

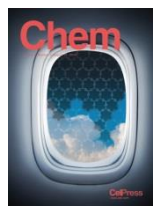
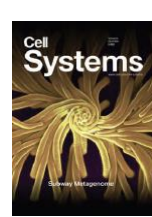
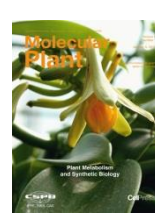
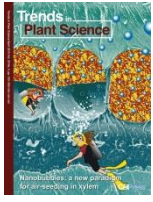
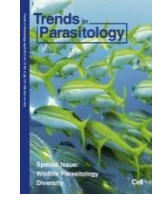
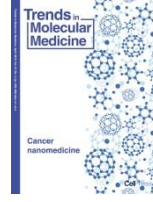
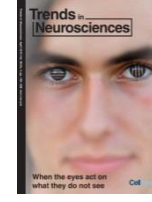
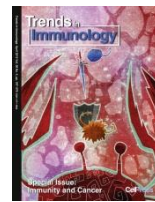
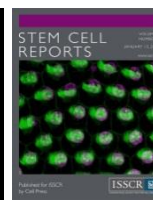
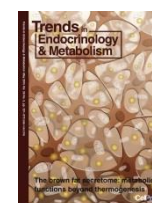
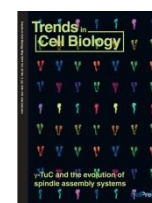
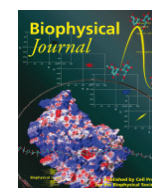
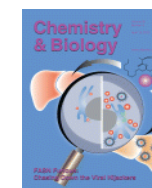
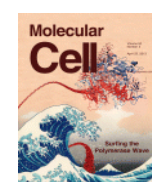
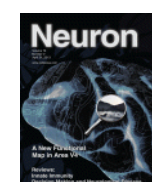
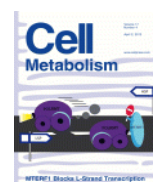
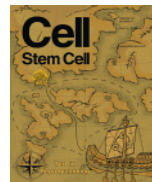
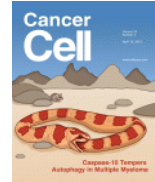
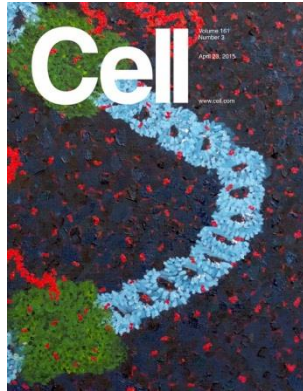
Figure360: A Case Study

Andy Smith

Deputy Operations Supervisor

December 2017 | STM Digital Publishing

About Cell Press



What Is a Figure360?

- A video version of a standard multi-panel figure
 - Author-narrated
 - 2–3 minutes long
 - Replicate feel of a conference presentation
 - Published with static figure online

What Is a Figure360?

- Visit www.cell.com/figure360

Figure360 Examples

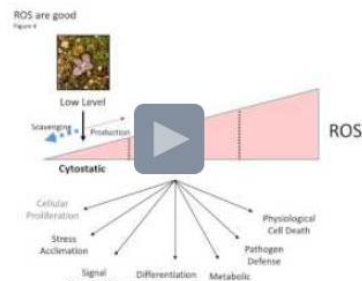


Figure 4
Mittler, R. (2017). ROS Are Good. *Trends Plant Sci.* 22, 11–19.

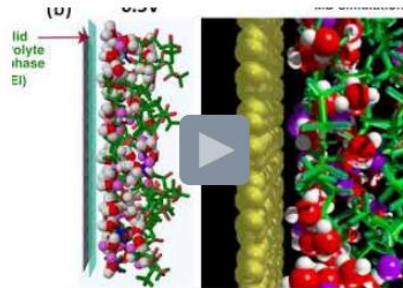


Figure 1
Yang, C. (2017). 4.0 V Aqueous Li-Ion Batteries. *Joule* 1, 122–132.

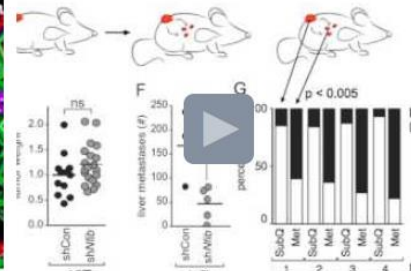


Figure 5
Denny, S.K., et al. (2016). Nf1b Promotes Metastasis through a Widespread Increase in Chromatin Assembly. *Cell* 166, 328–342.

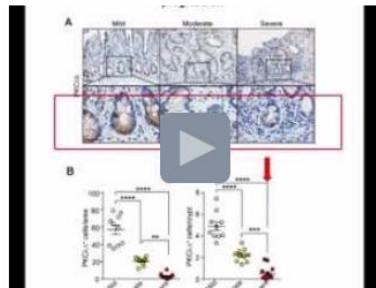


Figure 7
Nakanishi, Y., et al. (2016). Control of Paneth Cell Fate, Intestinal Inflammation, and Tumorigenesis by PKC α . *Cell Rep.* 16, 3297–3310.



Figure 1
Gravem, S.A., et al. (2017). Transformative Research Is Not Easily Predicted. *Trends Ecol. Evol.* 32, 825–834.

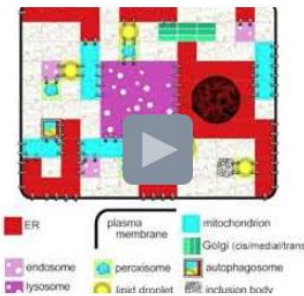
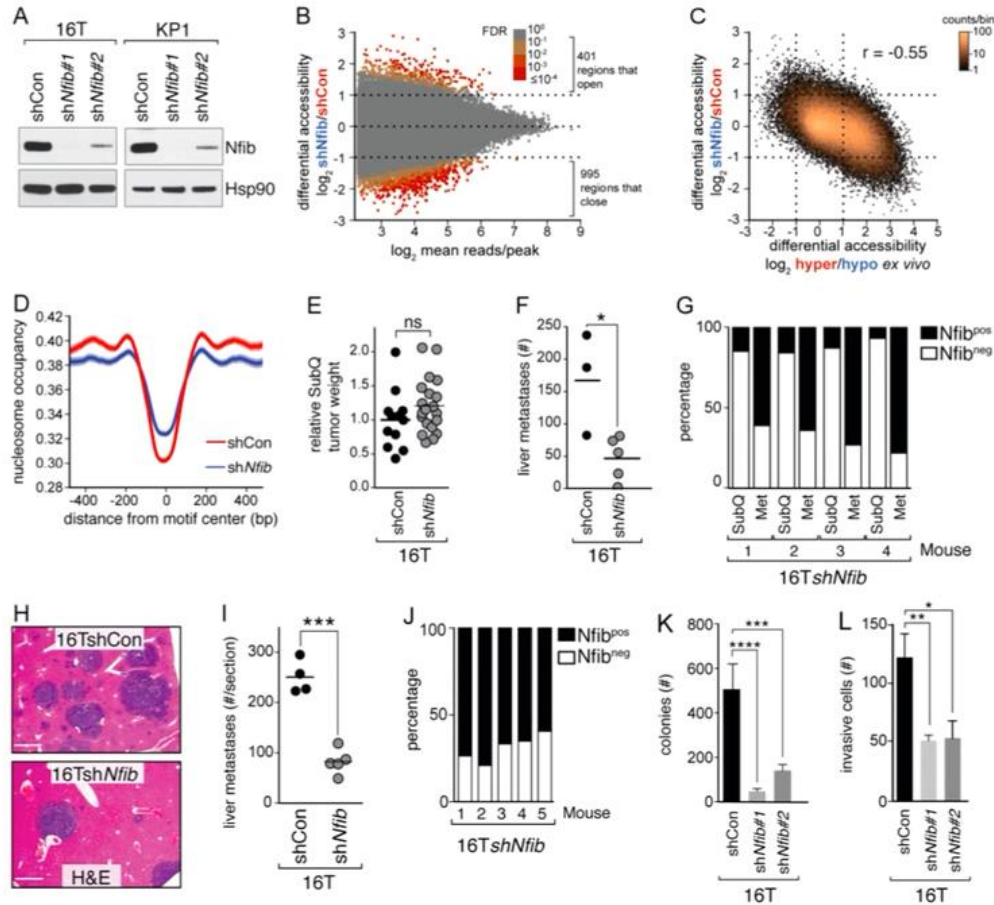


Figure 1
Gatta, A.T., and Levine, T.P. (2017). Piecing Together the Patchwork of Contact Sites. *Trends Cell Biol.* 27, 214–229.

What Is a Figure360?



00:10



H&E

16T

Complex Problems, “Simple” Solutions



Complex Problems, “Simple” Solutions

[Summary](#)[Full Text](#)[Methods](#)[Images/Data](#)[References](#)[Related Articles](#)[Comments](#)

STAR★Methods

Key Resources Table

REAGENT or RESOURCE	SOURCE	IDENTIFIER
Antibodies		
Anti-His6 mouse monoclonal A	Covance	Cat.# MMS-156P
Anti-Cytochrome C rabbit polyclonal	Abcam	Cat.# ab18738; RRID: AB_444661
Bacterial and Virus Strains		
<i>E. coli</i> BL21DE3	NEB	N/A
<i>L. monocytogenes</i> 10403	Lab strain	N/A
<i>Mycobacterium smegmatis</i> (Trevisan) Lehmann and Neumann	ATCC	Cat.# NCTC 8159 [Cornell 3]
<i>E. coli</i> clpX-	Tania Baker (MIT)	N/A
<i>E. coli</i> clpP-	Alfred Goldberg (HMS)	N/A
<i>E. coli</i> clpXP-	Alfred Goldberg (HMS)	N/A
Biological Samples		
lysate from <i>M. tuberculosis</i> (MTB) H37Rv stain	BEI Resources	N/A
Chemicals, Peptides, and Recombinant Proteins		
DPBS	GIBCO	Cat.# 14190-144
LB Media	Thermo Fisher	Cat.# 12780-0
BHI Media	Thermo Fisher	Cat # CM1135B

The Roots of Figure360

- 2013–2014
- Started with a clear OBJECTIVE and a focus on PEOPLE
- Develop ideas for how to present content to readers to facilitate and enhance scientific research

Developing Personas

Persona	Role
Marisol	Graduate Student
Carl	Assistant Professor
Kathy	PhD Researcher
Beth	Post-doc
Marian	Institutional Librarian
Hamilton	Head of Research Lab



**BIO**

Dr. Banning, 28 years old, is a postdoctoral researcher at the University of Washington, studying amphibian ecology. Her undergrad education was at University of Puget Sound. Her dissertation was on the effects of ultraviolet B radiation, in aquatic organisms.

She's a "comic book nut" and likes hiking in what little free time she has, after taking care of her mom and dad who she jokingly calls her "kids."

Research

She has co-authored two journal articles, "Amphibian Population Declines: Evolutionary Considerations," in *Bioscience* and another in *Ecology Letters*. She's not a believer in the "least publishable unit" notion, in which one tries to publish whatever minimum amount of research might be accepted by a journal. She is collaborating with researchers in Florida and Oregon. She's enthusiastic about the web for authoring but it's still just getting started. To find collaborators she feels a need for a "scientific commons" solution, but her current use of a Listserv has proven to be unwieldy since she gets flooded with emails. In general, "literature overload" and "flood of emails" from publishers are a problem. The solution might require careful filtering, or just "pull" methods, no "push" like newsfeeds. Another frustration: "Figures are not always clear".

**Methods**

She has a detailed website, and profile on LinkedIn. She formed a group on Facebook about a month ago and they are writing a book chapter together. They post pictures and can keep in touch easy, but only have to look at it when she wants to. They use GoogleDocs for the writing; anyone with a Gmail account can edit the doc, like a wiki (socially edited content). Has also used a wiki for her job search, allowing people to post jobs.

"Literature overload"

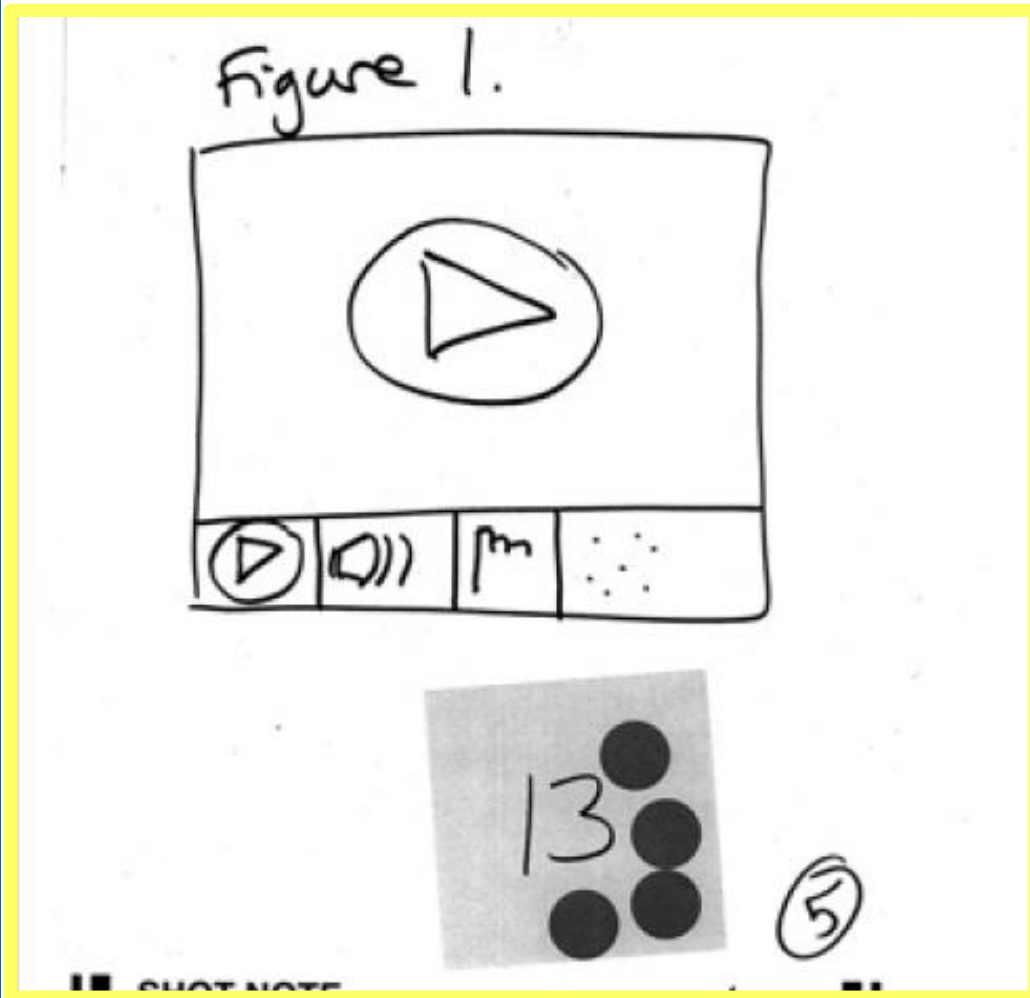
"Figures are not always clear"

Trends

She likes the idea of open access but feels that having to pay to submit to them is a deterrent. It seems particularly important for developing countries, where environmentalism is crucial. Perhaps conservation journals will lead in open access. Maybe a blog per journal would be good to introduce what's new. She thinks social tagging should eventually help with more objective and accurate retrieval of articles, but it's not there yet.

Likes collaborative authoring on the web

Persona-Inspired Products

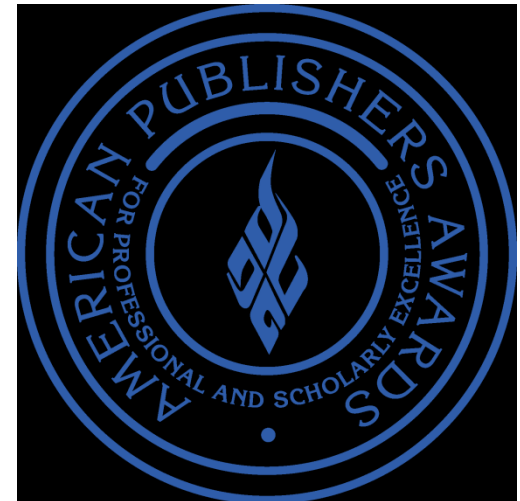


Figuring It Out

- Editors created two F360 prototypes (2015)
- Authors created four F360 videos for publication (2015)
- Six-month pilot (May to October 2016)

Pilot Results

- Published 31 videos in 11 journals
- Key Metric: Do users perceive a high level of value in F360 videos?
 - Does a F360 help users to better understand the data or content of a figure?
 - Yes: 66 percent
 - Does a F360 help users to more quickly comprehend a figure?
 - Yes: 63 percent
- *Prose Award!*

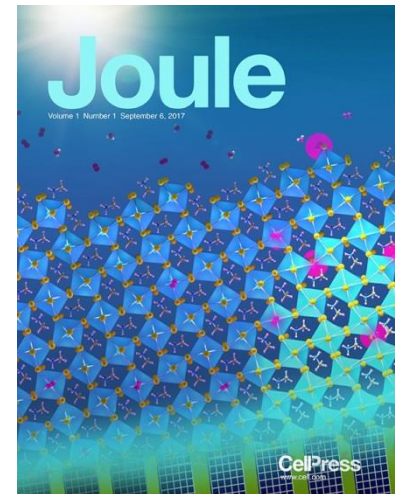
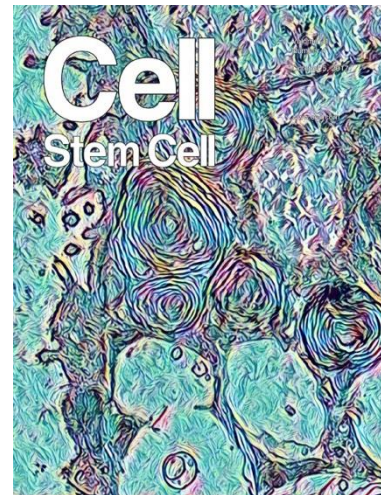


“Normalizing” Figure360

- So far in 2017, we’ve published ~40 videos across our journals
- Goal is to make Figure360 something authors and readers expect; normal part of workflow

Challenges: Visibility + Awareness

- How do we make more prominent in PDFs and online?
- How do we get **authors** to submit these and **editors** to recruit them?
 - Special issues
 - New journal launches
 - Editage collaboration



Questions

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Deputy Operations Supervisor

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www.cell.com/figure360