

**iPLANTA COST Action CA15223**

***WG5 MEETING***

**COMMUNICATION PLATFORM ON PLANT  
RNAi**

ATHENS (President Hotel)

**FEBRUARY 25TH, 2020**



**WG5 MEETING**

**COMMUNICATION PLATFORM ON PLANT RNAi AIMS AND  
THEMES**

The Wg5 Meeting will build the communication plan, and outline our activities to reach out to all our stakeholder groups

**THE MEETING WILL BE OPEN TO ALL PARTICIPANTS**

**DAY 1 – TUESDAY, FEBRUARY 25<sup>TH</sup>, 2020**

**PIGGYBACKING ON THE TRANSFORMING GM STORY OF IMPOSSIBLE FOOD DEMANDS**

HILDE-GUNN OPSAHL SORTEBERG

Dept of Plant Science, BIOVIT, NMBU, Ås, Norway

*Science communication, Impossible foods, Innovation, Sustainability, Macro algae*

The iPLANTA communication working group meeting is focusing on good stories and how to maximize impact. The main story served, while covering different aspects, is the Impossible Burger (IB) and dissemination options to increase outreach. The Impossible Food (IF) and Beyond Meat are illustrating how truly new technical innovation based on science can spread impressively, and you will be taken through the impossible route with an emphasis on communication. The development from the birth of a Silicon Valley start-up in 2011 by Patrick O Brown, professor emeritus biochemist at Stanford, to beyond any precedented growth phase will be illustrated. The IB hit No1 item from release in retail stores in 2019 (FDA GRAS 2019) and 17 000 restaurants (GRAS 2018) where Burger King has problems meeting the demand. Despite attempts to stop it arguing it uses GM heme from yeast to appear meaty, public perception is viral like. The success of IF and alike show consumers crave for sustainable, new food solutions, and such plant products are expected to turn food trends fast even if using biotechnology. IF is targeting flexitarians to improve health, and all to improve sustainable food production. This transformation is happening globally, and how Europe will deal with it concerns our activities: science, technology, breeding, public perception, socioeconomics, food security and safety, risk and politics. This change can increase our outreach and effect. Additionally, alternative macroalgae options and European suggested guide to controlled industrial upscaling will also be covered.

## THE IMPORTANCE OF INNOVATION IN SCIENCE COMMUNICATION

### JO RØISLIEN

Professor of medical statistics at Faculty of Health Sciences, University of Stavanger, Norway, and creative director and co-founder of scicomm company Science Addiction.

*Science communication, neuroscience, innovation.*

We are constantly bombarded with information. The brain prioritizes by sending the (well-)known directly to the brain's memory center, allowing the brain to run on autopilot unless exposed to something new or unexpected. This hardwired need for newness separates science communication from science education. In education each semester brings new students, and the same explanations and examples will be new to steadily new groups of students. In science communication the audience is always the same, be it the general public, policy makers or other stakeholders, and the required newness must be achieved by repeatedly changing the communication itself.

Portable media devices like smartphones has made this quest for newness challenging. Everyone can choose to be exposed to whatever they want, whenever they want, and science communicators are more than ever up against communication professionals like TV-series creators, ad agencies and artists. Facts are central to science, but successful science communication takes more than merely stating facts: New facts quickly turn into known facts, literally unable to awaken people's brains from autopilot mode.

Given this backdrop there are several tools for engaging audiences. In the arts originality is often achieved by 'matter out of place': Moving something from its traditional context to a new one. Science communication can mimic this using unexpected examples or pointing to unexpected uses of research results. Attaching personal stories to scientific research creates new meetings between scientific objectivity and subjective experience. By simple combinatorics an abundance of newness in science communication can be created.

## **GMO-FREE RNAi IN PLANTS COMMUNICATION TO IMPROVE THE BASIS FOR REGULATIONS AND POLICY MAKING**

PATRICK RUDELSHEIM

PERSEUS BV, Belgium – [www.perseus.eu](http://www.perseus.eu)

*Communication, regulation, legislation, precautionary approach, biotechnology*

“Scientists need to communicate more”. “Developers must inform the public”. These, and similar recommendations, are presented as mantras in a quest for improvements of the legal and regulatory environment for new technologies. While it seems to be sensible advice, there is hardly any clarification on the type and means of communication that might be effective. Is there actually any indication that more communication really has an effect? Furthermore, are the communication approaches of academics and industry suited for the task?

We will discuss examples, starting with the early debates on biosafety up, experience with the introduction of GMOs up to recent cases on synthetic biology, gene editing and toxicological studies, identifying the mechanisms that drive the development of legislation and regulatory requirements and associated communication challenges. Whereas scientific communication focusses on sharing information and getting recognition for scientific progress, legal and regulatory developments are based on societal agendas and political reactions. In this respect, communication should be seen as a necessary component to achieve a particular goal, rather than as providing a sound foundation and leaving other parties to steer the outcome.

## COMMUNICATION AND PUBLIC PERCEPTION IN SWEDEN

### MARIE NYMAN

Director of The Swedish Gene Technology Advisory Board

*Public perception, communication, biotechnology, politicians, general public*

The Swedish Gene Technology Advisory Board is an authority. The board consists of parliamentarians from each of the political parties and seven scientists in different areas. The Board meetings are a valuable platform for communication between politicians and scientists. Each year the authority shall submit a report to the government describing the development in the field of gene technology in a broad sense. The report mainly consists of short summaries of scientific papers written in a way so that politicians as well as the general public understand it. The report also includes a chapter on different aspects of legislation. The report is much appreciated by teachers, but also by politicians, journalists and other authorities. In addition to the report, the Board arranges seminars, gives lectures at e.g. schools and universities, and tweets. We also publish research news on our website and manage a second website with more basic information on genetics and gene technology.

In Sweden we have had field trials with GM-plants every year since 1989 without any vandalism. In recent years Swedish NGOs seem to have lost interest in GMOs since we have not had any protests since 2010 when a few members of Greenpeace occupied a farmer growing the Amflora potato. Reporting in media has also become much better over the years. Already in 2012, Swedish media refrained from reporting about the study by Seralini et al. when EFSA also published a review of the paper.

## COMMUNICATING BIOSAFETY ISSUES OF RNAi FOR PUBLIC PERCEPTION

A. DIETZ-PFEILSTETTER<sup>1</sup>, S. ARPAIA<sup>2</sup>

<sup>1</sup>Julius Kühn-Institut, Braunschweig, Germany;

<sup>2</sup>Italian National Agency for New Technologies, Energy and Sustainable Economic Development, Rotondella, Italy

*Biosafety, regulation, GM plants, risk assessment, public perception*

RNA interference (RNAi) has been used to obtain genetically modified (GM) plants with improved nutritional value, enhanced product quality and with resistance to plant pathogens and pests. RNAi strategies exploit naturally occurring gene regulation mechanisms and therefore do not pose a novel type of hazard to the environment or for food/feed consumption. In fact, there is a long history of safe human consumption of small RNAs naturally produced in plants. As no new proteins are produced by the RNAi GM construct, data requirements for food/feed safety assessment may be reduced compared to other GM plants. However, it has to be considered that intended as well as unintended changes caused by the silencing of genes from plant metabolic pathways can impact plant composition in an unfavourable manner. Careful comparative compositional analysis is therefore the main tool for food/feed safety assessment of these RNAi plants. RNAi plants also have a great potential for use in alternative plant protection strategies because they offer a more specific way of controlling plant pathogens and pests, although there may be unintended gene silencing in some non-target organisms. Environmental risk assessment of pesticidal RNAi plants therefore has to take into account relevant risk scenarios for non-target organisms. A communication strategy for public perception of RNAi has to be open and transparent, describing the advantages and disadvantages of RNAi approaches and of alternative options to achieve the intended breeding or plant protection goals.

## COMMUNICATING BIOTECHNOLOGY AND ITS IMPACTS

DRAGANA MILADINOVIĆ

Institute of Field and Vegetable Crops, Novi Sad, Serbia

*Biotechnology, communication, impact, public perception*

Not many subjects related to agriculture get such attention from the general public and policymakers as “biotechnology” and “new breeding techniques”. In the past, communication strategies aimed at facilitating public acceptance of application of biotechnology in agriculture have focused on technology-driven, top-down practices. This led to rapid rate of farmer adoption of the technology, but public acceptance lagged behind, with appearance of slogans such as “Playing God with DNA” which spread fear among the potential consumers of goods produced via biotechnological procedures.

Understanding and acceptance of any science by society, biotechnology included, is possible only with effective communication. The benefits of today's biotechnology products and new breeding tools are not evident to general public. The public will accept biotechnology only when individuals decide for themselves that products obtained with the use of biotechnological tools, either genetic modifications or genome editing, will contribute to their personal wellbeing. In order to improve the understanding of the biotechnology and potential benefits of its applications, special attention should be paid to creation of plan(s) for public communications in order to overcome confusion, misunderstandings and misconceptions with accurate, meaningful and useful information that will increase public awareness and understanding of modern biotechnology.



## **COMMUNICATION EXPERIENCE FROM LONG TERM PARTICIPATION IN COST ACTIVITIES**

LUIS M. CORREIA

IST/INESC-ID - University of Lisbon, Lisbon, Portugal

*Communication in COST Actions, Communication examples*

The talk addresses the personal experience of participating in COST Actions for almost 30 years. Although the experience has been in the area of Telecommunications, with the participation in a series of Actions addressing Mobile and Wireless Communications (Actions 231, 259, 273, 2100, IC1004 and CA15104), much of it can be exported to other areas. Having taken the leadership of two Actions, and still being involved in the management of a current Action, a good insight into the features and capabilities of COST Actions is presented. The experience in communication in the several Actions will be presented, with examples of success, as well as less successful ones. An overview will be presented on the various activities taken, ranging from a newsletter, to publicising joint publications in journals and conferences, encompassing the use of social media, the organisation of workshops, and the publication of a final report as a book, among others. Conclusions are presented at the end.

## PARTICIPANTS

<b>Name</b>	<b>Country</b>
Luis M Correia	Portugal (PT)
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**iPlanta**

IN COLLABORATION WITH:



NATIONAL CENTER FOR  
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RESEARCH



ADAM MICKIEWICZ  
UNIVERSITY  
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KNOW  
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Research Centre  
in Poznań



BIO-TALENT

