

# Open Science Landscape – Fall 2019

## Open Research Funders Group (ORFG)

A partnership of funding organizations committed to the “open sharing of research outputs... by accelerating the pace of discovery, reducing information-sharing gaps, encouraging innovation, and promoting reproducibility”



- Led by [SPARC](#); Helmsley, AHA, and Templeton are members (as well as Maryrose Franko, HRA)
- 🔗 Key resources: [Chart](#) highlighting the spectrum of open practices; [articles](#) and case studies about open science; “[Open 101](#)” PDF handouts; [Incentivization Blueprint](#) for funders (see next page)
- Recent activities: Announced support of [Invest In Open Infrastructure](#) (IOI), a recently-launched initiative aiming to coordinate open source tool development

## NAS Roundtable on Aligning Incentives for Open Science

3-year project convening critical stakeholders from universities, funding agencies, societies, foundations, and industry to discuss open science practices; consensus report expected to provide guidance for stakeholders to incentivize open science practices



- Convened by NAS with ORFG as a collaborator; HRA members include Maryrose Franko, Nicholas Gibson (Templeton), Susan Fitzpatrick (JSMF), Glen Dillon (AHA)
- 🔗 Key resources: Previous related Consensus Study Reports include [Reproducibility and Replicability](#) (2019), [Open Science by Design](#) (2018), [Fostering Integrity in Research](#) (2017)
- Subgroups (with chairs): Success Stories (Derrick Anderson), Provosts + Chairs Conversations (Chris Bourq), Redefining Outputs (Boyana Konforti), Nudge Form (Maryrose Franko\*), Good Practices (Jerry Sheehan and Nicholas Gibson\*), Stakeholder Gaps (Susan Fitzpatrick\*); \*indicates HRA affiliation

## Multi-Regional Clinical Trials Center

Research and policy center focused on improving the integrity, safety, and rigor of clinical trials by engaging diverse stakeholders to “define emerging issues in global clinical trials and to create and implement ethical, actionable, and practical solutions”



- Convened by Brigham and Women’s Hospital, Harvard
- 🔗 Key resources: Recommendations for data [anonymization](#) and [sharing](#) (including a platform for [global](#) clinical trials); ethics and guidelines for reporting clinical trial data to patients as [individual](#) and [aggregate](#) results; projects aimed at advancing recognition and [academic credit](#) for sharing data
- Recent activities: In collaboration with The Association of American Medical Colleges (AAMC) and the New England Journal of Medicine (NEJM), the MRCT Center launched the [Credit for Data Sharing](#) initiative to describe and implement a system to appropriately credit researchers for sharing data.

## Center for Open Science (COS)

Organization that provides advocacy, tools, training, and other support for incentives to “make research investment go farther, faster”



- Maryrose Franko (HRA) is on the Board; Salvo LaRosa (CTF) is involved with [Registered Reports](#); additional HRA members engaged with COS activities: Sindy Escobar-Alvarez, Susan Fitzpatrick, Nicholas Gibson, Belinda Orland
- 🔗 Key resources: [OSF](#), an open-source tool for project management, data storage, and collaboration that promotes open science; OSF [Preprints](#), a platform to aggregate search results from a variety of preprint providers
- Recent activities: Registered Reports have been gaining traction ([commentary](#) in Nature; [webinar](#) on reviewing and editing Reports); the NIH recommended OSF for registering basic studies in a Science [news article](#); COS recently launched a [project](#) with PLOS and Flu Lab that incentivizes sharing of replication and negative data (see also [manuscript](#) about replication).

## Additional Groups & Resources

**Plan S:** Initiative by cOAlition S (international consortium of research funders) to require scientists and researchers at state-funded research institutions to publish their work in open-access repositories or journals by 2021.



**Center for Biomedical Research Transparency:** Nonprofit that partners with biomedical societies and peer-reviewed journals to promote sharing of negative and inconclusive results.



**Harvard Open Access Project (HOAP):** Sponsored by the Laura and Jake Arnold Foundation; aimed at fostering the growth of open access to research using a combination of consultation, collaboration, and community-building.



### Scholarly Publishing and Academic Resources Coalition

**(SPARC):** Organization aimed at building broad-based recognition of the economic and societal benefits of scientific and scholarly open access.



**Board on Research Data and Information (BRDI):** National Academies group seeking to improve the stewardship, policy, and use of digital data and information for science and the broader society.



**Open, Public, Electronic, and Necessary (OPEN) Data Act:** Federal law, signed January 2019, requiring agencies to staff a Chief Data Officer and to maintain and publish a comprehensive inventory of all data assets.



## Resources for Funders

Click on icons beside descriptions to access resources.

- Incentivization Blueprint (ORFG)** - Outlines steps for funders to develop, implement, and incentivize openness, providing templated language
- Implementing an Open Data Policy: A Primer for Research Funders (SPARC)** – 6-page broad overview
- Stakeholder Resources (ORFG)** – FAQs and info on open science for foundation leaders and program staff
- Data Sharing Requirements by Federal Agency (SPARC)** – also links to [funder](#) data sharing policies
- Credit for Data Sharing: Recommended Stakeholder Actions (Credit for Data Sharing Initiative)**
- Example of HRA member data sharing policy ([PCORI](#)): **Policy on Data Management and Data Sharing**

## Resources for Grantees

- OSF (COS)** – Open-source tool for project management, data storage, and collaboration
- HowOpenIsIt? Open Access Guide (SPARC)** – Pocket guide describing the spectrum of openness
- “Open 101” handout (ORFG)** – 2-page introduction to open science, specifically designed for grantees
- Fact Sheets (SPARC)** – 1-2 page intros to concepts of Open [Access](#), Open [Education](#), and Open [Data](#)

## Recommended Reading

- [A Global, Neutral Platform for Sharing Trial Data](#) (Barbara E. Bierer et al., NEJM 2016)
- [Data Authorship as an Incentive to Data Sharing](#) (Barbara E. Bierer et al., NEJM 2017)
- [Barriers to accessing public cancer genomic data](#) (Katrina Learned et al., Scientific Data 2019)
- [Credit data generators for data reuse](#) (Heather H. Pierce et al., Nature 2019)
- [Move clinical trial data from an option to an imperative](#) (Rebecca Li, Stat News, Feb. 2019)