

"From Manuscript to Publication: Understanding the Publishing Process"

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Introduction

- Why do you need to get your research paper published?
- Overview of Presentation
 - Manuscript
 - Choosing the right journal
 - Writing style
 - Peer review and appropriate responses
 - Copyright and ethics
 - Preparing for publication
 - Editorial decision
 - Publication and dissemination

Case study: Reading a Primary Research Article from *Plant Physiology*

This case study examines a recent article published in the *Plant Physiology*. The full article is appended to this PDF. Because of space constraints, only the major points from the paper are covered in the case study, and the biochemical pathway is presented in simplified form.

The Manuscript



Manuscript: The original draft of a scholarly article

Components of a Manuscript: Title, Abstract, Introduction, Methods, Results, Discussion, Conclusion, References

Example Manuscript Structure

Title The *b* Gene of Pea Encodes a Defective Flavonoid 3',5'-Hydroxylase, and Confers Pink Flower Color¹[W][OA]

Authors and author information Carol Moreau, Mike J. Ambrose, Lynda Turner, Lionel Hill, T.H. Noel Ellis, and Julie M.L. Hofer*
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Abstract: A summary written by the authors
The inheritance of flower color in pea (*Pisum sativum*) has been studied for more than a century, but many of the genes corresponding to these classical loci remains unidentified. Anthocyanins are the main flower pigments in pea. These are generated via the flavonoid biosynthetic pathway, which has been studied in detail and is well conserved among higher plants. A previous proposal that the *Clavoured* (*b*) gene of pea controls hydroxylation at the 5' position of the B ring of flavonoid precursors of the anthocyanins suggested to us that the gene encoding flavonoid 3',5'-hydroxylase (*F3'5'H*), the enzyme that hydroxylates the 5' position of the B ring, was a good candidate for *b*. In order to test this hypothesis, we generated mutants generated by fast neutron bombardment. We found allelic pink-flowered *b* mutant lines that carried a variety of lesions in an *F3'5'H* gene, including complete gene deletions. The *b* mutants lacked glycosylated delphinidin and cyanidin, the major pigments present in the progenitor purple-flowered wild-type pea. These results, combined with the finding that the *F3'5'H* gene cosegregates with *b* in a genetic mapping population, strongly support our hypothesis that the *b* gene of pea corresponds to a *F3'5'H* gene. The molecular characterization of genes involved in pigmentation in pea provides valuable anchor markers for comparative legume genomics and will help to identify differences in anthocyanin biosynthesis that lead to variation in pigmentation among legume species.

Introduction: Not all animals mark it with subheading
Flavonoids are a large class of polyphenolic secondary metabolites that are involved in pigmentation, defense, fertility, and signaling in plants (Grotewold, 2006). Their basic skeleton consists of two six-carbon aromatic rings, A and B, connected by ring C, a three-carbon oxygenated heterocycle. Flavonoids are divided into different subclasses according to the oxidation state of the C ring, and compounds within each subclass are characterized by modifications such as hydroxylation, methylation, glycosylation, and acylation. Anthocyanins, for example, the major water-soluble pigments in flowers, have a fully unsaturated C ring and are usually glycosylated at position 3. Two important determinants of flower color are the cytochrome P450 enzymes

In-text citation: (3.2) and flavonoid precursor (4.13.8). These are seen in a floral pigmentation has a long history, beginning with crosses made between white- and purple-flowered varieties of garden pea (*Pisum sativum*; Knight, 1799; Mendel, 1866). Later crosses made between white-flowered *P. sativum* and rose-pink-flowered *Pisum arvense* defined two factors conferring flower color as *A* and *B*, respectively (Tschermak, 1911). The white flowers of pea anthocyanin-inhibitor (*ai*) mutants lack anthocyanins and flavonoids (Statham et al., 1972), in accordance with the role of *A* as a fundamental factor for pigmentation (Tschermak, 1911; De Haan, 1930). Another locus in pea, *ai2*, similarly confers a white-flowered phenotype lacking anthocyanins and other flavonoid compounds (Marx et al., 1989). It was shown that *A* and *A2* regulate the expression of genes encoding flavonoid biosynthetic enzymes (Harker et al., 1990; Uimari and Strommer, 1998), and recently they were identified as a basic helix-loop-helix (bHLH) transcription factor and a WD40 repeat protein, respectively (Hellem et al., 2010). They are likely to be components of the Myb-bHLH-WD40 transcription factor complex that regulates flavonoid biosynthesis in all plant species studied so far (Koes et al., 2005; Ramsay and

References, including contact information for corresponding author and funding sources
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The authors responsible for distribution of materials integral to the findings presented in this article in accordance with the policy described in the Instructions for Authors (www.plantphysiol.org) is: Julie M. L. Hofer (julie@jmh.ac.uk) and Mike J. Ambrose (mike.ambrose@jmh.ac.uk).
¹⁰⁹ The online version of this article contains Web-only data.
¹⁰⁹⁰ Open Access articles can be viewed online without a subscription.
www.plantphysiol.org/cgi/doi/10.1104/pp.112.197717

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The first page of a typical article from *Plant Physiology*. (See text for more information about each section)

Choosing the Right Journal

- Criteria for Selecting a Journal: Consider factors like relevance to your field, impact factor/journal ranking, acceptance rate, and publication fees
- Use JOURNAL FINDER websites, e.g. [Taylor and Francis](#)
- Open Access vs. Traditional Journals: The pros and cons





Writing Style and Guidelines

- Importance of Following Journal Guidelines
- Formatting (font, spacing, margins)
- Citations and References (APA, MLA, Chicago)

Preparing for Publication

- Proofreading and Editing to ensure clarity and coherence
- Finalizing Manuscript for Submission: Provide a checklist for finalizing the manuscript before submission, including checking for grammar, spelling, and formatting errors
- Submitting Manuscript to Journal: Walk through the steps of submitting a manuscript online through a journal submission system

Peer Review Process

- Peer Review: Process where experts evaluate the quality and validity of the manuscript before publication
- Importance of Peer Review: Ensures the credibility and reliability of published research
- Types of Peer Review





Responding to Peer Review

- Handling Criticism Constructively: Addressing reviewer comments appropriately without becoming defensive
- Revisions and Resubmission: Follow the prescribed steps/formats
- Addressing Peer Reviewer Comments: Display a before-and-after comparison of sections revised based on reviewer suggestions

Copyright and Permissions

- Obtaining Permissions for Figures and Data
- Creative Commons Licenses: Different types of Creative Commons licenses and how they affect the use and distribution of published work



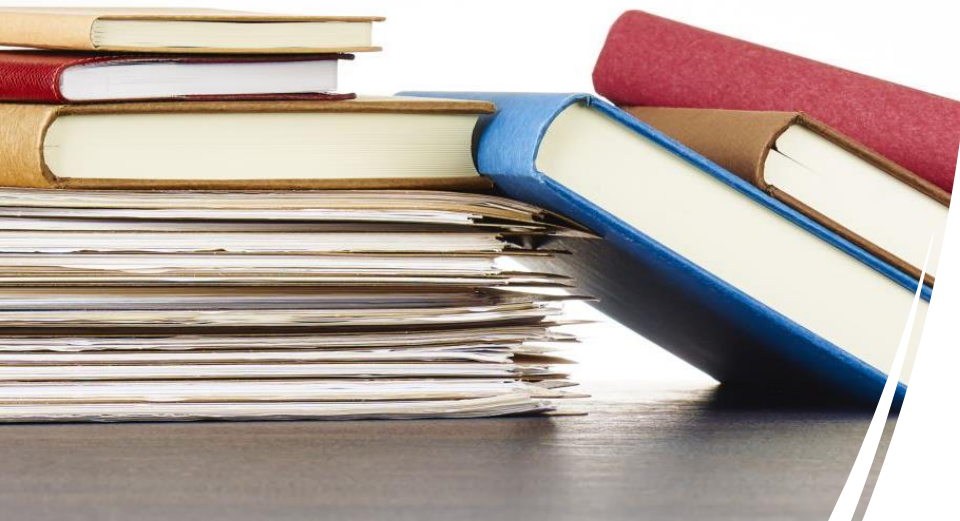


Editorial Decision

- Reviewing Editor's Decision: The different types of editorial decisions and their implications
- Acceptance, Rejection, or Revision: Common reasons for each type of decision and how authors can respond accordingly
- Next Steps Based on Editorial Decision: The next steps after receiving the editorial decision, such as revising the manuscript or selecting another journal for submission

Publication and Dissemination

- Final Manuscript Preparation: The final formatting requirements for the accepted manuscript before publication
- Online Publication and DOI Assignment
- Promoting Your Published Work through social media, academic networks, and conferences



Post-Publication Considerations

- Tracking Citations and Impact: tools and methods for tracking citations and measuring the impact of published work
- Responding to Feedback and Engaging with Readers: Respond to comments and questions from readers to foster discussion and collaboration
- Revising and Updating Published Work: Example: Revise and update published work, such as publishing corrections or follow-up studies



Resources and Support

Writing Resources : chatgpt, grammarly, turnitin

Institutional Support

Professional Associations and Networks related to the field of study for support and collaboration

Questions?

- Thank You
- Any questions?
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