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# Communicating scientific research to grape growers and winemakers

Belinda Kemp  
2019 CCOVI Lecture Series

# Contents



1. Types of science communication
2. Format: webinars, workshops, Podcasts, tastings etc.
3. Social media & social networks
4. Video abstracts & visual abstracts
5. Data visualization, information presentation formats & language
7. Adjust the format to the generation & audience



# Introduction



“The basic idea behind science communication is dissemination, the ability to spread an idea through a group of people. This dissemination is the key to the advancement of science”.

Ryan C. Fortenberry (2019).

More than outreach,  
it is now a field of science in its own right!

#scicomm

*SCIENCE COMMUNICATION degrees, SCICOMM positions  
at RI/Uni for those with PhDs & Sci comm journals i.e.  
Journal of Science communication*

# Why do science communication?

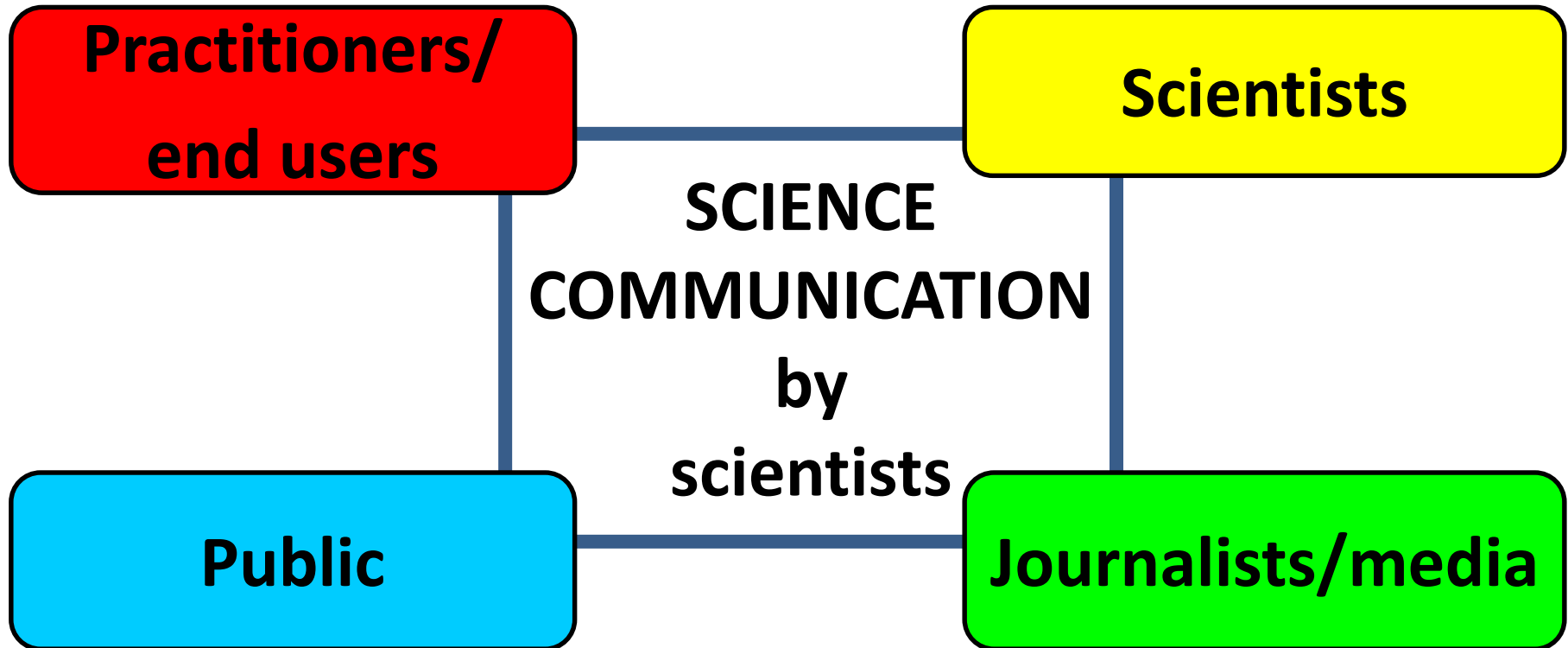


- Passing of viticulture and oenology research results to practitioners/end users (i.e. grape growers & winemakers).
- **Research funding requirements**
- **Research impact & monitoring of impact of V & O research on grape growing practises & winemaking techniques**
- **Science communication can influence behaviour!**

## **IMPORTANT**

**What the grape growers needs to know not what the scientists think they should know!**

# Science communication



# Hyped headlines & contrary misinformation!



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## Shortcuts Wine

### Should you stop drinking prosecco for ethical reasons?

Demand for the Italian white wine has surged in recent years, and increased production has led to soil erosion. So should prosecco join beef and others on the naughty list?



▲ Prosecco ... nice but naughty? Photograph: Aldo Pavan/Getty Images/Lonely Planet Images



Adam Vaughan

@adamvaughan\_uk  
Mon 28 Jan 2019  
07:00 GMT



1056 523

## Extra glass of wine a day 'will shorten your life by 30 minutes'

### Red wine's NOT good for you after all: Major shake-up of alcohol guidelines set to rubbish health benefits

- Chief Medical Officer Dame Sally Davies to rubbish red wine health benefits
- Includes ideas that it prevents cancer and stops weight gain in moderation
- Comes amid fears people are drinking more because they think it's healthy
- See the latest news and stories on the alcohol guidelines shake-up

By TOM WITHEROW FOR THE DAILY MAIL

PUBLISHED: 01:37, 7 January 2016 | UPDATED: 16:17, 7 January 2016

## Health Benefits of Organic Wine



Ditch Diabetes



Fight Heart Disease



Improve your bones



Blood pressure level



Considerations



<http://wine.healthfoodxdrinks.com/organic-wine-for-health-benefits/>

# Click bait articles on social media



Drinking A Glass Of Red Wine Is The Same As Getting  
An HOUR OF EXERCISE, Says New Study and Our  
Wildest Dreams



MARISA RILEY  
09.24.2014 • LIFESTYLE



Featured Research from universities, journals, and other organizations

## Resveratrol may be natural exercise performance enhancer

June 19, 2012

Share This

Source: University of Alberta Faculty of Medicine & Dentistry

Summary: A natural compound found in some fruits, nuts and red wine may enhance exercise training and performance, demonstrates newly published medical research.

- > Email to a friend
- > Facebook
- > Twitter
- > LinkedIn
- > Google+
- > Print this page

### Related Topics

#### Health & Medicine

- > Fitness
- > Men's Health
- > Cancer

#### Plants & Animals

A natural compound found in some fruits, nuts and red wine may enhance exercise training and performance, demonstrates newly published medical research from the University of Alberta.

Principal investigator Jason Dyck and his team found out in lab experiments that high doses of the natural compound resveratrol improved physical performance, heart function and muscle strength in lab models.

### Related Articles

- > Weight training
- > Physical exercise

# Business communication terminology applied to grape & wine research communication



## Business Communication Channels

- **Formal**

Sharing of information at meetings, training days etc.

- **Informal**

**Casual communication** between coworkers in the workplace.

- **Unofficial**

Company's “**grapevine**” that can cause rumours.  
'Grapevine' discussions often form groups, which translate into friendships outside of work.

## Grape & Wine research communication channels

- **Formal**

✓ **Lectures, seminars with tastings, workshops, field demos (hands on learning)**

- **Informal**

✓ **Informal communication (IC) is impossible to control.**

✓ **IC can directly contradict information from scientists**

✓ **Comm between growers/in wineries**

- **Unofficial**

✓ **Ability to pass on incorrect info or miscontrue info at events, parties etc.**

# Social networks: tasting groups, informal & formal events



Non-scientists are more likely to share scientific information with others in their networks when it arouses emotion, or seems useful/interesting to lay audiences.

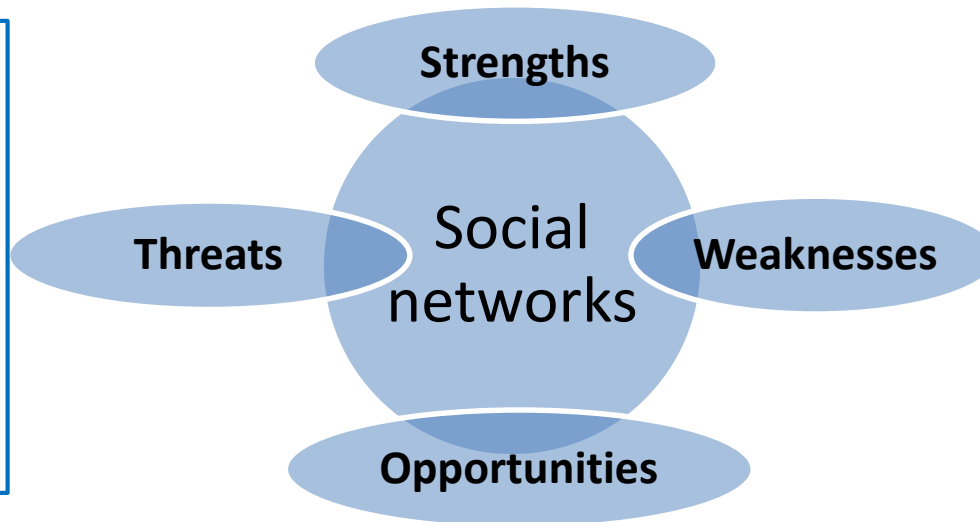
*(Milkman and Berger 2014)*

## 1. Influence of opinion leaders/personal influence

- Rapid spread

## 4. Misinformation from social media

- Influence of opinion leader



## 3. Misinformation "Grapevine whispers"

- Opinion leaders **not** always right
- Personal influence

## 2. Spread of beliefs, attitudes, and behaviors

- Increased rate of adoption of research results i.e. practice/innovation

# Types of science communication



Outreach briefs

Field demo

Masterclasses/Workshops

Conferences/Science flash talks

Webinars

Podcasts

Social media

Wine tastings

PR releases

Newsletters

Peer reviewed publications/journal papers: **well sci educated Ontario winemakers, many via Brock OEVI, who read papers + published results validates research results in the Ont wine industry.**

Personal contact/Blogs

Trade magazines

Vineyard/winery roadshows

**Grape growers  
&  
winemakers**

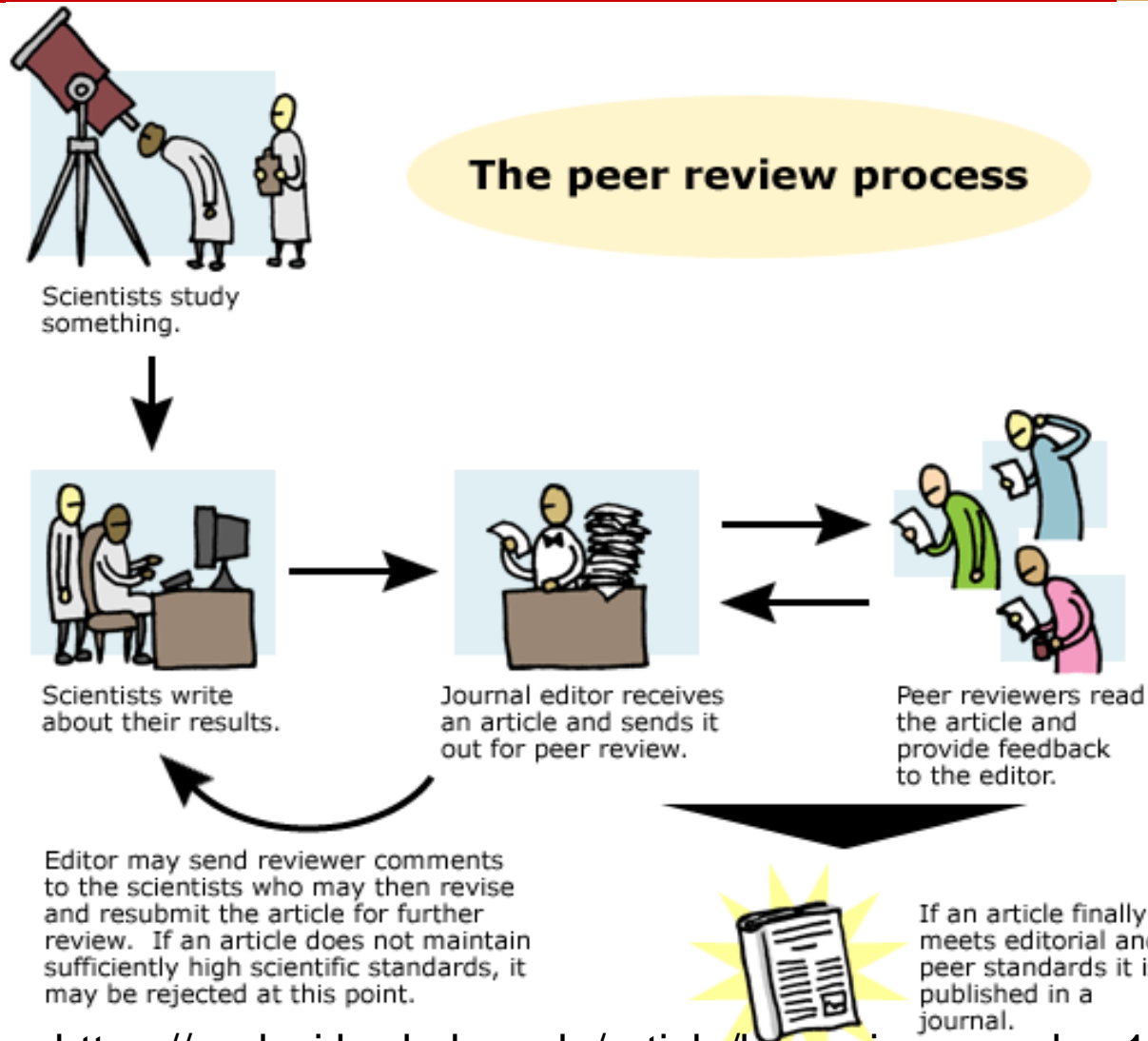


# Peer review process



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[https://undsci.berkeley.edu/article/howscienceworks\\_16](https://undsci.berkeley.edu/article/howscienceworks_16)

# STEP 1: Assessing the research needs of a regional wine industry

Listen to your audience!



## 1. Surveys, focus groups for regional research priorities

Penn state survey found that growers perceived winter injury as their greatest challenge to economic sustainability (Centinari et al. 2016). **Disease control, frost injury, and labour cost & availability were other factors that limit production & profitability.**

## 2. Survey should include how respondents would like to receive V & O research results.

## 3. **Surveys must be well designed**

*(get assistance from trained, experienced market research personnel)*

**If not carried out correctly it is a waste of time & results not meaningful!**

**4. Software & data analysis:** Use software that allows downloading of data to Excel for specific statistical analysis i.e. Typeform <https://www.typeform.com/> **% of respondents!**

- Do not rely solely on the survey software for the data analysis.

# Research communication preferences



## **Penn State University survey of grape growers & winemakers** (*Gardner et al. 2018*)

<b>Educational Outreach Resource</b>	<b>Order of preference</b>
<b>Organized workshops or seminars hosted at Penn State's main campus or at county Extension offices with a wine tasting</b>	<b>1</b>
<b>Regional (e.g., southeastern Pennsylvania, northwestern Pennsylvania) seminars held on a quarterly basis with Extension personnel providing new marketing strategies, production tips, etc.</b>	<b>2</b>
<b>Online webinars</b>	<b>3</b>
<b>Social media and online resources</b>	<b>4</b>
<b>Meetings made available through video teleconferencing or other media means</b>	<b>5</b>
<b>Meeting at the Mid-Atlantic Fruit &amp; Vegetable Convention or other structured event</b>	<b>6</b>

# Importance of relevancy and delivery



Washington State, study (Szymanski et al 2016), to establish what practitioners found useful & relevant NOT the impact of specific communications/research:

- 80% access trade publications as print copies
  - In interviews they were found useful but lack sufficient detail to come to usable conclusions from reading them!
  - Additional popular resources: seminars & workshops, extension publications, textbooks & vendor reps.
  - Social media Facebook (8%) & Twitter (0%) not used as info resources
- Academic journals & extension resources were the only resources that more than 90% of respondents believed to be trustworthy!



# Lack of research results in magazines/trade press



**Catalyst: Discovery into Practice**

*Catalyst: Discovery into Practice* is a newly launched journal from the American Society for Enology and Viticulture. The *American Journal of Enology and Viticulture* (AJEV) is ASEV's flagship journal, publishing novel, foundational research in areas underpinning grape and wine production. AJEV's focus is research, with a mission of "research to discovery." *Catalyst* will complete the continuum, with translation of research into practice, and will focus on extending fundamental discoveries in the scientific disciplines to sustain and advance winemaking and grapegrowing.

*Catalyst* will consider video as well as text-based submissions and will focus on providing information in a readily accessible format for readers via HighWine Press (current publisher for *AJEV* online). The target date for the first issue of *Catalyst* is February 2017. However, papers in press are available now. Click on the link below to view papers.

[VISIT THE CATALYST SITE AS A VISITOR](#)



**IVES Technical Reviews will be a tool to transfer current research to end users, i.e. consultants, enologists, agronomists, teachers, students, winegrowers, equipment suppliers etc...**

**IVES** International  
Viticulture & Enology  
Society

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## IVES Technical reviews

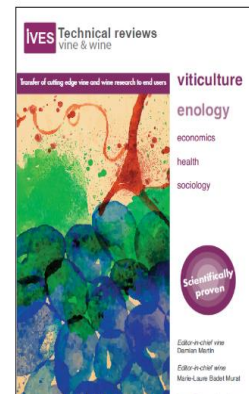
To be launched in 2019, **IVES Technical Reviews** will be a tool to transfer current research to end users, i.e. consultants, enologists, agronomists, experts, teachers, students, winegrowers, equipment suppliers, and people working in biotechnological and chemical industries. The articles will be sourced from **OENO One** and other scientific and technical journals. They will be published in English, French, German, Italian, Spanish and Portuguese.

Our international editorial board is composed of researchers and professionals from the industry and guarantees scientific quality and interest for the readers.

- Editor-in-chief vine: Damian Martin, **Plant and Food research**, New-Zealand.
- Editor-in-chief wine: Marie-Laure Badet Murat, **Oenoteam**, France.

All the publications will be freely available online!

The set-up and launch of this journal are supported by the **LabEx COTE** via its "Transfer and valorization" Call for projects.



IVES is an academic association dedicated to vine, grape and wine sciences.

# Changing our approach for the next generation!



*It's time to retire from the winemaking business, Maurice —  
Just look at your skin-to-pulp ratio.*



## Managing Change



# Local wine industry conferences

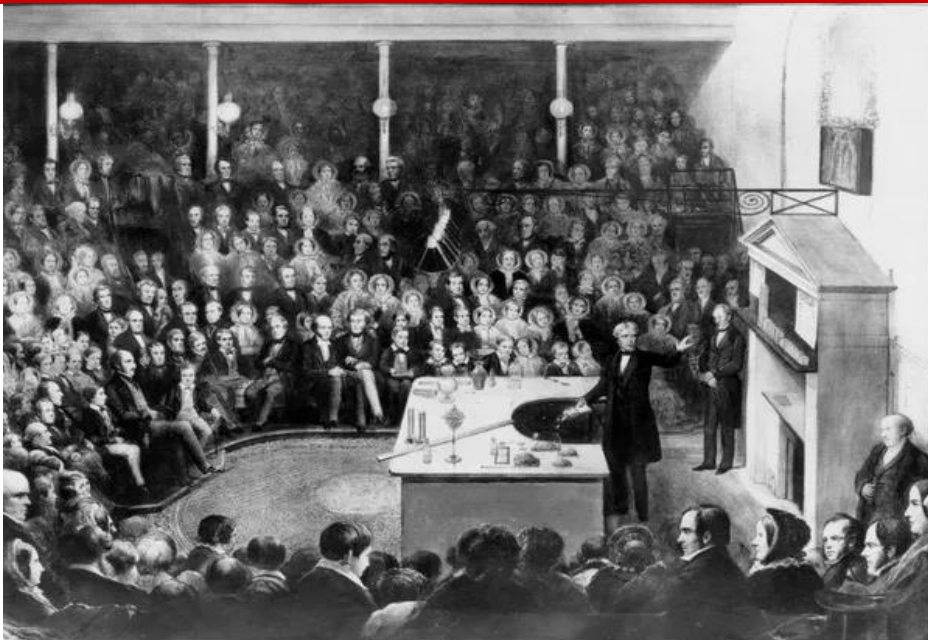


The first science of communication is analysis: **identifying those few scientific results that people need to know** among the myriad scientific facts that it would be nice to know. Determine what is already known!  
(*von Winterfeldt 2013, Raiffa 1968*)

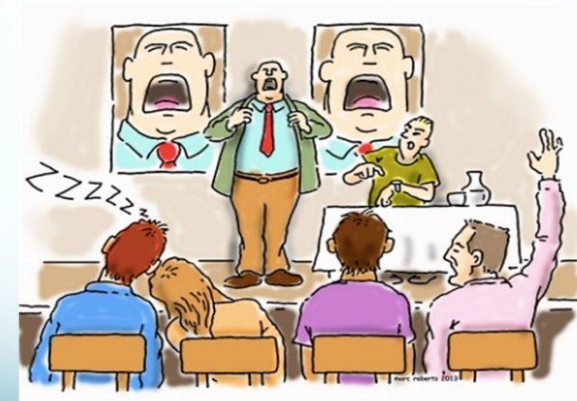
## Regional viti & oeno conferences for vineyards & wineries

- Annual or biennial
- **Focused on regional specific topics & research**
- Regional scientists = less funding needed for speakers & topics match local industry needs
- **Opportunity to make it interactive not just presentations**
- Delivery format can be changed to maximize attendance, learning & participation

# “Sage on a stage” at conferences/seminars/ workshops/masterclasses



Don't be the sage on the stage!



Lectures haven't changed a great deal since Michael Faraday delivered a Christmas lecture at the Royal Institution in 1856. [Wikimedia](https://theconversation.com/how-digital-natives-are-killing-the-sage-on-the-stage-39923)

<https://theconversation.com/how-digital-natives-are-killing-the-sage-on-the-stage-39923>

- Encourage interaction via innovative creativity i.e. online, games, polls, quizzes, flash talks
- **Interactive presentations i.e. wine texture using materials, aroma standards**
- **Seminars with tastings**
- **Audience participation/flash cards**

# V & O research communication



- ✓ Favoring of more informal communication methods by millennials
- ✓ Younger generations prefer having multiple ways of communicating



# Conferences, workshops, masterclasses



**Scientists have to be innovative in their research so why are we not more innovative & creative in our dissemination of research results?**

## **Suggestions for success**

- **Format of set up i.e. not behind a lectern/or elevated stage but centre on a stool or standing**
- **Appeal to attendees so not over their heads or too dumbed down. Sometimes the presenter fails to keep the audience engaged.**
- **Break down multi-step processes.**
- **Don't use language that can unintentionally frustrate or demean. Workshops (*mini boot camps to engage in practical*) & masterclasses (*more technical than workshops*) using storytelling are not lectures but practical labs! *RCIS talk!***
- **Appropriate level, encourage discussion & participation, and get people to see the value in what they are learning**

# Presenting lectures to grape growers & winemakers



➤ People have a strong tendency to confirm their existing ways of thinking, a tendency that makes a decision difficult to change.

**With grapes & wine we must put it in context of economical, environmental, sustainable & financial context.**

- No regs/rules we have to do presentations to industry in the same way as we do for an academic scientific conference!
- Change format?
- Background to study (yes) but opening line could be the most important take home message to grab attention.
- Stats imp but how we present data can be changed.



**Myth busting:** In certain sections of the wine community there are those who believe using long words means the speaker is highly intelligent!

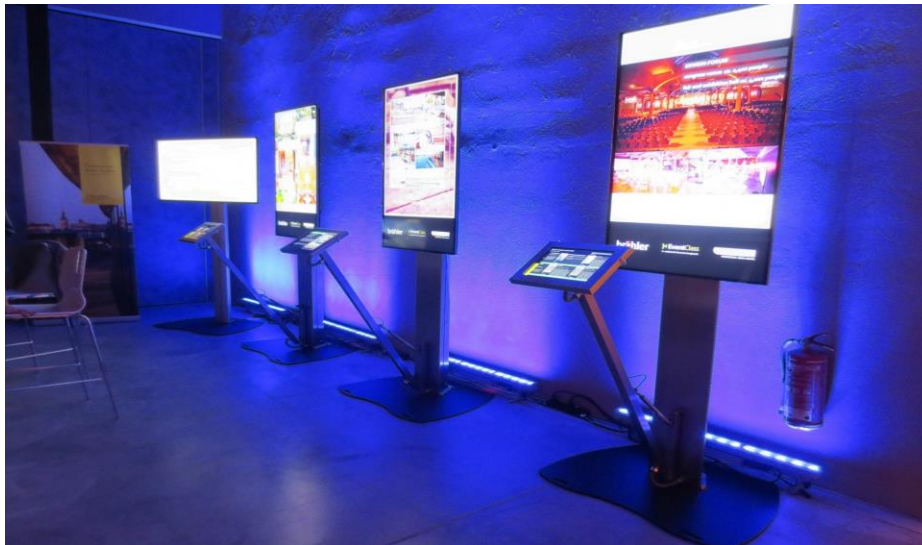
To which I reply **“that is utter quisquiliae”!**

- What’s the point of researchers using words that they then have to explain? **It uses up our speaking time.**
- Chem Structure slides?
- Reduce their use to important ones the audience needs to know!!
- Are you trying to impress or get across important research info?

# Posters, podcasts & results-based flash talks



- Not just paper posters but e-posters & interactive posters can be produced.
- Costs of production & presentation?
- Specific hardware & software
- Space dependent

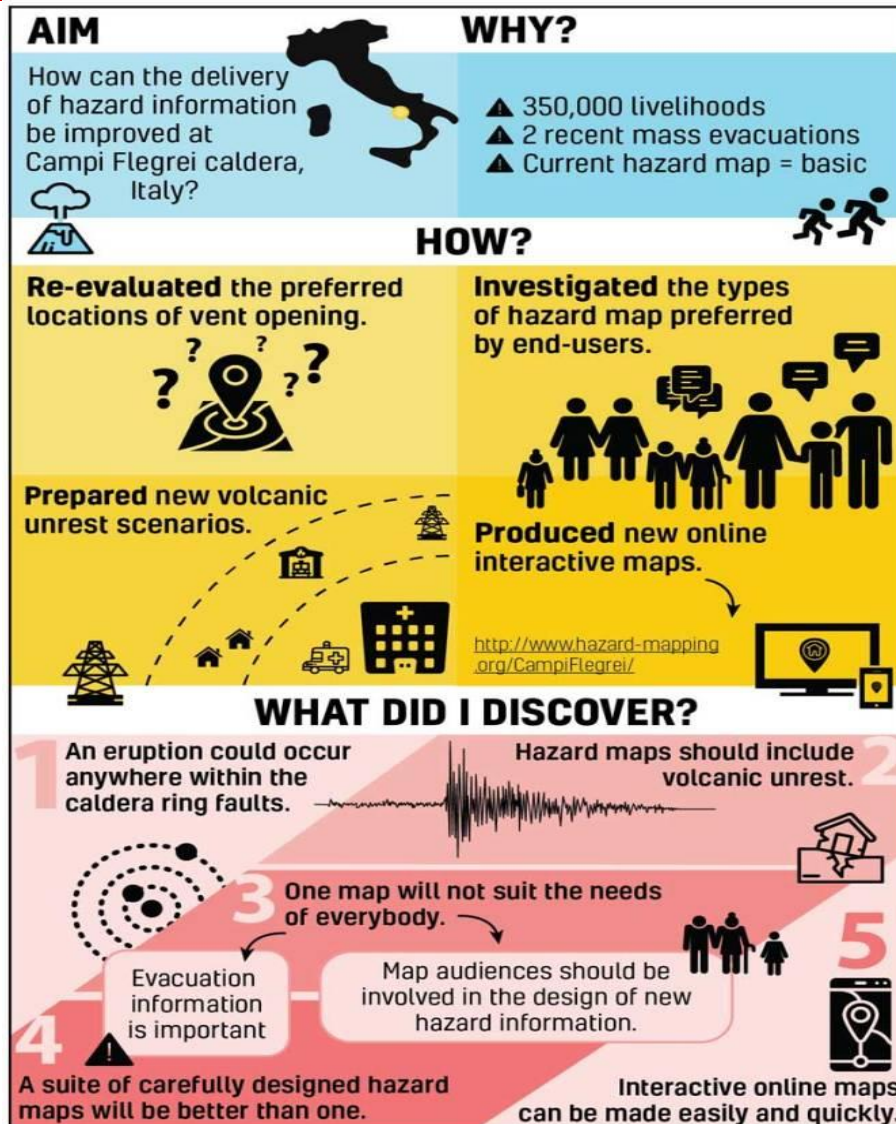


<https://www.braehler-convention.de/de/smartposter.html>



<https://www.eventresult.com/services/eposters/>

# Visual abstract



PhD Student at UCL Hazard Centre, Danielle Charlton (@hazardgirl09) created a graphical abstract for her thesis.

<https://infohackit.com/2018/03/25/using-visual-abstracts-for-science-communication/>

# Visual abstracts

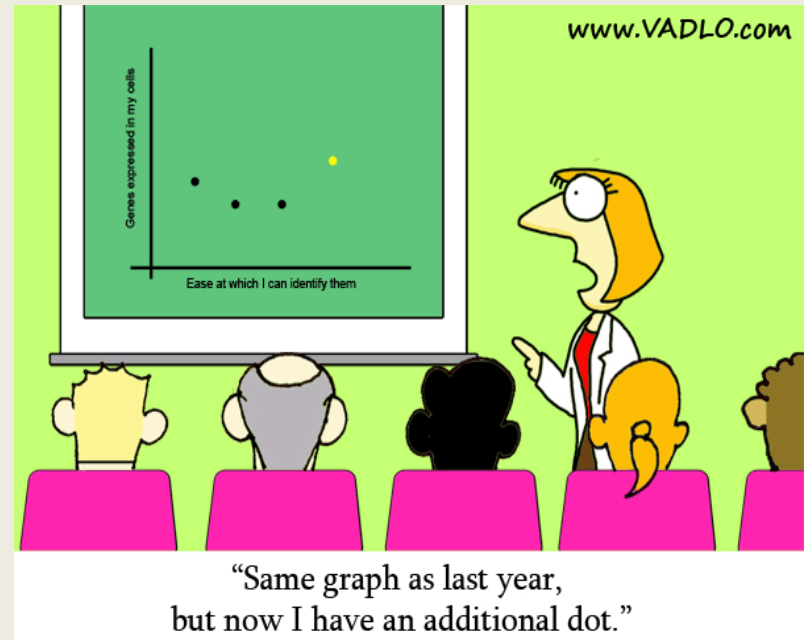


- Similar to “Contents graphic” for online science journals but more detailed.
- Great for social media, hand outs at talks
- Does not impact your publication
- Could replace outreach docs/briefs
- Illustrates a successful poster

**BUT**

- ✓ Focus on the end user experience
- ✓ Relevant Creativity
- ✓ Prioritize the key message
- ✓ Can use Powerpoint: Takes time but multifunctional tool!

<https://www.surgeryredesign.com/resources>



# Infographics: Marketing



## Difference between visual abstract & infographics

### CANADA'S **WINE ECONOMY** RIPE. ROBUST. REMARKABLE.



# Podcasts & results-based flash talks



- Podcasts - put on in winery or tractor while working, driving to & from work - no need to leave the premises

Cost? Tools required? No travel. Experience of podcast making, software?

- Viti/Oeno flash talks  
short & sweet! i.e. 3-5MT



 **Brock Grad Studies**  
@BrockGradStudy Following

It's really more than 3 minutes. It brings the whole graduate community together for a powerful hour of research storytelling. There is still time. Submit your abstract [@BrockGradStudy](https://twitter.com/BrockGradStudy) Learn more here > [bit.ly/2UaWDXM](https://bit.ly/2UaWDXM)

  
**3 minutes  
and 1 slide**

# Technology



**Technology has great potential for science communication.**

**Be cautious!**

**It is how we use it that determines its success!**

© Randy Glasbergen  
glasbergen.com



**"Of course I know how to communicate without a phone. I have an app for that!"**

# Social media



Dr Belinda Kemp  
@BKPPinot

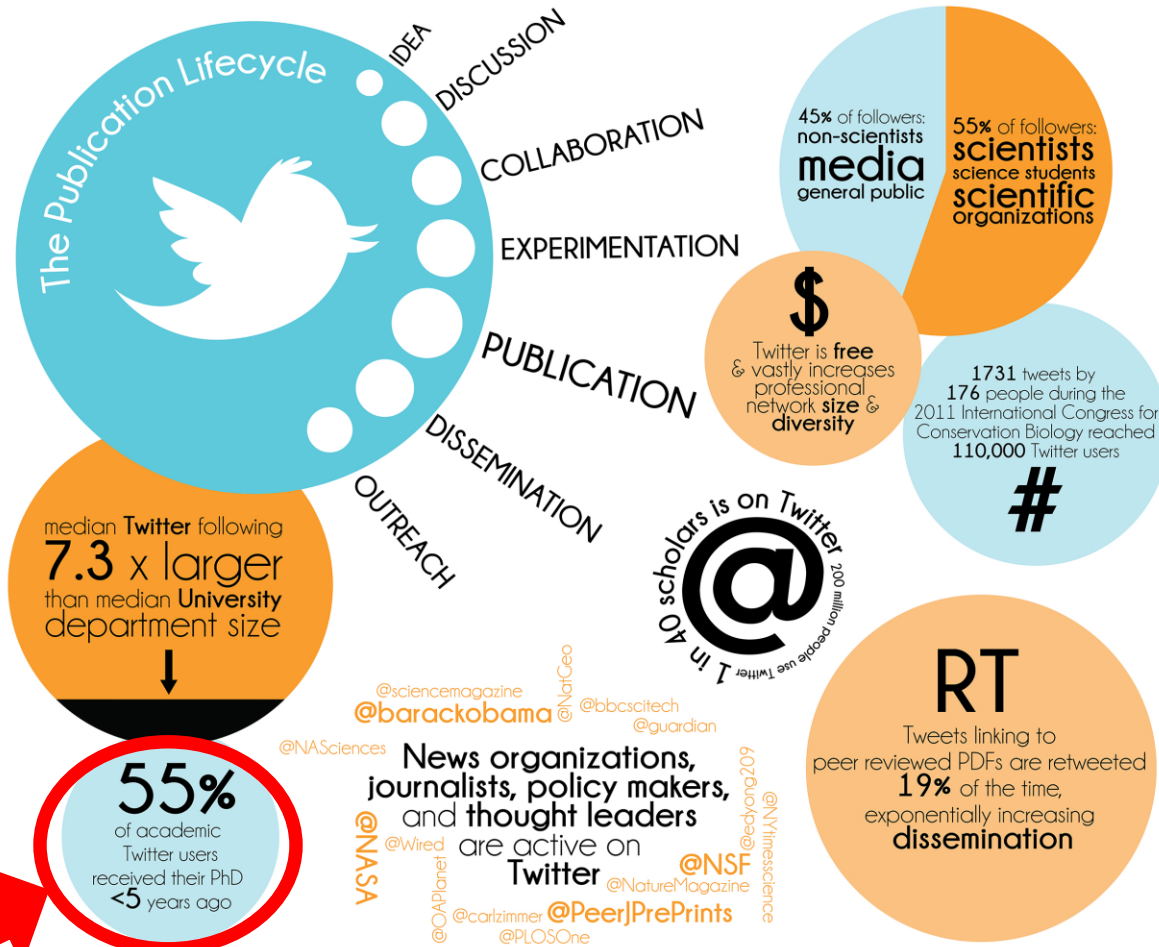
[tandfonline.com/doi/abs/10.1088/1755-7594/10/1/012001](https://doi.org/10.1088/1755-7594/10/1/012001) ... Here you go! We looked at every study we could find about sparkling wine foam & many things affect it i.e. alcohol, grape-derived proteins etc not just glasses & glass care (glasses also mentioned in the paper)

- **Paywalls! Tweet pdfs (if open access!)**
- **Speaking to other scientists**
- **How many grape growers & winemakers use social media for research results?**

## The role of Twitter in Science Publication and Communication

Based on the work of Emily S. Darling, David Shiffman, Isabelle M. Côté, & Joshua A. Drew\*

A survey of 116 marine scientists actively using Twitter highlighted the value of this social networking and microblogging site to science and scientists.



# Social media

- RIs, Universities, Faculties, Depts
- Labs have own social media
- Facebook, Reddit, Twitter etc



## Using social media to promote your research



From just one article Taylor & Francis has seen:

More than  
**400 tweets** from  
351 accounts, reaching  
over **1,000,000**  
combined followers



Posts on  
**12** public  
**Facebook walls**  
from **11** different accounts



Appeared in  
**3 news stories**,  
including Time magazine  
and The Telegraph



Resulting in over  
**13,400 article views**  
since December 2014  
(with over 1,000 from  
Twitter alone)



What are Taylor & Francis authors doing?



47% of  
authors are  
planning to  
share their  
free eprints



30% are  
announcing  
the publication  
of their article  
on **social  
media**



29% are  
updating their  
publication  
history on  
**LinkedIn**



12% are  
mentioning  
their article  
publication  
in their **email  
signature**



11% are  
posting a  
link on share  
services such  
as **Reddit**

Taylor & Francis  
Author Survey, 2014



Want to know more? Read our tips on promoting your research.

Guidance, developments, news and ideas for Taylor & Francis authors



@tandfauthorserv



tandfauthorservices



authorservices.taylorandfrancis.com

# Video abstracts



Garners significant attention & support from the research world

- Summarize your work & Illustrates methods
- Range of lengths - 60 s (NSERC) to doc length  
(Cooke et al. 2017)

- Can be used in various ways i.e. Science festivals, social media, email to growers & winemakers, post on researcher websites

- Some journals now require video abstracts

**BUT**

- Does not suit in-depth technical/chemical information but link viewers to further resources (Cooke et al. 2017)



# Video abstracts



Scientists at [#ccovi](#) are helping grape growers and wineries avoid crop loss during this extreme cold weather with the [#VineAlert](#) program in partnership with [@grapegrowersont](#) watch this video to learn more [#ccovi](#) [#brocku](#)



**How many grape growers & winemakers watch these videos?**  
**Untargeted #scicomm**

**Facebook:** posted January 31

**3.4K** views

**5,660** people reached (number of people who viewed post)

**25** shares (other people sharing/posting it on their pages)

**Instagram:** Posted January 31

**515** impressions (number of times post was seen)

**391** people reached

\*this was also posted on our Instagram story and IGTV so this number will be higher

**Twitter:** posted January 31

**3,492** Impressions

**1,359** Media views

# Webinars



- CCOVI lecture series, AWRI, Texas A & M V & O etc...  
<https://brocku.ca/ccovi/2019/02/04/brock-viticulture-lecture-series-back-for-12th-year/>

- Accessibility (*time of day?*)
- Costs are low now
- Equipment/people not

Camera, editing

**N.B. Release of your presentation before it is published can jeopardize someone's research & that of your grad students. OR someone is thinking "we could do the same thing ourselves & publish it!"**

THURSDAY, JANUARY 30, 2014 | by Tiffany Mayer

# CCOVI Webinars viewing figures



- **Post lecture viewing figures on YouTube**
- *\*Does not include in-person attendances*
- *Untargeted! Lacks data as to who the viewers are*

YEAR	VIEWS
2018	925
2017	500
2012 views in 2018	3132
2013 views in 2018	1683
2014 views in 2018	1694

# Blogs & Vlogs!



secure | [www.kimnicholas.com/wine-climate--sustainability.html](http://www.kimnicholas.com/wine-climate--sustainability.html)

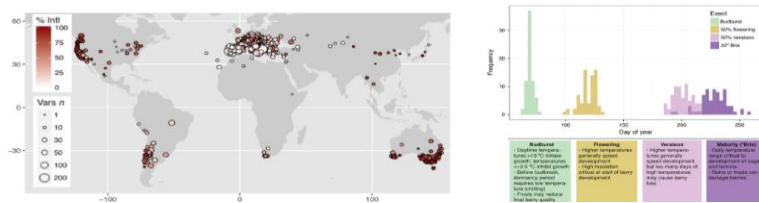
## Dr Kim Nicholas, Lund University, Sweden

WELCOME WHO WE ARE RESEARCH PRODUCTS TEACHING BLOG PRESS UPCOMING TALKS

### Wine, Climate, & Sustainability

I grew up in a winegrowing family in Sonoma, California, and have studied wine since 2003. My PhD dissertation at Stanford University focused on understanding the impacts of climate change on wine yields and quality, and how growers view and adapt to environmental stresses in the vineyard. I went on to get a MSc in Horticulture and Agronomy (Viticulture focus) at UC Davis. Below you find highlights of my wine research- please see specific pages for more detail.

#### Winegrape diversity for climate adaptation



## Blogs (by project or by scientist)

<https://www.ciencia-e-vinho.com/> Science & Wine, Portugal

Or Dr Kim Nicholas, Lund University, Sweden <http://www.kimnicholas.com/>

## Pros & cons

- Can access anytime, anywhere - untargeted
- Blog software exp & time needed to write & update it
- Effective platform for communicating science to major stakeholders & the public. <https://www.nature.com/articles/d41586-018-01414-6>

# Data visualization

## Diagrams, photos & graphs



Extracting meaning from data remains one of the biggest tasks of science!

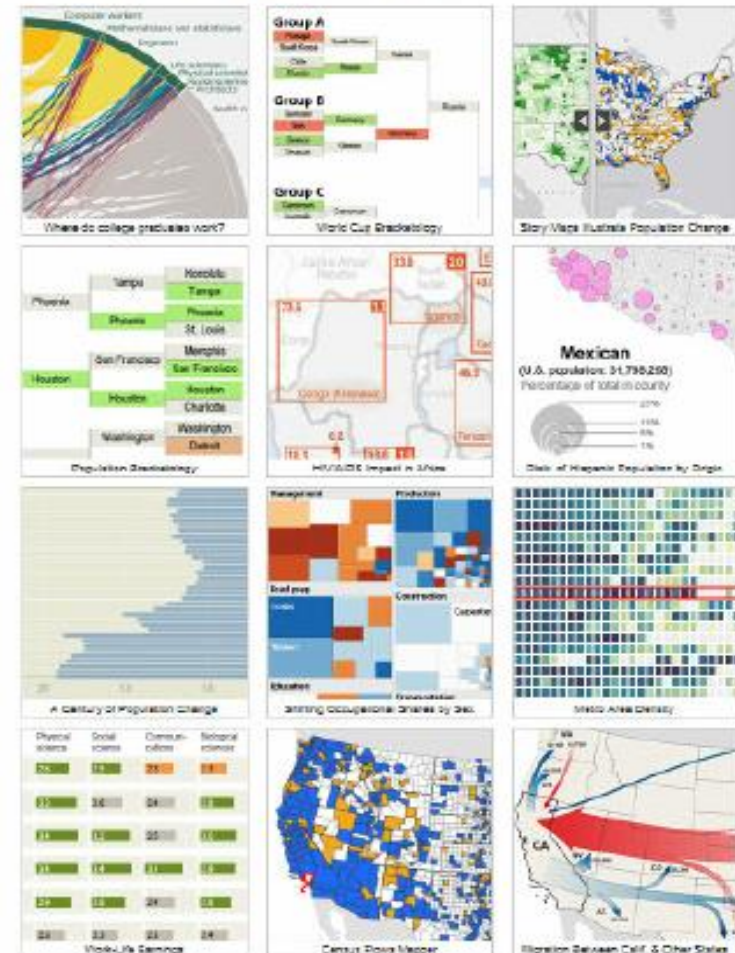
- ✓ Software for data visualization: costs & training needed
- ✓ Reduce the number of tables/graphs for growers & winemakers
- ✓ Use condensed diagrams & photos
- ✓ Use visualizations that do not require translation!
- ✓ Relate each result on a slide-by-slide basis to financial impact, & grape & wine quality. **Do not wait till the end!**

*Bevington-Attardi & Ratcliffe (2015)*

### Data Visualization Gallery

A weekly exploration of Census data.

The Census Bureau is working to increase our use of visualization in making data available to the public, and this gallery is an early part of that effort. The first posted visualizations will pertain largely to historical population data, building on prior work done to portray historical changes in the growth and redistribution of the U.S. population. For later visualizations, the tools will expand beyond decennial census data to include the full breadth of Census Bureau data sets and subject areas, from household and family dynamics, to migration and geographic mobility, to economic indicators.



# Doing rather than saying!



- **Field/vineyard demos on regional sites i.e. pruning, geotextiles demos**
- **Virtual learning/Live vineyard advising**  
(Fritz Westover - Westover Vineyard Advising)
- **Seminars with wine tastings**  
*esp. research wines & spiked wines*  
*Fizz Club off-honey flavour spiked wines*
- **Winemaking & faults workshops**
- **Biennial Grape Research Tailgate Tour - Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA)**



<http://www.vineyardadvising.com/>



# Creative #scicomm in grape & wine

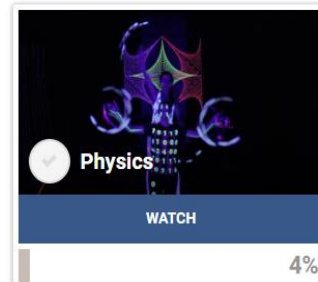
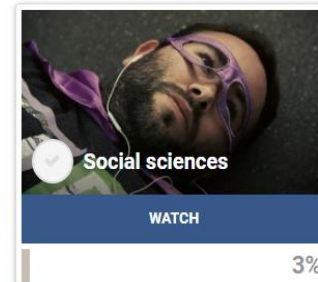
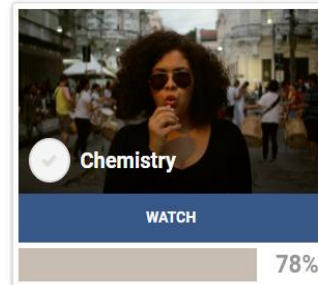
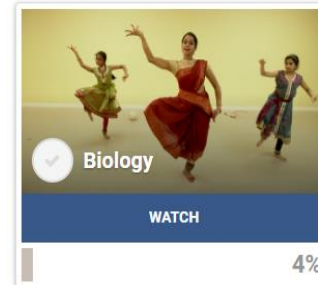


## Performance art & visual arts

- Dance your PhD
- Artist in Residence at AWRI

## Not yet tapped into

- VR/AR for grape & wine research
- Wine science cafés
- Grape & wine research radio/TV
- Touch/smell/taste experiences (AUS)
- Wine science comics



**Dance your PhD**

# Evaluating grape/wine science communication events



- Before the event? After the event?
- Cannot judge the success of an event by the number of people that attended! **Customer satisfaction matters!**

## The secret to successful surveys

- Seek help from someone who has carried out research surveys to gather quantitative data for help with question design
- Ensure survey will gather the data to meet its goal!
- Text vs. drop down, multiple choice, ranking questions

# Example of poor survey questions



Questions which require written answers when busy!

## Example

1. Please provide topics for future inclusion
2. What do you like least about Fizz Club? Please provide suggestions to improve Fizz Club.

- ✓ Questions too similar
- ✓ #1 was the most skipped question
- ✓ #2 was the 2<sup>nd</sup> most skipped question

Reasons = needed on the spot ideas, writing, time consuming

Should have used a drop down menu i.e. viticulture, malolactic fermentation etc. + smaller text box to help generate ideas.

# International Cool Climate Wine Symposium (ICCWS) 2020



**Viticulture**

**Wine business**

**Oenology**



**INTERNATIONAL  
COOL CLIMATE  
WINE SYMPOSIUM**

**CANADA · 2020**



**#Scicomm for media**

**#Scicomm for  
grape growers &  
winemakers**

**#Scicomm for  
scientists**

**Grape & wine science communication**

**More easily available scientific information does not  
necessarily translate into more effective science  
communication**

*(Brossard and Scheufele 2013).*

# Summary



- Format of scicomm delivery depends on the topic & audience (*interactive, workshops, visual abstracts, videos*)
- Join forces to help others to use new ideas
- Language: avoid over complicating. Just because we know long words we do not have to use them!
- Keep up to date with #scicomm, new ideas for delivery methods i.e. learn new skills (software) as well as your research topic
- It is not what you know or what you think growers & winemakers should know BUT what they need to know for their business!

**No one learns from know it alls!**

**They just create know-nots and the know-not-a-lots!**

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# Acknowledgements

**Thank you to Britt Dixon, CCOVI PR & Communications Officer for social media information.**

## **ANY QUESTIONS?**