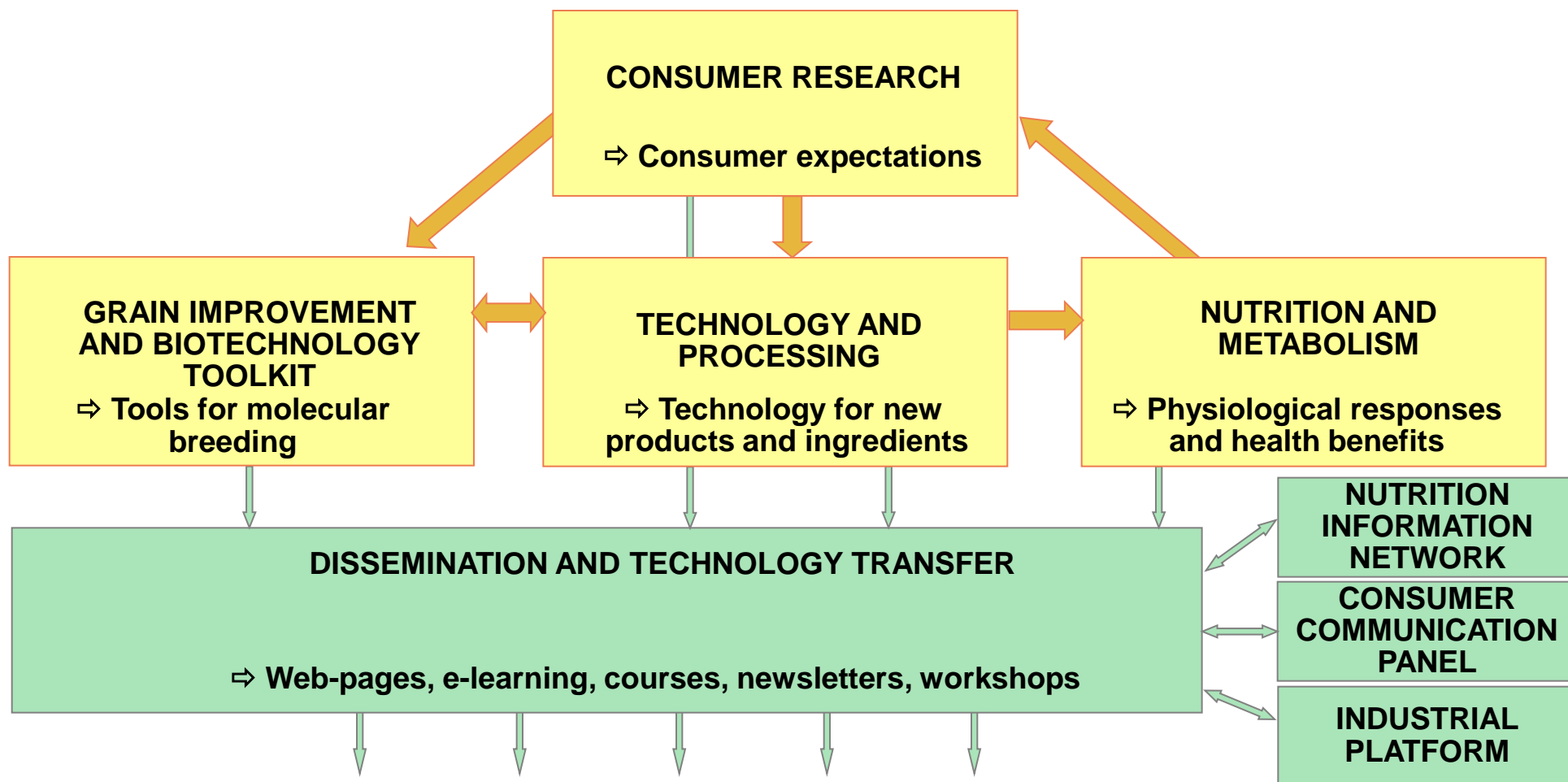


INTEGRATED APPROACH REQUESTED





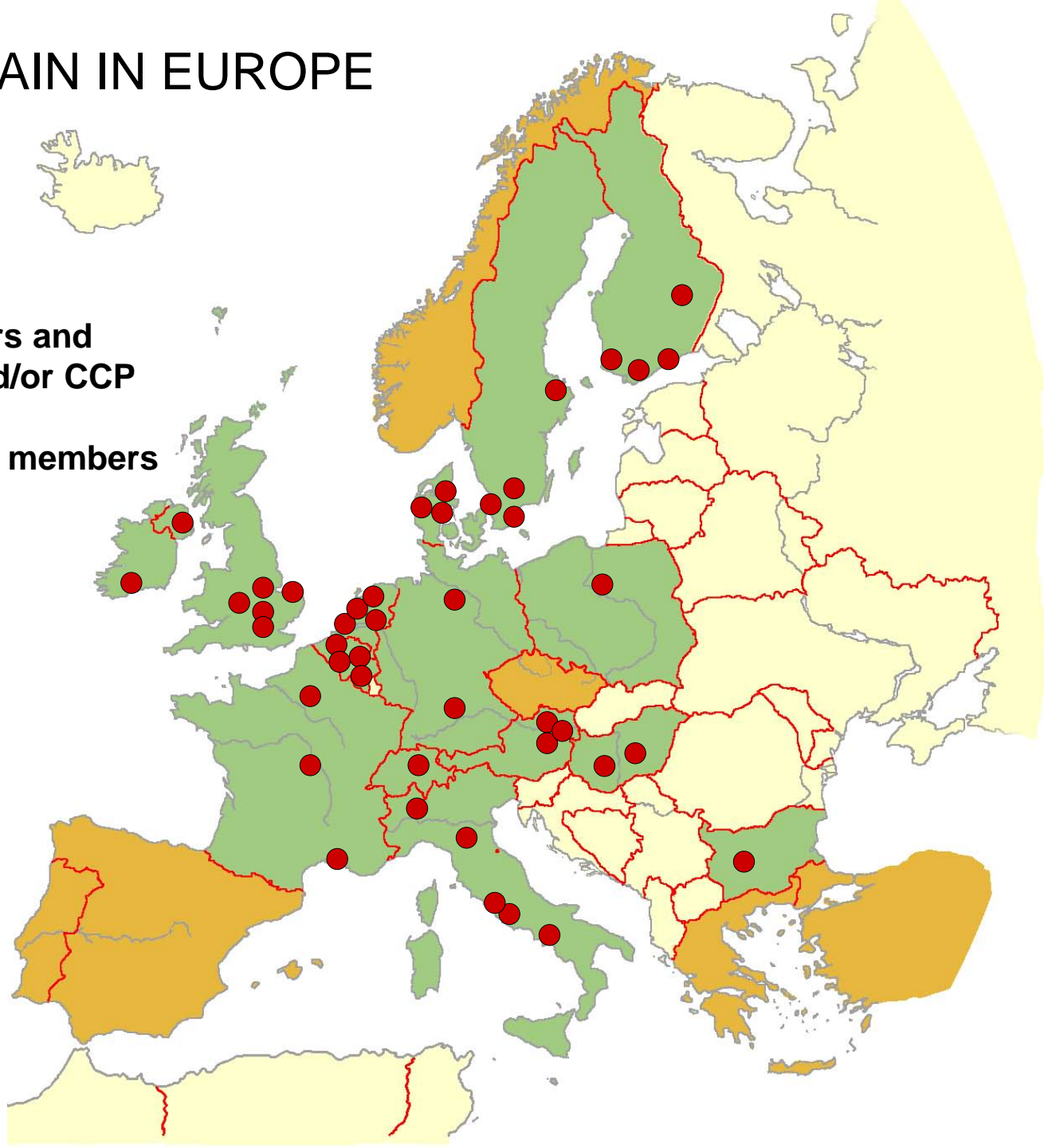
PROJECT STRUCTURE

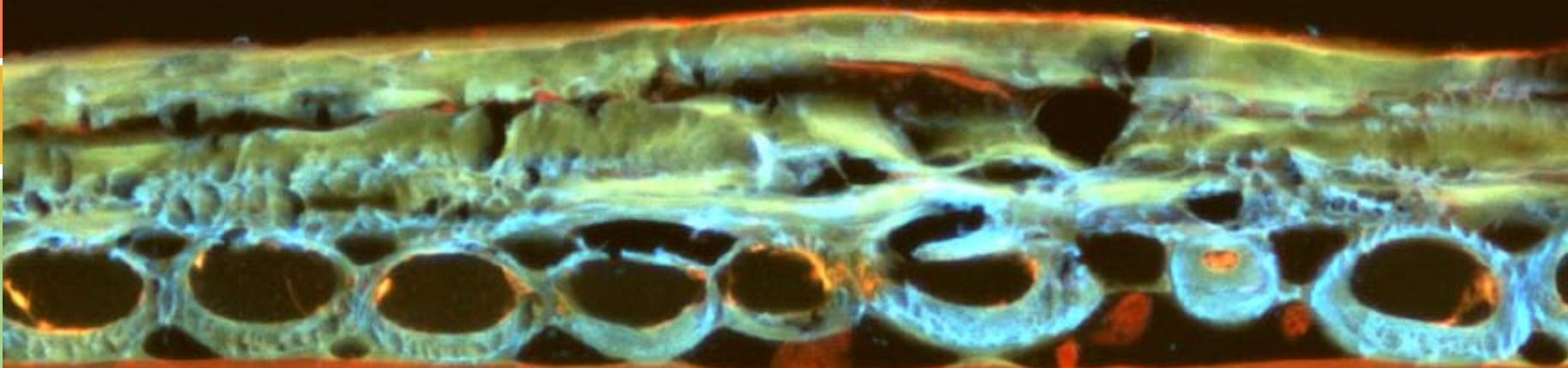


Breeders, food industry, trade, consumer organisations, authorities

HEALTHGRAIN IN EUROPE

- **green:** countries with HEALTHGRAIN partners and members of IP, NIN and/or CCP
- **orange:** countries with members of IP, NIN, and/or CCP

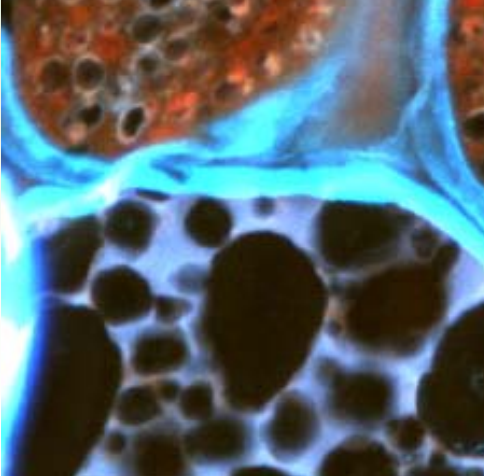
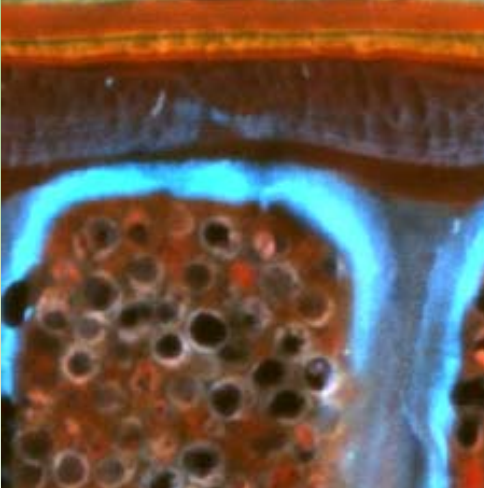
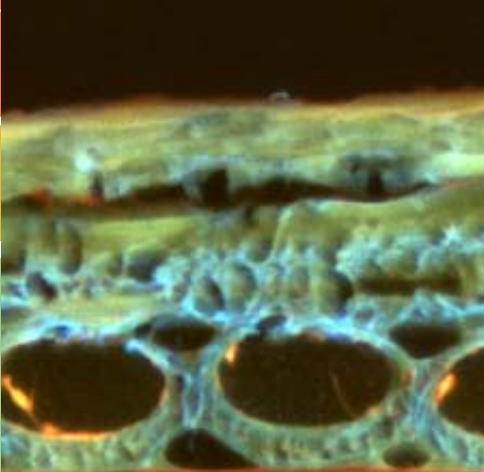




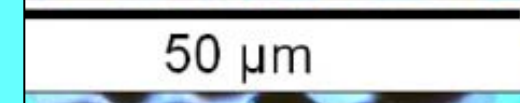
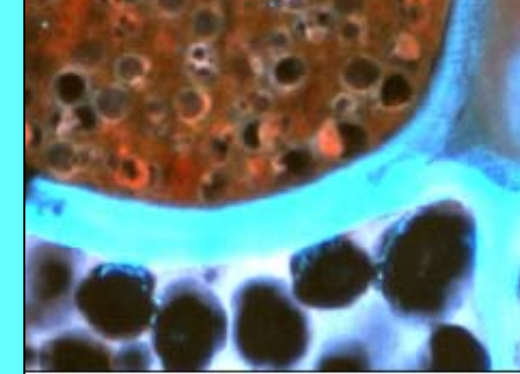
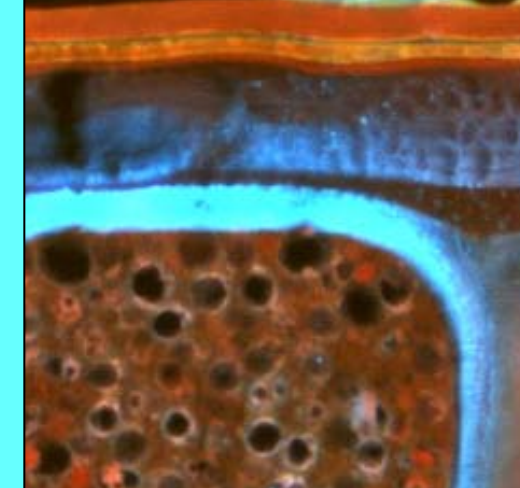
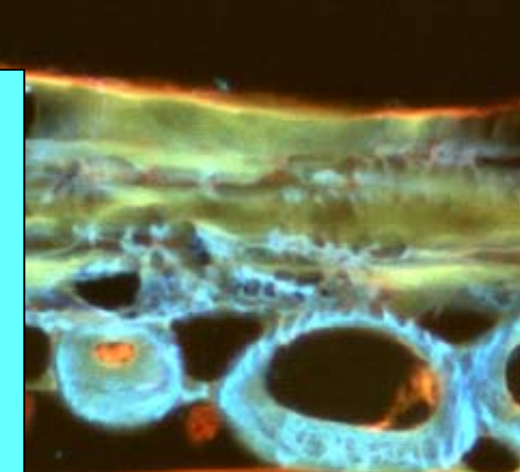
Dietary fibre
Oligosaccharides
Phytate
Phytosterols
Ferulic acid
Alkylresorcinols
Lignans
Tocopherols & -trienols
Folate, choline, betaine
Minerals

50 μ m





Analysis methods
Variation
Tools for breeding
Tissue markers
Localization of compounds
Peeling
New milling and
classification methods
New ingredients
Xylanase toolbox
Enzyme applications
Fermentation
Demonstration
Bioavailability
Glycemic response
Effects on satiety
Gut conversions
Metabolite formation
Effects on blood biomarkers



SOME STATEMENTS

- Consumers in European countries appreciate grain healthiness in diverse ways
- Health benefits of wheat can be improved by plant breeding
- Innovative milling techniques and processes have potential for new healthy ingredients of cereal grains
- Wheat arabinoxylan can be engineered for new applications
- Bioprocessing has potential of for improving exploitabiliy of wheat bran
- New and improved gluten free foods can be developed by help of lactic acid bacteria and enzymes
- Rye and barley products facilitate blood glucose and appetite regulation
- There is evidence for health potential of wheat aleurone as part of ready-to-eat cereals and bread
- A definition for whole grain is developed



Work still needed to increase availability and use of healthy and functional grain based foods and ingredients



The foods should provide

- ✗ Sensory pleasure
- ✗ Emotional and social pleasure
- ✗ Easiness of use

- ✗ Suitable amount of energy
- ✗ Optimal amount and delivery of nutrients

- ✗ Protection of personal disease risk



**New technologies, products,
practices,
Communication strategies**



HEALTHGRAIN - FORUM



**Research SRA;
Scientists**





THANK YOU!

For more results and information
Please visit the HEALTHGRAIN website
www.healthgrain.org



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