

### Topic for Discussion: Peer Review

Cross-Cutting Themes: Collaboration, Conflict of interest, Mentor-mentee relationships

#### Topic Overview – What’s at stake?

- Peer review of scientific publications and grants is the primary means by which the biomedical research community ensures the dissemination and support of valid, high quality research
- However, traditional (often “black boxed”) approaches to peer review raise a variety of concerns, including variable review quality and reviewer conflict of interest
- Recent empirical research has suggested that double-blind peer review (where both author and reviewer identity is concealed) can help minimize conflicts of interest; greater transparency, including publishing anonymized peer reviews, may also improve the peer review process

#### Getting the Discussion Started

- Who is more likely to benefit from “open” (i.e. published or otherwise made accessible to public inspection) peer review: early-career researchers or more senior scientists? What makes you answer as you do?
- Does peer review (transparent or otherwise, anonymous or otherwise) guarantee sound science? Why or why not? What else might contribute?
- Are good (fair, incisive, comprehensive) peer reviewers born or made? Where could you go to develop your skills as a peer reviewer?

#### Use the 4 R’s to Think Through a Particular Case or Issue

##### Process for Thinking through Difficult Ethical Dilemmas

**Recognition:** *What are the issues being raised? What is the underlying ethical concern? How does this issue impact me?*

**Reasoning:** *What values are at stake? Are there competing points of view? What are the potential benefits and harms of different actions? Are there any rules or guidelines that can help?*

**Responsibility:** *What are my responsibilities? Do others have responsibilities also?*

**Response:** *What should I do – and why?*

#### “Back pocket” Cases

- You’re in the process of completing your first peer review of an article and realize that you have several questions about the data and the authors’ interpretation of it. You bring your concerns to a lab mate, who looks over the article and suggests that you accept the data without expressing concerns, since the author is well-known and highly respected in the field.
- Your academic supervisor mentions an innovative new research methodology which will be of great value to your project. You’re thrilled and ask your mentor for the reference. “Oh”, they respond, “it’s not published yet. I just reviewed the manuscript describing the method yesterday.”

#### Assigned Reading

Polka JK, Kiley R, Konforti B, Stern B, & Vale RD. (2018) Publish peer reviews. *Nature*, 560(7720): 545-547. <https://www.nature.com/articles/d41586-018-06032-w>

#### Additional Resources

- ASAPbio (Accelerating Science and Publication in biology), a scientist-driven nonprofit working to promote innovation and transparency in life sciences communication. <https://asapbio.org/>
- Tennant JP, Dugan JM, Graziotin D et al. (2017) A multi-disciplinary perspective on emergent and future innovations in peer review. *F1000Research*, 6:1151. <https://doi.org/10.12688/f1000research.12037.3>