

Publishing with R Markdown

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Where to put analysis code with a publication

- GitHub Pages
- Bookdown / RStudio Connect / RPubS
- Binder / Jupyter Notebook Viewer
- Leanpub
- Hypothes.is

Self publishing is great, but doesn't get traditional academic credit

Options for publishing code

Four existing models I am aware of:

- Rmarkdown to Overleaf to F1000Research (more on this)
- Jupyter Notebook as Supplement
- Embedded CodeOcean “capsule”
- eLife & Stencila

Bioconductor Workflows

- Educational documents detailing how to use multiple packages
 - https://bioconductor.org/packages/release/BiocViews.html#___Workflow
- Regularly checked on Bioconductor servers
 - Ensures changes in component tools are identified quickly
 - Allows rapid updates by author
 - Provides users a platform to easily access the complete suite of tools
- Difficult to get credit

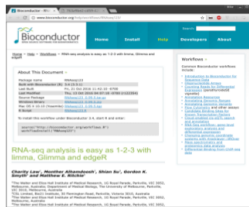
F1000Research

- F1000Research provides a citable, peer-reviewed publication platform
- Intention is for the same document to be submitted to both platforms
- Updates are possible

Open Peer Review			
Reviewer Status ✓✓✓ ⓘ			
Reviewer Reports			
	Invited Reviewers		
	1	2	3
Version 3 (revision) 01 Oct 18	✓ read		✓ read
	↑		↑
Version 2 (revision) 14 Sep 18	? read	✓ read	
	↑	↑	↑
Version 1 27 Jun 18	? read	? read	? read

Ideal scenario

Source
R Markdown

[illegible]F1000Research
PDF

Bioconductor
HTML

BiocWorkflowTools

```
install.packages('BiocManager')  
BiocManager::install("BiocWorkflowTools")
```

Workflow

- Use BiocWorkflowTools to create a 'Workflow R package'
 - `BiocWorkflowTools::createBiocWorkflow(path = "Myworkflow")`
- Write a single Rmd vignette for both platforms
- Submit package to Bioconductor
- Use `uploadToOverleaf()` to begin journal submission

In Overleaf

- Once rendered into Latex, the code chunks cannot be changed
- Can do minor editing of text BUT need to also edit Rmd source in parallel
- Submit to F1000Research button
- Incorporating editor revisions is challenging!

Conclusions

- R Markdown is great for:
 - Lab book / journal recording
 - Reports
 - Supplementary materials
- As a primary document for journal articles - we're not there yet!

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F1000Research