

# Peer review 101: Top Tips for Early Career Researchers



## Craig Hersh

**Organization** Department of Medicine, Brigham and Women's Hospital, Harvard Medical School  
**Current Position** Professor of Medicine

### Educational background

2002-2004 M.P.H., Harvard School of Public Health  
2000-2004 Fellow, Pulmonary and Critical Care Medicine, Harvard Medical School  
1997-2000 Resident in Internal Medicine, University of Pennsylvania  
1993-1997 M.D., University of Pennsylvania School of Medicine  
1989-1993 B.A., Harvard University

### Professional experience

2025-Present Professor of Medicine, Brigham and Women's Hospital, Harvard Medical School  
2016-2025 Associate Professor of Medicine, Brigham and Women's Hospital, Harvard Medical School  
2008-2016 Assistant Professor of Medicine, Brigham and Women's Hospital, Harvard Medical School  
2004-2008 Instructor in Medicine, Brigham and Women's Hospital, Harvard Medical School

The term “peer review” was coined in the 1970s, but the concept has roots in the prior centuries. Currently, pre-publication review by external experts is nearly universal in biomedical journals, and in other areas such as grant reviews. This session will focus on practical advice for early career researchers, including junior faculty members, post-doctoral trainees, and students. We will explain the journey of a manuscript from initial submission to a final decision and where peer review fits into the process.

The presentation will take the perspectives of a peer reviewer as well as an author. The goal from both perspectives is to publish the best possible paper in the most appropriate journal. Topics in the first viewpoint will include how to become a peer reviewer, how to critically read a manuscript, and how to prepare a constructive written critique. Advice for authors on how to respond to peer reviews will include the importance of the editor's comments, looking for major themes across the reviewers, writing the response to reviews, and revising the manuscript. Both areas will touch on publication ethics and best practices for data sharing. If reviewers or authors have questions or concerns about a specific manuscript, they should know they can always contact the Associate Editor.

The presentation will address some limitations of peer review, such as the volunteer nature, the ever-growing number of manuscripts and peer review requests, and the potential for bias. Then we will discuss new innovations in peer review including incentives and recognition, blinded review, open peer review, publishing reviews along with the manuscript, and post-publication peer review. The increasing role of Artificial Intelligence in scientific publishing and reviewing is a recent development that will need careful consideration from journal editors.